

*Nagog Pond Water Treatment Plant
Acton, Massachusetts*

*Applications for Special Use
Permit and Site Plan
Special Permit*



*Town of Concord
Public Works
Department*

Environmental Partners
GROUP

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August 25, 2016

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

Re: Revised Applications for Special Use Permit and for Site Plan Special Permit
Nagog Pond Water Treatment Plant

Dear Mr. Bartl:

On behalf of the Town of Concord and its Water/Sewer Division of Concord Public Works (“Concord”), Environmental Partners Group, Inc. is submitting a revised Application for a Special Use Permit and a revised Application for Site Plan Special Permit (the “Applications”) under the Acton Zoning Bylaw for the proposed upgrades and improvements to its existing public water supply system infrastructure at Nagog Pond in Acton. The initial Applications were filed on November 20 2015; the first public hearing was conducted on January 25, 2016 and was continued to July 18, 2016 and again to September 12, 2016.

As a result of comments by the Town of Acton and the public on the Applications, and comments received on the Environmental Notification Form (“ENF”) filed under the MEPA regulations, Concord undertook additional site investigations and a review of alternative power sources for the new facility. In response to comments, Concord has chosen to use a distributed power system instead of a solar photovoltaics (PV) array to power the new Nagog Pond Water Treatment Plant. This change eliminates work within archaeologically sensitive areas, and reduces work within the wetland setback and buffer zones. The use of a distributive power system maintains the forested area between the Water Treatment Plant and the residences of

Quail Ridge and Acorn Park. It also avoids the debate about the applicability of and compliance with Article 97 for Concord's property on which the solar PV array was proposed. A draft Environmental Impact Report ("DEIR") for the changed project was filed with the MEPA Unit in the Executive Office of Energy and Environmental Affairs (EOEEA) on August 15, 2016. The EOEEA Secretary's Certificate will be issued on September 30, 2016.

In order to facilitate reviews by the Board of Selectmen and the town boards, Concord has prepared this single comprehensive submittal which incorporates relevant information from the initial Applications and provides supplemental information on the project's compliance with zoning. This single document avoids the inconvenience and confusion of working with two separate documents.

Attached hereto are two (2) Applications with Attachments, two (2) full-size sets of design plans, two (2) copies of reduced plans (11" x 17"), and a CD containing PDFs of the plans. The plans are stamped, signed and dated, and are prepared based on NAVD 1988.

If you require additional copies or information, or have any questions, please contact me at (617) 657-0276, or Alan Cathcart, the Superintendent of the Concord Water/Sewer Division at 978-318-3250. We can also be reached via e-mail at pcm@envpartners.com, pfg@envpartners.com, and ACathcart@concordma.gov.

Mr. Roland Bartl, Director
August 25, 2016

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Very truly yours,
Environmental Partners Group, Inc.



Paul C. Millett, P.E.
Project Manager



Paul Gabriel, P.E.
President

Enclosures

cc: Richard K. Reine, PWLF, Director, Concord Public Works
Alan H. Cathcart, Superintendent, Concord Water/Sewer Division
John F. Shea, Esq., Mackie Shea, PC
Jeffrey L. Roelofs Esq., Acton Special Town Counsel

Nagog Pond Water Treatment Plant

Applications for Special Use Permit and Site Plan Special Permit

August 25, 2016

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In Association With:
TECH Environmental Inc.
Energy New England
Mackie Shea, PC.

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PROJECT OVERVIEW

The Town of Concord is proposing to make comprehensive and critical improvements and upgrades to its existing surface water supply known as Nagog Pond, which has been utilized by Concord as a water supply since the early 1900s. Nagog Pond is located on the borders of the neighboring community of Littleton and Acton as shown in Figure 1. The site of the water treatment plant is located at 180/182 Skyline Drive in Acton and consists of two parcels of land owned by the Town of Concord (approximately 59.79 acres total). The parcels are developed for use as the Town's water supply, including the existing dam/intake structure, ozone disinfection treatment plant, and associated appurtenant facilities (gate house, raw water wetwell, valve and meter vault, propane tank, electrical transformer, etc.).

The Town of Concord currently operates a dam on Nagog Pond which was originally constructed over 100 years ago and renovated in 2012. The dam consists of a 10-ft primary spillway, 20-ft auxiliary spillway, and 24-inch (square) low level outlet operated by a slide gate. The low level outlet was designed and constructed to allow for controlled drainage of the pond and includes a stone approach channel to minimize erosion of the pond bottom and stone/rip rap lined discharge channel for energy dissipation. Nagog Pond discharges to Nagog Brook, which has been determined to be an intermittent stream by the Acton Conservation Commission.

The existing water treatment facility was built in 1995 to meet evolving water treatment standards at that time, and the building has a footprint of approximately 1,297 square feet. The treatment facility is situated within 200 feet of Nagog Pond. The existing water intake pipe, like the dam, was also originally constructed over 100 years old and the pipe is in poor condition.

