



## **EcoTec, Inc.**

### **ENVIRONMENTAL CONSULTING SERVICES**

102 Grove Street  
Worcester, MA 01605-2629  
508-752-9666 / Fax: 508-752-9494

May 21, 2020

Leicester Conservation Commission  
Town Hall  
3 Washburn Square  
Leicester, MA 01524

**Re: Request for Determination of Applicability**

**Subject Property: Stafford Street (Former Fournier-Gemme Lagoon)**

Dear Commission Members:

Enclosed please find two (2) copies of a Request for Determination of Applicability ("RFDA") and supporting materials submitted on behalf of the Applicant: Adam Last, PE, LSP of Corporate Environmental Advisors, Inc. This RFDA is filed under the Massachusetts Wetlands Protection Act and the Leicester Wetland Bylaw for the above-referenced property. The proposed work is identical to the work approved by the Commission in a Negative Determination of Applicability issued on 10/13/2016. Due to funding limitations, the property owner was unable to conduct the work prior to the expiration of the Determination in late 2019. Because funding for this work, which is required to complete the site remediation under the Massachusetts Contingency Plan ("MCP") regulations (310 CMR 10.00) is now in place, the applicant again seeks approval to conduct the work.

This filing is comprised of:

- This cover letter;
- WPA Form 1: Request for Determination of Applicability (RFDA);
- Pilot Test System Layout plan, dated September 27, 2016 (1 sheet);
- REGENESIS Plume Stop fact sheet (1 page);
- REGENESIS Plume Stop Colloidal Biomatrix White Paper Executive Summary (I am happy to provide the full paper if you would like);
- Municipal filing fee check (\$100); and
- Certified Abutters Lists (Auburn & Leicester) and form of abutter notice.

In compliance with the Leicester Wetlands Bylaw, I certify that abutters to the site have been notified of this filing by USPS Certificates of Mailing. Certified abutters lists (Leicester and Auburn) and a copy of the abutter notice are attached. EcoTec will promptly pay the cost of the required legal notice as soon as we receive the details.

A copy of this filing has been submitted by certified mail, return receipt requested to the Central Regional Office of the Department of Environmental Protection and to the property owner, as required.

The proposed project consists of additional remediation/clean-up of groundwater at the former Fournier-Gemme Lagoon site. As the Commission is aware, clean-up activities were last undertaken at this site in 2008 and 2009, under an Order of Conditions issued for DEP file #197-499. As outlined on the attached RFDA Form 1, the clean-up activities currently proposed (identical to the 2016 approved work) consist of limited Buffer Zone vegetation clearing to allow access, drilling of new injection wells within the Buffer Zone, and injecting a non-toxic, aqueous suspension of "Plume Stop" activated carbon into proposed wells within the buffer zone and into an existing well within the wetland. No wetland impacts are proposed and the location of access points, a staging area, existing and proposed wells and temporary control measures are depicted on the attached plan. A Fact Sheet and Executive Summary from a more detailed white paper pertaining to the "Plume Stop" activated carbon to be used are attached

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Leicester Conservation Commission

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to this filing. Additional information on this product is available upon request. The Plume Stop is designed to capture contaminants in groundwater and provide a bacterial matrix to enhance and accelerate biodegradation of the contamination.

We look forward to meeting with the Commission regarding this project. If you have any questions, please feel free to contact me at any time.

Sincerely,



Paul J. McManus, LSP, PWS

President

[pmcmanus@ecotecinc.com](mailto:pmcmanus@ecotecinc.com)

AA/NOI//L/ Leicester Stafford St RDA cover.doc

cc:      Adam J. Last, PE, LSP  
          DEP-CERO Wetlands & Waterways  
          George J. Gemme – property owner

*EcoTec, Inc.*



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

Leicester

City/Town

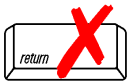
**WPA Form 1- Request for Determination of Applicability**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**A. General Information**

**Important:**

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



1. Applicant:

Corporate Environmental Advisors, Inc.

alast@cea-inc.com

Name

E-Mail Address

21 East Main Street

Mailing Address

Westborough

MA

01581

City/Town

State

Zip Code

800-358-7960

508-835-8812

Phone Number

Fax Number (if applicable)

2. Representative (if any):

EcoTec, Inc.

