

THE RESIDENCES AT DARWIN COMMONS
DARWIN LANE – WALPOLE, MA
APPLICATION FOR COMPREHNSIVE PERMIT
UNDER M.G.L. C. 40B

ZONING BOARD OF APPEALS OF THE TOWN OF WALPOLE
COMPREHENSIVE PERMIT REGULATIONS
APRIL 28, 2022

SECTION 3.2.6 – REPORT OF EXISTING SITE CONDITIONS

EcoTec, Inc.

ENVIRONMENTAL CONSULTING SERVICES

102 Grove Street

Worcester, MA 01605-2629

508-752-9666 – Fax: 508-752-9494

August 4, 2021

Lou Petrozi
Wall Street Development Corp.
2 Warthin Circle
Norwood, MA 02062

via email: lou@wallstreetdevelopment.com

RE: Environmental Resources Evaluation, Darwin Lane, Walpole, Massachusetts

Dear Mr. Petrozi:

As requested, EcoTec has conducted a review of environmental resources at the undeveloped property located south of the Darwin Lane cul-de-sac. Our evaluation included review of mapped resources available on MassGIS, as well as an on-site inspection.

Site Location and Abutting Properties:

The site consists of an approximately 4-acre tract of land at the south end of Darwin Lane (see Figure 1: USGS Locus and Figure 2: MassGIS Locus map). The site is comprised of two parcels identified on Walpole Assessors map as:

- Lot 42-227-13; and
- Lot 42-240.

The site property is abutted to the north, east and west by residential properties fronting on Darwin Lane, Eleanor Road, and Washington Street, respectively. The site is abutted to the south by an approximately 8-acre parcel (lot 42-241) owned by the Town of Walpole. The Town parcel is largely undeveloped, but contains two buildings apparently associated with the municipal water supply system. The southern abutting Town of Walpole parcel is also crossed by large overhead electric transmission lines.

Site Description:

The site is undeveloped, although a portion of the property near Darwin Lane was filled many years ago and has become overgrown with opportunistic shrubs and small trees. The remainder of the site is wooded, with a relatively mature closed tree canopy dominated by eastern white pine (*Pinus strobus*), northern red oak (*Quercus rubra*) and white oak (*Quercus alba*), and a relatively sparse understory, presumably due to the closed canopy, including seedlings of the noted tree species, Canada mayflower (*Maianthemum canadense*), glossy buckthorn (*Rhamnus cathartica*) and upland sedge (*Carex pennsylvanica*). Elevations on the site are highest in the southern portion near Darwin Lane, and slope generally to the south, with a low point near the southern lot line adjacent to the Town of Walpole property. Except for the filled area near Darwin Lane and some small excavations and mounds in the southern portion of the site, surface soils and topography appear natural.

Wetlands and Floodplains:

On July 22, 2019, EcoTec, Inc. inspected the above-referenced property for the presence of wetland resources as defined by: (1) the Massachusetts Wetlands Protection Act (M.G.L. Ch. 131, § 40; the "Act") and its implementing regulations (310 CMR 10.00 *et seq.* the "Regulations"); (2) the Walpole Wetlands Protection Bylaw; and (3) the U.S. Clean Water Act (i.e., Section 404 and 401 wetlands). Paul J. McManus, PWS conducted the inspection.

As noted above, the site plant community is dominated by pines and oaks which are considered "upland" (i.e., not wetland) indicators. No areas on the site contain a predominance of wetland indicator species (Facultative or wetter designation). Similarly, EcoTec observed no depressions or flow channels on the site, and no areas of ponding, water staining or other evidence of wetland hydrology. EcoTec evaluated soils at the most low-lying portion of the site, and found obvious non-hydric soils (lack of organic soils and presence of high chroma subsoils). Based upon these findings, it is EcoTec's opinion that there are no vegetated wetlands on the site as defined under local, state and federal definitions. Review of MassGIS mapping (Figure 2) indicates that the nearest mapped wetlands to the site are approximately 350 feet to the south of the site on the Town of Walpole property.