Raw water from Nagog Pond flows by gravity into the wetwell by means of a 16-inch intake pipe and gatehouse at the dam. Water is pumped from the wetwell through the contactors where ozone gas is added for oxidation and disinfection. Ozone treated water then flows by gravity to the Route 2A Satellite Pumping Station via a 16-inch cement lined cast iron main (circa 1909). Final treatment is provided at the Route 2A Satellite Pumping Station including additional disinfection with ultraviolet (UV) light, pH adjustment, fluoridation, corrosion control, and secondary

disinfection. Finished water is then pumped into Concord's water distribution system which provides service to the Town of Concord and residential and commercial businesses in Acton along Route 2A.

The proposed project has two major components: 1) replacing an existing treatment plant (the Ozone Disinfection Facility) that has limited treatment capability with a state-of-the-art filtration and disinfection facility, and 2) replacing an antiquated 16-inch cast iron intake pipe that extends into Nagog Pond with a new 16-inch high density polyethylene (HDPE) intake pipe. The new treatment plant will be powered with a gas-fired distributed power system, which will be independent of the electrical grid. This approach to powering the treatment plant is a modification from the solar PV system described in the November 20, 2015 Applications.

The proposed Nagog Pond Water Treatment Plant (WTP) will have the same hydraulic design capacity as the existing facility, 1.5 MGD. With the proposed upgrades, the WTP will utilize the latest drinking water treatment technologies for the consistent production of high quality drinking water for Concord's water system customers in both Concord and Acton. Several physical and chemical water treatment processes will be used.

Water from Nagog Pond is obtained by means of an existing 16-inch diameter cast iron intake pipe (circa 1909). The intake pipe extends approximately 1,800 feet into Nagog Pond from the gate house at the dam and is partially supported by wooden cribbing. Physical inspections of the intake pipe have indicated that it has significantly deteriorated, resulting in decreased hydraulic carrying capacity and risk of failure. If the intake pipe is not replaced, Concord will be at risk of not being able to meet its water demands, a situation that would be a significant public health issue. Due to the condition of the existing intake pipe Concord is proposing to replace it with a new 16-inch diameter HDPE pipe. The proposed replacement pipe will allow water to be drawn from two different levels within the pond, and will include an automated "air burst" cleaning system for the intake drum screens.

The project will be completed in two phases of construction: 1) the Nagog Pond WTP facility and 2) the Nagog Pond intake replacement. The proposed work area will include the entire developed portion of the existing Ozone Disinfection Facility site and temporarily dewatering a limited area

of Nagog Pond to construct the new intake pipe. The project includes demolition of the existing ozone disinfection facility, construction of the new water treatment plant and intake systems and installation of all supporting infrastructure and utilities. The proposed WTP and intake pipe replacement have an estimated construction cost of \$13.94 million. Concord will provide funding for the project.

Project Need

The proposed intake and WTP project are part of a master planning effort for the Nagog Pond water supply. The ultimate goal of this project is the consistent production of high quality drinking water that meets existing and future proposed drinking water standards. Nagog Pond and the ozone disinfection facility are currently operating with a Filtration Avoidance Waiver under the United States Environmental Protection Agency (EPA) and Massachusetts Department of Environmental Protection (MassDEP) Surface Water Treatment Rule (SWTR). Compliance with and continued operation under the Filtration Avoidance Waiver requires strict conformance with federal and state water quality limits which have restricted the use of this water supply. The proposed WTP will be state-of-the-art and allow for the consistent production of high quality water for Concord's water system customers in both Concord and Acton. Construction of the proposed WTP will allow Concord to release its Filtration Avoidance Waiver associated with the SWTR. These improvements will enable Concord to increase the reliability and resiliency of Nagog Pond as a public water supply source.

The Proposed Water Treatment Plant

The proposed treatment plant building will be a two story structure having a footprint of 7,165 square feet and a net floor space of 9,338 square feet. The exterior façade is proposed to be cement masonry unit (CMU) architectural block with sufficient windows to provide natural lighting to the interior. The building will house all of the treatment processes and equipment and ancillary support spaces such as a control room, water quality laboratory, and office/common area. The new building is larger than the existing plant due to the advanced treatment systems to be employed. To minimize impacts to the forested area on the property and with consideration of environmental constraints (Figure 3), the existing disinfection facility will be demolished and the new WTP will be constructed over the same footprint as the existing building. This allows the

foundation system for the new building to utilize the same area cleared for the existing building, which required extensive blasting of bedrock. By taking this approach, minimal, if any, bedrock blasting is required for the new facility. This location takes advantage of the 25-ft deep excavations made into the bedrock for the installation of the existing raw water wetwell, meter and valve vault, and ozone contactors. These three subsurface bedrock excavations will be reused to accommodate the proposed raw water pumps, residuals storage tank, filter backwash waste tank, and filtered water wetwell. The proposed building location has the least environmental impact of any other location on the site and is the most economical.

The project also includes the installation of additional underground utilities (natural gas, water, and cable), fencing, parking areas, stormwater drainage and handling systems, and widening of the existing access road in response to the Fire Department's recommendations to improve the accessibility of fire equipment to the facility in the event of an emergency.

The proposed Nagog Pond WTP is being designed as a zero discharge facility. Concord intends to recycle all wastes, with the exception of sanitary wastes. The proposed WTP will include a small (20 gallons per day) disposal system for sanitary wastes (septic tank). Residuals generated from treating the water will be dewatered on-site, and the solids will be transported off-site and blended with other materials to create a compost material. The plant will also include suitable secondary containment and safety measures for the storage of water treatment chemicals in accordance with local and state requirements.

