Worcester Lakes and Ponds Invasive Aquatic Plant Control Specifications for Management at Salisbury Pond

OVERVIEW

The City of Worcester Department of Sustainability and Resilience (DSR) seeks a qualified Contractor to manage invasive aquatic vegetation in Salisbury Pond in Institute Park in Worcester, Massachusetts. The Contractor will remove moderate to dense growth of water chestnut (*Trapa natans*) with mechanical harvesting or hydrorakin. Any plants in areas not accessible by mechanical harvester or hydrorake may be spot-treated with herbicide.

DSR will be responsible for obtaining approvals from the Worcester Conservation Commission under the Massachusetts Wetlands Protection Act. The Contractor will be responsible for complying with the Order of Conditions, and for maintaining certified applicators licenses and the waterbody License to Apply as required.

TASK BREAKDOWN

The Contractor will perform the following tasks on a directed basis:

(1) **Trapa natans management:** Eight (8) days of effort to remove water chestnut plants from Salisbury Pond through mechanical harvesting or hydro-raking. Treat plants inaccessible by mechanical harvester with herbicide as necessary.

For bidding purposes, respondents should submit pricing assuming eight (8) days of management of water chestnut with mechanical harvesting methods, and two (2) acres of treatment with herbicide (imazamox).

PROBLEM IDENTIFICATION/HISTORY

Salisbury Pond is a 13-acre waterbody located in Institute Park in Worcester. Salisbury Pond has experienced dense seasonal growth of water chestnut (*Trapa natans*) since 2022. The growth has been treated with the herbicide Clearcast each year to manage growth and deplete the seed bank. Continued management is necessary. Figures A and B show dense growth occurring in 2024.



Figure A. Water chestnut growth in 2024, view from pond dam on Lancaster St.



Figure B. Water chestnut growth in 2024, view from southern shore towards suggested work area and put-in location.

PROJECT LOCATION AND PARAMETERS

Salisbury Pond is approximately 13 acres. A bathymetric study conducted in 2012 indicated that the pond's average depth was roughly three feet, with depths of one to two feet in areas (See Appendix A). Additional filling-in has likely occurred since the 2012 study. At full growth, water chestnut covers nearly

all of the pond's surface, including the very shallow waters north of the peninsula and surrounding the island in the center of the pond. There is no boat ramp providing access to the pond. Previous treatments have been facilitated by backing a trailered airboat into the pond with the use of mobile wheel ramps to facilitate access to the bank. The Contractor shall be responsible for providing necessary equipment for deployment.

The Contractor shall remove the majority of plants through mechanical harvesting. Any plants not accessible by the harvester may be treated with imazamox or removed by hydrorake. For bidding purposes, respondents should submit pricing assuming eight (8) days of management of water chestnut with mechanical harvesting methods, and two (2) acres of treatment with herbicide (imazamox).

The Contractor shall be responsible for collection and disposal of the removed plant material, and for providing all equipment necessary for collection and disposal. Up to two dumpsters may be placed by the Contractor in the work area for collection of the water chestnut prior to disposal. The Contractor shall be responsible for securing the dumpsters at the end of the work day, or for disposing of any trash deposited in unsecured dumpsters. Ground protection must be placed in the work area to prevent damage to the turf, and the work area must be left clean and secure at the end of each day. Institute Park is a highly used park for walking, fishing, and other recreation. The walking paths and boardwalk shall be left clear during project work. The Contractor shall take care to maintain an orderly and safe work area.

Figure C shows the proposed work area and put-in location. Other work areas may be proposed, subject to approval by the City of Worcester.

Arrangements for bidders to view the site can be made directly with Katie Liming, Lakes and Ponds Program Coordinator with the Department of Sustainability and Resilience at limingk@worcesterma.gov or 508-799-8324 x 31212.



Figure C. Suggested work area highlighted in green at the northwest shore of the pond.

TREATMENT APPLICATION PERSONNEL

All management will be completed by a qualified lake management professional with at least 5 years of experience operating a mechanical harvester and overseeing mechanical harvesting projects. Chemical applications must be performed by a qualified lake management professional with at least 5 years of experience in the application of herbicides. The Contractor must have all necessary licenses and certifications for herbicide applications, including the License to Apply (WM-04). The Contractor will be responsible for reporting herbicide applications to regulatory agencies in accordance with the Order of Conditions and other applicable permits.

The Contractor will provide and be responsible for all labor, mobilization, demobilization, materials, equipment, and incidentals required to complete the work specified in this proposal including chemicals, application equipment, harvesting equipment, loading equipment, ground protection, sampling equipment, storage and disposal equipment, spill containment equipment, etc.

