



# **REND LAKE CONSERVANCY DISTRICT**

## **WATER TREATMENT CHEMICALS**

### **BID SPECIFICATIONS**

October 2024

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Bid Form

**REND LAKE CONSERVANCY DISTRICT  
NOTICE TO BIDDERS  
WATER TREATMENT CHEMICALS**

The Rend Lake Conservancy District is accepting bids for various chemicals to be used at our Water Treatment Plant in Benton, Illinois. The bids will be used to establish prices for the period from January 2025 – December 2025. Bid documents are available from the RLCD Administrative Office at 11231 Marcum Branch Road in Benton, Illinois 62812, 618-439-4321 or from [www.rendlake.org](http://www.rendlake.org). Bids are due at 2:00 PM on Thursday, November 14<sup>th</sup>, 2024.

**BID PROCEDURES & GENERAL REQUIREMENTS**

**BID PROCEDURE**

Bids are to be submitted in sealed envelopes marked as follows:

“WTP Chemical Bids – November 14<sup>th</sup> Bid Opening”

Bids are to be submitted on the attached bid form to:

RLCD Administrative Office

Attn: Central Purchasing

PO Box 907

11231 Marcum Branch Road

Benton, IL 62812

**BID AWARD**

The purpose of this bid is to establish prices for each chemical listed. As chemicals are required, the District will first attempt to purchase said chemical from the lowest bidder for that item. The District reserves the right to purchase from the subsequent low bidders for each item if the lowest bidder is unable to make delivery of the chemicals per specified requirements.

The Rend Lake Conservancy District reserves the right to reject any or all bids, to waive any informalities in the bid procedure, and to accept the bid considered to be in the best interest of the District. The District will not be responsible for any errors or omissions on the part of bidders when submitting their bids or proposals. All bids must be signed by an authorized representative and any bid received unsigned will be rejected. All bids must be submitted in accordance with the specifications listed. The bidder must note any exceptions to the specifications listed on the bid form; otherwise, it is assumed that the bid complies, in all respects, with the listed specifications.

**BID BOND, CONTRACT, AND PERFORMANCE BOND,**

Bid Bonds, Contracts, and Performance Bonds are not required.

**DELIVERY**

All chemicals shall be delivered to:

Rend Lake Intercity Water Treatment Plant

11228 Marcum Branch Road

Benton, IL 62812

Delivery costs shall be included in the bid price.

Deliveries shall be made within 7 working days of notification or sooner in the event of an emergency. They shall be metered or accompanied by certified weight tickets.

### **FORCE MAJEURE**

In the event of an emergency or Force Majeure declaration, the District reserves the right to purchase chemical from the first available supplier if the lowest bidder is unable to make delivery before chemical supplies are exhausted or hold their contract price. The District will attempt to contact suppliers starting with the lowest bid until delivery can be secured.

### **FUEL PRICE ADJUSTMENTS**

Successful bidders may request fuel price adjustments during the course of the year if substantial changes in fuel prices occur. The bidder shall document the fuel price at the time of the bid and the fuel price at the time of the request. Adjustments shall apply to fuel costs only.

### **PRODUCT DATA**

The bidder shall provide current Safety Data Sheet upon request or if new revision is issued. Bidders shall supply product specifications with their bid. Bidders shall supply an Affidavit of Compliance for the specified AWWA Standards with their bid where applicable.

### **VERIFICATION TESTING**

The District may perform routine sampling and testing of some chemical deliveries to verify conformance with the specifications. Verification testing will be performed at the District's cost. The District reserves the right to use the next low bidder at any point in which verification testing shows chemicals have been delivered that do not comply with these specifications. The chemical supplier shall remove, at their expense, any chemical that does not meet the specifications.

### **PAYMENT**

Payment will be made for each delivery after the receipt of a detailed invoice from the vendor. Delivery tickets and invoices shall name the chemical, the concentration, the weight or other delivery quantity, the unit price, and the total price.

### **TAXES**

The materials included in this bid are exempt from Illinois State Sales Tax.

### **CONTRACT**

This contract shall be in effect from January 1, 2025 to December 31, 2025 unless indicated otherwise. The unit price on the bid form shall remain firm for the full duration of the contract. These bid specifications and attached bid form shall be considered the entire agreement between the District and supplier(s). **No external contract shall supersede this agreement.**

### **QUESTIONS**

Bidders may contact Tony Furlow at 618-439-4394 ext. 222 with questions about the bid. Only those questions addressed in a written addendum to all bidders shall be considered to modify these bid specifications.