The treatment plant units that will be installed in the new WTP were selected and sized on the basis of data collected from two pilot studies, performed in August 2013 (warm water) and February 2014 (cold water) by Environmental Partners Group, Inc. (EPG). The treatment system consists of removal of source water iron and manganese, removal of low-density particulates, removal of natural organic matter, and removal of objectionable tastes and odors. To achieve treatment goals, the pilot study proposed a treatment system consisting of pH adjustment with potassium hydroxide, pre-oxidation with potassium permanganate, in-line mixing, coagulation with polyaluminum chloride, two-staged tapered flocculation, clarification using dissolved air floatation, primary disinfection using ozone, filtration using biologically activated granular carbon filters, corrosion control with zinc polyphosphate, and fluoridation using sodium fluoride.

Supplemental disinfection will include the addition of sodium hypochlorite dosed prior to the clearwell.

In response to local concerns, instead of the originally proposed solar PV array system the new Nagog Pond WTP will have three micro-turbine distributed power units located southwest of the proposed WTP building. The proposed design includes three 100-kW gas fired reciprocating engines that will have a total capacity of 300 kW (Attachment F). In addition to using these units as the power supply for the WTP, the Town is studying how to use the heat generated by these units to provide space heat to the WTP building. The three units will occupy approximately 210 square feet immediately adjacent to the building, as shown in the design plans included in Attachment L.

The proposed distributed power units more than satisfy even the stringent air quality requirements of the California South Coast Air Quality Management District and the New Jersey Department of Environmental Protection emission limits. Emissions from the proposed units are well below the MassDEP Environmental Results Program (ERP) emissions thresholds established for NO_x and carbon monoxide. These attributes of the distributed power units are consistent with Concord's sustainability goals for the project.

Using the distributed power units will significantly reduce the extent of clearing and land disturbance compared to the original solar PV array. The power supply units will be located adjacent to the existing WTP facility and will not require any additional clearing of the forested area on the property. In addition, this change will reduce approved work within the buffer zone to bordering vegetated wetlands and will eliminate work in areas that have been identified to be archaeologically sensitive. The use of energy efficient distributed power supply units located on-site next to the WTP will reduce energy costs and provide a long-term economic benefit to Concord.

Intake Pipe Construction and Dewatering of Nagog Pond

Installation of the new intake pipe has been approved by the Acton Conservation Commission (Attachment H). Permits will be needed from MassDEP and the Army Corps of Engineers. The new intake pipe work will require temporarily draining a limited, relatively shallow area of the

pond referred to as the cove area by installing a coffer dam with bypass piping. The cove area is a small section of the pond about 16.23 acres, equivalent to about 1.4% of the total pond volume and 5.8% of the total pond surface. The coffer dam will utilize an existing, partially submerged coffer dam at the same location, which will be amended by installing an impermeable barrier/liner on its interior face and providing additional support using large sand bags, referred to as super sacks. Once the temporary coffer dam is in place, the existing Nagog Pond dam outlet structure will be utilized to dewater the lower section of the pond so that replacement of the intake pipe can be accomplished in relatively dry working conditions, and within a shorter time frame.

The area of the pond to be dewatered encompasses an area of approximately 707,000 square feet. At full pond level, this area has a water volume of 19.65 million gallons. Water from dewatering is to be pumped from the cove area into the remainder of the pond, over a period of approximately 20 and 45 days. Controlled releases may be made to Nagog Brook, if needed. It is anticipated that the construction activities associated with the intake pipe construction, including draining the reservoir, will begin in either the fall of 2017 or 2018 (generally September through December). The goal is to complete construction of the intake line before the new WTP is placed into service, anticipated to be in the summer of 2018 or 2019, depending when the construction activities are started.

The existing 16-inch intake pipe will be removed and the new 16-inch intake pipe will be installed at the same location within the coffer dam area. All excavation work will be accomplished in such a manner that there will be no net increase in soils and sediments either removed or added to the pond bottom. All existing sediments and soils will remain and no new soils will be added. During the excavation process sediments will be stockpiled adjacent to the pipe trench and re-used to backfill the pipe.

The Contractor will maintain several dewatering pumps to transfer water from isolated low spots within the dewatered area. Water will either be pumped to another isolated low spot not affecting the construction zone or pumped to the dam outlet zone for release downstream to Nagog Brook. Any water that is pumped will be monitored visually for the transport of solids/sediment. If solids/sediments are detected, then they will be allowed to settle within the dewatering area before being discharged to Nagog Brook.

The remaining section of the intake pipe to be installed beyond the area of the pond being dewatered will be placed using a barge. The HDPE pipe will be fused and concrete collars will be installed around the pipe at various locations. The pipe will be filled with air and positioned at the location it is to be installed. The pipe will then be filled with water and submerged. Due to the buoyancy of HDPE, concrete collars 30” wide by 30” tall by 12” thick will be used to restrain the pipe. The concrete collars will be spaced approximately 10 feet apart along the entire length of the intake pipe, resulting in a total of approximately 253 concrete collars.

Divers will connect the intake screen and attached the intake line to a support tower. The support tower will also be deployed using a barge. The appropriate pipe locations will be determined using GPS equipment.

