

PURCHASING DIVISION  
CITY OF WORCESTER  
MASSACHUSETTS 01608-1895  
ROOM 201 - CITY HALL, 455 MAIN ST.  
PHONE (508) 799-1220

**SEALED BID INVITATION**  
**(Supplies, Material, Equipment, Services)**

AN EQUAL OPPORTUNITY AFFIRMATIVE ACTION EMPLOYER

**SEALED BID NO. CR-7811-W2**

**DATE: April 15, 2022**

**CITY OF WORCESTER**  
**Christopher J. Gagliastro, MCPPO**  
**Purchasing Agent**

**BUYER: Christopher J. Gagliastro**

**NOTICE TO BIDDERS**  
**TERMS AND CONDITIONS**

All bids are subject to the terms and conditions and specificity herein set forth except where specifically deleted by the City of Worcester in Section No. 6 below.

**COMPLETE ORIGINAL COPY (including ALL pages) OF THIS BID MUST BE SUBMITTED IN A SEALED ENVELOPE:**

DATE: MAY 11, 2022

TIME: 10:00 A.M. LOCAL TIME

PLACE: Purchasing Division, Room 201, City Hall, Worcester, Massachusetts

MARK SEALED ENVELOPE **"Sealed Bid No. CR-7811-W2, Weed Control Services (Lakes & Ponds) / S & R"**

The name and address of the bidder must appear in the upper left hand corner of the envelope. The City of Worcester is not responsible for bids not properly marked.

**GENERAL**

1. This Bid Invitation covers: Provide all labor, materials, equipment and supplies necessary for Weed Control Services as per the attached requirements and specifications of the City of Worcester for a period of one year from May 15, 2022 through May 14, 2023. This contract may be extended for a second and third year at the sole discretion of the City, the option of which will be determined near the end of the current contract term. (See page 10)
2. A certified check or bid bond made payable to the "City Treasurer, City of Worcester" in the Amount of \$ N/A must accompany this bid.
3. All bids received will be publicly opened and read in the Bid Room at City Hall at date and time shown above.  
**NO BID WILL BE ACCEPTED AFTER TIME AND DATE SPECIFIED**
4. A performance bond in the amount of \$ N/A of the total dollar award is required.
5. A payment bond in the amount of \$ N/A of the total dollar award is required.
6. All terms and conditions are applicable to this proposal except the following section numbers which are hereby deleted from this invitation: all apply
7. **Questions pertaining to this bid must be directed to Christopher J. Gagliastro via e-mail at [gagliastroc@worcesterma.gov](mailto:gagliastroc@worcesterma.gov)**

Please go to the closed bids page of our site to obtain bid results. [www.worcesterma.gov](http://www.worcesterma.gov)

8. The following meanings are attached to the defined words when used in this bid form.
  - (a) The word "City" means The City of Worcester, Massachusetts.
  - (b) The word "Bidder" means the person, firm or corporation submitting a bid on these specifications or any part thereof.
  - (c) The word "Contractor" means the person, firm or corporation with whom the contract is made by carrying out the provisions of these specifications and the contract.
  - (d) The words "Firm Price" shall mean a guarantee against price increases during the life of the contract.
9. Any prospective bidder requesting a change in or interpretation of existing specifications of terms and conditions must do so within five (5) days (Saturdays, Sundays and Holidays excluded) BEFORE scheduled bid opening date. All requests are to be in writing to the Purchasing Division (or e-mailed at: [gagliastroc@worcesterma.gov](mailto:gagliastroc@worcesterma.gov)). *No changes will be considered or any interpretation issued unless the request is in our hands within five (5) days (Saturdays, Sundays and Holidays excluded) BEFORE scheduled bid opening date.*
10. The contractor will be required to indemnify and save harmless the City of Worcester, for all damages to life and property that may occur due to his negligence or that of his employees, subcontractors, etc., during this contract.
11. The Contract Agreement will be in the form customarily employed by the City of Worcester and is on file in the Purchasing Division at City Hall.
12. Bids which are incomplete, not properly endorsed, or signed, or otherwise contrary to these instructions will be rejected as informal by the Purchasing Agent. **Conditional bids will not be accepted.**
13. The Bidder must certify that no official or employee of the City of Worcester, Massachusetts is pecuniarily interested in this proposal or in the contract which the bidder offers to execute or in expected profits to arise therefrom, unless there has been compliance with provisions of G.L. C. 43 Sec. 27, and that this bid is made in good faith without fraud or collusion or connection with any other person submitting a proposal.
14. As the City of Worcester is exempt from the payment of Federal Excise Taxes and Massachusetts Sales Tax, prices quoted herein are not to include these taxes.
15. All prices are to be firm F.O.B. Destination, City of Worcester, Massachusetts, unless otherwise indicated by the City. **Time reserved for award is ninety days.**
16. In case of error in the extension prices quoted herein, the unit price will govern.
17. It is understood and agreed that should any price reductions occur between the opening of this bid and delivery of any order, the benefit of all such reductions will be extended to the City.
18. The City of Worcester reserves the right to reject any and all bids, wholly or in part, and to make awards in a manner deemed in the best interest of the City.
19. Awards will be made to the bidder quoting the lowest net price in accordance with the specifications.
20. The supplier will be bound by all applicable statutory provisions of law of the Federal Government, the Commonwealth of Massachusetts, the City of Worcester, and the Department of Public Safety of the Commonwealth of Massachusetts.
21. Any bid withdrawn after time and date specified, the bidder shall forfeit deposit on bid as liquidated damages.
22. The contractor will not be permitted to either assign or underlet the contract, not assign either legally or equitably any monies hereunder, or its claim thereto without the previous written consent of the City Treasurer and of the Purchasing Agent of the City of Worcester.
23. If this bid shall be accepted by the City, and the bidder shall fail to contract as aforesaid and to give a bond in the amount as specified in Section 4, within ten (10) days, (not including Sunday or a legal Holiday) from the date of the mailing of a notice from the City to him/her, according to the address given herewith, that the contract is ready for signature, the City may by option determine that the bidder has abandoned the contract and thereupon the proposal and acceptance shall be null and void and the bid security accompanying this proposal shall become the property of the City as liquidated damages.