TREATMENT APPLICATION SCHEDULE

Services will begin no earlier than June 1, 2025 and end no later than June 30, 2025.

PROJECT COORDINATION

Invasive plant management implementation will be designed by the Contractor with approval by DSR. Once approved, the Contractor will work independently to complete assigned tasks, providing

materials and personnel, and providing a brief report summarizing all practices and observations to DSR within two weeks of project completion.

PERMITTING

The Contractor will be responsible for the following:

- Obtaining any state pesticide use permits required to perform any work specified in this contract where applicable.
- Filing of any notices or year-end reports with the appropriate agency as required by any related permit.
- Notifying the client of any restrictions or special conditions put on the site with respect to any permit received, where applicable.
- Complying with the Orders of Conditions.

DSR will be responsible for obtaining the Orders of Conditions under the Wetlands Protection Act.

SAFETY, STORAGE & HANDLING

The Contractor shall be responsible for all safety issues related to recommended treatment. This includes employee training, storage, handling, and distribution of material. The Contractor shall be responsible for providing any temporary storage of equipment, materials, or supplies.

EMERGENCY NOTIFICATIONS

The Contractor shall be responsible for providing notification to the DSR of any incidents with local property owners, accidents, and/or issues with the application of the treatment to the lake. Additionally, the Contractor will alert the City at least 48 hours prior to any application of chemicals.

AWARD

Contract award will be based on the proposal that matches the above specifications and at the lowest total price. Bidders should include their price for Task (1).

ATTACHMENTS

Attachment A – Order of Conditions.

Attachment B – 2012 bathymetric map of Salisbury Pond, excerpted from dredging feasibility study conducted by Weston & Sampson.

<u>Pricing Sheet</u> <u>Weed Control - Salisbury Pond - Bid #:8432-J5</u>

Item #	Quantity	Unit of Measurement	Description	<u>Unit Cost</u>	Total Cost
1	8	Days	Trapa Natans Harvesting		\$
2	2	Acres	Trapa Natans Treatment with Imazamox	\$	\$
			Bidder Must Bid ALL Items to Be Considered For Award *AWARD BASED ON AGGREGATE TOTAL*	*Grand Total*	\$



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Please note: this form has been modified with added space to accommodate the Registry of Deeds Requirements

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



1. From: City of Worcester		
Conservation Commission		
2. This issuance is for (check one):	a. Order of Conditions b. Amend	led Order of Conditions
3. To: Applicant:		
a. First Name	b. Last Name	
City of Worcester		
c. Organization		
455 Main Street		
d. Mailing Address		
Worcester	MA	01608
e. City/Town	f. State	g. Zip Code
a. First Name	b. Last Name	
c. Organization		
d. Mailing Address		
e. City/Town	f. State	g. Zip Code
s. Project Location:		
Salisbury Pond, 82 Salisbury	Street Worcester	

Latitude and Longitude, if known:

(aka Institute Park)

c. Assessors Map/Plat Number

a. Street Address

01-01X

42d 16m 33.64s N

b. City/Town

d. Parcel/Lot Number

-03-05

d. Latitude

71d 48m 20.05s W

e. Longitude



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A. General Information (cont.)

6.	Property rone parce		Regis	try o	f Deeds	for (a	ttach add	ditiona	ıl in	form	ation if more th	an
	a. County						Certificate	Numb	er (i	f regis	tered land)	
	1258	•						b. Certificate Number (if registered land) 53				
	c. Book						d. Page					
	_	5/18/2022			6	6/6/202	_				6/7/2022	
7.	Dates:	a. Date Notice of Ir	ntent F	iled			ublic Hear	ing Clo	ead		6/7/2022 c. Date of Issuance	
8.	as needed	roved Plans and d): Site Locus	Othe	er Do								
		oko Managaman	. 4				,					
	b. Prepared	ake Managemer	11		-	_	/a	1.04				
		•					Signed an	id Stam	ped	by		
	4/21/2022		_				/a					
	d. Final Revi	sion Date				e.	Scale					
	NOI Applie	cation Materials									May 2022	
	Revised P	roject Description	n								Received 6/1/2	022
	f. Additional	Plan or Document Ti	tle							-	g. Date	
	Finding	-										
1.	Findings p	oursuant to the M	assa	ichus	setts W	etlands	s Protect	ion Ac	et:			
	provided in the areas	the review of the n this application in which work is Act (the Act). Ch	and prop	pres osed	ented a is sign	at the p ificant	public hea	aring.	this	Col	mmission finds	that
a.	□ Public	Water Supply	b.		Land (Contair	ning She	llfish	C.		Prevention of lution	
d.	☑ Private	e Water Supply	e.	\boxtimes	Fisher	ies			f.		Protection of dlife Habitat	
g.	⊠ Groun	dwater Supply	h.	\boxtimes	Storm	Dama	ge Preve	ention	i.	\boxtimes	Flood Control	
2.	This Comn	nission hereby fin	ds th	e pro	oject, as	propo	sed, is: (c	heck	one	of th	ne following box	es)
Αŗ	proved s	ubject to:										
a.	standards be perform General C that the fol	lowing conditions set forth in the wated in accordance onditions, and ar llowing conditions submitted with the submitted with the second to the with the second to the water was th	etlar e wit ny otl s mo	nds re In the her s dify (egulation Notice pecial of the control of the control or differ	ons. The of Intecondities from the condities of the condi	nis Comn ent refere ons attac the plans	nission enced thed to a spec	n or abo th sific	ders ove, is Or ation	that all work si the following der. To the ext is, or other	