Firm

Paul J. McManus

pmcmanus@ecotecinc.com

Contact Name

E-Mail Address

102 Grove Street

Mailing Address

Worcester

MA

01605

City/Town

State

Zip Code

508-752-9666, ext. 1

508-752-9494

Phone Number

Fax Number (if applicable)

**B. Determinations**

1. I request the Leicester make the following determination(s). Check any that apply:  
Conservation Commission

- ☐ a. whether the **area** depicted on plan(s) and/or map(s) referenced below is an area subject to jurisdiction of the Wetlands Protection Act.
- ☐ b. whether the **boundaries** of resource area(s) depicted on plan(s) and/or map(s) referenced below are accurately delineated.
- ☒ c. whether the **work** depicted on plan(s) referenced below is subject to the Wetlands Protection Act.
- ☒ d. whether the area and/or work depicted on plan(s) referenced below is subject to the jurisdiction of any **municipal wetlands ordinance** or **bylaw** of:

Leicester

Name of Municipality

- ☐ e. whether the following **scope of alternatives** is adequate for work in the Riverfront Area as depicted on referenced plan(s).



**Massachusetts Department of Environmental Protection**

Bureau of Resource Protection - Wetlands

Leicester

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**WPA Form 1- Request for Determination of Applicability**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**C. Project Description**

1. a. Project Location (use maps and plans to identify the location of the area subject to this request):

Stafford Street (Gemme/Fournier Lagoons)

Street Address

Leicester

City/Town

45

Assessors Map/Plat Number

B6-0

Parcel/Lot Number

- b. Area Description (use additional paper, if necessary):

The project area consists of a former hazardous waste disposal site. The site is subject to on-going monitoring and remediation/clean-up.

- c. Plan and/or Map Reference(s):

Pilot Test System Layout - Former Fournier/Gemme Lagoon Site

Title

9/27/2016

Date

Title

Date

Title

Date

2. a. Work Description (use additional paper and/or provide plan(s) of work, if necessary):

Clear limited vegetation from existing access roads in buffer zone. Drill new injection wells in buffer zone. Inject "Plume Stop" treatment into groundwater via new wells in buffer zone and via existing well within wetland. Only work within wetland is dragging hose, by hand, to access two existing wells. No wetland disturbance is proposed. Proposed work is depicted on attached Pilot Test System Layout plan.



**Massachusetts Department of Environmental Protection**

Bureau of Resource Protection - Wetlands

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**WPA Form 1- Request for Determination of Applicability**

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**C. Project Description (cont.)**

b. Identify provisions of the Wetlands Protection Act or regulations which may exempt the applicant from having to file a Notice of Intent for all or part of the described work (use additional paper, if necessary).

Proposed disturbance is within the buffer zone only and limited to areas previously disturbed for earlier remediation work. Foot travel (dragging hoses in the wetland) within wetland will not alter wetland. Temporary erosion barriers and limited scope of work will ensure no wetland impact or alteration. 310 CMR 10.02(2)(b) permits the issuing authority to allow work, without a Notice of Intent, if it will not alter an Area Subject to Protection.

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3. a. If this application is a Request for Determination of Scope of Alternatives for work in the Riverfront Area, indicate the one classification below that best describes the project.