The Massachusetts Rivers Protection Act amended the Act to establish an additional wetland resource area: Riverfront Area. Based upon a review of the current USGS Map (Figure 1: Norwood Quadrangle, attached) and observations made during the site inspection, there are no mapped or unmapped streams located within 200 feet of the site. Accordingly, Riverfront Area would not occur on the site.

Bordering Land Subject to Flooding is a type of regulated wetland resource area that floods due to a rise in floodwaters from a bordering waterway or water body. Where flood studies have been completed, the boundary of Bordering Land Subject to Flooding is based upon flood profile data prepared by the National Flood Insurance Program. Section 310 CMR 10.57(2)(a)3. states that "The boundary of Bordering Land Subject to Flooding is the estimated maximum lateral extent of flood water which will theoretically result from the statistical 100-year frequency storm." The attached FEMA FIRMet (Figure 3) shows no mapped floodplains on the site, with the nearest floodplain located south of the power lines on Town of Walpole property.

State-Listed Species:

State and local wetland regulations require that no project may be permitted that will have any adverse effect on specified habitat sites of rare vertebrate or invertebrate species, as identified by procedures set forth at 310 CMR 10.59. Based upon a review of the *Massachusetts Natural Heritage Atlas*, 15th edition, there are no Estimated Habitats [for use with the Act and Regulations (310 CMR 10.00 *et seq.*)], Priority Habitats [for use with Massachusetts Endangered Species Act (M.G.L. Ch. 131A; "MESA") and MESA Regulations (321 CMR 10.00 *et seq.*)], Certified Vernal Pools, or mapped "potential vernal pools" on or in the immediate vicinity of the site. A copy of this map is attached (Figure 4).

Water Supply Protection Areas:

EcoTec reviewed water supply protection mapping for the site available through MassGIS and the Town of Walpole. The site is not mapped as containing any surface water protection zones (see Figure 5 from MassGIS). The site is adjacent to but not within a Zone I groundwater protection zone as mapped by MassGIS (Figure 6) and the Town of Walpole (Figure 7A and 7B). The site is mapped by MassGIS as being within a Zone II (Area 1 designation by the Town of Walpole). The Zone I (Zone 1 as defined by the Town of Walpole) is the primary zone of contribution to a public water supply well. A Zone II is a wellhead protection area that has been determined by hydro-geologic modeling and approved by the Department of Environmental Protection's (MassDEP) Drinking Water Program. The primary potential threat to groundwater quality from a residential development would be the discharge of domestic wastewater, however EcoTec understands that the site is proposed to be connected to the municipal wastewater collection system and that no on-site wastewater discharge is proposed, thereby eliminating this potential risk.

I hope that this information is helpful to you and to the Town of Walpole. Please contact me if you have any questions.

Cordially,
ECOTEC, INC.



Paul J. McManus, LSP, SPWS
President

Enclosures:

- Existing Conditions Plan by GLM Engineering
- Figure 1: USGS Locus
- Figure 2: MassGIS Wetlands
- Figure 3: FEMA Flood map
- Figure 4: Massachusetts Natural Heritage Atlas
- Figure 5: Surface Water Protection Areas – MassGIS
- Figure 6: Groundwater Protection Areas – MassGIS
- Figure 7A and 7B: Groundwater Protection Areas: Town of Walpole
- Resume