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B. Findings (cont.)

De	enied because:
0	filled because.
b.	the proposed work cannot be conditioned to meet the performance standards set forth in the wetland regulations. Therefore, work on this project may not go forward unless and until a new Notice of Intent is submitted which provides measures which are adequate to protect the interests of the Act, and a final Order of Conditions is issued. A description of the performance standards which the proposed work cannot meet is attached to this Order.
c.	the information submitted by the applicant is not sufficient to describe the site, the work or the effect of the work on the interests identified in the Wetlands Protection Act.

or the effect of the work on the interests identified in the Wetlands Protection Act.

Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides sufficient information and includes measures which are adequate to protect the Act's interests, and a final Order of Conditions is issued. A description of the specific information which is lacking and why it is necessary is attached to this Order as per 310 CMR 10.05(6)(c).

3.	☐ Buffer Zone Impacts: Shortest distance between limit of project	
	disturbance and the wetland resource area specified in 310 CMR 10.02(1)(a)	a. linear feet

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

	•	(о. <i>г</i> .рр.отаю о	,,
Resource Area	Proposed Alterati (Temporary)	ion Permitted Alteration (Temporary)	Proposed Replacement	Permitted Replacement
4. 🔲 Bank	a. linear feet	b. linear feet	c. linear feet	d. linear feet
5. Bordering			o. m.car rect	di ilileal Teet
Vegetated			c. square feet	d. square feet
6. 🔼 Land Unde	er 568,728	568,728		
Waterbodi Waterway	•	b. square feet	c. square feet	d. square feet
	e. c/y dredge	ed f. c/y dredged		
7. Bordering	, ,			
Subject to Floo	ding a, square fee	et b. square feet	c. square feet	d. square feet
_	ar = G)		` -	•
Cubic Feet Floo	d Storage e. cubic feet	f. cubic feet	g. cubic feet	h. cubic feet
8. Isolated La	ind			
Subject to Floo		b. square feet		
Cubic Feet Floo	d Storage c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
	3. 33.3.3.3	d. Cable leet	e. cabic leet	i. Gubic teet
9. Riverfront	Area			
o	a total so fe	b. total sq. feet		
Sq ft within				
Sq ft between	en 100-	d. square feet	e souare feet	f. square feet
200 ft	n souare fee	h, square feet		i. square feet
	ממן מוומרים וו	i in oqual o loot	i sourare feet	j. square reet



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B. Findings (cont.)

Co	astal Resource Area Impa	cts: Check all tha	at apply below.	(For Approvals O	nly)
	_	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10.	☐ Designated Port Areas	Indicate size ur	nder Land Unde	r the Ocean, belo	w
11.	☐ Land Under the Ocean	a. square feet	b. square feet		
12.	☐ Barrier Beaches	c. c/y dredged Indicate size ur below	d. c/y dredged nder Coastal Be	aches and/or Coa	astal Dunes
13.	☐ Coastal Beaches			cu yd	cu yd
		a. square feet	b. square feet	c. nourishment cu yd	d. nourishment cu yd
14.	☐ Coastal Dunes	a. square feet	b. square feet	c. nourishment	d. nourishment
15.	Coastal Banks	a. Inear feet	b. linear feet		
16.	Rocky Intertidal Shores	a. square feet	b. square feet		
17.	Salt Marshes	a. square feet	b. square feet	c. square feet	d. square feet
18.	☐ Land Under Salt Ponds	a. square feet	b. square feet	•	
		c. c/y dredged	d. c/y dredged		
19.	☐ Land ContainingShellfish	a. square feet	b. square feet	c. square feet	d. square feet
20.	☐ Fish Runs		or inland Land	nks, Inland Bank, Under Waterbodi	
21.	☐ Land Subject to	a. c/y dredged	b. c/y dredged		
	Coastal Storm Flowage	a. square feet	b. square feet		
22.	☐ Riverfront Area	a total so feet	b. total sq. feet		
	Sq ft within 100 ft				
	Sq ft between 100-	r smilare feet	d. square feet	e soliare feet	f. square feet
	200 ft	n snijare feet	h. square feet	i souare feet	j. square feet