24. When quoting, the bidder shall submit a signed copy of this bid form, and if bid accepted by the City shall constitute part of the contract of purchase. Do not detach any part of this form 30B (Sealed Bid Goods & Services) when submitting a bid. Bidder must sign and return complete form 30B (Sealed Bid Goods & Services).
25. If in the judgment of the Purchasing Agent any property is needlessly damaged by an act or omission of the contractor or his/her employees, servants or agent, the amount of such damages shall be determined by the Purchasing Agent of the City of Worcester and such amount shall be deducted from any money due the contractor or may be recovered from said contractor in actions at law.
26. It is agreed that deliveries and/or completion are subject to strikes, lockouts, accidents and/or Acts of God.

#### **INSURANCE AND WORKER'S COMPENSATION**

27. **COMMERCIAL GENERAL LIABILITY INSURANCE:** Contractor to supply the City of Worcester with certificates of insurance evidencing general liability coverage of not less than \$ 1,000,000.00 per occurrence / \$ 2,000,000.00 aggregate.
28. **AUTOMOBILE LIABILITY INSURANCE:** Contractor to supply the City of Worcester with certificates of insurance evidencing automobile liability coverage, bodily injury and property damage combined single limit, of \$ 1,000,000.00 (all owned, hired, and non-owned autos).
29. **COMPENSATION INSURANCE:** The contractor shall furnish the City of Worcester with certificates showing that all of his/her employees who shall be connected with this work are protected under Massachusetts' statutory worker's compensation insurance policies.
30. The Contractor shall carry public liability insurance with an insurance company satisfactory to the City so as to save the City harmless from any and all claims for damages arising out of bodily injury to or death of any person or persons, and for all claims for damages arising out of injury to or destruction of property caused by accident resulting from the use of implements, equipment or labor used in the performance of the contractor or from any neglect, default or omission, or want of proper care, or misconduct on the part of the Contractor or for anyone of his employ during the execution of the contract.
31. Prior to starting on this contract, the Contractor shall deposit with the Contracting Officer certificates from the insurer to the effect that the insurance policies required in the above paragraphs have been issued to the Contractor. The certificates must be on a form satisfactory to the Purchasing Agent.
32. Except as may otherwise be stated herein, the Contractor shall also carry bodily injury and property damage insurance in an amount not less than those set forth above covering the operation of all motor powered vehicles owned or operated by the Contractor and engaged in this contract.

#### **DISCOUNT**

33. Prompt pay discounts will be considered when determining the low bid except when discounts are for a period of less than 30 days. In this event discounts will not be taken into consideration when determining low bid.
34. Time, in connection with discount offered, will be computed from date of completion and/or delivery and acceptance at destination, or from date correct bill or voucher properly certified by the contract is received if the latter date is later than the date of completion and acceptance and/or delivery and acceptance.

#### **GUARANTEE**

35. The bidder to who a contract is awarded guarantees to the City of Worcester all equipment, materials and or workmanship for a period of one (1) year after final inspection and acceptance and shall replace promptly any defective equipment, materials and/or workmanship required without additional cost to the City.

## **DELIVERIES AND COMPLETION**

36. It is understood and agreed that in the event of failure on the part of the bidder to indicate date of delivery and/or completion, delivery and/or completion will be made within twelve (12) days from date of notification. Should the successful bidder fail to make delivery or complete contract within time specified, the City reserves the right to make the purchase on such orders at the open market and charge any excess over contract price to the account of the successful bidder, who shall pay the same.
37. The contractor shall familiarize himself with the location and facilities for storage.
38. The City through its Purchasing Division reserves the right to divert delivery from one location to another, and to allow for any change in operating conditions or for any other cause not now foreseen and to proportion deliveries according to available storage facilities.

