

NORTH
GLENGARRY
NORD



THE CORPORATION OF THE TOWNSHIP OF NORTH
GLENGARRY

Proposal No. PW 2023-20

RFP FOR WASTEWATER LAGOON SLUDGE REMOVAL

May 25, 2023

The Township of North Glengarry is seeking submissions from qualified contractors to provide proposals for sludge removal at the Alexandria Wastewater Lagoon.

1. Information for Bidders

1.1. Submissions

The RFP must be submitted on the forms provided, which shall be filled out in ink or by typewriter and shall be duly executed by the signing officer(s) of the corporation. Proposals may be invalidated if the forms are not properly or fully completed. All blanks must be legibly and properly filled in on the printed forms supplied for that purpose.

Submissions shall be received by the Township of North Glengarry by email to pwspecialist@northglengarry.ca, no later than **4:00:00 PM** local time on **June 15, 2023**.

1.2. Overview of Requirements

The RFP document provides for the supply of all material, labor, and equipment for the removal of biosolid content from the Alexandria Wastewater Lagoon Cell “B” and the dewatering thereof, at the same location. The project must be completed through using geotextile containers (disposal by others), polymer, polymer feed system, and incidentals as shown, specified, and required in connection with deployment, and filling of geotextile containers, all in accordance with the terms and conditions and specifications of this RFP.

1.3. Bank Draft

Only the lowest bidder must submit a bank draft, in the amount of 10% of the total proposal within 5 days of notice. The Township shall contact the lowest bidder to notify them in a timely manner. Unsuccessful bidders will not be required to provide a 10% deposit unless the lowest bidder fails to comply within the allotted time. The bank deposit of the successful bidder shall be retained until the Township’s acceptance of the completed work.

1.4. Definitions

See Appendix ‘A’ for definitions that apply hereto.

1.5. Workplace Safety and Insurance Board (WSIB) Requirements

Adherence to WISB requirements is mandatory for this project. A certificate of clearance from the Workplace Safety & Insurance Board shall be submitted by the bidder in the quotation package.

The policy shall include the Township of North Glengarry and the Ontario Ministry of the Environment, Conservation and Parks (MECP) as an additional insured in respect of all operations performed by or on behalf of the company in relation to the contract requirements.

1.6. Experience/References

Bidders are to complete the attached Experience/References Form (Section 4 - Schedule 1) for their company and all named subcontractors and submit it with their proposal at the time of closing of the bids. By completing this information, bidders' consent to the Township contacting the references provided or any obtained independently to obtain further information in relation to the quality and scope of work provided by the bidder, as well as information relating to any of the above assessment factors. The Township reserves the right not to award this project to any bidder.

Bidders' named subcontractors are to each have and, if requested, be able to provide conclusive proof of acceptable qualifications and related business experience in performing the services required. The assessment of acceptable qualifications and related business experience will be based on a range of measures including, as appropriate, professional and technical qualifications and competence of the firm and the staff proposed for the work, the firm financial resources, the equipment and other facilities available to provide the services, managerial capability, reliability, experience and reputation, personnel available, the firm's legal capacity to enter into a contract, their solvency and any outstanding litigation, their good standing regarding the payment of taxes and any history of false representation regarding qualifications and related experience.

Completion of a minimum of at least two (2) similar projects of a comparable size and volume, in municipal/private wastewater treatment in the past five years is a requirement for firms submitting quotes. A completed Experience I References Form must be submitted with the quotation package.

1.7. Subcontracting

Bidders are to complete the attached Subcontractor Form and submit it with their RFP package. If awarded this RFP, all subcontractors must possess the required qualifications & experience. The Township reserves the right, in its sole discretion, not to recommend an award to any bidder whose named subcontractor(s) is/are deemed to be unsuitable by the Township or has/have an unsatisfactory health and safety record. Bidders using subcontractors shall be responsible for their quality of work and restoration of substandard work.

