



March 22, 2021

Boston Conservation Commission
Boston Environment Department
Boston City Hall, Room 805
Boston, Massachusetts 02201

Re: DEP File NE006-1468

Request to Amend Order of Conditions Boston Nature Center 500 Walk Hill Street, Mattapan, MA 02126

Dear Members of the Conservation Commission,

Mass Audubon's Boston Nature Center is submitting a Request for Amendment to the Order of Conditions for the control of non-native invasive plant species at 500 Walk Hill Street, Mattapan, MA 02126 (DEP File # 006 1468), issued initially on June 9, 2016, and extended on May 1, 2019.

The original and extended OOC included the removal of the following invasive plant species from various locations in wetlands, wetland buffer zones, and adjacent uplands at the Mass Audubon's Boston Nature Center (BNC).

- Common Reed (*Phragmites australis* ssp. *australis*)
- Japanese Knotweed (*Fallopia japonica*)
- Wild Chervil (*Anthriscus sylvestris*)
- Hairy Willow-herb (*Epilobium hirsutum*)
- Oriental Bittersweet (*Celastrus orbiculatus*)

The Amendment is requested to include two small additional common reed stands identified in the wetland that were inadvertently chemically treated in 2020.

Included for your review are the following materials:

- End of Season Report detailing the work done in 2019/2020
- Amendment Project Narrative
- Abutters list
- Affidavit of Service
- Notification to Abutters
- Copies of the issued and recorded Orders of Conditions
- Copy of the original narrative





Thank you very much for your consideration in this matter. If you have any questions or require additional information, please do not hesitate to contact us. We look forward to meeting with you (virtually) at your next scheduled public hearing.

Sincerely yours,

A handwritten signature in black ink that reads "Julie Brandlen".

Julie Brandlen
Anne and Peter Brooke Director
Mass Audubon's Boston Nature Center

Cc: DEP NERO





February 22, 2021
Boston Conservation Commission
Boston City Hall Room 709
Boston, MA 02201

RE: DEP File # 006 1468
Boston Nature Center 500 Walk Hill Street, Mattapan, MA 02126.

End of Year Report

Dear Commission,

In accordance with the Order of Conditions, Special Condition #32, issued to Mass Audubon from the Boston Conservation Commission on June 9, 2016, and extended on May 1, 2019, I am providing an End of Season Report for 2019 and 2020 for efforts on our project to control certain non-native invasive species at our Boston Nature Center (BNC) in areas that are subject to the jurisdiction of the Boston Conservation Commission.

Due to a lack of staff with the proper license, no activities to control invasives were conducted in 2019.

In 2020 the two focal species for our control efforts were common reed, *Phragmites australis* ssp. *australis*, and Japanese knotweed, *Fallopia japonica*. Japanese knotweed is still present in the Bordering Vegetated Wetland (BVW) buffer, with one stand occurring within the 200-foot Riverfront Area to a perennial stream (Canterbury Brook) and in many other upland locations. A consistent decline of this species was evident when control activities were maintained yearly (2016-2018). Unfortunately, the treatment gap year in 2019 has coincided with an increase in size and distribution at BNC of Japanese knotweed. Similarly, common reed density and distribution has expanded at BNC. The originally mapped stand of phragmites still occurs on the west side of the wetland, but the species is now also present in the BVW with two additional small stands, and has also been identified in an upland area outside of the jurisdictional area.

A licensed herbicide applicator conducted treatments on the two invasive species, which resulted in an increase in the coverage area since 2019 but which will require further effort to be able to control and hopefully eradicate them.

The largest stand of Japanese knotweed nearing the BVW (identified by the letter A in figure 1) was treated during 2020 together with other upland stands outside of the BVW. Plants were cut to the ground in July of 2020. The standard procedure is to allow the plants to regrow to the point where they start to flower. Herbicide was applied to the resprouted plants on two days, one in September and one in October. We used a dilute solution of Rodeo (2 ounces per gallon) and a surfactant (0.5 ounces per gallon) that was applied with a backpack sprayer. Thirty-two ounces of Rodeo and 8 ounces of Surfactant were used to treat Japanese knotweed in 2020 over an area of roughly 32,000 square feet (2971 m²) in uplands around the property.