- ☐ Single family house on a lot recorded on or before 8/1/96
- ☐ Single family house on a lot recorded after 8/1/96
- ☐ Expansion of an existing structure on a lot recorded after 8/1/96
- ☐ Project, other than a single family house or public project, where the applicant owned the lot before 8/7/96
- ☐ New agriculture or aquaculture project
- ☐ Public project where funds were appropriated prior to 8/7/96
- ☐ Project on a lot shown on an approved, definitive subdivision plan where there is a recorded deed restriction limiting total alteration of the Riverfront Area for the entire subdivision
- ☐ Residential subdivision; institutional, industrial, or commercial project
- ☐ Municipal project
- ☐ District, county, state, or federal government project
- ☐ Project required to evaluate off-site alternatives in more than one municipality in an Environmental Impact Report under MEPA or in an alternatives analysis pursuant to an application for a 404 permit from the U.S. Army Corps of Engineers or 401 Water Quality Certification from the Department of Environmental Protection.

b. Provide evidence (e.g., record of date subdivision lot was recorded) supporting the classification above (use additional paper and/or attach appropriate documents, if necessary.)

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**Massachusetts Department of Environmental Protection**

Bureau of Resource Protection - Wetlands

Leicester

City/Town

**WPA Form 1- Request for Determination of Applicability**

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

**D. Signatures and Submittal Requirements**

I hereby certify under the penalties of perjury that the foregoing Request for Determination of Applicability and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge.

I further certify that the property owner, if different from the applicant, and the appropriate DEP Regional Office were sent a complete copy of this Request (including all appropriate documentation) simultaneously with the submittal of this Request to the Conservation Commission.

Failure by the applicant to send copies in a timely manner may result in dismissal of the Request for Determination of Applicability.

Name and address of the property owner:

George Gemme

Name

291 Prospect Street

Mailing Address

Auburn

City/Town

MA

State

01501

Zip Code

Signatures:

I also understand that notification of this Request will be placed in a local newspaper at my expense in accordance with Section 10.05(3)(b)(1) of the Wetlands Protection Act regulations.

Signature of Applicant

Date

*Paul J. Matthews*

Signature of Representative (if any)

5/21/2020

Date







- Rapidly reduces contaminant concentrations
- Stops migrating plumes
- Eliminates rebound
- Achieves stringent clean-up standards

10 μm

A scanning electron micrograph picture of the actual PlumeStop material.



PlumeStop liquid-based remediation substrate

PlumeStop provides remediation professionals with these additional benefits:

- Eliminates problematic back-diffusing contaminants and associated rebound
- Distributes widely into contaminated zones under low injection pressures (a clear advantage over hard to distribute, powdered activated carbon products)
- Effectively treats a range of petroleum and chlorinated hydrocarbons
- Packaged in liquid form for clean and simple subsurface injection

**PlumeStop™** is an innovative, in situ remediation substrate which quickly and effectively treats contaminated groundwater. It does this through the use of highly dispersible, fast-acting, sorption-based technology which captures and concentrates dissolved-phase contaminants within its structure. Once contaminants are sorbed, biodegradation processes proceed at an accelerated rate.

PlumeStop is an environmentally friendly, patent-pending product based on the use of unique, biologically enriching polymers to suspend a colloidal-scale solid sorbent material. This highly dispersible sorbent pulls contaminants directly from groundwater and stimulates their biodegradation in situ.

Once in place PlumeStop is expected to last for decades with minimal impact on aquifer oxidation-reduction potential or geochemistry.

To learn more about PlumeStop visit [plumestop.com](http://plumestop.com) or contact your local REGENESIS Remediation Technologies representative.



# PlumeStop™ Colloidal Biomatrix

## Securing rapid contaminant reduction and accelerated bioremediation using a dispersive injectable reagent

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Jeremy Birnstingl, PhD<sup>a</sup>; Craig Sandefur, MS<sup>b</sup>; Kristen Thoreson, PhD<sup>b</sup>; Stephanie Rittenhouse, BS<sup>b</sup>; Ben Mork, PhD<sup>b</sup>

<sup>a</sup>REGENESIS UK, Bath UK; <sup>b</sup>REGENESIS, San Clemente, CA USA

### Executive Summary

**PlumeStop™ Colloidal Biomatrix** (PlumeStop™) represents a new (patent pending) technology innovation designed to address the challenges of excessive time and end-point uncertainty in groundwater bioremediation. The technology secures rapid groundwater contaminant concentration reduction (days), coupled with accelerated bio-destruction. It is effective on most organic groundwater contaminants including hydrocarbons, halogenated compounds, and a wide variety of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs).