Without limitation and to summarize the requirements of other paragraphs of the proposal, the following documentation shall be included with the RFP package:

- HST registration number
- Approved list of subcontractors
- Proof of insurance
- Workers' Compensation Board Certificate
- Copy of bidder's Health and Safety Policy
- Detailed plan of construction

If the bidder refuses or fails to execute the contract within ten (10) working days of the date of award, it will be considered that the bidder has abandoned all rights and interest in the contract. The Township shall, in such an event, be free to award the contract to another bidder, or to re-bid the work.

Bids shall be irrevocable for 60 days.

1.8. Basis of Award

It is the intention of the Township to award this RFP based on the most compliant and responsive bid. All Contracts will be awarded by resolution of Council.

The Township reserves the right in its sole discretion not to award a Contract to any bidder who has failed to demonstrate the required experience & qualifications identified in the quotation document as necessary for performing the required work.

The award of this contract is subject to the availability of finances and the review and approval by Township management and Council, as appropriate. Any of these parties may elect not to approve the award of this contract for any reason.

If this RFP is cancelled, the bidder agrees to waive any right to claim any damages or cost recoveries whatsoever against the Township of North Glengarry, its elected officials, employees and authorized agents.

The Township reserves the right, in its sole and unfettered discretion, to:

- Issue an Award for this work in whole or in part;
- Refrain from making an Award.

No liability shall accrue to the Township for its decision in this regard.

2. Contract Requirement

2.1. Location of Work

The equipment and materials required shall be delivered to the following location:

- 20596 McCormick Road, Alexandria Ontario

2.2. Project Manager

Township of North Glengarry Project Manager:

Dean McDonald, Environmental Services Manager

2.3. Background/Scope of Work

2.3.1. Scope of Work

- This proposal provides for the supply of all material, labor and equipment, polymer, polymer feed system, and incidentals as shown, specified, and required in connection with deployment, and filling of the geotextile container, at the Alexandria Lagoon for the removal of biosolids content

from Cell B, and dewatering thereof, using geotextile containers (disposal by others), all in accordance with the terms and conditions and specifications of this RFQ document.

- The contractor may choose to provide an alternate method for biosolids removal and dewatering, with equivalent efficiency and regulatory compliance to geotextile containers. In this case, the bidder shall remove and dispose of the biosolids offsite.
- The contractor shall furnish the geotextile container by positioning it on a prepared surface that is level across the width of the geotextile container with a maximum slope of 0.5% in the overall length direction of the geotextile container. The geotextile container is to be filled with dredged or pumped material to a height not exceeding the manufacturer's specifications.
- The contractor shall be responsible for obtaining power supply for the work to be completed. No separate payments will be made for cost associated with the power supply.
- The contractor has the responsibility to provide any personal protective equipment for their own workers. If a worker fails to comply with any program, policy, rule or request regarding health and safety, that person will not be allowed on the site until such time that the person complies.
- Prior to starting the work, the contractor shall meet with the Township's staff to receive safety orientation on the site safety policies of the Township.
- Submit a signed certification from the geotextile container manufacturer indicating that the materials utilized meet the project specification requirements and are designed specifically for this purpose.

2.3.2. Products

- Geotextile Containers

A. Geotube® Container Material: The Geotube® container material shall be fabricated from GT500, a "Specially Engineered Dewatering Textile" manufactured from high tensile polypropylene multifilament and monofilament yarns, which are woven into a stable network such that the yarns retain their relative position. The Geotube® container material shall be inert to biological degradation and resistant to naturally encountered chemicals, alkalis and acids.

B. The Geotube® container shall be fabricated by sewing together mill

widths of the GT500 woven engineered textile to form a tubular shape. The sewn seams shall be two parallel rows of 401 “lockstitch” with 3/8” to 1/2” spacing between rows. The sewing thread shall be multi-ply polyester.