Common reed treatments were conducted with the cut and drip method. The plant's stems were cut at about chest height, and a small amount of a concentrated solution of Rodeo was carefully injected into the open stem using a squeeze bottle. Treatments were conducted over four days in September/October, spending 16 hours and applying a total of 18 ounces of Rodeo. A total of 17,300 square feet (1609 m²) of reed were treated in 2020, of which 11,200 square feet (1046 m²) were in the initially mapped area. Two small areas, one of 1100 square feet (103 m²) and one of 5000 square feet (460 m²), were inadvertently treated in 2020 using the cut and drip method inside the bordering vegetated wetland. Particular attention was used to contain the chemical applied to the cut stem, and coloring was added to the herbicide to avoid double treating stems. This accurate application method and the treatment timing, which aimed at selecting treatment days within dry periods, eliminated the chance that the herbicide was in contact with water or other plants growing nearby.

Because areas of common reed that were treated in 2020 were not included in the original map, I contacted Mr. Moreno to inform him of the misunderstanding and ask for suggestions on rectifying the situation. After talking with Mr. Moreno, we followed his advice to apply for an amendment to our NOI that will be followed by an application for a new permit that would extend our ability to deal with invasive species and target new stands identified so far.

Please do not hesitate to contact me if you have any questions about this report and the project. I can be reached by telephone on my cell at 571 271 3708 or via email at fsutti@massaudubon.org.

Sincerely,

A handwritten signature in black ink that reads "Flavio Sutti".

Flavio Sutti, Ph.D.
Greater Boston Regional Scientist



Project Narrative – Amendment Request

The proposed Amendment involves the inclusion of two additional stands of common reed (*Phragmites australis* spp. *australis*) in the invasive control treatment plan conducted at Mass Audubon's Boston Nature Center and authorized by the Order of Conditions (DEP 006-1468).

Project Description

The Boston Nature Center Non-native Invasive Plant Management Project initiated in 2016 aims to control or eradicate several non-native plant species that have been designated as Invasive or Likely Invasive in Massachusetts by the Massachusetts Invasive Plant Advisory Group. The invasive plant species present at the Boston Nature Center that were included in the plan for management were:

- Common Reed (*Phragmites australis* ssp. *australis*)
- Japanese Knotweed (*Fallopia japonica*)
- Wild Chervil (*Anthriscus sylvestris*)
- Hairy Willow-herb (*Epilobium hirsutum*)
- Oriental Bittersweet (*Celastrus orbiculatus*)

The locations of major stands of these species in 2016 are shown below in Figure 1. These species were present in various locations in wetlands, wetland buffer zones, riverfront areas, and adjacent uplands at the Boston Nature Center. After the first few years of chemical treatments (2016-2018), Japanese knotweed and common reed are the only two species still managed with the use of herbicides in BVW as the control of other species is conducted at the moment mechanically and outside regulated areas.

Common reed has become established in the west end of the marsh at the BNC. Over the last 15 years, it has expanded from a relatively small stand covering several hundred square feet to approximately 11,000 square feet by 2018, displacing the native cattail (*Typha* spp.) in the process. Efforts prior to 2016 were made to suppress common reed by hand cutting and pulling, but had not succeeded in preventing the expansion of the common reed stand. In 2020 after one gap year of treatments in 2019, the original common reed stand has increased to almost 18,000 square feet (1668 m²), and two new stands of reed were identified in bordering vegetated wetland (Figure 2). Of these two stands, one is roughly covering an area of 1100 square feet (103 m²) and the other around 5000 square feet (460 m²). The common reed present in the wetland varies in density and is interspersed with cattail and other native plants but appears to be rapidly increasing in both density and extent. The control proposed in this project aims to eradicate common reed in the marsh, allowing the area now dominated by common reed to be re-colonized by cattail. A small stand (700 square feet - 65 m²) of reed was also identified in the upland west of the Nature Center.