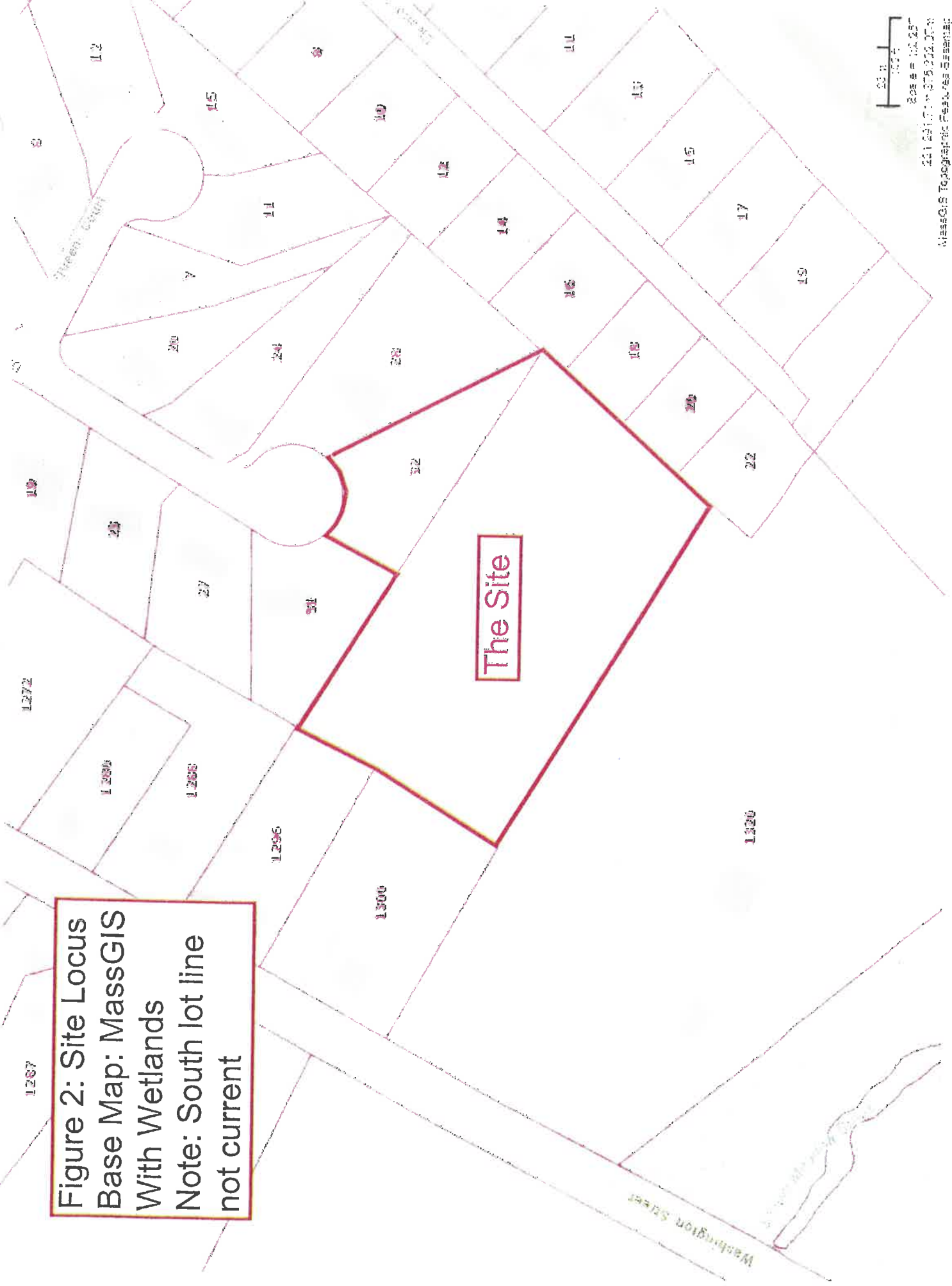
Figure 1: USGS Topographic Map
Norwood Quad, 1985
1:10,000 Scale, Metric

Site Locus



Figure 2: Site Locus
Base Map: MassGIS
With Wetlands
Note: South lot line
not current

The Site



National Flood Hazard Layer FIRMette



71°14'53"W 42°7'48"N

**Figure 3:
Floodplain Map**



71°14'16"W 42°7'22"N



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
 Without Base Flood Elevation (BFE) *Zone A, X, AE, S*
 With BFE or Depth *Zone A, X, AE, S, AH, VE, AR*
 Regulatory Floodway

0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone 2*

Future Conditions 1% Annual Chance Flood Hazard *Zone 1*
 Area with Reduced Flood Risk due to Levee. See Notes. *Zone 3*
 Area with Flood Risk due to Levee *Zone 4*

NO SCREEN
 Area of Minimal Flood Hazard *Zone 5*
 Effective LOMRS
 Area of Undetermined Flood Hazard *Zone 6, 7*