## CHEMICAL SPECIFICATIONS

### **AMMONIUM SULFATE (40%)**

The Ammonium Sulfate shall be furnished as a liquid solution and meet the following requirements:

- Certified as suitable for contact with or treatment of drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- Conform to AWWA B302-23
- 40% solution (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>
- 10% available Ammonia
- Clear to pale yellow solution
- Shall contain no soluble materials or organic substances in quantities capable of producing deleterious or injurious effects on the health of those consuming water treated with its use

The Ammonium Sulfate will be used in conjunction with 12.5% Sodium Hypochlorite to generate Chloramines for Potable Water Treatment.

The bid price, per pound, shall be based on the actual pounds of liquid delivered. The supplier shall furnish consistent Ammonia content for the duration of the contract.

|                     |  |
|---------------------|--|
| Delivery Method:    | Bulk   |
| Unloading Method:   | The fill pipe connection is located near ground level.<br>The connection is a 2" male camlock fitting.<br>The supplier shall pump the material to the storage tank located 40' above ground level. |
| Storage Capacity:   | 10,500 gallons   |
| Typical Delivery:   | 4,500 gallons  |
| Delivery Frequency: | 2 months   |
| Annual Usage:       | 30,000 gallons   |

There is no storage or chemical feed equipment required to be furnished for this bid.

## CHEMICAL SPECIFICATIONS

### **CARBON DIOXIDE**

Carbon Dioxide, CO<sub>2</sub>, shall be furnished as a pressurized liquid and meet the following requirements:

- Certified as suitable for contact with or treatment of drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- Conform to AWWA B510-18
- The CO<sub>2</sub> supplied shall exceed 99.5% purity level

The bid price, per ton, shall be based on the actual pounds of product delivered.

|                     |  |
|---------------------|--|
| Delivery Method:    | Bulk   |
| Unloading Method:   | The District must have before and after readings on our gauge during the unload process. |
| Storage Capacity:   | 120,000 lbs  |
| Typical Delivery:   | 40,000 lbs   |
| Delivery Frequency: | 7-21 Days  |
| Annual Usage:       | 1,000,000 lbs  |

There is no storage or chemical feed equipment required to be furnished for this bid.

## CHEMICAL SPECIFICATIONS

### CATIONIC POLYMER (FILTER-AID)

Cationic Polymer shall be furnished as a liquid solution and meet the following requirements:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- Conform to AWWA Standard B451-23
- Low molecular weight (100k) PolyDiAllylDiMethylAmmoniumChloride, PolyDADMAC<sup>2</sup>, equal to the following:
  - Clarifloc C-308P
- Non-Volatile Solids content: 19 – 22%
- Brookfield Viscosity: 80 – 180 cps

The supplier shall specify the solids content and molecular weight being bid. The supplier shall furnish consistent solids content and viscosity for the duration of the contract. The solids content being bid will be considered in determining the low bidder.

Bidders shall specify the maximum allowable dosage rate to meet NSF 60 requirements.

The bid price, per pound, shall be based on the net weight of chemical delivered. If vendor does not pick up used drums, recycling cost shall be including in bid price.

|                        |   |
|------------------------|---|
| Delivery Method:       | 55-gallon drums   |
| Delivery Instructions: | Drums are required to be shipped on pallets.<br>The District will offload the material. |
| Typical Delivery:      | 8 drums   |
| Delivery Frequency:    | Up to twice per year  |
| Annual Usage:          | 200 – 300 gallons   |

There is no storage or chemical feed equipment required to be furnished for this bid.

The District may request samples from each vendor submitting a product different than those previously listed. The samples would be used in laboratory jar testing to determine if the product can deliver equivalent performance with the same quantity used. Failure to meet the performance testing will disqualify the product from consideration. Laboratory testing would be performed at the District's cost.

## CHEMICAL SPECIFICATIONS

### CATIONIC POLYMER (CLARIFICATION)

Cationic Polymer shall be furnished as a liquid solution and meet the following requirements:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- Conform to AWWA Standard B451-23
- High molecular weight (500k) PolyDiAllylDiMethylAmmoniumChloride, PolyDADMAC<sup>2</sup>, equal to the following:
  - Clarifloc C-378
  - Magnafloc LT-7992
- Non-Volatile Solids content: 19 – 22%
- Brookfield Viscosity: 1000-3000 cps

The supplier shall specify the solids content and molecular weight being bid. The supplier shall furnish consistent solids content and viscosity for the duration of the contract. The solids content being bid will be considered in determining the low bidder.

Bidders shall specify the maximum allowable dosage rate to meet NSF 60 requirements.

The bid price, per pound, shall be based on the net weight of chemical delivered. If vendor does not pick up used totes, recycling cost shall be including in bid price.

|                     |   |
|---------------------|---|
| Delivery Method:    | Totes – 275 gallons each  |
| Unloading Method:   | The District shall assist in unloading.<br>Deliveries are accepted Mon thru Fri 7A to 2P. |
| Typical Delivery:   | 4 Totes   |
| Delivery Frequency: | Every 2-3 weeks   |
| Annual Usage:       | 15,000 gallons  |

There is no storage or chemical feed equipment required to be furnished for this bid.

