

**BACKGROUND**

The City of Ocala requires the services of an experienced vendor to provide supply and delivery of polymer for the solids handling systems at the City of Ocala Water Treatment Plant # 1 (WTP1), Water Reclamation Facility # 2 (WRF2) and Water Reclamation Facility # 3 (WRF3). Only chemicals known as organic polymer which are synthetic, high molecular weight, water soluble polyelectrolyte and manufactured specifically as flocculants for the sludge conditioning will be used.

It will be necessary for all interested vendors to test their polymer during the bid process. The testing process is two phased, comprised of bench testing and full-scale trials. Vendors having polymer demonstrating acceptable product performance during bench testing will be allowed to participate in full-scale testing. Only vendors with polymer meeting minimum performance specifications that passed full-scale testing will be allowed to bid. The City will accept liquid polymer only. The polymer is to be purchased in accordance with the City of Ocala Procurement Department terms and conditions and the following specifications.

**Section 1: PRODUCT SPECIFICATIONS**1.1 General Specifications

The City will accept liquid polymer only. Polymers shall be emulsion type and readily and completely soluble in water. The polymer must maintain ninety percent (90%) strength for up to six (6) full months after delivery. Physical and chemical characteristics shall not change during this period. The polymer materials in both concentrated and diluted form shall be classified as non-hazardous material for shipping and use under applicable standards and shall not require special handling nor shall they pose hazards to employees working with them. The polymer supplied must have a low toxicity with respect to contact with the skin and eyes and to accidental ingestion or inhalation. First aid or other suggested medical treatment procedures for this product must be furnished by Supplier prior to delivery of the first shipment along with safety data sheets (SDS). There are three (3) different facilities and three (3) types of sludge for polymer applications.

1.2 Drinking Water

The polymer shall be an Anionic Polyacrylamide water-in-oil emulsion. (30% mole anionic polyacrylamide water-in-oil emulsion). The City of Ocala's polymers shall meet the EPA's Acrylamide and Epichlorohydrin requirements at all times. The polymer shall meet all state and federal requirements for use in potable drinking water. An annual report for Acrylamide and Epichlorohydrin will be required to be sent to the City Project Manager, Robyn Preston, in the month of December.

1.3 Wastewater

Polymers shall be Cationic Polymer and readily and completely soluble in water. The polymer must maintain ninety (90%) strength for up to six (6) full months after delivery. Physical and chemical characteristics shall not change during this period. The polymer shall meet all state and federal requirements for use in wastewater treatment.

**Section 2: MANDATORY PRODUCT TESTING**

2.1 Testing Process and Timeline

The testing process is to demonstrate acceptable product performance through bench testing. Only vendors having demonstrated acceptable product performance during bench testing will be allowed to participate in full-scale testing. The current provider, Polydyne, Inc., is not required to participate in this testing because performance results are already recorded. At the completion of bench testing and full-scale trials, an approved vendor list with polymer types will be posted on the listing through the City’s e-Procurement system, ProRFx ([www.bidocala.com](http://www.bidocala.com) or [www.prorfx.com](http://www.prorfx.com)). The approximate timeline is shown below:

<b><u>Description</u></b>	<b><u>Approximate Date</u></b>
Bench Testing	September 5, 2023 to September 8, 2023
Bench Test Results Published on ProRFx	September 11, 2023
Full Scale Trials	September 18, 2023 to September 22, 2023
Full Scale Trial Results Published on ProRFx	September 25, 2023
Bid Opening	October 2, 2023

2.2 Bench Testing

Bench work to screen products for use in full-scale testing is **required** and will be conducted beginning approximately September 4, 2023 and completed by approximately September 8, 2023. This testing will be done on site in the facilities of the City of Ocala WTP1, WRF2 and WRF3. Bench testing will be limited to one (1) day to determine polymer being submitted for full testing. Specific dates for bench tests must be scheduled with Robyn Preston at (352) 351-6682 (WTP1), Jeff Greve (352) 572-0486 (WRF2) and Bill Davis (352) 572-0418 (WRF3) and will be handled on a first call, first come basis. If unable to contact these persons call the Water Resources Administrative offices at (352) 351-6772 or Robyn Preston at (352) 572-0488. Vendors must provide a polymer data sheet, including SDS, for the polymers they are testing during the bench test. At the completion of bench testing, an approved vendor list with polymer types will be posted on the listing through the City’s e-Procurement system. Only vendors on this list can submit their approved polymer for full-scale trials.