GENERAL STRUCTURES
 Channel, Culvert, or Storm Sewer
 Levee, Dike, or Floodwall

OTHER FEATURES
 Cross Sections with 1% Annual Chance Water Surface Elevation
 Coastal Transect
 Base Flood Elevation Line (BFE)
 Limit of Study
 Jurisdiction Boundary
 Coastal Transect Baseline
 Profile Baseline
 Hydrographic Feature

MAP PANELS
 Digital Data Available
 No Digital Data Available
 Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

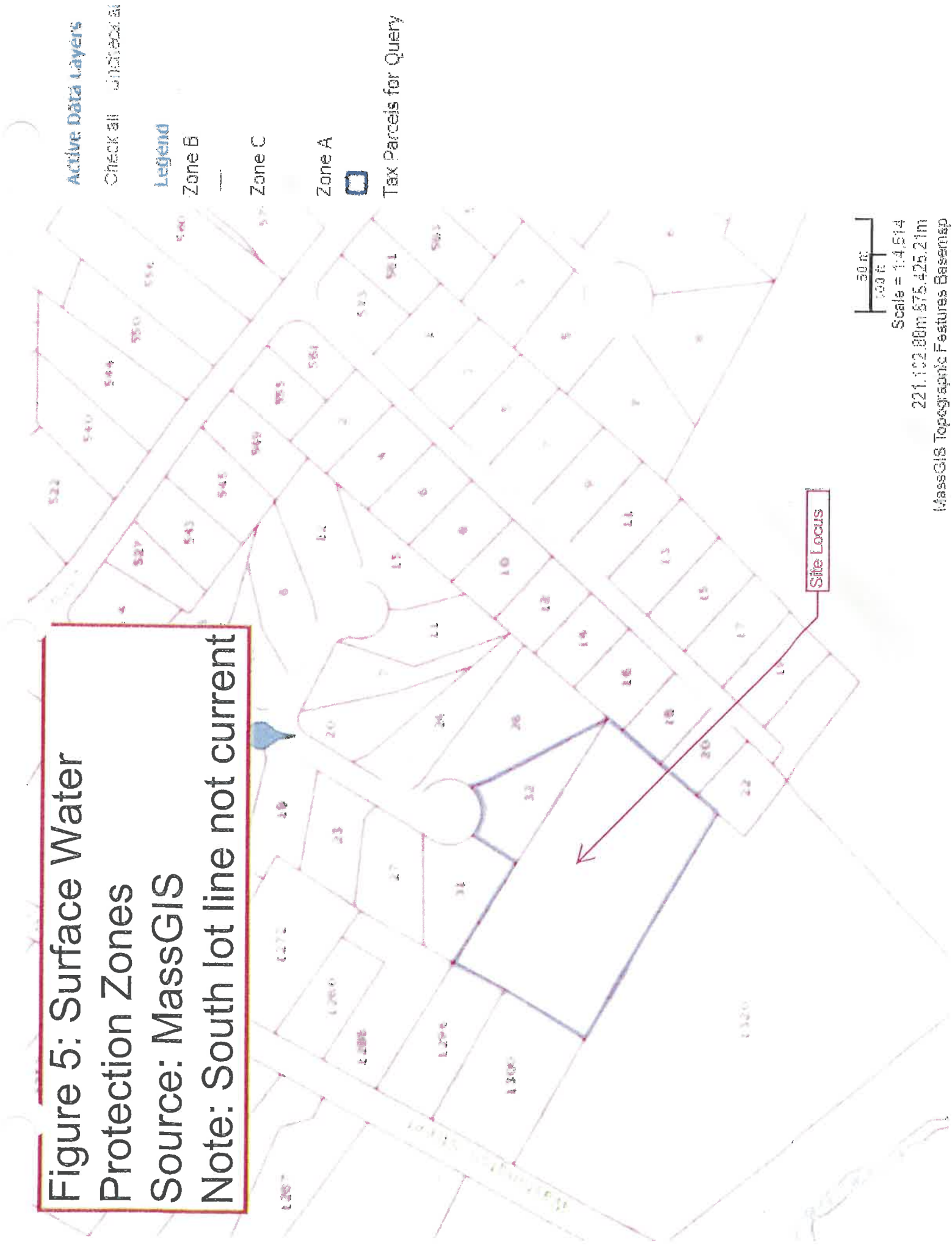
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/29/2020 at 12:45 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Figure 4: Massachusetts natural Heritage Atlas - 15th Edition
From MassGIS 8/4/2021