## **SAMPLING AND ANALYSIS**

39. Each bidder must state the commercial name of the product quoted, name, and address of operator or agent from whom the product will be purchased and in addition shall furnish an analysis of the product, date of analysis, by whom made and their address.
40. Samples of the product to be delivered may be taken by a representative of the City, either prior to delivery or while it is being delivered in the storage facilities at destination, or will be taken from the storage facilities to which the product has been delivered as determined from time to time by the Purchasing Agent. Bidder agrees to furnish the necessary manual labor, without additional cost required to assemble the physical samples, which is to be performed under the direction of the City representative.
41. The representative of the City taking the samples shall be given the opportunity, while sampling, to affix his or her signature to the delivery slip each item represented in his/her sample.
42. Any product after the sampling and analysis, not found meeting the requirements of the contract shall be sufficient cause for the cancellation of the contract at the option of the Purchasing Agent.
43. If any product is found that does not meet the analysis submitted by the bidder in his/her proposal, the Purchasing Agent may, at his or her option, exercise his/her right to reject the product and require that all or any part thereof shall be removed promptly by and at the expense of the contractor and replace it forthwith with a product satisfactory to the Purchasing Agent, or to retain the product and compensate the contractor in an amount as determined by the Purchasing Agent and the City Manager.
44. It is understood and agreed that it shall be a material breach of any contract resulting from this bid for the Contractor to engage in any practice which shall violate any provisions of Massachusetts General Laws, Chapter 151B, relative to discrimination in hiring, discharge, compensation, or terms, conditions or privileges of employment because of race, color, religious creed, national origin, sex, age or ancestry.
45. The undersigned as bidder, declares that the only parties interested in this proposal as principals are named herein; that this proposal is made without collusion with any other person, firm or corporation, that no officer or agent of the City is directly or indirectly interested in this bid; and he/she proposes and agrees that if this proposal is accepted he/she will contract with the City in accordance with the specifications, also the terms and conditions as spelled out in this bid form.
46. No Person, including but not limited to corporations, partnerships, limited partnerships or limited liability corporations, shall be eligible to receive a contract under this invitation to bid and/or requires for proposal if that person has been convicted of any felony offense involving the distribution of controlled substances as that term is defined under Chapter 94C of the General Laws and, for contracts to be performed for on-site services to the Worcester Public Schools, if that person or any person to be employed by that person in the performance of such on-site services has been convicted of a "sex offense" or a "sex offense involving a child" or a "sexually violent offense" or would meet the definition of "sexually violent predator" as those terms are defined in Section 178C of the General Laws and who must register with the sex offender registry board.

47. The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ for work or services relating to this contract any unfit person or anyone not skilled in the task assigned to him. In light of the fact that the performance of this contract requires the Contractor and its employees to have significant interaction with the public, the Contractor shall require all employees who may perform services under this contract to conduct themselves in a courteous, professional manner. If the Contractor is notified by the Contract Officer that any person engaged upon the work is incompetent, unfaithful, disorderly, discourteous, or otherwise unsatisfactory, then such person shall be discharged from providing services or work pursuant to this contract. Without limiting the generality of the foregoing, intimidation, threats and/or violent conduct of any kind or nature directed to members of the public are absolutely prohibited. Failure to comply with this requirement shall be grounds for termination of the contract.
48. The Contractor's performance may be evaluated on an ongoing basis including but not limited to consideration of complaints received from members of the public. In order to facilitate this evaluation, the Contractor shall provide the City with documents and records upon request. The Contractor shall further obtain from its employees authorization that appropriate City personnel may obtain all available criminal offender information ("CORI") from the Criminal History Systems Board. A high number of unresolved complaints, any number of complaints that are particularly severe, or employment of individuals who have been convicted of assault or other violent crimes shall be grounds for the early termination or non-renewal of the contract by the City.
49. The procurement officer shall award the contract to the lowest responsible and responsive bidder. The term "responsible bidder" means "a person who has the capability to perform fully the contract requirements, and the integrity and reliability which assures good faith performance." Consistent with its duty to maintain public order and promote public safety, the City has determined that this contract is of a type and nature so as to be particularly sensitive due, at least in part, to the contractor's inherent access and dealings with the members of the general public. Therefore, the City has concluded that additional scrutiny is justified as it determines whether a particular bidder is responsible, having the integrity and reliability to properly perform the requested services. This may entail consideration of the contractor's system of oversight, training and supervision of its employees, including but not limited to its requirement of a high standard of customer service and courtesy in its dealings with the public. The bidder's care and diligence in hiring and assigning its employees will also be considered. In making its determination, the City reserves the right to examine any and all information at its disposal, including but not limited to prior City contracts, the experiences and information obtained from current and former customers (whether identified by the bidder as references or not), as well as other sources available to the City, including but not limited to court documents, newspapers, financial reports (such as DUNS), and certain police data and reports.
50. The Contractor, acting through its owner(s) or any of its employees, or its agents or sub-contractors and any of their employees, shall not engage in any behavior, whether during the course of its duties under this contract or at any other time, that is illegal, criminal or otherwise shocking or offensive to the general public. The determination whether any particular behavior is illegal, criminal or shocking to the general public shall rest in the sound judgment of the Contracting Officer or the City Manager. In making such determination, the Contracting Officer or the City Manager shall apply the general standards of the community. No criminal conviction or formal charges shall be required to make such determination. Such behavior need be something more than trivial and something which would cause the general public to have concerns either about the safety of individuals coming in contact with the Contractor or about the character and integrity of the individuals with which the City does business. Violation of this provision shall be grounds for immediate and unilateral termination of this contract by the City upon five days' notice as otherwise provided herein