2.3 Full-Scale Trials

Vendors with polymer passing bench testing can submit their product for a formal full-scale trial beginning approximately September 18, 2023 and completed by approximately September 22, 2023 and must be conducted using the polymers to be considered for final bid. Full-scale testing is **required** for bidding. The specific date for the full-scale trial must be scheduled with Robyn Preston at (352) 351-6682 (WTP1), Jeff Greve (352) 572-0486 (WRF2) and Bill Davis (352) 572-0418 (WRF3) and will be handled on a first call, first come basis. If unable to contact these persons call the Water Resources Administrative offices at (352) 351-6772 or Robyn Preston at (352) 572-0488. At completion of full-scale trials, an approved vendor list with polymer types will be posted on the listing through the City’s e-Procurement system. Only vendors on this site can submit bids based on their approved polymer.

#### 2.4 Water Treatment Plant (WTP1)

Polymer must be jar tested and meet current plant dosage and turbidity requirements. Any upsets during the evaluation will result in vendor disqualification. Settling rate, flow separation (floating separate clumps), supernatant clarity, supernatant turbidity and required dosage will be evaluated during jar testing. Polymer considered for bid will be tested in a full-scale trial and evaluated for performance. Polymer must be NSF approved for use in the potable water industry and NSF certification must be in the vendor's name.

#### 2.5 Wastewater Treatment Facilities (WRF2 and WRF3)

Each vendor passing bench testing will be allowed to conduct full-scale trials. The trial will be limited to one (1) four (4) hour run that includes a one (1) hour setup and three (3) hours of thirty (30) minute trials. During all test runs, the sludge feed rate will be approximately 120 gallons per minute (gpm) at both WRF2 and WRF3, with the only operating parameter the polymer feed rate. The vendor will advise the City's plant operator of desired operating adjustments regarding polymer addition and polymer feed rate. All operating adjustments will be made by City personnel who will also monitor and record the various test conditions evaluated. The process will remain stable (no further adjustments except for polymer dosage) for one (1) hour prior to taking samples. For each vendor run, duplicate samples will be collected of the cake solids and feed solids.

All samples will be analyzed and evaluated by the City. The analysis performed by Wastewater personnel will be the official numbers used for bid test results/product approvals. The polymer vendor may utilize an outside lab of their choice for comparison of the analyses at their own expense.

#### 2.6 Product Performance

The sludge feed rate during testing shall be approximately 120 gpm at WRF2 and WRF3. Sludge feed solids typically average between 0.7 % and 1.4 % total solids. Polymer used during the testing shall be furnished by the vendor at no cost to the City. Samples of polymer used during testing will be taken and retained by the City. Each bidder shall furnish a one (1) pint sample together with a listing of the total solids and active solids content of the polymer.

Minimum performance criteria will be as follows:

WRF2 Cake solids 19.0 % minimum (measured in final cake)

WRF3 Cake solids 14.0 % minimum (measured in final cake).

### **Section 3: PROCESS DESCRIPTION**

#### 3.1 Water Treatment Plant Facility Process

The City of Ocala's Water Treatment plant is a 24.42 MGD Lime Softening Facility with an average daily flow of 13 MGD. The treatment process utilizes calcium oxide for softening and polymer to aid in coagulation. The polymer will be compatible with the in-place delivery system, a Blue and White peristaltic pump. The pumping system utilizes liquid polymer in 55-gallon plastic drums.

#### 3.2 Water Reclamation Facility # 2 Process

WRF2 is a 6.5 MGD Oxidation Ditch Denitrification Facility with a Hiller centrifuge. The polymer will be compatible with the in-place delivery system, a Blue and White peristaltic pump. The pumping system utilizes liquid polymer in 55-gallon plastic drums. The feed sludge is aerobically digested.

### 3.3 Water Reclamation Facility # 3 Process

WRF3 is a 4.0 MGD Oxidation Ditch Denitrification Facility with an Ashbrook Winklepress belt filter press. The polymer will be compatible with the in-place delivery system, Blue and White peristaltic pumps. The pumping system utilizes liquid polymer in 55-gallon plastic drums. The feed sludge is undigested secondary waste sludge.