- C. Geotube® containers 45 ft. or greater in circumference must be fabricated with the mill roll length of the GT500 woven engineered textile and the adjacent seams being in the circumferential direction with the closure of the Geotube® container having a longitudinal seam on the bottom of the container. Each Geotube® container shall be fabricated with one or more PVC filling ports located along the top centerline of the Geotube® container. The filling port is comprised of approx. 1.5” thick (inside and outside) flange rings that sandwich the Geotube® GT500 woven engineered textile between 1/8” thick rubber gaskets and secured with 3/4” bolts. The resulting connection strength exceeds that of a traditional sewn-in, textile filling port. In addition to the flanges, the fill port shall include a fabric sleeve that may be secured around the feed line to prevent leakage.
- D. PVC Fill Ports are for the attachment of the dredge or pump discharge line to the Geotube® container and shall be located at intervals of no more than 100 feet, or as recommended by the manufacturer. Fill ports shall be ridged PVC with an inner port body and outer port body each comprising one or more cellular surfaces capable of distributing a force caused by the clamping of the inner port body and outer port body together with steel bolts and nuts. Fill ports shall be either 4” (GP4) or 8” (GP8) in diameter with a 30-inch long, flexible non-woven 8 oz. geotextile sleeve.
- E. “Specially Engineered Dewatering Textile” material and factory-sewn seams utilized in the construction of the Geotube® container shall meet or exceed the values shown in Table 1.
- F. The geotextile containers shall be filled as evenly as possible until the design height has been achieved. Effluent water shall be allowed to adequately drain away from the geotextile container.
- G. After the initial filling cycle, allow the geotextile containers to dewater, then the geotextile containers may be filled again to the recommended height. This process can be repeated until the geotextile dewatering process is completed. Upon completion of filling the geotextile container, the fill port sleeves shall be closed by rolling the sleeve down to the top of the port flange and closing with a clamp.
- H. Geotextile container recommended filling heights will be supplied by the manufacturer.

- I. Overall compliance with the manufacturer's installation instructions is required.

Table 1: GT500 Polypropylene - “Specially Engineered Dewatering Textile”

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Wide Width Tensile Strength (at ultimate)	ASTM D4595	kN/m (lbs/in)	78.8 (450)	109.4 (625)
Wide Width Tensile Elongation	ASTM D4595	%	20 (max.)	20 (max.)
Factory Seam Strength	ASTM D4884	kN/m (lbs/in)	70 (400)	
CBR Puncture Strength	ASTM D6241	N (lbs)	8900 (2000)	
Apparent Opening Size (AOS)	ASTM D4751	mm (U.S. Sieve)	0.43 (40)	
Water Flow Rate	ASTM D4491	l/min/m ² (gpm/ft ²)	813 (20)	
UV Resistance (% strength retained after 500 hrs)	ASTM D4355	%	80	

Filtration Properties	Test Method	Unit	Typical Value
Pore Size Distribution (O ₅₀)	ASTM D6767	Micron	80
Pore Size Distribution (O ₉₅)	ASTM D6767	Micron	195

Physical Properties	Test Method	Unit	Typical Value
Mass/Unit Area	ASTM D5261	g/m ² (oz/yd ²)	585 (17.3)
Thickness	ASTM D5199	mm (mils)	1.8 (70)

- Geotextile Liner and Filtration Fabric
 - A. A drainage medium shall be required on top of the impervious membrane and under the geotextile containers, as described in paragraph 2.1.4.1 (b). Acceptable materials would be Geotextile Filtration Fabric (GFF) or sufficient washed crush stone to create voided area for drainage. If used, the three-dimensional GFF shall be installed prior to placement of the geotextile container and may be installed in between each layer. The GFF provides drainage beneath the geotextile containers for each layer especially when stacking.
 - B. The impervious membrane shall have a thickness of at least 17 mils.