Particular attention is used when applying herbicide to common reed. To minimize the amount of chemical used, we add to it a coloring pigment that stained the cut stem when applied, thus avoiding double treatments. This accurate application method and the treatment timing, which aims at selecting treatment days within dry periods, eliminate the chance that the herbicide is in contact with water or other plants growing nearby.

In 2020, two new stands of common reed were inadvertently treated with the cut and drip method (Figure 2). These two areas, one of 1100 square feet (103 m²) and one of 5000 square feet (460 m²) are located inside bordering vegetated wetland, and we ask that the OOC for chemical treatments be amended to include these two areas.

The control of two additional stands of common reed conducted in 2020 was a minor change to the work authorized in the OOC, which consisted of a slight increase in the area chemically treated. The treatment methodology was not changed, and the work was done in conformance to the order of condition. The treatment conducted on previously not mapped stands of common reed meet all performance standards for resource areas and/or buffer zones.

The control program of common reed at the Boston Nature Center would support the wetland's climate resilience. Canterbury Brook, a small urban stream neighboring the wetland, carries solid waste and other materials into the wetland during flooding. Climate change affects flooding regimes, which influence the functioning of the freshwater wetland. The accumulation of organic matter and the build-up of vegetation favored by common reed modifies the water flow and changes topography, potentially playing a role in the drying of the invaded marsh. Prolonged periods of soil exposure that are more frequent during climate-induced droughts could foster the establishment of new common reed populations and their spread within and around the wetland, reducing native species.

Conclusion

The chemical treatment of areas of common reed not originally mapped did not impact the wetland. The work conducted was consistent with the OOC, and the area chemically treated was only minimally increased. Particular attention was used when applying herbicide to common reed. To minimize the amount of herbicide used, we added a coloring pigment that stained the cut stem when applied, thus avoiding double treatments. This accurate application method and the treatment timing, which aimed at selecting treatment days within dry periods, eliminated the chance that the herbicide was in contact with water or other plants growing nearby. Subsequent to the treatment, no evidence was found that species besides common reed suffered from the treatments performed.

Because the establishment of common reed in wetlands can lead to an increase in below- and above-ground biomass, could alter nutrient cycling, and could outcompete native species, we believe that our control effort and its extension should be approved.