The technical innovation allows for wide dispersion of a sorptive medium in the aqueous subsurface. The product has a dual function; it sorbs contaminants, quickly removing them from the mobile phase ('PlumeStop'), and provides a high surface area matrix favorable for microbial colonization and growth ('Biomatrix'). Contaminant availability within a risk pathway is therefore reduced while at the same time contaminant destruction is accelerated. The product can be applied in combination with compatible controlled release electron donors/acceptors.

Upon reagent injection, target contaminants partition out of the aqueous phase and into the reagent matrix, thereby removing mobile contaminants from the immediate risk pathway. Concentration of the contaminants in this manner, in a matrix conducive to degrader colonization and activity, results in a direct increase in the overall instantaneous rate of contaminant destruction, given the quasi first-order biodegradation kinetics characteristic of environmental systems. This phenomenon can be especially important at low contaminant concentrations, which may otherwise prove insufficient to support appreciable growth and activity of a degrading microflora.

The technology can be applied to inhibit spreading of contaminant plumes, to protect sensitive receptors, or to prevent contaminant migration across property boundaries. PlumeStop is also a very effective tool for control and treatment of groundwater contamination associated with low-permeability porous formations and matrix back-diffusion, promoting diffusion out of the immobile porosity while preventing groundwater impact, and for treating sites with very low contaminant concentrations.

Field studies confirm wide-area dispersion, with order of magnitude (>90%) dissolved-phase concentration reductions secured at the test sites post-application sampling, increasing to two orders of magnitude (>99%) within two months for both chlorinated solvent and hydrocarbon species alike. Laboratory data provide confirmation of post-sorption degradation enhancement, describing a significant increase in the rate of contaminant destruction in biotic matrix systems compared to abiotic matrix and biotic non-matrix controls.

**Notification of Abutters Under the  
Massachusetts Wetlands Protection Act &  
The Town of Leicester Wetland Bylaw**

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following:

- A. The name of the applicant is Corporate Environmental Advisors, Inc.
- B. The applicant has filed a Request for Determination of Applicability with the Conservation Commission for the municipality of Leicester seeking permission to perform additional clean-up of groundwater within and adjacent to an Area Subject to Protection Under the Wetlands Protection Act (General Laws Chapter 131, Section 40).
- C. The address where the planned activity will take place is the former Fournier-Gemme Lagoon site – off Stafford Street (west of houses at 751-757 Stafford Street).
- D. Copies of the Request for Determination of Applicability may be obtained from EcoTec, Inc., 102 Grove Street, Worcester, MA.

For more information call Paul McManus at (508) 752-9666, ext. 1 or email him at [pmcmanus@ecotecinc.com](mailto:pmcmanus@ecotecinc.com).

This is the applicant's representative.

- E. Information regarding the date, time and place of the public hearing may be obtained from EcoTec, Inc., by calling this telephone number (508) 752-9666 during regular business hours.

**NOTE: Notice of the public hearing, including the date, time and place will be published at least five (5) days in advance in the *Worcester Telegram & Gazette*.**

**NOTE: Notice of the public hearing, including the date, time and place will be posted in the City or Town Hall not less than forty-eight (48) hours in advance. Due to current COVID-19 restrictions, the public hearing will likely be held remotely, with provisions for public viewing and participation, to be provided by the Conservation Commission.**

**NOTE: You also may contact your local Conservation Commission or the nearest Department of Environmental Protection Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call:**