- C. The GFF must meet the specification shown in Table 2.
- D. Immediately prior to placing the geotextile containers, the Township shall inspect the prepared area. Geotextile containers shall not be placed thereon until the area has been reviewed and approved by the Township.

Table 2: GFF - Geotextile Filtration Fabric

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Grab Tensile Strength	ASTM D4632	lbs (N)	425 (1891.3)	351 (1557.5)
Trapezoid Tear Strength	ASTM D4595	lbs (N)	210 (934.5)	20 (689.8)
Puncture Strength	ASTM D4884	lbs (N)	165 (734.3)	
Mullen Burst Strength	ASTM D6241	psi (kPa)	8900 (2000)	
Air Flow	ASTM D4751	cfm	0.43 (40)	
Thickness	ASTM D4355	mils (mm)	80	

Physical Properties	Unit	Typical Value
Weight (ASTM D5261)	g/m ² (oz/yd ²)	342.4 (10.1)
Fiber Content		
Construction	EPI x PPI	26 x 18

2.4. Manufacturer's Representative

A manufacturer's representative shall be present for the installation of the first geotextile container unless the bidder can prove adequate, successful experience with this technology.

2.5. Equipment

2.5.1. The use of the Township's equipment or service will not be permitted.

2.5.2. All electrical devices and wiring used shall carry appropriate CSA approval. All lighting and wiring shall be made secure from damage or falling. All electrical installation and equipment shall comply with electrical codes.

2.5.3. All electrical tools used inside the plant or other areas shall carry the appropriate CSA approval.

- 2.5.4. In hazardous areas, provide intrinsically safe mechanical devices and equipment for fans, pneumatic operators for dampers and aluminum clappers for check valves on pipelines conveying gaseous fuels.
- 2.5.5. If applicable, designate an area within the working limits to be used exclusively for fueling equipment. Within ten (10) business days following award of the contract, the contractor must submit for review a plan for the interception and rapid cleanup of fuel spills. The contractor is to maintain the apparatus for cleaning up fuel spills at all times. The contractor is to notify the MECP about spills immediately, as required by Ontario Regulation 675/98.
- 2.5.6. Equipment must be kept clean so that no debris is deposited on the plant roadways or on any public roadway. Debris must be contained in a designated area within the working limits. Dispose of debris off site, as specified.
- 2.5.7. Except a day as determined by the Township, on which the bidder is prevented by inclement weather or related conditions, from proceeding with the work. For the purposes of this definition, this shall be a day during which the bidder cannot proceed with at least 60% of the normal labor and equipment force effectively engaged in the work.
- 2.5.8. Except a day on which the bidder is prevented from proceeding with the work, as determined by the Township by reason of:
- The Owner, or if such prevention is due to the Owner, another contractor hired by the Owner, or an employee of any of them, or by anyone else acting on behalf of the Owner.
 - Non-delivery of Owner supplied materials.
 - Any cause beyond the reasonable control of the contractor that can be substantiated by the contractor to the satisfaction of the Township.

2.6. Project Meetings

A project meeting will be held prior to the commencement of construction and once per week thereafter, as necessary.

2.7. Protection of Wildlife

In and around the lagoon there are turtles, birds and other wildlife. The bidder shall enact best management practices to minimize the impact on the local wildlife.

3. Pricing Schedule

To supply all material, labor, and equipment for the removal and dewatering of the Alexandria biosolids at the Alexandria Wastewater Lagoon in the Township of North Glengarry.