Figures



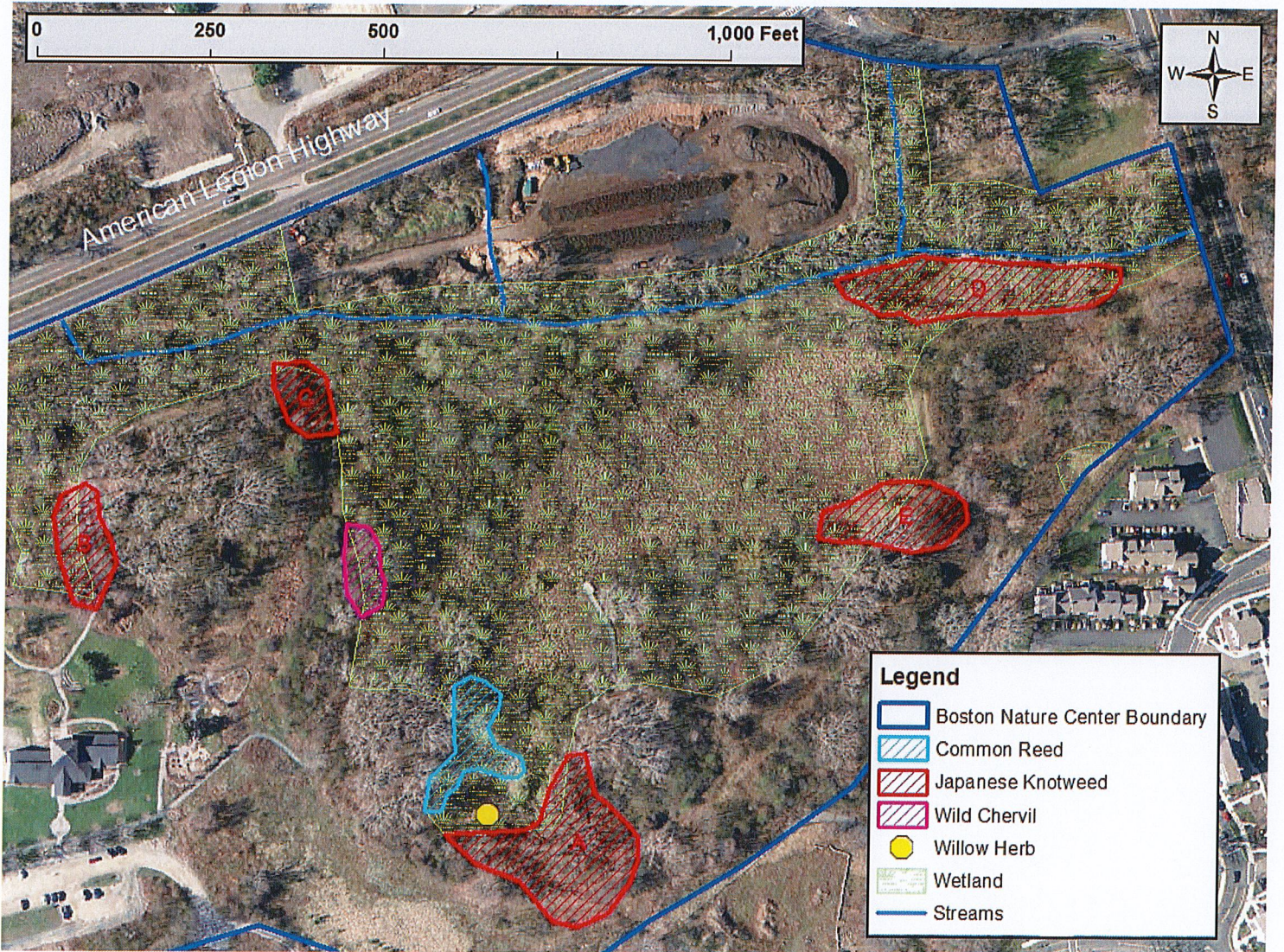
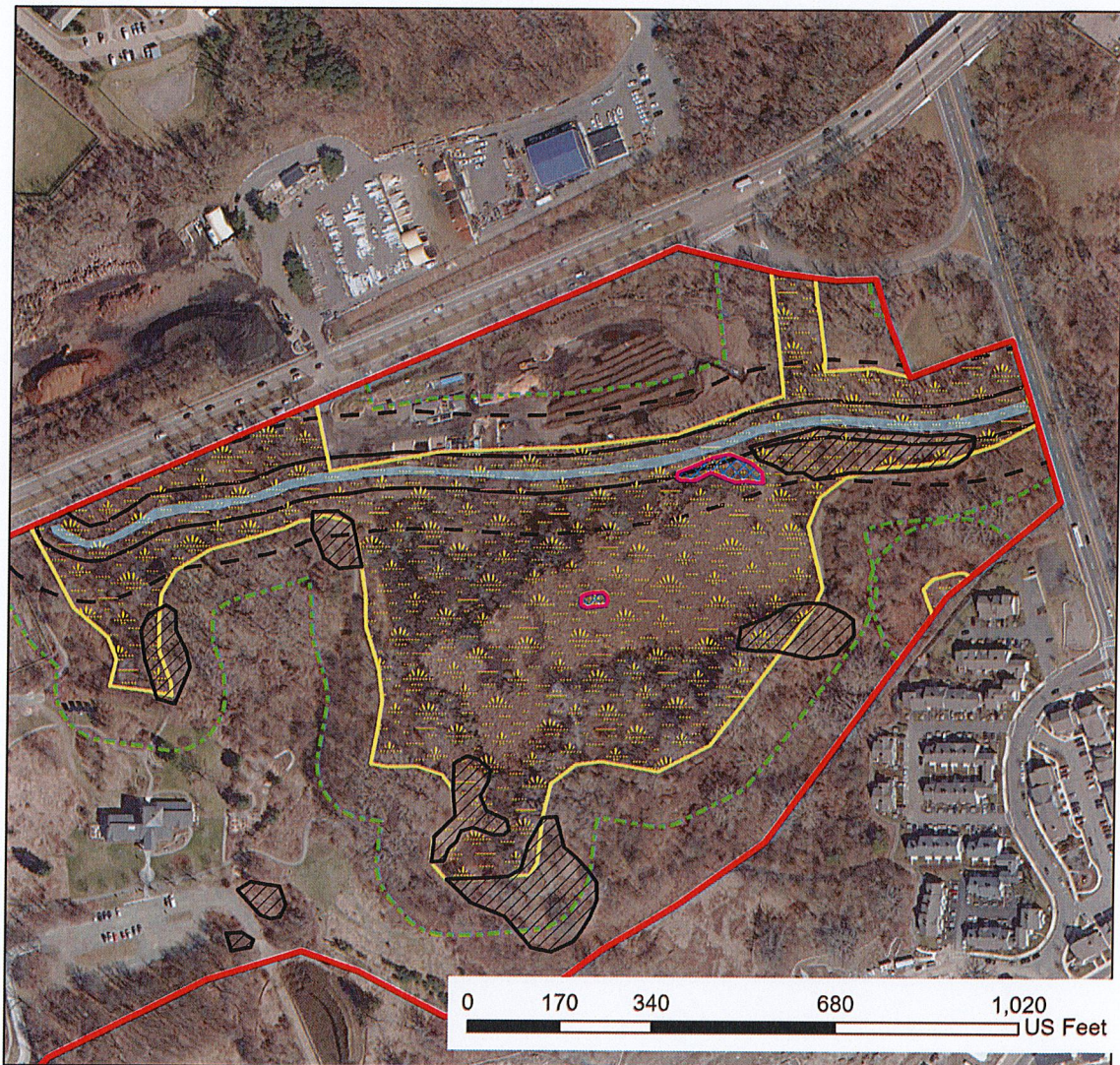