## **Section 4: QUALIFICATIONS AND BID RESPONSE**

### 4.1 Qualifications

The City of Ocala will only accept bids from vendors who have passed the full-scale trials and who represent manufacturers who have been in business for three (3) years or more, who manufacture polymer products used in the water/wastewater treatment field, and who have competent, trained personnel familiar with sludge dewatering systems.

In the bid response, vendors must include the following (attach documents in the Requested and Additional Documents section):

1. Evidence that the manufacturer has manufactured polymers for water/wastewater applications. Manufacturers must have been in business for a minimum of three (3) years or more, who manufacture polymer products used in the water/wastewater treatment field, and who have competent, trained personnel familiar with sludge dewatering systems.
2. A list of water/wastewater plants where the vendor's polymer is being used, what polymer is being used, contact name and telephone number.
3. The name, address, and phone number of the vendor's contact person with a description of this person's training and experience with polymer applications in sludge thickening and dewatering.
4. The company and location of the facility where the polymer is manufactured.
5. Polymer data sheet, including SDS for the polymers they are proposing for utilization that have passed full-scale performance tests.

## **Section 5: BID PRICING AND EVALUATION**

Bid unit prices shall be based on a price per pound of bulk polymer solution. Pricing shall include any and all freight, product packaging requirements (see Section 6), or special equipment required by this scope of work and specifications. Bid award for WRF2 and WRF3 will be recommended for the vendor whose material provides the lowest cost per ton of dry solids produced and meeting all other minimum performance criteria. This award may occur per line item or for the bid as a whole: the City will award the option most advantageous. Cost per ton will be computed by the following formula:  $\$/\text{Dry Ton} = \$/\text{lb. of}$

polymer x lbs. of polymer/Dry Ton. Polymers for each location will be bid as separate line items as shown below:

Item	Location	Cost Per lb	Cost 55-gal drum
Item 1	Water Treatment Facility		
	Manufacturer:	\$	\$
	Product Name/#:		
Item 2	Water Reclamation Facility # 2		
	Manufacturer:	\$	\$
	Product Name/#:		
Item 3	Water Reclamation Facility # 3		
	Manufacturer:	\$	\$
	Product Name/#:		

**Section 6: REQUIRED PRODUCT PACKAGING**

Polymer shall be packaged in disposable 55-gallon plastic containers.

For all treatment facilities, WTP1, WRF2 and WRF3, the preferred containers shall be 55-gallon plastic drums with two (2) 2” inch outer holes. The containers shall net a product content of approximately 450 lbs. The polymer containers shall be compatible with the in-place polymer feed system.

**Section 7: CONTRACT TERM**

This agreement shall commence upon Notice to Proceed and continue in effect through October 31, 2025. At the sole discretion of the City, this contract may be extended for two (2) additional one-year periods under the same terms and bid prices, subject to agreement by the Contractor.

**Section 8: CONTRACT TERMINATION AND DAMAGES**

8.1 Termination

The City may terminate this agreement at any time for cause and may also terminate this Agreement with or without cause by giving at least thirty (30) days prior written notice to Contractor.

8.2 Causes for Termination

1. The polymer being furnished by the seller is not performing to the criteria listed in Section 2.6 (Product Performance). If the product fails to perform as indicated, the vendor will be notified within twenty-four (24) hours and within three (3) days of the notification will be required to correct the problem.
2. It is not substantially the same as the material used during trial evaluations. When this occurs, the vendor will be notified within twenty-four (24) hours and within three (3) days of the notification will be required to correct the problem.

3. If any of the City of Ocala Water and Wastewater Facilities are damaged as a result of impurities in the polymer.
4. The quality of the sludge is damaged as a result of impurities in the polymer.
5. Equipment provided by the seller is not satisfactory or is not working properly and is not repaired or replaced with twenty-four (24) hours. For example, the City will not provide 55-gallon drum mixers to mix the polymer.

### 8.3 Damages

In the event of substantial damage to the City of Ocala Water and Wastewater Facilities, the supplier shall reimburse the City of Ocala for the cost of any repair, maintenance or replacement resulting there from.

### 8.4 Drum Mixers

If a vendor requires drum mixers for the polymer to work properly, vendor will provide mixers to the City at no additional cost. It is the vendor's responsibility to ensure the mixers are in good working condition at all times. If the equipment furnished by the vendor is not satisfactory or is not in good working condition, the vendor will have twenty-four (24) hours to replace or repair the equipment. In addition, the vendor shall reimburse the City for the cost of any repair, maintenance or replacement of the vendor's equipment that is necessary to maintain the normal operations of the sludge facility.