**Figure 5: Surface Water
Protection Zones
Source: MassGIS
Note: South lot line not current**

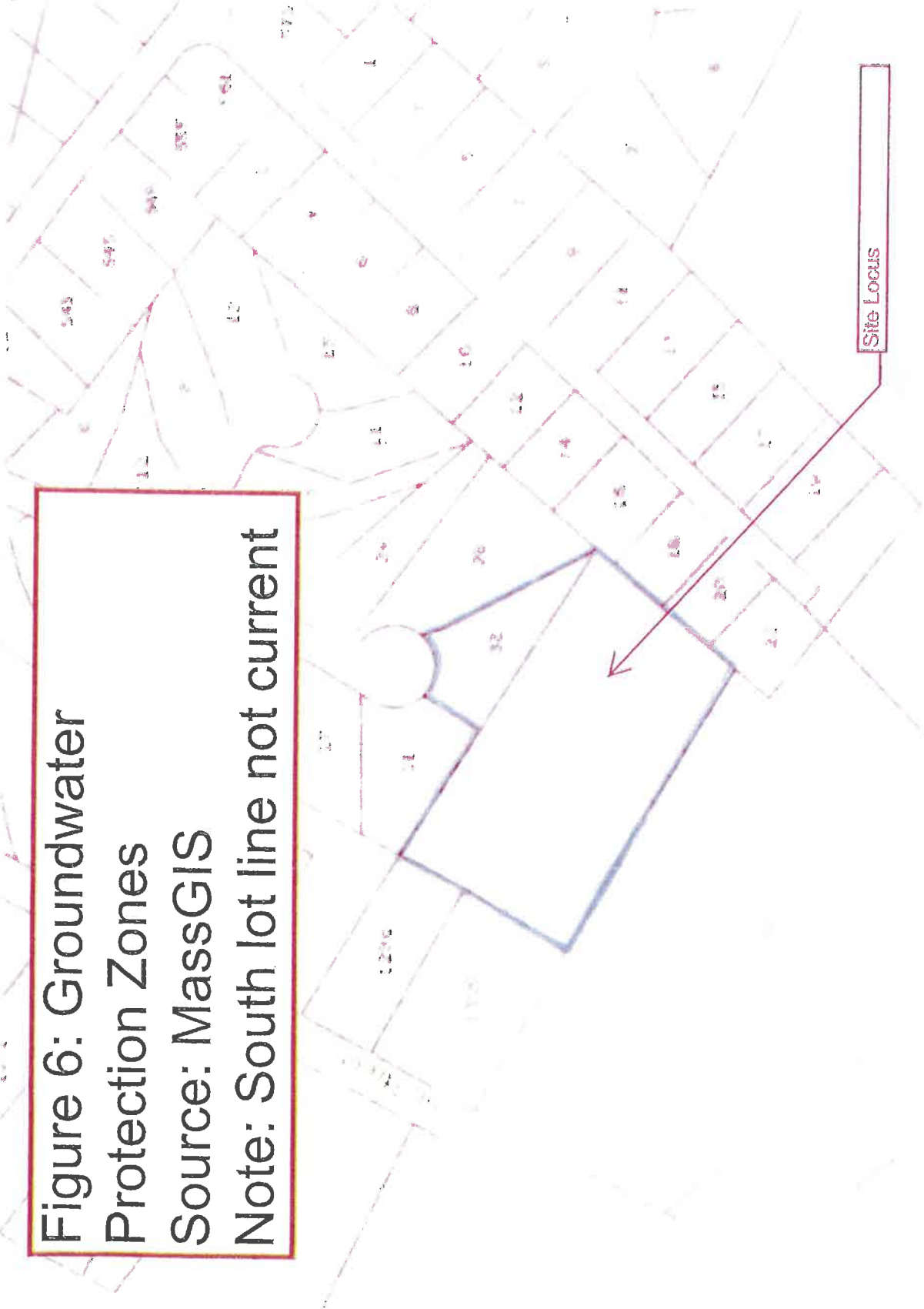


**Figure 6: Groundwater
Protection Zones
Source: MassGIS
Note: South lot line not current**

Active data Layers
Check all Unchecked

Legend
Zone IIs
Zone Is

Tax Parcels for Query

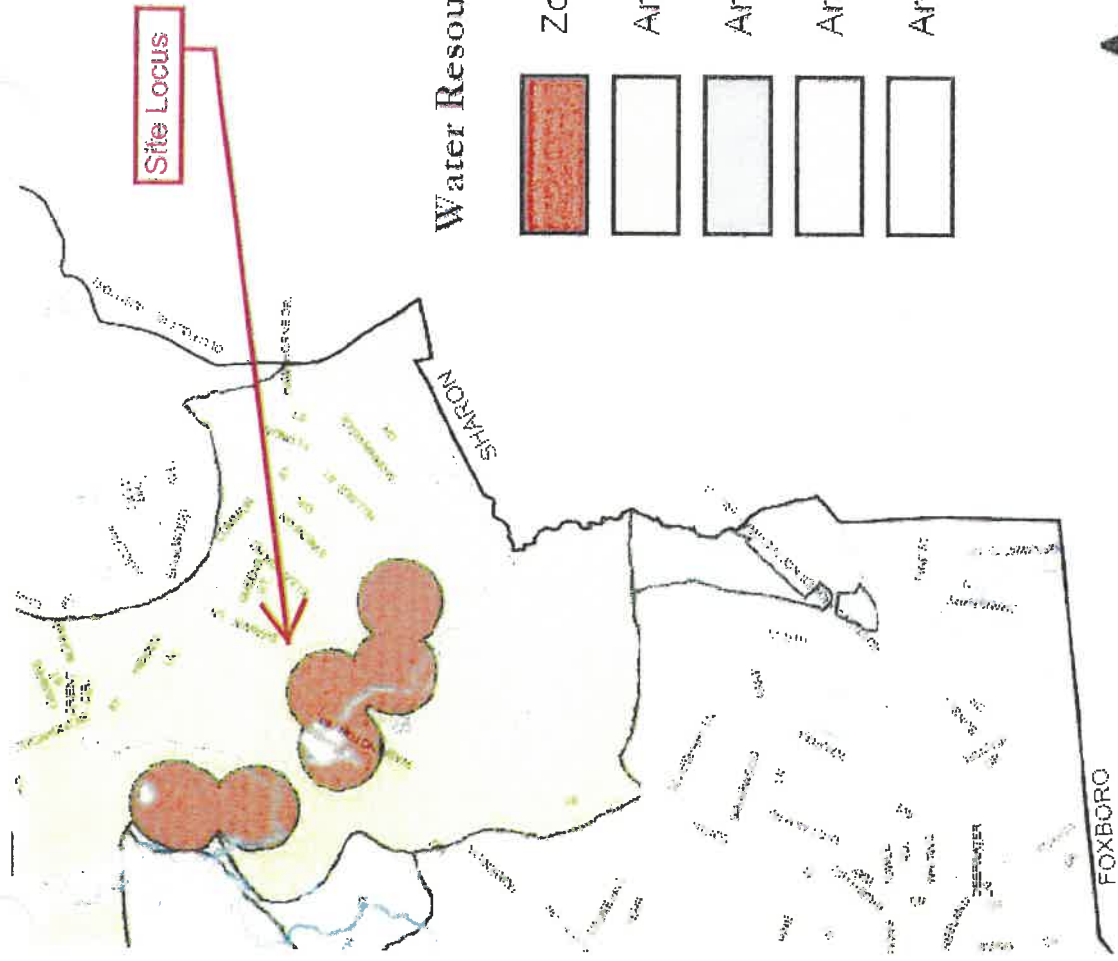


50 m
100 ft






Scale = 1:4,514
221,359.00m 575,214.75m

MassGIS Topographic Features Basemap

Figure 7A
Town of Walpole Water
Supply Overlay



Water Resource Protection Overlay Districts

-  Zone 1 - 400' Well Radius
-  Area 1 - Area of Pumping Influence
-  Area 2 - Potential Water Supply Area
-  Area 3 - Primary Recharge Area
-  Area 4 - Secondary Recharge Area