Figure 1: Non-native invasive plant treatment areas authorized by the OOC



Boston Nature Center Wildlife Sanctuary, Mattapan, MA

Invasive Species Control Project Phragmites stands treated in 2020

- | | |
|---|---|
|  BNC Boundary |  25' Riverfront Area Limit |
|  Canterbury Brook |  100' BVW Buffer |
|  Phragmites new stands treated in 2020 |  100' Bank Buffer |
|  BNC Wetlands |  Invasive stands OOC |



Base map: USGS ortho photos 2019 obtained from MASSGIS

Figure 2: Additional common reed (phragmites) treatment areas included in this Amendment (purple)





Figure 3: Original common reed patch and close up of cut stems treated in 2020

Abutter Mailing List Generator
 Abutter List

OBJECTID PID_LONG PID GIS_ID FULL_ADDRESS CITY
 99511 1405198505 1405198505 1405198505 HARVARD ST #LOT 2A-12 DORCHESTER
 99509 1405198410 1405198410 1405198410 HARVARD ST DORCHESTER
 99510 1405198500 1405198500 1405198500 HARVARD ST #LOT 2A-11 DORCHESTER

ZIPCODE OWNER ADDRESS MAIL_ADDRESS
 02124 OG WEST CAMPUS LAND LLC OG WEST CAMPUS LAND LLC 75 STATE ST SUITE #1410
 02124 COMMONWEALTH OF MASS COMMONWEALTH OF MASS HARVARD ST
 02124 OG WEST CAMPUS LAND LLC OG WEST CAMPUS LAND LLC 75 STATE ST SUITE #1410