The District may request samples from each vendor submitting a product different than those previously listed. The samples would be used in laboratory jar testing to determine if the product can deliver equivalent performance with the same quantity used. Failure to meet the performance testing will disqualify the product from consideration. Laboratory testing would be performed at the District's cost.



## CHEMICAL SPECIFICATIONS

### **FERRIC CHLORIDE**

Ferric Chloride shall be furnished as a liquid solution and meet the following requirements:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- Conform to AWWA Standard B407-18
- 40% Ferric Chloride by weight (+/- 2%)
- Specific gravity of 1.3 to 1.5
- Contain no more than 2.5% Ferrous Chloride, less than 1% free acid as Hydrochloric Acid and no more than 0.2% total insoluble matter by weight

Ferric Chloride will be used as a coagulant for potable water treatment.

Bidders shall specify the maximum allowable dosage rate to meet NSF 60 requirements.

The bid price, per dry ton, shall be based on the dry tons of ferric chloride in the liquid ferric chloride solution (as opposed to the tons of solution delivered).

|                     |   |
|---------------------|---|
| Delivery Method:    | Bulk  |
| Unloading Method:   | The fill pipe connection is located near ground level.<br>The connection is a 2" male camlock fitting.<br>The supplier shall pump the material to the storage tanks located 40' above ground level. |
| Storage Capacity:   | 13,000 gallons  |
| Typical Delivery:   | 4,000 gallons   |
| Delivery Frequency: | Every 7-10 days   |
| Annual Usage:       | 175,000 gallons   |

## CHEMICAL SPECIFICATIONS

### **FLUORIDE**

Fluoride shall be furnished as a liquid Hydrofluorosilicic Acid,  $H_2SiF_6$ , solution and meet the following requirements:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- Conform to AWWA Standard B703-19
- Contain 20% to 30% Hydrofluorosilicic Acid by weight, with a 23% to 25% solution preferred. The supplier shall specify the concentration being bid. The supplier shall furnish a consistent concentration for the duration of the contract. The concentration being bid will be considered in determining the low bidder.

The bid price, per pound, shall be based on the actual pounds of liquid solution delivered.

|                     |   |
|---------------------|---|
| Delivery Method:    | Totes - 330 gallons each (must be returnable)   |
| Unloading Method:   | The District shall assist in unloading.<br>Deliveries are accepted Mon thru Fri 7A to 2P. |
| Storage Capacity:   | 5 Totes @ 330 gallons each.   |
| Initial Delivery:   | 4 Totes   |
| Typical Delivery:   | 4 Totes (990 gallons)   |
| Delivery Frequency: | 4-6 Weeks   |
| Annual Usage:       | 11,000 gallons  |

Totes shall meet the following requirements:

- Outlet must be 2" male camlock fitting.
- Must have 2" female NPT connection on top of tote for venting.
- Must be able to be moved with pallet jack.

Empty Totes shall be loaded on delivery truck after each shipment for return to supplier. Return cost shall be included in bid price.

## CHEMICAL SPECIFICATIONS

### **HYDROCHLORIC ACID (15%)**

Hydrochloric Acid, HCl, shall be furnished as a liquid solution and meet the following requirements:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- Contain 15% HCl by weight
- Contain no inorganic or organic substances in quantities capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with it.
- Reasonably clear liquid, free from visible foreign matter and sediment

The Hydrochloric Acid will be used in conjunction with Sodium Chlorite ( $\text{NaClO}_2$ ) and Sodium Hypochlorite ( $\text{NaOCl}$ ) to generate Chlorine Dioxide for potable water treatment.

The bid price, per pound, shall be based on the actual pounds of solution delivered.

|                     |  |
|---------------------|--|
| Delivery Method:    | Bulk   |
| Unloading Method:   | The fill pipe connection is located near ground level.<br>The connection is a 2" male camlock fitting.<br>The supplier shall pump the material to the top of the tank, approximately 15' above ground level. |
| Storage Capacity:   | 5,000 gallons  |
| Typical Delivery:   | 3,300 gallons  |
| Delivery Frequency: | 2 months   |
| Annual Usage:       | 20,000 gallons   |

There is no storage or chemical feed equipment required to be furnished for this bid.

## CHEMICAL SPECIFICATIONS

### LIME

Lime, CaO, shall be furnished as pebble-form quicklime and meet the following requirements:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- Conform to AWWA Standard B202-19
- 3/8" to 1/2" nominal size. The District uses pneumatic lime transfer equipment, therefore the lime shall be limited to a maximum particle size of 1" in accordance with the AWWA Standard.