Potential impacts to the environment resulting from the intake pipe installation will be temporary and mitigated to the greatest extent possible by implementing the best management practices and procedure. At the recommendation of the Massachusetts Division of Fish and Wildlife and as required by the Acton Conservation Commission Order of Conditions, the Town will hire an independent Environmental Monitor to observe field conditions during the drawdown activities and review findings with the Acton Natural Resources/Conservation Department.

Timetable

The proposed project implementation plan will be conducted in phases. Construction of the WTP is anticipated to begin during the first half of 2017; however, the existing Ozone Disinfection Facility will remain operational until the late summer or early fall of 2017. Once the existing Ozone Disinfection Facility is taken off-line for demolition, the intake project can also commence. Both the new intake and WTP are scheduled to be on-line between mid-2018 to early 2019. Concord’s six groundwater supply wells will be used while Nagog Pond is not available during construction of the intake and WTP.

Consistency with Planning

Watershed Resource Protection Plan – Nagog Pond

The Town of Concord has been very active in conserving and protecting the water quality of Nagog Pond, and coordinating these efforts with both Acton and Littleton. This program is described in Concord's Watershed Protection Plan for Nagog Pond.

Water Quality and Treatment Requirements

The Surface Water Treatment Rule (SWTR) was promulgated by the United States Environmental Protection Agency (USEPA) in 1989 to protect public drinking water from waterborne microbiological pollutants such as Giardia and viruses. Under the provisions of the SWTR, all public water systems using surface water supplies or groundwater supplies under the direct influence of surface water must include disinfection as part of the treatment process. In addition, unless the water meets strict water quality criteria, filtration is required to physically remove waterborne microorganisms that are resistant to conventional disinfection practices (chlorination) and may be present in the water. For water systems in the Commonwealth of Massachusetts, detailed requirements of the SWTR are defined in 310 CMR 22.20A.

Under the 1996 amendments to the Safe Drinking Water Act (SDWA), improvements to the SWTR were proposed by the USEPA in the form of an Enhanced Surface Water Treatment Rule (ESWTR). These changes address increased removal/inactivation requirements for poorer quality source waters and treatment requirements for the removal/inactivation of cryptosporidium (CT), which was found to be highly resistant to standard disinfection practices. The ESWTR applied to water systems already regulated by the SWTR.

Concord currently operates under a SWTR Filtration Avoidance Waiver for Nagog Pond. Construction of the proposed WTP (with the addition of filtration treatment) will allow the Town to meet current and future water quality standards in accordance with the ESWTR and release its SWTR filtration waiver. This will increase the reliability and resiliency of Nagog Pond as a public water supply.

Town of Concord Water Facilities Planning

In an effort to optimize the use of Nagog Pond as a water supply, the Town embarked on an evaluation of filtration treatment alternatives. Filtration treatment will allow Nagog Pond to be used as a safer and more reliable water supply regardless of natural variations in pond water quality. EPG performed a pilot study on behalf of the Town of Concord in August 2013 (warm water) and February 2014 (cold water). The results of the pilot study recommended the use of pH adjustment, pre-oxidation, coagulation, flocculation, dissolved air floatation, ozone, and biologically activated carbon filtration as treatment processes for Nagog Pond (see discussion above).

Traffic

The project will have minimal effect on traffic patterns in the area. Traffic will increase slightly during construction with vehicles exiting off Skyline Drive and utilizing the access road to go to the Nagog Pond WTP. A traffic management program will be developed to control entering and exiting the construction site. The contractor will be responsible for establishing the traffic signage around the work zone each day. Daily vehicle trips to the facility associated with the operations and maintenance of the WTP are expected to only slightly increase from what currently occurs. Water treatment plants of a similar size to the one proposed are typically staffed by approximately three operators that would generate approximately six vehicle trips per day. Routine traffic as a result of operations activities, including chemical deliveries and residuals management, will slightly increase the average daily trips. Seven chemical deliveries per month are anticipated with no more than two deliveries per day and residuals management may occur twice per week. Conservatively, a total of 10 to 15 trip ends per day are anticipated for the water treatment plant with an occasional increase for additional maintenance, well below zoning thresholds that would trigger the need for a traffic impact study (see Attachments). Five parking spaces are being planned for the facility, a reflection of the low traffic activity that is anticipated at the facility.

Noise

A Noise Emissions Analysis was prepared to evaluate ambient noise conditions. The analysis was conducted to assess the project's compliance with the MassDEP Noise Policy that limits sound operations to be no more than 10 A-weighted decibels (dBA) above the lowest nighttime ambient

sound level at the residential property lines and prohibits a ‘pure tone’ condition. A Noise Analysis Memorandum is included as Attachment G.

Ambient sound measurements were continuously collected from Thursday, July 28 to Monday, August 2, 2016 near the site property line. Late night ambient sound levels were measured at the site property boundary and at the nearest residences on Skyline Drive and Hazelnut Street and acoustic modeling was used to predict future contributions to sound levels in the neighborhood from the proposed WTP. Based on the measurements of ambient sound and acoustic modeling, an increase of 1.5 dBA to 9.2 dBA above existing nighttime ambient sound levels is predicted at the nearest residences due to the proposed WTP design. Therefore, the results of noise emissions analysis demonstrates that the proposed WTP design will comply with the MassDEP Noise Policy. Additionally, the acoustic analysis indicated that the proposed WTP will not create any pure tones.