MAIL_CS MAIL_ZIPC Shape_Area Shape_Length
 BOSTON 02109 18614.58984 1785.89892
 DORCHESTER 02124 140434.1914 1973.44572
 BOSTON 02109 50909.52734 1376.787271

4204 1961 0000 0343 5102

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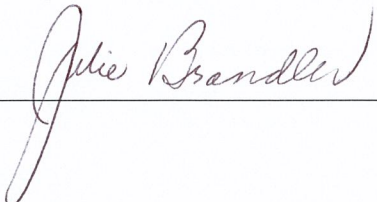
AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act
(to be submitted to Massachusetts Department of Environmental Protection and the
Conservation Commission when filing a Notice of Intent)

I, Julie Brandlen, hereby certify under the pains and penalties of perjury that on March 24, 2021, I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, and the DEP Guide to Abutter Notification dated April 8, 1994, in connection with the following matter:

A Notice of Intent filed under the Massachusetts Wetlands Protection Act by the Mass Audubon and its Boston Nature Center with the City of Boston Conservation Commission on March 24, 2021, for property located at 500 Walk Hill Street, Mattapan, MA 02126 for the control of non-native invasive species.

The form of the notification, and a list of the abutters to whom it was given and their addresses, are attached to this Affidavit of Service.

Name 

March 24, 2021
Date





**NOTIFICATION TO ABUTTERS
BOSTON CONSERVATION COMMISSION**

In accordance with the Massachusetts Wetlands Protection Act, Massachusetts General Laws Chapter 131, Section 40, and the Boston Wetlands Ordinance, you are hereby notified as an abutter to a project filed with the Boston Conservation Commission.

A. Mass Audubon (and its Boston Nature Center) has filed a Notice of Intent with the Boston Conservation Commission seeking permission to alter an Area Subject to Protection under the Wetlands Protection Act (General Laws Chapter 131, section 40) and Boston Wetlands Ordinance.

B. The address of the lot where the activity is proposed is 500 Walk Hill Street, Mattapan, MA 02126.

C. The project involves control of non-native invasive plant species.

D. Copies of the Notice of Intent may be examined at **Boston City Hall** between the hours of **9 AM and 5 PM, Monday through Friday**. For more information, contact the Boston Conservation Commission at CC@boston.gov or (617) 635-3850.

E. Copies of the Notice of Intent may be obtained from Julie Brandlen at jbrandlen@massaudubon.org or 617-983-8500 x6901 between the hours of 9 AM and 5 PM, Monday through Friday.

F. In accordance with the Commonwealth of Massachusetts Executive Order Suspending Certain Provisions of the Open Meeting Law, the public hearing will take place **virtually** at <https://zoom.us/j/6864582044>. If you are unable to access the internet, you can call 1-929-205- 6099, enter Meeting ID 686 458 2044 # and use # as your participant ID.

G. Information regarding the date and time of the public hearing may be obtained from the **Boston Conservation Commission** by emailing CC@boston.gov or calling (617) 635-4416 between the hours of 9 AM to 5 PM, Monday through Friday.

NOTE: Notice of the public hearing, including its date, time, and place, will be published at least five (5) days in advance in the **Boston Herald**.

NOTE: Notice of the public hearing, including its date, time, and place, will be posted on www.boston.gov/public-notices and in Boston City Hall not less than forty-eight (48) hours in advance.

NOTE: If you would like to provide comments, you may attend the public hearing or send written comments to CC@boston.gov or Boston City Hall, Environment Department, Room 709, 1 City Hall Square, Boston, MA 02201

NOTE: You also may contact the Boston Conservation Commission or the Department of Environmental Protection Northeast Regional Office for more information about this application or the Wetlands Protection Act. To contact DEP, call: the Northeast Region: (978) 694-3200.