GIVE FULL NAMES AND RESIDENCES OF ALL PERSONS INTERESTED IN THE FOREGOING PROPOSAL.

(NOTICE: Give first and last name in full; in case of corporations, give corporate name and names of President, Treasurer, and Manager; and in case of firms give names of the individual members)

Name	Address	Zip Code
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_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

KINDLY FURNISH THE FOLLOWING INFORMATION REGARDING BIDDER:

(1) If a Proprietorship

Name of Owner \_\_\_\_\_

Business Address \_\_\_\_\_

Zip Code \_\_\_\_\_ Telephone No. \_\_\_\_\_

Home Address \_\_\_\_\_

Zip Code \_\_\_\_\_ Telephone No. \_\_\_\_\_

(2) If a Partnership  
Full names and addresses of all partners

<u>Name</u>	<u>Address</u>	<u>Zip Code</u>
-------------	----------------	-----------------

_____	_____	_____
_____	_____	_____
_____	_____	_____

Business Address \_\_\_\_\_ Zip Code \_\_\_\_\_

Tel. No. \_\_\_\_\_

(3) If a Corporation

Full Legal Name \_\_\_\_\_

State of Incorporation \_\_\_\_\_ Qualified in Massachusetts ? Yes \_\_\_\_\_ No \_\_\_\_\_

Principal Place of Business \_\_\_\_\_

Street P.O. Box

City/Town State Zip

Telephone No. \_\_\_\_\_

Place of Business in Massachusetts \_\_\_\_\_

Street P.O. Box

City/Town State Zip

Telephone No. \_\_\_\_\_

GIVE THE FOLLOWING INFORMATION REGARDING SURETY COMPANY

Full Legal Name of Surety Company \_\_\_\_\_

State of Incorporation \_\_\_\_\_ Admitted in Massachusetts ? Yes \_\_\_\_\_ No \_\_\_\_\_

Principal Place of Business \_\_\_\_\_

Street P.O. Box

City/Town State Zip

Place of Business in Massachusetts \_\_\_\_\_

Street P.O. Box

City/Town State Zip

Telephone No. \_\_\_\_\_

NOTE

The Office of the Attorney General, Washington, D.C. requires the following information on all bid proposals amounting to \$1,000.00 or more.

F.I.D. Number of bidder \_\_\_\_\_

This number is regularly used by companies when filing their "EMPLOYER'S FEDERAL TAX RETURN, U.S." Treasury Department Form 941.

AUTHORIZED SIGNATURE OF BIDDER \_\_\_\_\_ TITLE \_\_\_\_\_  
PLEASE SIGN

DATE \_\_\_\_\_ BID SECURITY \$ N/A

The name of Customer Service Representative and the Contract Administrator responsible for servicing this account in the event of contract award are:

NAME (PLEASE PRINT) *Customer Service Rep.* \_\_\_\_\_ TEL. NO. \_\_\_\_\_

NAME (PLEASE PRINT) *Contract Administrator* \_\_\_\_\_ TEL. NO. \_\_\_\_\_

FAX NUMBER \_\_\_\_\_ FAX # \_\_\_\_\_

E-MAIL (Customer Service Rep.): \_\_\_\_\_

E-MAIL (Contract Administrator): \_\_\_\_\_

UNDER MASSACHUSETTS GENERAL LAWS, CHAPTER 30B: SECTION 10, THE FOLLOWING CERTIFICATION MUST BE PROVIDED:

Section 10. A person submitting a bid or a proposal for the procurement or disposal of supplies, or services to any governmental body shall certify in writing, on the bid or proposal, as follows:

" The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity, or group of individuals."