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* #23. If the	2.
project is for	۷,
the purpose of restoring or	
enhancing a	
wetland	
resource area	24
in addition to	
the square	
footage that	_
has been	C
entered in	_
Section B.5.c	
(BVW) or B.17.c (Salt	T
Marsh) above,	
please enter	1.
the additional	
amount here	2

B. Restoration/Enhancement *:	
a. square feet of BVW	b. square feet of salt marsh
Stream Crossing(s):	
a. number of new stream crossings	b. number of replacement stream crossings

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

- Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Order.
- 2. The Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.
- 3. This Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.
- 4. The work authorized hereunder shall be completed within three years from the date of this Order unless either of the following apply:
 - a. The work is a maintenance dredging project as provided for in the Act; or
 - b. The time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Order.
 - c. If the work is for a Test Project, this Order of Conditions shall be valid for no more than one year.
- 5. This Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Order. An Order of Conditions for a Test Project may be extended for one additional year only upon written application by the applicant, subject to the provisions of 310 CMR 10.05(11)(f).
- 6. If this Order constitutes an Amended Order of Conditions, this Amended Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Order will expire on _____ unless extended in writing by the Department.
- 7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.



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C. General Conditions Under Massachusetts Wetlands Protection Act

- 8. This Order is not final until all administrative appeal periods from this Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.
- 9. No work shall be undertaken until the Order has become final and then has been recorded 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, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.
- A sign shall be displayed at the site not less then two square feet or more than three square feet in size bearing the words,

"Massachusetts Department o	of Environmenta	l Protection" [or	, "MassDEP"]
"File Number	349-1327	97	

- 11. Where the Department of Environmental Protection is requested to issue a Superseding Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.
- 12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.
- 13. The work shall conform to the plans and special conditions referenced in this order.
- 14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.
- 15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Order at reasonable hours to evaluate compliance with the conditions stated in this Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.
- 16. This Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Order and to any contractor or other person performing work conditioned by this Order.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- 17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.
- 18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Order.

19.	The wo	rk associated with this Order (the "Project")
	(1)	is subject to the Massachusetts Stormwater Standards
	(2) 🛛	is NOT subject to the Massachusetts Stormwater Standards

If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

- a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.
- No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:
- i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;

ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;

iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10:



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;

- v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.
- c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement) for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:
 - i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and
 - ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.
- d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.
- e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.
- f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.



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C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

- g) The responsible party shall:
 - Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);

Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and

- Allow members and agents of the MassDEP and the Commission to enter and
 inspect the site to evaluate and ensure that the responsible party is in compliance
 with the requirements for each BMP established in the O&M Plan approved by the
 issuing authority.
- h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.
- i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.
- j) The stormwater management system approved in the Order of Conditions shall not be changed without the prior written approval of the issuing authority.
- k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.
- Access for maintenance, repair, and/or replacement of BMPs shall not be withheld.
 Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Special Conditions (if you need more space for additional conditions, please attach a text document):

-			-

20. For Test Projects subject to 310 CMR 10.05(11), the applicant shall also implement the monitoring plan and the restoration plan submitted with the Notice of Intent. If the conservation commission or Department determines that the Test Project threatens the public health, safety or the environment, the applicant shall implement the removal plan submitted with the Notice of Intent or modify the project as directed by the conservation commission or the Department.



1. 2.

3.

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D. Findings Under Municipal Wetlands Bylaw or Ordinance

ls a	a municipal wetlands bylaw or ordinance applicable? 🛛 Yes 🔲 No	•
Th	e City of Worcester hereby finds (check one Conservation Commission	that applies):
a.	☐ that the proposed work cannot be conditioned to meet the standards municipal ordinance or bylaw, specifically:	set forth in a
	City of Worcester Wetlands Protection Ordinance & Regulations 1. Municipal Ordinance or Bylaw	COW GRO Part 1. Ch. 6.
		2. Citation
	Therefore, work on this project may not go forward unless and until a re- Intent is submitted which provides measures which are adequate to meast andards, and a final Order of Conditions is issued.	vised Notice of et these
b.	that the following additional conditions are necessary to comply with ordinance or bylaw:	a municipal
	City of Worcester Wetlands Protection Ordinance & Regulations 1. Municipal Ordinance or Bylaw	COW GRO Part 1. Ch. 6.
T L	- 0	2. Citation
COI	e Commission orders that all work shall be performed in accordance with nditions and with the Notice of Intent referenced above. To the extent that nditions modify or differ from the plans, specifications, or other proposals. Notice of Intent, the conditions shall control.	the following
mo	e special conditions relating to municipal ordinance or bylaw are as follow re space for additional conditions, attach a text document): e Attachment A.	s (if you need
1-0		
100		



WPA Form 5 - Order of Conditions

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

Provided by MassDEP: 349-1327
MassDEP File #

eDEP Transaction #
Worcester
City/Town

E. Signatures

This Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

Please indicate the number of members who will sign this form.