Although the project meets the MassDEP Noise Policy threshold, additional structural and mechanical noise mitigation measures (such as acoustic louvers and sound barriers) are being considered as part of the facility design in the event that seasonal ambient noise conditions, including the winter conditions, are less than that measured during the time that this study was performed. When these mitigation measures are incorporated into the noise modeling, sound levels at the nearest residences from the WTP is reduced to 0.3 dBA – 6.0 dBA. In addition, the manufacturers of the distributed energy units being considered for the project are continuously developing advanced measures for attenuating sound, and the most current of these that are available during the final design effort will also be considered.

Solid and Hazardous Waste

The Contractor will be required to submit an alternatives assessment for the re-use and recycling of solid materials associated with the demolition of the existing ozone disinfection facility. Existing asphalt surfaces and other earth materials will be reclaimed for use on-site. Concord has evaluated the treatment process mechanical equipment and determined that it has reached its useful service life so that re-use is not practical. Asphalt, brick and concrete (ABC) generated during demolition activities will be processed and disposed in accordance with MassDEP regulations.

Stormwater Management

Please refer to Attachment I for the full stormwater report prepared for this project. When the full stormwater report was prepared, Concord was considering installation of a PV system. Since Concord is not currently proposing this PV system and is instead proposing a distributed power supply that will be located on the existing building footprint, the proposed condition analyzed in the stormwater report has changed. The project change, which significantly reduces the clearing of vegetation, will not increase stormwater runoff.

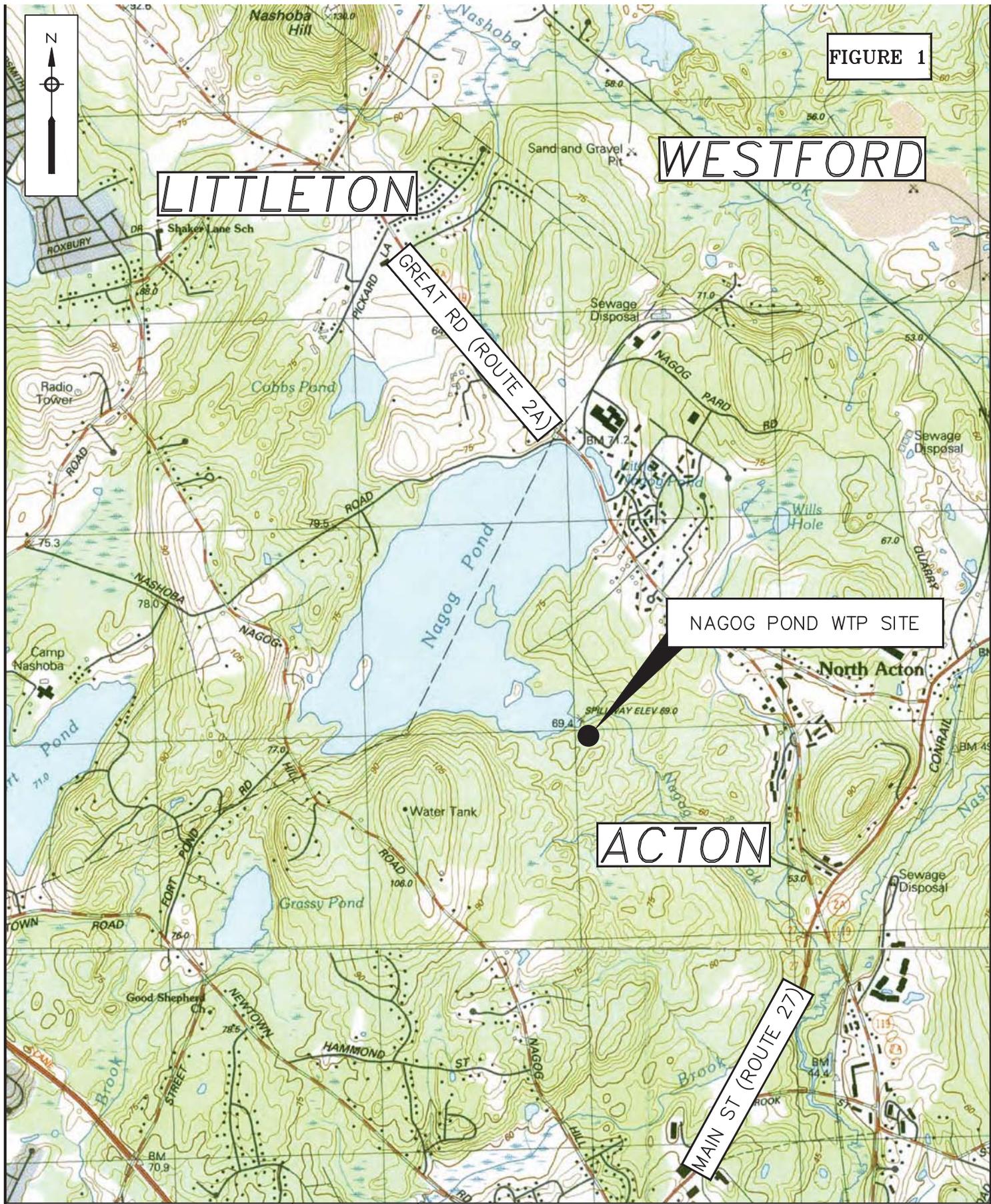
Compliance with Zoning

Concord's legal counsel has prepared a detailed analysis of the proposed project's compliance with the Acton Zoning Bylaw and a 1994 variance and special permit (Attachment C). The project meets the requirements of Sections 3.4.7 and 10.4 of the Acton Zoning Bylaw for a use special permit and a site plan special permit for the proposed Nagog Pond WTP. See also Figure 5.