Aquifers

Town of Walpole
 Commonwealth of Massachusetts
 August 2000

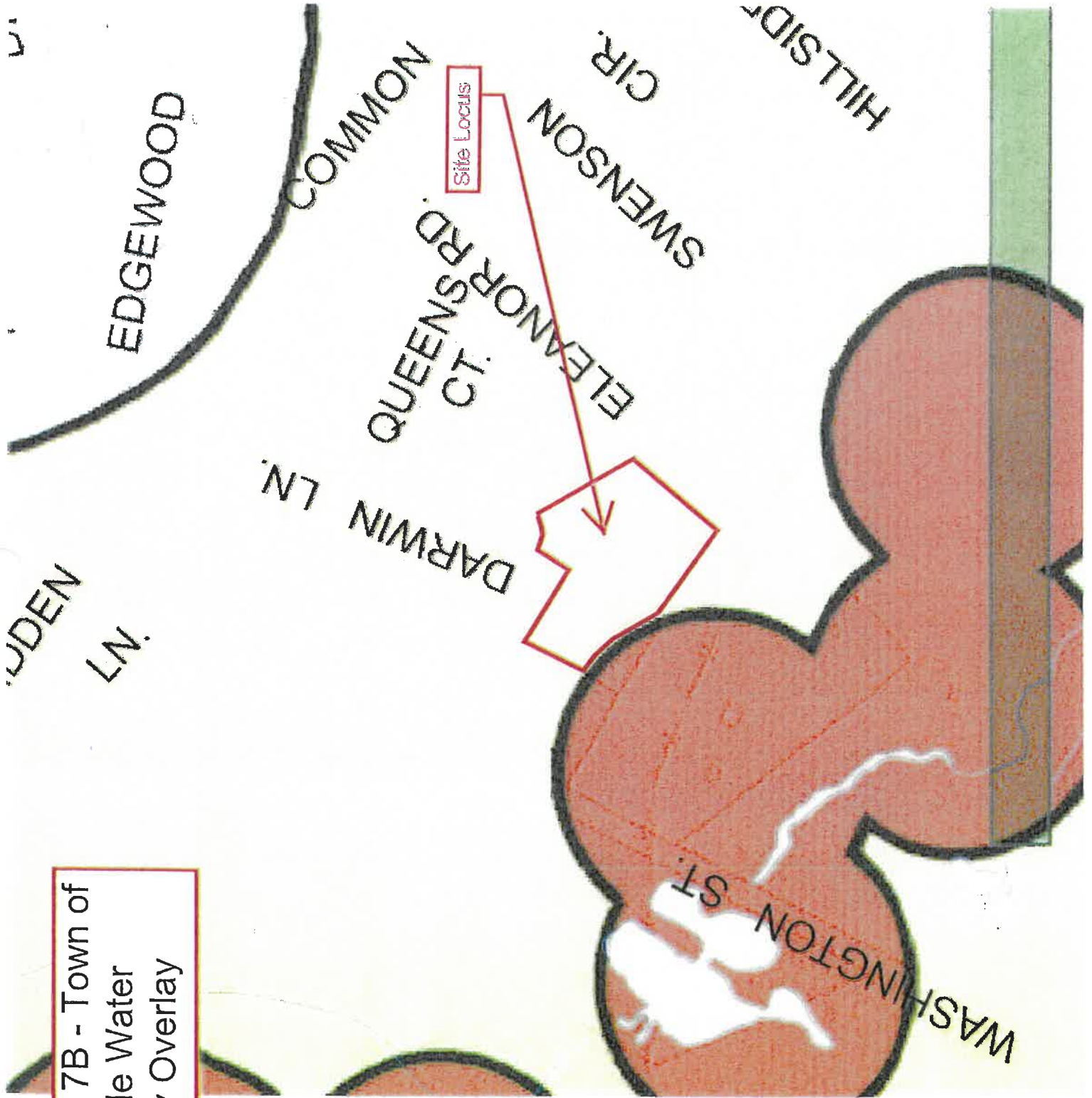


Figure 7B - Town of Walpole Water Supply Overlay

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Paul J. McManus, LSP, PWS
President

Paul McManus is the President and owner of EcoTec, Inc., which he founded in 1990. He is a certified Professional Wetlands Scientist (PWS) from the International Society of Wetlands Scientists (SWS), the leading professional organization in the field, where he served as President of the New England Chapter of SWS, representing the Chapter on the International Board of Directors for several years, and currently serves as Chapter Treasurer. Mr. McManus is also a Massachusetts Licensed Site Professional (LSP) with experience including a wide range of projects, focused on ecological risk assessment at sites with contaminated wetland resources. Prior to the founding of EcoTec, Mr. McManus was employed at other Massachusetts consulting firms and as an aquatic ecologist at the Massachusetts Division of Water Pollution Control. Mr. McManus brings a wide variety of environmental consulting experience to EcoTec, including wetland evaluation and delineation, lake and stream assessment, wildlife habitat evaluation, oil and hazardous materials ecological risk assessment, and a variety of other types of environmental impact assessment. He has conducted detailed wetland community surveys and impact restoration specifications in "Areas of Critical Environmental Concern" (ACECs), and led the local, state and federal wetland permitting, including vernal pool mitigation design and a Wetlands Protection Act Variance, at the MWRA's Norumbega Reservoir property in Weston. He has directed hundreds of other wetlands projects at sites including large and small residential and commercial developments. He has completed all phases of environmental permitting work, including wetland delineation, replication and mitigation design, implementation, and monitoring in freshwater wetlands and salt marsh, as well as general wildlife and rare species assessments and trapping, including