This Order must be signed by a majority of the Conservation Commission.

2. Number of Signers

The Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office, if not filing electronically, and the property owner, if different from applicant.

The names typed below represent the intent to sign the foregoing document in accordance with MGL Chapter 110G §9

Duly authorized by Ch.110G and recorded at Worcester Registry of Deeds in Book 62537 Page 329.

Signatures:	
(mondo Amon	
Sunday the	
Jung Capital	
by hand delivery on	by certified mail, return receipt requested, on
Date	Date

F. Appeals

The applicant, the owner, any person aggrieved by this Order, any owner of land abutting the land subject to this Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Order associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Order, or providing written information to the Department prior to issuance of a Superseding Order.

The request shall state clearly and concisely the objections to the Order which is being appealed and how the Order does not contribute to the protection of the interests identified in



WPA Form 5 – Order of Conditions

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

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City/Town

the Massachusetts Wetlands Protection Act (M.G.L. c. 131, § 40), and is inconsistent with the wetlands regulations (310 CMR 10.00). To the extent that the Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

G. Recording Information

Prior to commencement of work, this Order of Conditions must be recorded 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, the Final Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Order. In the case of registered land, this Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Conservation Commission		
Camanaianian	nped by the Registry of Deeds and su	
То:	1120 11 10 10 10 10	
Conservation Commission		
Please be advised that the Orde	er of Conditions for the Project at:	
Project Location	MassDEP File Numb	ber
Has been recorded at the Regis	stry of Deeds of:	
County	Book	Page
for: Property Owner		
and has been noted in the chair	of title of the affected property in:	
Book	Page	
In accordance with the Order of	Conditions issued on:	
Date		
If recorded land, the instrument	number identifying this transaction is	::
Instrument Number		

If registered land, the document number identifying this transaction is:



Massachusetts Department of Environmental Protection Bureau of Resource Protection - Wetlands WPA Form 5 - Order of Conditions

Provided by MassDEP: 349-1327
MassDEP File #

eDEP Transaction #
Worcester
City/Town

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

Document Number

Signature of Applicant



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

☐ Superseding Determination of Applicability – Fee: \$120

☐ Superseding Order of Resource Area Delineation – Fee: \$120

DEP File Number:

Provided by DEP

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

Request Information

	ocation of Project			
	a. Street Address	b. City/Town, Zip		
	c. Check number	d. Fee amount		
	Person or party making request (if appropriate, name the citizen group's representative):			
	Name			
	Mailing Address			
	City/Town	State	Zip Code	
	Phone Number	Fax Number (if appli	cable)	
	(Form 4B), Order of Conditions (Form	n of Applicability (Form 2), Order of Resource n 5), Restoration Order of Conditions (Form 5	e Area Delineatio 5A), or Notice of	
	(Form 4B), Order of Conditions (Form Non-Significance (Form 6)): Name	n of Applicability (Form 2), Order of Resource n 5), Restoration Order of Conditions (Form 5	e Area Delineatio 5A), or Notice of	
	(Form 4B), Order of Conditions (Form Non-Significance (Form 6)):	n of Applicability (Form 2), Order of Resource 1 5), Restoration Order of Conditions (Form 5)	e Area Delineatio 5A), or Notice of	
	(Form 4B), Order of Conditions (Form Non-Significance (Form 6)): Name	n of Applicability (Form 2), Order of Resource 1 5), Restoration Order of Conditions (Form 5)	e Area Delineatio 5A), or Notice of Zip Code	
	(Form 4B), Order of Conditions (Form Non-Significance (Form 6)): Name Mailing Address	n 5), Restoration Order of Conditions (Form 5	Zip Code	
	(Form 4B), Order of Conditions (Form Non-Significance (Form 6)): Name Mailing Address City/Town	n 5), Restoration Order of Conditions (Form 5	Zip Code	
	(Form 4B), Order of Conditions (Form Non-Significance (Form 6)): Name Mailing Address City/Town Phone Number	n 5), Restoration Order of Conditions (Form 5	Zip Code	
3	(Form 4B), Order of Conditions (Form Non-Significance (Form 6)): Name Mailing Address City/Town Phone Number	n 5), Restoration Order of Conditions (Form 5	Zip Code	
	(Form 4B), Order of Conditions (Form Non-Significance (Form 6)): Name Mailing Address City/Town Phone Number DEP File Number:	State Fax Number (if appli	Zip Code	