DEP Central Region: 508-792-7650

8:38:22AM

## Abutters List

ParcelID	Location	Owner	Co-Owner	Mailing Address	City	State	Zip
35 B4 0	678 STAFFORD ST	WITKOWSKI WAYNE JR	WITKOWSKI LORETTA	678 STAFFORD ST	ROCHDALE	MA	01542
36 B3 0	705 STAFFORD ST	BRIARCLIFF ESTATES SV LLC		7 MAPLE AV	HOPKINTON	MA	01748
36 B5 0	755 STAFFORD ST	TOWN OF LEICESTER	TOWN HALL	3 WASHBURN SQUARE	LEICESTER	MA	01524
36 B6 0	753 STAFFORD ST	PARKE ANDREW M	PARKE STEPHANIE I	753 STAFFORD ST	ROCHDALE	MA	01542
36 B7 0	751 STAFFORD ST	FERREIRA RAILAN	GUIMARAES SERGIO	401 PLEASANT STREET	LEICESTER	MA	01524
45 B1.1 0	909 STAFFORD ST	LANGE SARA		62 MECHANIC STREET	SPENCER	MA	01562
45 B4 0	847 STAFFORD ST	WIRTANEN JR ROBERT L	WIRTANEN KIMBERLY A	P O BOX 293	ROCHDALE	MA	01542-0293
45 B5 0	845 STAFFORD ST	FERDINAND DENISE A	FERDINAND BENSON	845 STAFFORD STREET	ROCHDALE	MA	01542-0312
45 B6.10 0	777 STAFFORD ST	LAGNEUX HEIDIE L	BEDARD PAUL D	777 STAFFORD ST	ROCHDALE	MA	01542
45 B6.12 0	781 STAFFORD ST	HOWARD MICHAEL D	HOWARD THERESA L	781 STAFFORD ST	ROCHDALE	MA	01542
45 B6.2 0	759 STAFFORD ST	POZZESSERE JULIE ANN TRUSTE	PRINCE AMY MARIE TRUSTI	759 STAFFORD ST	ROCHDALE	MA	01542
45 B6.3 0	761 STAFFORD ST	FAITH FELLOWSHIP MINISTRIES		484 MAIN ST UNIT 430	WORCESTER	MA	01608
45 B6.4 0	763 STAFFORD ST	MYROVALIS DIMITRIOS	MYROVALIS THEODORA	763 STAFFORD STREET	ROCHDALE	MA	01542
45 B6.5 0	767 STAFFORD ST	FERDINAND DENISE A	FERDINAND BENSON	767 STAFFORD ST	ROCHDALE	MA	01542
45 B6.6 0	769 STAFFORD ST	WILKICKI CHARLES H	WILKICKI SUSAN L	769 STAFFORD ST	ROCHDALE	MA	01542
45 B6.8 0	773 STAFFORD ST	PREST JOHN F	PREST GAYLE E	773 STAFFORD ST	ROCHDALE	MA	01542
45 B7 0	WILSON ST	BERGIN JR JOSEPH D		P O BOX 486	HARDWICK	MA	01037
45 B8 0	WILSON ST	BERGIN JR JOSEPH D		P O BOX 486	HARDWICK	MA	01037

End of Report

PLEASE NOTE: Abutters in the Town of Auburn

Above is a certified list of abutters that border subject only.

Subject property: Stafford Street, Assessors Map 45-B6-0, Deed Ref. 6641/266

Subject owner: George Gemme

John Prescott, Principal Assessor

Prepared by: Kathleen Asquith, Assistant

## Seth Woolard

**From:** ccosgrove=town.auburn.ma.us@mg.unibank.net on behalf of ccosgrove@town.auburn.ma.us  
**Sent:** Tuesday, May 19, 2020 4:25 PM  
**To:** artallen59@gmail.com  
**Subject:** Request for Abutters List - Your payment has been confirmed!

ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.