Article 97

The proposed improvements to the WTP do not require approvals under Article 97 of the Massachusetts Constitution. Concord retains ownership and possession of the land which will continue to be used for public drinking water supply purposes. The building and treatment system improvements, including the use of the distributed power system, do not implicate Article 97. Concord's legal counsel has conducted a thorough Article 97 analysis with reference to controlling documents (Attachment E). See also Figure 4.

FIGURE 1



NOVEMBER 2015

APPLICANT: TOWN OF CONCORD

200-1501

NAGOG POND WATER TREATMENT PLANT

1" = 2,000'

USGS QUADS LOCUS MAP

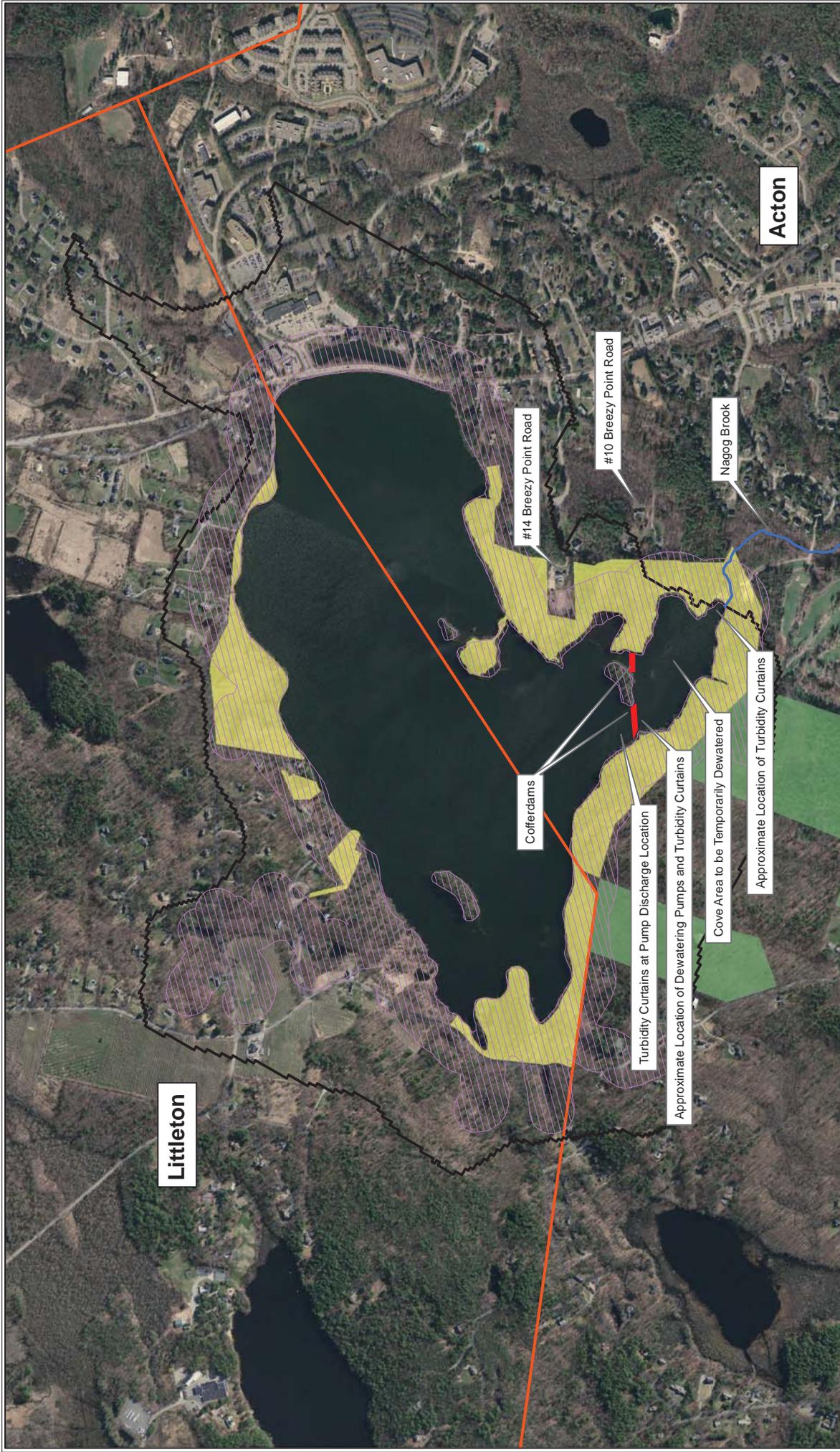


Figure 2
Nagog Pond Watershed
Town of Concord, MA
August 2016



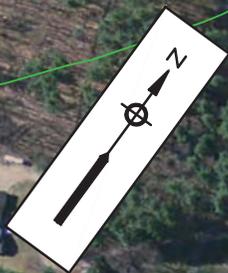
Legend

- Watershed
- Town of Concord Property
- Town Border
- Town of Concord Property
- Zone A
- Turbidity Curtains
- Cove A to be Temporarily Dewatered