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







DEP File Number:

Request for Departmental Action Fee Transmittal Form

Provided by DEP

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

B. Instructions (cont.)

Send this form and check or money order, payable to the Commonwealth of Massachusetts, to:

Department of Environmental Protection Box 4062 Boston, MA 02211

- On a separate sheet attached to this form, state clearly and concisely the objections to the
 Determination or Order which is being appealed. To the extent that the Determination or Order is
 based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations,
 the Department has no appellate jurisdiction.
- 3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see http://www.mass.gov/eea/agencies/massdep/about/contacts/).
- 4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

ATTACHMENT A

Worcester Conservation Commission Special Order of Conditions

City of Worcester Wetlands Protection Ordinance & City of Worcester Wetlands Protection Regulations (City of Worcester Revised Ordinance Part I, Chapter 6)

And

Massachusetts General Laws, Chapter 131, §40 - Massachusetts Wetlands Protection Act

Salisbury Pond, 82 Salisbury Street (CC-2022-040 & DEP#349-1327)

Project Description: An Ecological Restoration Limited Project to manage invasive plants and cyanobacteria using herbicides and other mechanical methods.

Waivers Granted: Waiver of performance standard 4.2.4 for work within the 15' buffer zone (work is within the resource area)

Table of Contents:

I.	Conditions to Meet Prior to and During Construction	2
	Conditions to Meet During Construction	
	Conditions to Meet at Completion of Project	
	General Conditions	

Notes:

- Office of the Commission is located at the Division of Planning and Regulatory Services (455 Main Street 4th floor, Worcester, MA), which can be contacted by e-mailing planning@worcesterma.gov or calling 508-799-1400 ext. 31440.
- Asterisked (*) conditions are standard conditions of approval for all projects.

I. Conditions to Meet Prior to and During Construction

- 21. <u>Person Responsible for Compliance with the Order of Conditions</u>* A person shall be designated to be responsible to monitor compliance with the Order of Conditions. Their name and contact information (24/7) shall be provided to the Office of the Commission prior to start of any activity. This person shall conduct:
 - a) periodic inspections to assure the adequacy and continued effectiveness of erosion and sediment controls;
 - b) inspections of said controls following 0.5-inch or greater rain events, or after a heavy snow melt.
- 22. <u>Contract</u>* This Order of Conditions and all approved plans shall be included as part of any contract and subcontract and shall be posted in a prominently displayed location in the supervisory office on site during all phases of construction.
- 23. Notification* The applicant shall notify the Office of the Commission a minimum of 48 hours prior to the start of any activity.

II. Conditions to Meet During Construction

- 24. <u>Treatment & Monitoring Program</u> The applicant shall develop and implement a management monitoring program to be conducted during and after the drawdown and other management activities. Monitoring shall be on-going throughout the year to minimize impacts to fisheries, shellfish, wildlife habitat, non-target native species, and/or water quality (e.g. flow, clarity, etc.) and to evaluate and maintain the effectiveness of the treatment and minimize any related impacts. On an annual basis, treatment and work plans, and monitoring data/reports shall be provided to the office of the Commission. End of year monitoring reports shall be submitted to the office of the Commission. These reports shall include all management and treatment measures employed in that year, the results of said measures and recommendations for management for the following year. At minimum annual monitoring, and associated reporting information, shall include the following:
 - a) During the winter months evaluation of dissolved oxygen to ensure successful overwintering of organisms;
 - b) During the summer months evaluation of nutrients.
- 25. <u>Chemical Treatments</u> Only chemicals (i.e. algaecides, herbicides, etc.) approved by the Commission applied in accordance with the specifications on file with the Office of the Commission, and with any applicable MassDEP standards shall be used for chemical treatment of the waterbody. If the applicant wishes to propose the use of any other chemicals, they shall submit a written request to the Commission for their review and approval.
- 26. <u>Boat Washing</u> Boats and equipment shall not be washed out in any resource area or buffer zone area, or into any drainage system.
- 27. <u>Limit of Work*</u> No removal, filling, dredging or altering of jurisdictional areas shall take place outside the approved work under this Order of Condition.
- 28. Work Sequencing* Activities shall take place in accordance with all phasing and sequencing shown on the plan and/or provided in the application materials on file with the Office of the Commission and shall follow any lot opening restrictions otherwise provided herein.
- 29. Erosion Stabilization
 - a) <u>Erosion and Sediment Controls</u>* All erosion and sediment controls shall be monitored, maintained, and adjusted for the duration of the project to prevent adverse impacts to jurisdictional areas. Additional erosion and sediment controls may be utilized on site as needed.