(Please Print) \_\_\_\_\_  
Name of Person Signing Bid

\_\_\_\_\_  
Signature of Person Signing Bid

\_\_\_\_\_  
Company

**No award will be made without vendor certification of the above.**



Bidders must state and identify the product offered, such as manufacturer's name, trade name, brand name and quality next to each item. WE MUST KNOW WHAT HAS BEEN OFFERED.

The quantities shown herein are estimated only and the Contractor will be required to furnish all quantities ordered by the City during the period of the contract.

YES ☐ X ☒ NO ☐

Delivery to be made to: as required by the City, Worcester, MA

This Bid includes addenda numbered \_\_\_\_\_

**NO PRICE ADJUSTMENTS ALLOWED. PRICES QUOTED ARE FINAL. CHECK BEFORE SIGNING!**

**BIDDER TO COMPLETE ITEMS BELOW**

Item No.	Estimated Quantity	Description			Unit Price	Total Amount
		<p>Provide weed control services for lakes &amp; ponds as per the attached requirements and specifications of the City of Worcester.</p> <p>Bidder must bid all items. Award to be made in the aggregate.</p>				<p><b>See Pricing &amp; Specification Pages</b></p> <p>Bidders must use the attached pricing page.</p>
		<p>All questions must be sent via email to <a href="mailto:gagliastroc@worcesterma.gov">gagliastroc@worcesterma.gov</a></p>				

TERMS, CASH DISCOUNT \_\_\_\_\_% 30 DAYS, NET 45 DAYS.

DELIVERY AND/OR COMPLETION TO BE MADE WITHIN as required by the City DAYS FROM DATE OF NOTIFICATION BY THE CITY.

NAME OF BIDDER \_\_\_\_\_

# **DISCLOSURE OF CONTRACT RENEWAL**

This contract may be renewed for a second and third year at the sole discretion of the City of Worcester, the option of which will be determined at the end of the current contract year.

In no event will increase exceed \_\_\_\_\_ % for the second contract year.  
**(TO BE COMPLETED BY BIDDER)**

In no event will increase exceed \_\_\_\_\_ % for the third contract year.  
**(TO BE COMPLETED BY BIDDER)**

\_\_\_\_\_  
Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

IF VENDOR DOES NOT WISH TO BE CONSIDERED FOR A SECOND OR THIRD YEAR OPTION,  
PLEASE INDICATE BY CHECKING THIS BOX: ☐

## **IMPORTANT**

**It is understood and agreed, that failure by the bidder to complete the above increase statement, it is the bidders intent to accept a second and third year option at zero (0) percent increase.**

**All other Terms and Conditions to remain the same.**

**Worcester Lakes and Ponds Invasive Aquatic Plant Control**

**Specifications for Management at Indian Lake and Coes Reservoir**

**OVERVIEW**

The City of Worcester Department of Sustainability and Resilience (DSR) seeks a qualified Contractor to manage invasive aquatic vegetation at Indian Lake and Coes Reservoir in Worcester, Massachusetts. The Contractor will treat the invasive aquatic plants *Phragmites australis*, *Trapa natans*, *Myriophyllum spicatum*, and *Cabomba Caroliniana*, as well as the native nuisance plant *Potamogeton sp*, using herbicide applications. Determination of necessity will be made in collaboration with Worcester DSR.

DSR will be responsible for obtaining approvals from the Worcester Conservation Commission under the Massachusetts Wetlands Protection Act.

**TASK BREAKDOWN**

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

- 1) ***Phragmites australis* Treatment (Indian Lake):** Apply glyphosate to control the growth of *Phragmites australis* (common reed) to the extent possible along the entire shoreline of Indian Lake and Sears Island in early fall of 2022.
- 2) ***Myriophyllum spicatum* Treatment (Indian Lake):** Chemical treatment with diquat dibromide of about 10 acres of dense and 10 acres of sparse growth of *Myriophyllum spicatum* (Eurasian milfoil) in the eastern portion of Indian in the summer of 2022.
- 3) ***Potamogeton sp.* Treatment (Indian Lake):** Chemical treatment with diquat dibromide of about 30 acres of dense *Potamogeton sp* (native nuisance thin leaf pondweed) throughout Indian Lake in the summer of 2022.
- 4) ***Trapa natans* Treatment (Coes Reservoir):** Chemical treatment with imazamox to 1.8 acres of sparse density, 9.1 acres of dense patches, and 1.7 acres of dense growth of *Trapa natans* (water chestnut) in the northern portion of Coes Reservoir once in June and twice in July of 2022.
- 5) ***Myriophyllum spicatum* Treatment (Coes Reservoir):** Chemical treatment with diquat dibromide of about 40 acres of sparse growth of *Myriophyllum spicatum* (Eurasian milfoil) throughout Coes Reservoir in the summer of 2022.
- 6) ***Cabomba caroliniana* Treatment (Coes Reservoir):** Chemical treatment with fluridone of about 50 acres of *Cabomba carolinian* (fanwort) in the northern section of Coes Reservoir in the summer of 2022.