marbled salamander, 4-toed salamander, wood turtle, and eastern box turtle, under the MA Wetlands and Endangered Species Act Regulations. Permitting efforts regularly include federal, local and state permitting, including filings under the Massachusetts Environmental Policy Act (MEPA) regulations. Additional projects he has directed include major biological and chemical marine sampling programs; he has been involved in a variety of freshwater system evaluations, and conducted evaluations and sampling for proposed fresh water and marine dredging projects. He also has experience in large scale soil reuse projects, where he completed wetland permitting and served as the independent third-party monitor in accordance with voluntary Administrative Consent Orders for the sites. Mr. McManus serves as a consultant on behalf of government, business, private citizens, utility companies, the development community, conservation commissions, and concerned citizens' groups. He presently serves on a continual basis as technical wetlands consultant for the Town of Dover Conservation Commission, and works regularly for Boylston, Shrewsbury, and other Commissions providing peer review expertise for varied projects.

Education: Master of Science: Applied Marine Ecology - University of Massachusetts/Boston, 1988
Bachelor of Arts: Biology (Ecology emphasis) – College of the Holy Cross, Worcester, MA, 1984
U.S. Fish and Wildlife Service: Habitat Evaluation Procedure (HEP) Certification
Massachusetts Division of Water Pollution Control: Algal Assay (eutrophication) Short Course

Professional Affiliations: Massachusetts Association of Conservation Commissioners (Board of Directors)
(Partial list) Society of Wetland Scientists (Treasurer and former President of the New England Chapter)
Association of Massachusetts Wetlands Scientists
Licensed Site Professional Association

Certifications: Society of Wetlands Scientists Professional Wetlands Scientist # 962
Commonwealth of Massachusetts Licensed Site Professional # 5711
OSHA Health & Safety Hazardous Waste Safety Training, 29 CFR 1910.120 (40 hr & refresher)