CITY OF BOSTON

THE ENVIRONMENT DEPARTMENT

Boston City Hall, Room 709 • Boston, MA 02201 • 617/635-3850 • FAX: 617/635-3435

May 2, 2019

Julie Brandlen
Mass Audubon
500 Walk Hill Street
Mattapan, MA 02126

RE: Extension to the Order of Conditions for DEP File No. 006-1468 for the control of non-native invasive species at the Boston Nature Center

Dear Ms. Brandlen,

The Boston Conservation Commission voted at its May 1, 2019 public meeting to extend the above referenced Order of Conditions until June 9, 2022.

If there should be any adverse impacts to wetland resource areas resulting from the work, or changes in design to the project, please contact me immediately at 617-635-4416. Additionally, any work within wetland resource areas and associated buffer zone beyond that outlined in the request is subject to review by the Commission.

For the Commission,

Amelia Croteau, Executive Secretary
Boston Conservation Commission

Enclosure: WPA Form 7

CC: DEP NERO



Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

DEP File Number:

WPA Form 7 – Extension Permit for Orders of Conditions

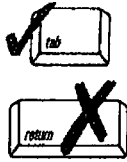
006-1468

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

Provided by DEP

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:

Julie Brandlen
Name
Mass Audubon, 500 Walk Hill Street
Mailing Address
Mattapan MA 02126
City/Town State Zip Code

2. Property Owner (if different):

Massachusetts Audubon Society
Name
208 South Great Road
Mailing Address
Lincoln MA 01773
City/Town State Zip Code

B. Authorization

The Order of Conditions (or Extension Permit) issued to the applicant or property owner listed above on:

June 9, 2016 Issued by: Boston
Date Conservation Commission

for work at: 500 Walk Hill Street 1405198050
Street Address Assessor's Map/Plat Number Parcel/Lot Number

recorded at the Registry of Deeds for:

Suffolk 56594 240
County Book Page

Certificate (if registered land)

is hereby extended until: June 9, 2022 NA
Date Date the Order was last extended (if applicable)

his date can be no more than 3 years from the expiration date of the Order of Conditions or the latest extension. Only unexpired Orders of Conditions or Extension may be extended.

his Extension Permit must be signed by a majority of the Conservation Commission and a copy sent to the applicant and the appropriate DEP Regional Office (<http://www.mass.gov/dep/about/region/findyour.htm>)

Signatures:

Handwritten signatures of three Conservation Commission members

Handwritten signature of Michael [unclear]
Date 5/1/2019

2020 00078540
Bk: 63765 Pg: 130 Page: 1 of 2
Recorded: 09/15/2020 10:06 AM
ATTEST: Stephen J. Murphy, Register
Suffolk County Registry of Deeds



WPA Form 7 – Extension Permit for Orders of Conditions

006-1468

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

Provided by DEP

C. Recording Confirmation

The applicant shall record this document in accordance with General Condition 8 of the Order of Conditions (see below), complete the form attached to this Extension Permit, have it stamped by the Registry of Deeds, and return it to the Conservation Commission.

Note: General Condition 8 of the Order of Conditions requires the applicant, prior to commencement of work, to record the final Order (or in this case, the Extension Permit for the Order of Conditions) in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, it shall be noted in the Registry's Granter Index under the name of the owner of the land upon which the proposed work is to be done. In the case of registered land, it shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done.

Detach this page and submit it to the Conservation Commission prior to the expiration of the Order of Conditions subject to this Extension Permit.

To:

Boston Conservation Commission
Conservation Commission

Please be advised that the Extension Permit to the Order of Conditions for the project at:

500 Walk Hill Street, Mattapan, MA
Project Location

006-1468
DEP File Number

has been recorded at the Registry of Deeds of:

Suffolk
County

for:

Massachusetts Audubon Society
Property Owner

and has been noted in the chain of title of the affected property in accordance with General Condition 8 of the original Order of Conditions on:

Date

Book

Page

If recorded land the instrument number which identifies this transaction is:

Instrument Number

If registered land, the document number which identifies this transaction is:

Document Number

Signature of Applicant