Bidders should include their prices the total cost of Tasks (1), (2), (3), (4), (5), and (6).

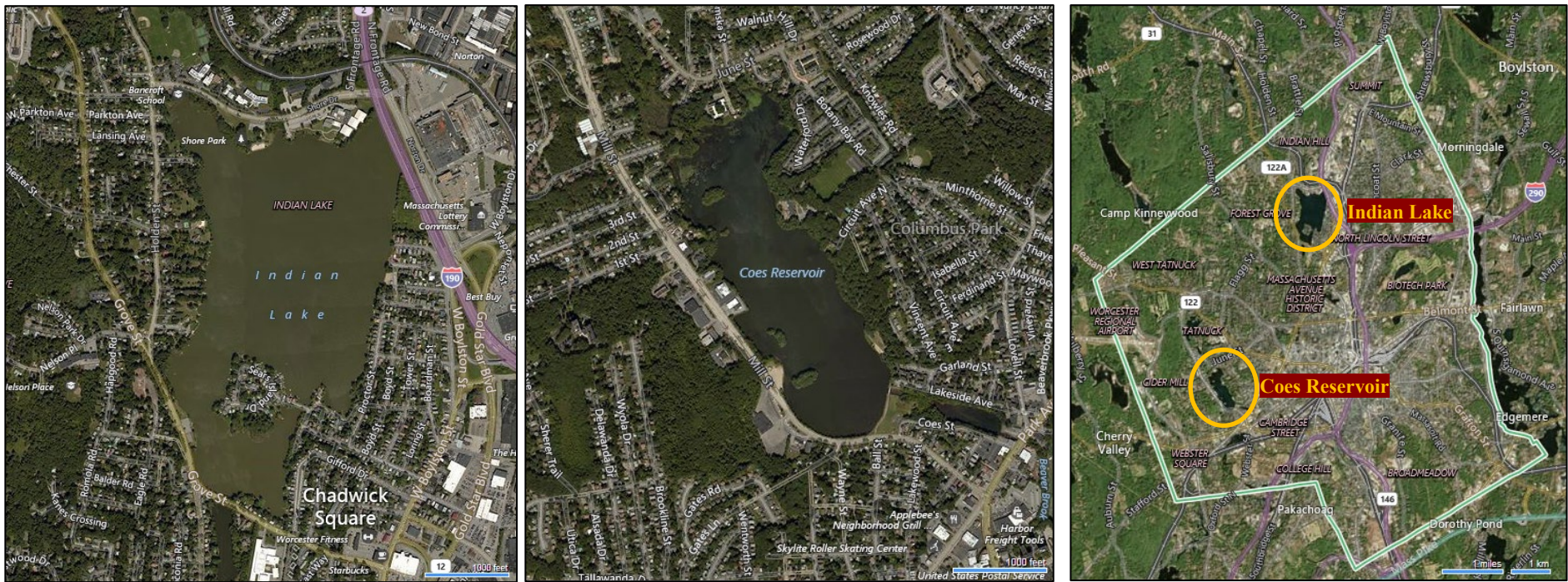
**PROBLEM IDENTIFICATION/HISTORY**

Indian Lake is a 190-acre, shallow lake in Worcester, MA that has been listed on the 2014 Massachusetts Impaired Waters 303d List for Dissolved Oxygen and noxious aquatic plants (see *Figure 1*). In 2001, the Massachusetts Department of Environmental Protection drafted a Total Maximum Daily Load for phosphorous. *Phragmites australis* has been a concern for its obstruction of access to the water, and its ability to fill in the lake at a rapid rate. Between the fall of 2017 and 2020,

Worcester DPW&P contracted the application of glyphosate to the affected areas of the Lake, Applications were not performed in 2021 and DSR would like to address regrowth as necessary in 2022. While a recent map is unavailable, bidders should use the 2016 map for purposes of pricing. In the summer of 2021, *Myriophyllum* was treated with Procellacor, significantly reducing the density. However, after this reduction of density of the invasives, a native pondweed, *Potamogeton sp*, reproduced to nuisance levels, and needed to be treated with diquat dibromide. In 2022, we would like to either treat any returning invasive plants with diquat, so they do not restart infestation. Additionally, we would like to be able to respond to a pondweed infestation if it were to return. See *Figure 2* for a map of the *Phragmites* stands in Indian Lake prior to treatment in 2017, and the *Myriophyllum spicatum* patches in 2020.