**Your Confirmation number is 20200519885190**

**Date of Confirmation: 5/19/2020**

NOTE: When paying by ACH (Checking) it will take two business days for the payment to be debited from your bank account. Your account number is not verified until this payment is presented to your bank. They have the right to return this payment if unable to process this transaction against your account.

Your request for payment(s) of \$10.25 has been received and is subject to approval by your financial institution.

### Account Information

**Name:** Arthur Allen  
**Address:** 13 Town Farm Road  
**City:** Princeton  
**State:** MA  
**Zip:** 01541  
**Email:** artallen59@gmail.com

### Payment Information

**Payment Type:** ACH  
**Payer Name:** Arthur Allen  
**Routing Number:** \*\*\*\*\*5150  
**Account Number:** \*\*\*\*\*2896

### Transaction Information

Town of Auburn Assessor's Department  
Request for Abutters List  
Request Type: Standard 100 to 300 Feet \$10.00

Contact Person: Arthur Allen

Contact Address: EcoTec, Inc.

Contact Phone Number: 508-328-6639

Email Address: aallen@ecotecinc.com

Name of Board: Conservation Commission

Purpose: Notice of Intent

Location of Property: Stafford Street, Leicester

Owner of Property: Gemme

Preferred Method of Delivery: Electronic

Notes: This Leicester property is on the Auburn town line and I need to notify  
Auburn abutters. I have a list from 2016.

29/6

**Quantity:** 1

**Amount:** \$10.00

**Fee:** \$0.25

**Payment Type:**  
ACH

**Total: \$10.25**

## Town of Auburn, Massachusetts

Julie A. Jacobson  
Town Manager

Seth Woolard  
Chief Assessor



May 20, 2020

### Conservation Commission List of "Parties in Interest"

A "Party in Interest" is defined as any person, whose property line touches the petitioner's property, including property directly opposite on public or Private Street or way, and owners of land within 100 feet of the property line as they appear on the most recent tax maps and list in the Town of Auburn.