- b) Off Site Impacts* There shall be no off-site erosion, flooding, ponding, or flood-related damage from runoff caused by the project activities.
- c) <u>Unanticipated Drainage or Erosion</u>* The applicant shall control any unanticipated drainage and/or erosion conditions that may cause damage to jurisdictional areas and/or abutting or downstream properties. Said control measures shall be implemented immediately upon need. The Office of the Conservation Commission shall be notified if such conditions arise and of the measures utilized.
- d) <u>Soil Stabilization due to Delay in Work</u>* If there is an interruption of more than 10, but less than 60 days between completion of grading and revegetation, the applicant shall sow all disturbed areas with annual rye grass to prevent erosion. If soils are to be exposed for longer than 60 days, a temporary cover of rye or other grass should be established following US Soil Conservation Services procedures, as recently amended, to prevent erosion and sedimentation. Once final grading is complete, loaming and seeding of final cover should be completed promptly.

e) Grading of Slopes*-

- i. >40% Slope Slopes shall not exceed those specified in the plans approved by the Conservation Commission. Any slope equal to or greater than 40% (1 vertical to 2 1/2 horizontal) shall be stabilized with erosion control matting.
- ii. <40% Slope Final grades of vegetated areas shall not exceed a slope of 1 vertical to 2 1/2 horizontal (40%) and shall be stabilized to prevent erosion, particularly during the construction period.
- f) <u>Stockpile Maintenance</u>* Any stockpiling of loose materials shall be properly stabilized to prevent erosion into and sedimentation of jurisdictional areas. Preventative controls such as strawbales or erosion control matting shall be implemented to prevent such an occurrence.
- g) <u>Stockpile Location</u> In no case shall any soil or excavated material be stockpiled within 50 feet of any wetland, floodplain, or storm drain inlet.
- h) <u>Site Stabilization Prior to Winter*</u> Prior to winter, exposed soils shall be stabilized (e.g. with demonstrated vegetative growth, impermeable barriers, erosion control blankets, etc.).

30. Invasive Insects* -

- a) Plantings No trees to be planted shall be species susceptible to the Asian Longhorned Beetle or Emerald Ash Borer.
- b) Wood Removal All tree, brush & wood removal shall adhere to the most recently amended requirements set forth by the Massachusetts Department of Conservation & Recreation for any project located in the Asian Longhorned Beetle Quarantine Zone.
- 31. <u>Dust Control</u>* Provisions for dust control shall be provided during all construction and demolition activities. Such provisions shall be conducted in compliance with all City of Worcester Water Use Restrictions, if in effect, during such activities.
- 32. <u>Dewatering*</u> If dewatering is required.
 - Notice of such activities shall be given to the Office of the Commission within 24 hours of commencement;
 - b) There shall be no discharge of untreated dewatered stormwater or groundwater to jurisdictional areas either by direct or indirect discharge to existing drainage systems;
 - c) Any discharge to surface waters or drainage structures must be visibly free of sediment;

- d) To the maximum extent practicable, proposed dewatering activities should be located outside of the 100' buffer. If such activities must be located within the 100' buffer, they shall be monitored at all times when the pumps are running;
- e) Dewatering activities shall be confined within an area of secondary containment at all times.

33. Spill Prevention* -

- a) No fuel, oil, or other pollutants shall be stored in any resource area or the buffer zone thereto, unless specified in this Order;
- b) No refueling shall take place within resource areas or 100-ft to a resource area;
- c) The applicant shall take all necessary precautions to prevent discharge or spillage of fuel, oil or other pollutants onto any part of the site;
- d) A spill kit shall be present on site at all times.

III. Conditions to Meet at Completion of Project

- 34. <u>Site Stabilization*</u> All disturbed areas shall be properly stabilized with well-established perennial vegetation or other approved methods before the project is considered complete.
- 35. <u>Erosion and Sediment Controls*</u> Erosion and sediment controls shall not be removed from the site until all disturbed areas have been stabilized with final vegetative cover and approval has been received from the Commission or its Agents to do so. The controls must then be removed within two weeks of receipt of that certification.
- 36. <u>Certificate of Compliance*</u> Upon completion of the project, the applicant shall request in writing a Certificate of Compliance from the Commission. If the project has been completed in accordance with plans stamped by a registered professional engineer, architect, landscape architect, or land surveyor, certification must include a written statement by such professional certifying the same.
 - a) If the project required compliance with the Massachusetts Stormwater Standards and/or work was conducted within Riverfront Area or Bordering Land Subject to Flooding, a certified as-built plan-of-land shall be provided showing final grades, resource areas, and all constructed improvements;
 - b) If permanent markers were required, the certified as-built plan-of-land shall depict their location.