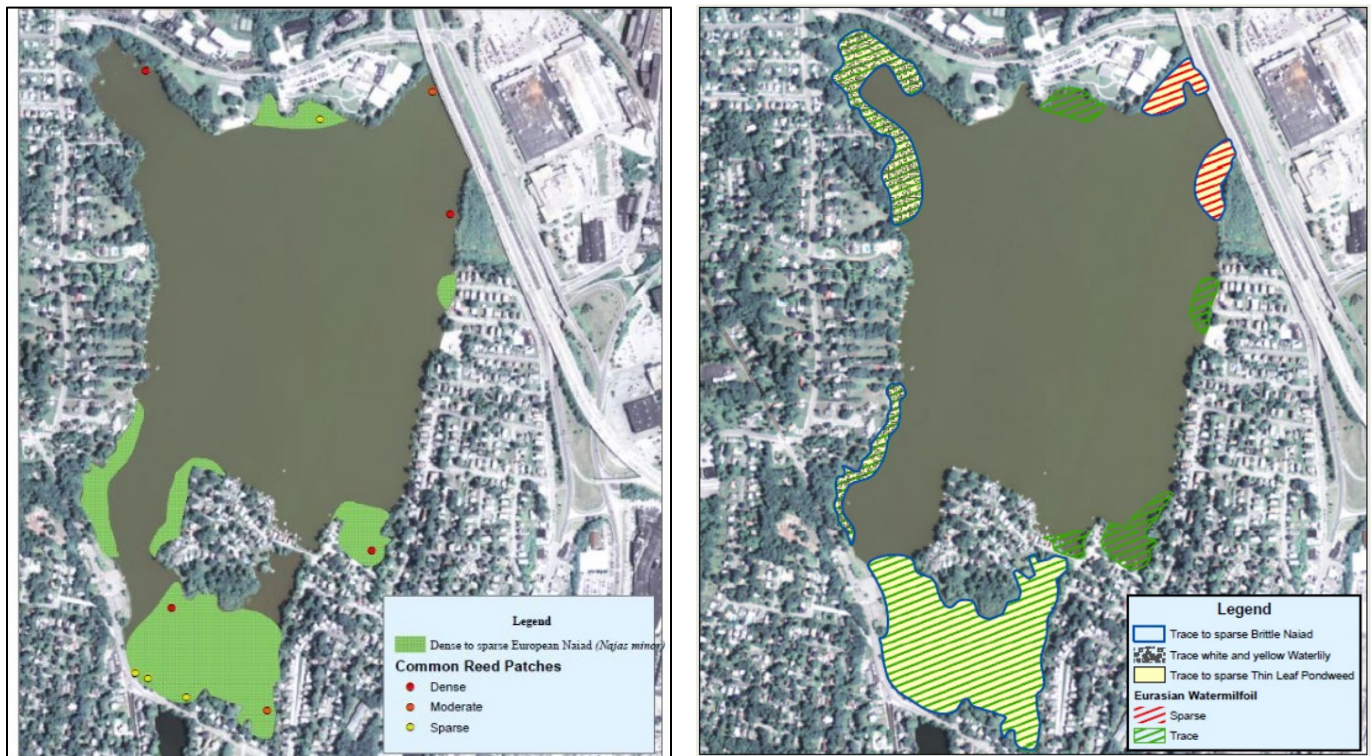
Coes Reservoir is a 90 acre reservoir in western Worcester, and is fed primarily by Tatnuck Brook, which enters from the North. It has public beach access off of Mill Street to the west. The reservoir suffers from the presence of several invasive aquatic plant species. *Trapa natans* has been a concern in the northern portion of the reservoir and has been multiplying at a rapid rate (see *Figure 3* for a map of the infestation). Up until 2020 the City of Worcester contracted the mechanical harvest of a portion of this material, but was limited by time constraints and bathymetry in removing all of it. In 2021, imazamox was used for the first time with success, and the city wants to continue to use it in the coming years. *Myriophyllum spicatum*, and more recently, *Cabomba caroliniana* have been found in the lower portions of the reservoir. In 2019, Sonar was applied with great success, and the waterbody has had minimal presence by these invasives since then. In order to maintain this level of growth, we have been using spot treatments of diquat dibromide. If *Cabomba caroliniana* is found in high density, it is to be treated with fluridone. Invasive plants were mapped post-treatment in 2020 and can be seen in *Figure 3*.

Figure 1. Project location and area.





**Figure 2.** Distribution of *Phragmites* in Indian Lake patches as of 2016 (left), and *Myriophyllum spicatum* in 2020 prior to treatment (right).



**Figure 3.** Distribution of *Myriophyllum spicatum* and *Trapa natans* in Coes Reservoir as of fall of 2020.



## PROJECT LOCATION AND PARAMETERS

Indian Lake is located north of central Worcester, Massachusetts. It is bordered on the northeast by I-190 and on the southwest by Grove Street. The major tributary, Ararat Brook, enters from the north. The Lake is partially divided by Sears Island, which is connected by a low causeway in the southeastern portion. It is well used for recreational purposes, such as swimming, motorized and non-motorized boating, and fishing. See *Figure 1* for a location map. Indian Lake has a mean depth of approximately 9 feet and a maximum depth of 17 ft. Its watershed covers about 2,084 acres and is heavily developed for residential and urban uses. There are two public swimming beaches on the north and east side, and a boat launch on the west side of the Lake.