Map: 29      Parcel: 6

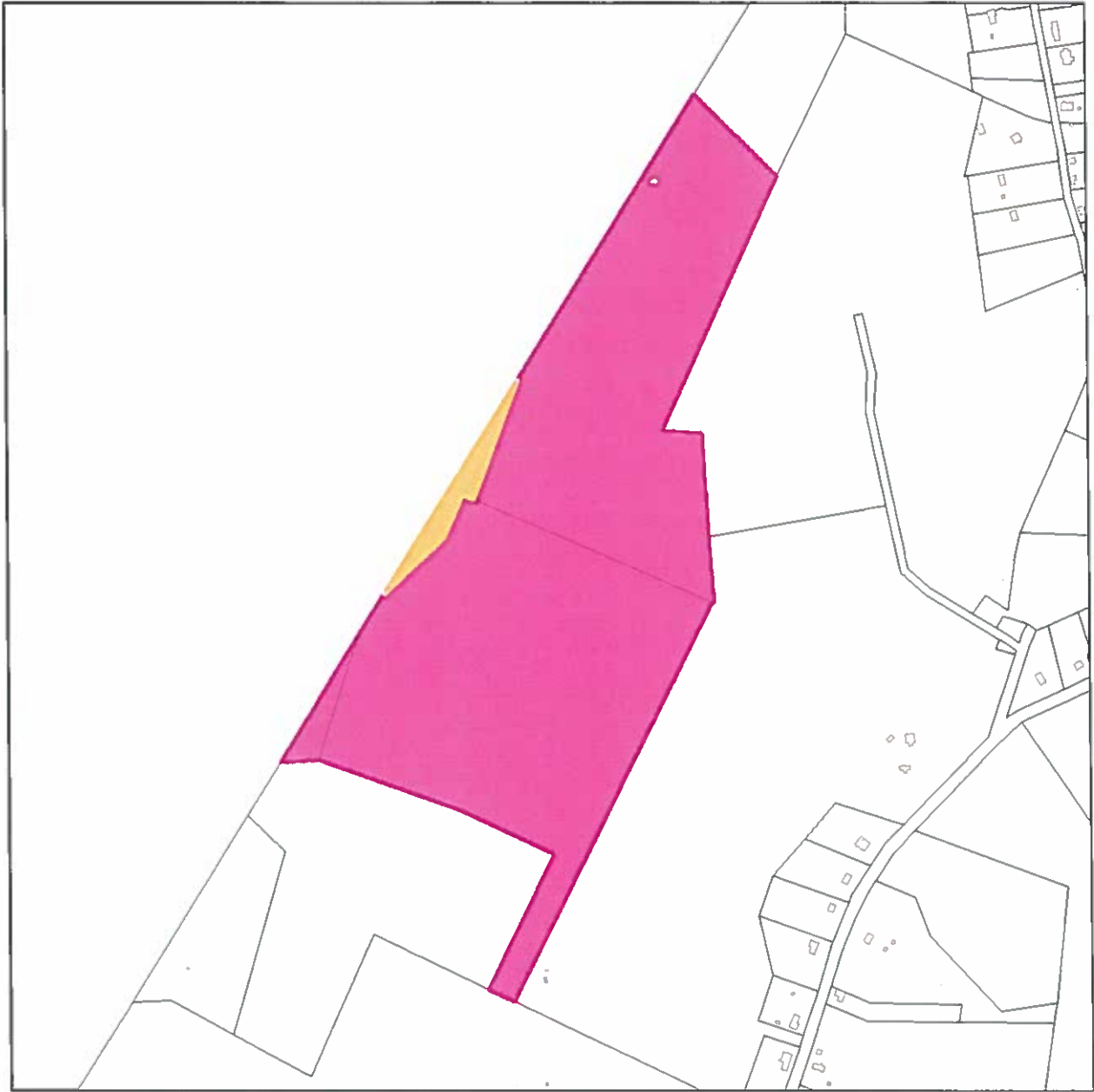
Location: STAFFORD ST AUBURN MA 01501

Assessed to: GEORGE GEMME    291 PROSPECT ST AUBURN MA 01501

Signature: \_\_\_\_\_ Seth Woolard \_\_\_\_\_ Date: \_\_\_\_\_ 5/20/2020 \_\_\_\_\_

104 Central Street  
Auburn, MA 01501  
Telephone: (508) 832-7708  
Fax: (508) 832-5328  
Email: [swoolard@town.auburn.ma.us](mailto:swoolard@town.auburn.ma.us)  
Web site: [www.auburnguide.com](http://www.auburnguide.com)

# STAFFORD ST AUBURN MA



MAP 29 PARCEL 6

CONSERVATION





29/ 4/ / /

SMOKERISE DEVELOPMENT CORP  
417 HENREDON HILL  
PEACHTREE CITY, GA 30269

29/ 5/ / /

SMOKERISE DEVELOPMENT CORP  
417 HENREDON HILL  
PEACHTREE CITY, GA 30269

29/ 6/ / /

GEMME GEORGE J  
291 PROSPECT ST  
AUBURN, MA 01501

20340

**ECOTEC, INC.**

102 GROVE STREET  
WORCESTER, MA 01605  
(508) 752-9666



53-7102/2113



5/21/2020

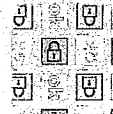
PAY TO THE ORDER OF Town of Leicester

\$ \*\*100.00

One Hundred and 00/100\*\*\*\*\*

DOLLARS

Town of Leicester



*[Handwritten Signature]*  
AUTHORIZED SIGNATURE

MEMO Bylaw fee Stafford St Leicester

⑈020340⑈

ECOTEC, INC.

Town of Leicester  
688 - Project costs - Filing Fee

Bylaw fee Stafford St Leicester

5/21/2020

20340

100.00

EcoTec Inc. - Bay Stat Bylaw fee Stafford St Leicester

100.00

Security features. Details on back.