IV. General Conditions

- 37. Validity and Duration of the Order The activities authorized hereunder shall be completed within five (5) years from the date of issuance of this Order as this special condition hereby modifies General Condition four (4) of this Order. These activities have demonstrated success in managing aquatic nuisance, non-native, and/or invasive vegetation species without adverse impacts to either resource areas or interests they protect. The Commission recognizes the long-term benefits of this recurring, annual, activity and that an extended permit duration is necessary to observe discrete improvements of overall water quality and native habitat restoration due to the lifecycles of target plant growth. For example, many aquatic nuisance vegetation and invasive species, having extended periods of seed dormancy, may continue to propagate after initial treatment, thus additional time is warranted to complete effective treatments and monitor outcomes for overall, long-term improvements to the resource area and associated waters. Therefore, the Commission finds that the recurring and maintenance nature of the proposed activities have special circumstances warranting an extended permit life in order to best serve protected wetland interests.
- 38. Change in Ownership* If a change in ownership takes place while this Order is still in effect, it is the responsibility of the new owner to notify the Commission of the change and to provide the name of the person responsible for compliance with the Order.

- 39. Conservation Agent's Power to Act* With respect to all conditions, except _____, the Conservation Commission designates the Conservation Agent, as its Agent with full powers to act on its behalf in administering and enforcing this Order, unless the Agent determines approval from the Commission is appropriate.
- 40. Right to Inspect* A member of the Conservation Commission or its Agent may enter and inspect the property and the activity that are the subjects of this Order at all reasonable times, with or without probable cause or prior notice, and until a Certificate of Compliance is issued, for the purpose of evaluating compliance with this Order (and other applicable laws and regulations).
- 41. Changes to the Plan or Errors & Omissions* -
 - (a) If any plan, calculation, or other data presented to the Office of the Commission is in error or have omissions, and are deemed significant by the Commissioners or their Agents, all work will stop at the discretion of the Commission, until the discrepancies have been rectified to the Commission's satisfaction.
 - (b) The applicant must notify the Commission in writing of any changes in the plans or implementation of the proposed activity where mandated by any local, state, or federal agencies having jurisdiction over the proposed activity. If, in the opinion of the Commission, any changes in the plans or implementation of the proposed activity so require, then the Commission may modify, amend or rescind this Order in a way consistent with:
 - M.G.L. Chapter 131, Section 40,
 - 310 CMR 10.00, Wetlands Protection,
 - the City of Worcester's Wetlands Protection Ordinance, and
 - the Commission's Wetlands Protection Regulations

If any provisions of any conditions, or application thereof is held to be invalid, such invalidity shall not affect any other provisions of this Order. If the Commission deems that a proposed change is major or substantial, a new hearing may be required.

42. <u>Liability</u>* - The applicant shall indemnify and save harmless the Commonwealth, the City of Worcester, the Conservation Commission, and its Agents against all sites, claims or liabilities of every name and nature arising at any time out of or in consequence of the acts of the Commission or its Agents in the performance of the work covered by this Order and/or failure to comply with the terms and conditions or this Order whether by itself or its employees or subcontractors.

Appendix B – Excerpt of Dredging Feasibility Study conducted by Weston & Sampson

Full report available at: https://www.institutepark.org/sites/default/files/reports/salisbury-pond-dredging-feasibility-study.pdf

2.0 EXISTING BATHYMETRY

The quantity of material to be dredged is a key feature of the pond with regard to assessing dredging feasibility, and relates to the current and potential future water depth contours, or bathymetry. One of the primary reasons to dredge a pond is to regain lost volume; this can minimize pollutant impacts and reduce the extent and severity of rooted plant growths.

On October 5, 2012, W&S employees accessed the pond in order to evaluate existing bathymetry and sediment thickness within Salisbury Pond. The result was a map that shows that the average depth of Salisbury Pond is approximately 3 feet, with some areas that are shallower than 1 foot.

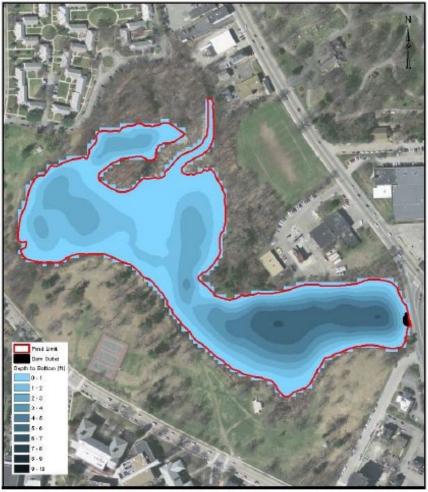


Figure 2: Existing Bathymetry