### 8.5 Shipment Testing and Product Rejection

The City of Ocala reserves the right to test each shipment. Each shipment must perform satisfactorily as determined by a Jar or Bench Test before it is accepted and must also perform to the minimum performance criteria in these specifications. If any shipment of polymer is provided below the quantity, quality and performance criteria required by these specifications, the City of Ocala reserves the right to reject the shipment. If any shipment of polymer is proven to be more than five percent (5 %) less effective than the control sample when both are tested on the same sludge sample, the City of Ocala reserves the right to reject that shipment. The rejected material shall be removed by the supplier at the supplier's expense. The supplier shall then replace the rejected material with satisfactory material or credit the City for the full delivered price of the rejected material.

## **Section 9: DELIVERY**

### 9.1 Delivery Locations and Required Delivery Response Time

The successful bidder (Supplier) shall deliver polymer to the City of Ocala Water Treatment Plant # 1 (WTP1) located at 1805 NE 36<sup>th</sup> Avenue, Ocala, Florida 34470; Water Reclamation Facility # 2 (WRF2) located at 4200 SE 24<sup>th</sup> Street, Ocala, Florida 34471; and Water Reclamation Facility # 3 (WRF3) located at 3100 SW 67<sup>th</sup> Avenue, Ocala, Florida 34474 within ten (10) calendar days after notification, except as otherwise permitted. If, for any reason, the polymer cannot be delivered within the allotted time, the City of Ocala reserves the right to purchase the needed polymer from another source.

### 9.2 Delivery Hours

Regular truck delivery of polymer shall be scheduled to arrive at the plant between 8:00 am and 3:30 pm Monday through Friday (normal workdays), unless otherwise arranged by the City of Ocala Water and Wastewater Facilities personnel.

#### 9.3 Delivery Truck and Removal of Containers

The delivery truck must include a lift gate. Empty polymer containers will be recycled by the City.

#### 9.4 Polymer Spills

The supplier is responsible to hose down and otherwise clean any polymer spills as required by law, which may occur while delivering the polymer.

### **Section 10: TESTING OF POLYMERS DURING CONTRACT**

The City of Ocala reserves the right to test polymers of different types and from different manufacturers during the period of this contract.

### **Section 11: TECHNICAL ASSISTANCE**

#### 11.1 As Needed Technical Assistance

The Supplier will be required, at no charge to the City, to provide technical assistance for a minimum of one (1) day per month, if needed, and as requested at the times specified by the City of Ocala Water/Wastewater Treatment Facilities Operator or their designee. The technical assistance may require a representative to come to the City of Ocala Water/Wastewater Treatment Facility if the City of Ocala Water/Wastewater Treatment Facility Operator determines that the problem cannot be corrected over the phone or by email.

#### 11.2 Emergency Technical Assistance

In the case of an emergency, Supplier will be required to provide technical assistance with twenty-four (24) hours of notification of such need. To ensure that this requirement can be met, the City of Ocala further requires that Supplier have a qualified technical representative residing in the State of Florida throughout the contract period. The supplier must provide a phone number for the technical representative as well as their location. In addition to the above times, additional technical assistance for a period of up to five (5) calendar days shall be required at the beginning of the contract period at no charge to the City.

### **Section 12: NON-CONFORMANCE TO CONTRACT CONDITIONS**

Items may be tested/inspected for compliance with specifications by appropriate testing laboratories. The data derived from any tests for compliance with specifications are public records and open to examination thereto in accordance with Chapter 119, Florida Statutes. Items delivered not conforming to specifications may be rejected and returned at vendor's expense. These items and items not delivered as per delivery

date in bid and/or purchase order may result in bidder being found in default in which event any and all re-procurement costs may be charged against the defaulting contractor. Any violation of these stipulations may also result in supplier's name being removed from the vendor/bidder mailing list.

**Section 13: SAMPLES**

Samples of items, when called for, shall be furnished free of expense, and if not destroyed may, upon request, be returned at the bidder's expense. Each individual sample shall be labeled with bidder's name, manufacturer's brand name and number, bid number and item reference. Sample of successful bidder's items may remain on file for the term of the contract. Request for return of samples shall be accompanied by instructions which include shipping authorization and name of carrier and must be received at time of bid opening. If instructions are not received at this time, the samples shall be disposed of by the City, within a reasonable time as determine appropriate by the City.