0 400 800 1,600 2,400 Feet

1 in = 800 feet

FIGURE 3



16" Ø RAW WATER INTAKE

ZONE A SURFACE WATER SUPPLY PROTECTION

CHAPTER 91 JURISDICTION

WETLAND LIMITS

ACTON

LIMITS OF LAND DEVELOPMENT

100-FEET WETLAND BUFFER

I:\CONCORD\200\200-1501 NAGOG POND WTP CONCEPTUAL DESIGN\US PERMITTING\APPENDIX C-LOCUS MAPS\BOUNDARY LOCATIONS.DWG

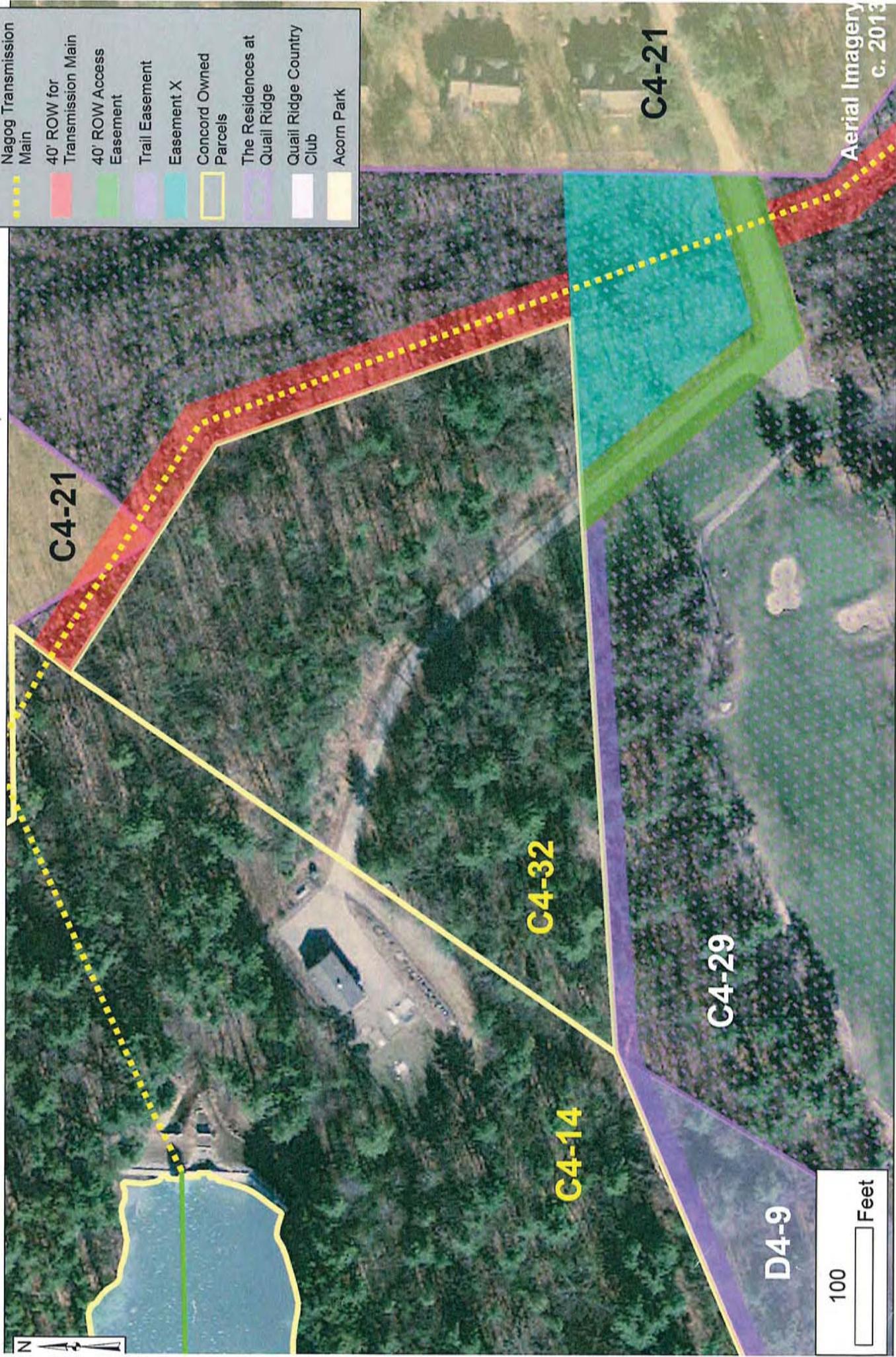


NOVEMBER 2015
200-1501
1" = 300'