3.1. Detailed Pricing Schedule

Table 3: Dewatering Cell / Geosynthetics Pricing Breakdown

DEWATERING CELL/GEO-SYNTHETICS					
Item	Description/Comments	Unit	Quantity	Unit Rate	Total
Geotube® Units	Three (3) 65' circumference x 86' length Geotube® units.	Each	3		
Subtotal					

Table 4: Mobilization Demobilization

DEWATERING CELL/GEO-SYNTHETICS				
Item	Description/Comments	Unit	Quantity	Total
Mobilization/ Demobilization	Includes all materials, equipment and personnel to/from site and site setup/teardown. With equipment support from Town to offload and reload trucks.	Each	1	
Subtotal				

Table 5: Operation Costs Breakdown

DEWATERING CELL/GEO-SYNTHETICS					
Item	Description/Comments	Unit	Quantity	Unit Rate	Total
Vegetation Removal	Daily charges may include travel to and from site, site setup, vegetation removal. This does not include the disposal of the vegetation. The bidder to enter the quantity required.	Daily			
Removal, Dewatering, and Containment of Sludge	Includes sludge removal, polymer and polymer conditioning, sludge transfer to Geotube® units, labor, QA/QC.	BDMT	133		
Subtotal					

Subtotal of Project Costs	
HST	
Total Project Cost	

A detailed breakdown of operational costs and unit rates, as appropriate, is to be attached to the RFP package. Only alternate proposals with a sufficient breakdown will be considered.

4. Signature Page

I/We the undersigned have read and understand this RFP document and agree to perform the work required in accordance with this RFP form, at the price(s) listed above.

Signed and submitted for and on behalf of:

Company Name

Address City Postal Code

Signature of Authorized Signing Officer Print Name and Title

Date Email Address

Telephone Number Fax Number

Schedules and Appendices

Schedule 1 – Bidder’s Experience/References Form

All bidders are to have an acceptable and successful track record of completing at least two past projects of similar size, value and relevant scope of work as required in this contract within the past 5 years. The Township reserves the right to reject any bidder who cannot meet this requirement.

Project	Completion Date	Owner for Whom Work was Performed	Name of Contact Person	Phone Number	Email

This page to be included with the RFP package.

Schedule 2 – Subcontractor Form

Sub-Trade Category	Proposed Subcontractor	Experience (Years)

This page to be included with the RFP package.

Schedule 3 – Workplan

A workplan to be attached to RFP package.

Appendix 'A' – Definitions

- A. **Bench-Scale** - Rapid Dewatering Test (ROT) is a fast and easy test to determine how well a sludge dewater through the textile. The test is designed to: evaluate the efficiency of the polymer, measure the volume of effluent filtered from the sludge, record the time of filtration, and analyze the quality of the effluent water.
- B. **Bone Dry Metric Tonne** - a volume of biosolids that would weigh one thousand kilograms if all the moisture content was *removed*.
- C. **Contractor** - Successful bidder
- D. **Engineer** - Director of Public Works and Development or designate.
- E. **Filling Ports**, also known as "Injection Port", are PVC flanges which the inner port body and outer port body each comprise one or more cellular surfaces capable of distributing a force caused by the clamping of the two bodies together. Once bolted to the top of the geotextile container, the dredge or pump discharge line can be attached.
- F. **Flow, Percent Solids, and Density Measurement** - A flow meter and a density meter are required in order to pace the polymer with the pumping rate and the solids in the line. Ideally they should be paced electronically with the polymer system.
- G. **Township** - The Township of North Glengarry
- H. **Geotextile Container** - A large tube (20m) in circumference fabricated from high strength engineered textiles in lengths greater than 26m). Geotextile containers are used for containment and dewatering of high moisture content sludge and other fine grain material. They are also used for coastal and riverine erosion control, and cores for marine structures, such as sand dunes and levees. The tubes can also be filled by a combination mechanical and hydraulic method.
- I. **Polymers** - Polyacrylamide polymers can be non-ionic, anionic, or cationic.
- J. **Polymer Systems** - The components of the dry or emulsion system shall include as a minimum: polymer storage, metering pump, static mixer, calibration cylinder, flow control *valve*, and piping as required.
- K. **Project Manager** – The Township of North Glengarry staff assigned to manage the project.
- L. **Specially Engineered Dewatering Textile** - A woven synthetic textile used to construct the geotextile container.
- M. **Owner** - The Township of North Glengarry