Coes Reservoir is a 90-acre reservoir located in the Columbus Park neighborhood of western Worcester. It is well used for recreational purposes, such as swimming, non-motorized boating, and fishing. Coes Reservoir is bordered on the west side by Mill Street, a highly trafficked roadway. The City of Worcester owns parkland around the southern portion of the waterbody, including a public beach, a universal access park, and walking trails. Zoning around the reservoir is primarily residential, with a swath of Business Limited on Mill Street and Manufacturing Limited near the spillway. See *Figure 1* for location map. Coes Reservoir has a maximum depth of about 16 feet, and one public beach on Mill Street.

Arrangements for bidders to view the site can be made directly with John Odell, Chief Officer of the Department of Sustainability and Resilience at 508-799-8325 or [odellj@worcesterma.gov](mailto:odellj@worcesterma.gov).

## TREATMENT AREA

Glyphosate will be applied to all stands of *Phragmites* found around the perimeter of Indian Lake as indicated in *Figure 2*. Additionally, diquat dibromide is to be applied as spot treatments to all returning *Myriophyllum spicatum*, as well as nuisance *Potamogeton sp.* In Coes Reservoir, Imazamox should remove all *Trapa natans* present in the northern portion of Coes Reservoir over at least two treatments, diquat dibromide is to be applied as spot treatments to all returning *Myriophyllum spicatum*. A fluridone treatment will be determined necessary by DSR personnel.

## TREATMENT APPLICATION PERSONNEL

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 algaecide and herbicide applications.

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, sampling equipment, storage equipment, spill containment equipment, etc.

## TREATMENT APPLICATION SCHEDULE

Tasks will be completed as-needed based on monitoring data generated by Worcester DSR and other contractors. It is important to complete any treatments in as short of a time as possible to

minimize the impacts to lake recreational use. Treatments will begin no earlier than April 1, 2022 and end no later than November 1, 2022.

## **PROJECT COORDINATION**

Invasive plant treatment 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 reports to DSR within two weeks of each treatment implementation with monitoring results (in the case of alum treatments) and recommendations.

## **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. During applications, the Contractor must ensure that full containment of chemical be maintained at all times to ensure no contamination of the lake.

## **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 to ensure that the City has proper time to alert the public about any subsequent lake closures.

## **REPORTING**

After each treatment, the Contractor will prepare a treatment report summarizing all practices and observations during treatment. This report will be due to DSR within 10 days of the treatment date.

## **AWARD**

Contract award will be based on the proposal that matches the above specifications and at the lowest price. Bidders should include their prices for Task (1), (2), (3), (4), (5), and (6).

## **REFERENCES**

Indian Lake Phosphorus Reduction Study

([http://www.ilwa.org/Indian\\_Lake\\_Phosphorus\\_Reduction\\_Study%20Final\\_022613.pdf](http://www.ilwa.org/Indian_Lake_Phosphorus_Reduction_Study%20Final_022613.pdf))

Total Maximum Daily Load for Indian Lake (<http://www.ilwa.org/Indian%20Lake%20TMDL.pdf>)



# PROPOSAL FOR WEED MANAGEMENT AT INDIAN LAKE AND COES RESERVOIR

ITEM NUMBER AND DESCRIPTION		ESTIMATE OF QUANTITIES	COMPUTED TOTALS
THE BIDDER MUST FILL IN THESE UNIT PRICES. He/she should also carry out all extensions and fill in "Computed Totals." (In case of error or discrepancies, UNIT PRICES govern and written words take precedence over figures.)			

Item 1	<i>Phragmites australis</i> Treatment (Indian Lake)		
	_____ Dollars	1	\$ _____
Item 2	<i>Myriophyllum spicatum</i> Treatment (Indian Lake):		
	_____ Dollars	1	\$ _____
Item 3	<i>Potamogeton</i> sp. Treatment (Indian Lake):		
	_____ Dollars	1	\$ _____
Item 4	<i>Trapa natans</i> Treatment (Coes Reservoir):		
	_____ Dollars	1	\$ _____
Item 5	<i>Myriophyllum spicatum</i> Treatment (Coes Reservoir):		
	_____ Dollars	1	\$ _____
Item 6	<i>Cabomba caroliniana</i> Treatment (Coes Reservoir):		
	_____ Dollars	1	\$ _____

## TOTAL

\_\_\_\_\_ DOLLARS AND \_\_\_\_\_ CENTS  
(AMOUNT IN WORDS)

\$ \_\_\_\_\_  
(AMOUNT IN FIGURES)