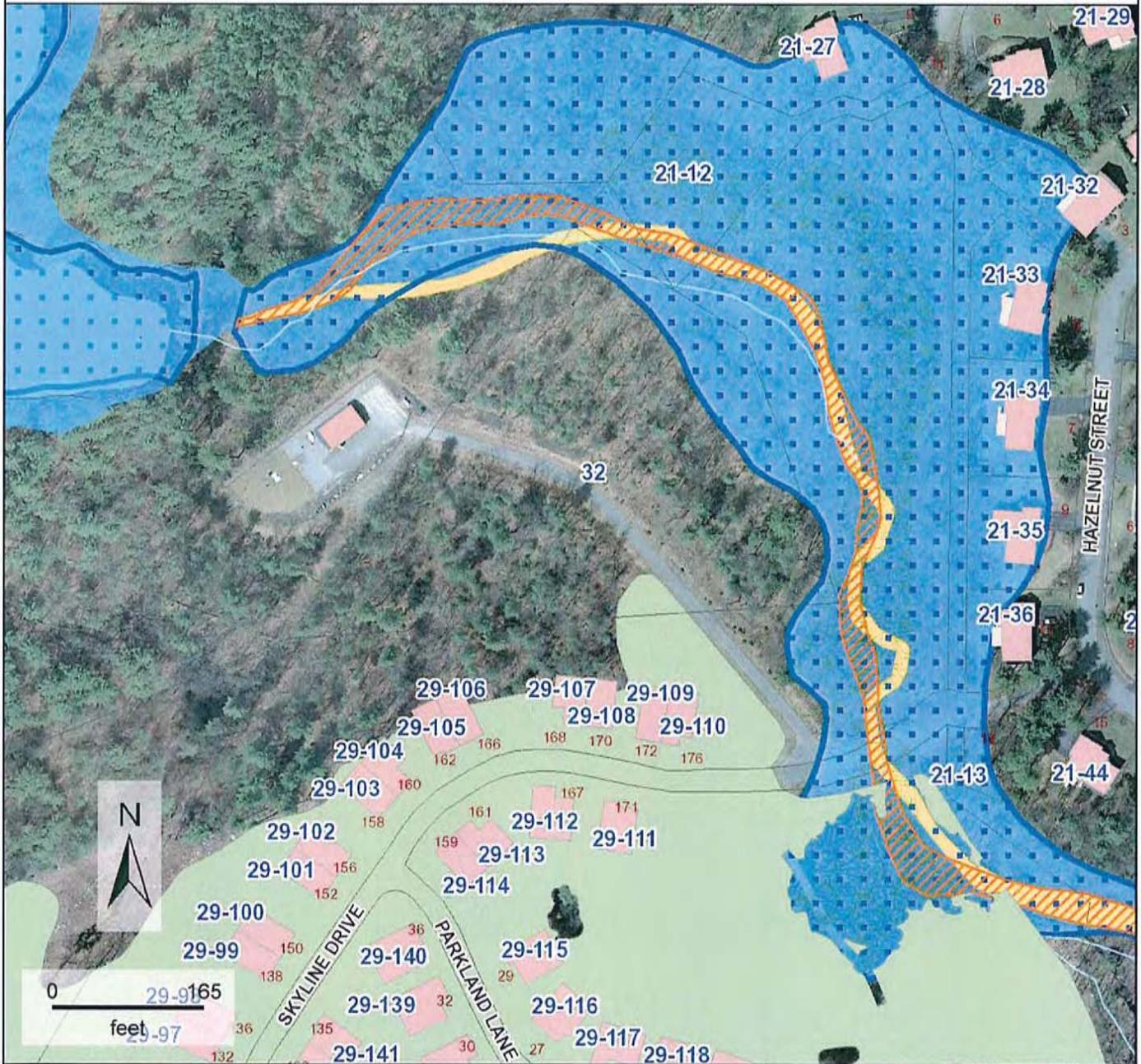
APPLICANT: TOWN OF CONCORD
NAGOG POND WATER TREATMENT PLANT
ENVIRONMENTAL CONSTRAINTS



Nagog Pond Water Treatment Plant Local Parcels & Easements



Floodway and Floodway Fringe



Property Information

Property ID
Location



**MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT**

This data set/map is for planning purposes only and should not be used for larger scale analysis. The Town of Acton shall not be held liable for any use of the data or images shown on this map, nor is any warranty of accuracy expressed. All uses of this data set/map are subject to field verification.



FLOOD ZONES

-  2014 FEMA Floodway
-  2014 FEMA Flood Zone - 100-year flood zone
-  2014 FEMA Flood Zone - 500-year flood zone
-  2010 FEMA Floodway
-  2010 FEMA Flood Zone- 100-year flood zone
-  2010 FEMA Flood Zone - 500-year flood zone

NATURAL RESOURCES

DEP RIVERS & STREAMS

DEP WETLANDS

 WET AREAS

 PONDS

BASE MAP

 POOLS

STRUCTURES

 BUILDING

 DECK

 FOUNDATION

 FUEL TANK

 MOBILE

 PORCH

 RUINS

 SMOKESTACK

 WATERTANK

 SPORTS FACILITY / AREAS

TOWN DATA

POINTS OF INTEREST

 CONSERVATION

 HISTORICAL

 MUNICIPAL

 OTHER GOVERNMENT

 PUBLIC SAFETY

 RECREATION

 SCHOOL

 PARCELS

 TOWN BOUNDARY