The bid price, per ton, shall be based on the actual tons of pebble lime delivered.

|                     |   |
|---------------------|---|
| Delivery Method:    | Bulk  |
| Unloading Method:   | The fill pipe connections are located near ground level. The supplier shall pump the material to the storage silos, one of which is located 40' above ground level. |
| Storage Capacity:   | 7,200 cubic feet, approx. 125 tons  |
| Typical Delivery:   | 25 tons   |
| Delivery Frequency: | Every 4-7 days  |
| Annual Usage:       | 1,500 – 2,000 tons  |

There is no storage or chemical feed equipment required to be furnished for this bid.

## CHEMICAL SPECIFICATIONS

### **POWDERED ACTIVATED CARBON**

Powdered Activated Carbon, PAC, shall be supplied in bulk, dry-form and meet the following requirements:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- Conform to AWWA Standard B600-16
- Iodine number of at least 800
- Ash content of less than 10%

The bid price, per ton, shall be based on the net weight delivered.

|                     |   |
|---------------------|---|
| Delivery Method:    | Bulk  |
| Unloading Method:   | The PAC storage tank is below ground level and has a 4" male camlock fitting at ground level.<br>The district will install dust socks before each delivery to help filter the exhaust air.<br>Deliveries are accepted Mon thru Fri 7A to 11A. |
| Storage Capacity:   | 55,000 gallons of Carbon slurry / ~40,000 lbs of PAC  |
| Typical Delivery:   | 20,000 pounds   |
| Delivery Frequency: | Up to every 2 weeks during warm season  |
| Annual Usage:       | 50 tons or more depending on raw water quality  |

There is no storage or chemical feed equipment required to be furnished for this bid.

The District will notify all bidders of any testing within one week after the bid opening.

## CHEMICAL SPECIFICATIONS

### **SODIUM CHLORITE**

Sodium Chlorite, NaClO<sub>2</sub>, shall be furnished as a liquid solution and meet the following requirements:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- Conform to AWWA Standard B303-18
- Contain 25% NaClO<sub>2</sub> by weight

The bid price, per pound, shall be based on the actual pounds of solution delivered.

|                     |   |
|---------------------|---|
| Delivery Method:    | Bulk  |
| Unloading Method:   | The tank has a fill pipe connection near ground level. The supplier shall pump the material to the top of the tank, approximately 15' above ground level. |
| Storage Capacity:   | Furnished by Supplier   |
| Typical Delivery:   | 3,000 gallons   |
| Delivery Frequency: | Every 2-3 Months  |
| Annual Usage:       | 15,000 gallons  |

The Sodium Chlorite supplier shall furnish one, minimum 4000 gallon, double-walled, insulated storage tank for Sodium Chlorite storage, one, minimum 4,500 gallon-double walled Sodium Hypochlorite storage tank and one minimum 4,000 gallon double-walled Hydrochloric Acid storage tank for the duration of the contract.

The Sodium Chlorite supplier shall furnish two Chlorine Dioxide Generators, each capable of producing a range of 65 to 160 pounds per day, of Chlorine Dioxide, ClO<sub>2</sub>. The units shall generate ClO<sub>2</sub>, by combining Sodium Chlorite (NaClO<sub>2</sub>), Sodium Hypochlorite (NaOCl), and Hydrochloric Acid (HCl). The generators shall be an eductor style unit that uses a potable water stream to create a vacuum draw for the three individual chemical feeds. The water pressure is approximately 70 psi. The generators shall include a method of adjustment for each of the three chemicals.

The Sodium Chlorite supplier shall provide repairs as needed and preventative maintenance for the generators, a minimum of 1 on-site visit every 2 months. The generators shall operate at a minimum efficiency of 95% at the end of each service call.

The District will supply all piping and housing for the generators.

## **CHEMICAL SPECIFICATIONS**

### **SODIUM HYPOCHLORITE (12.5%)**

Sodium Hypochlorite, NaOCl, shall be furnished as a liquid bleach solution and meet the following requirements:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- Conform to AWWA Standard B300-24
- Minimum 12.5% NaOCl by weight
- Contain no visible foreign matter and sediment

The bid price, per gallon, shall be based on the actual pounds of solution delivered.

The District has two Sodium Hypochlorite tank locations. The supplier shall be directed concerning which tanks to fill during each delivery.

|                     |  |
|---------------------|--|
| Delivery Method:    | Bulk   |
| Unloading Method:   | Each tank has a fill pipe connection near ground level.<br>The connections are 2" male camlock fittings.<br>The supplier shall pump the material to the top of the tank, approximately 40' above ground level. |
| Storage Capacity:   | 2 @ 8,500 gallons & 1 @ 6,000 gallons  |
| Typical Delivery:   | 4500 gallons   |
| Delivery Frequency: | Every 1-2 weeks  |
| Annual Usage:       | 175,000 gallons  |

There is no storage or chemical feed equipment required to be furnished for this bid.

## CHEMICAL SPECIFICATIONS

### CITRIC ACID

Citric Acid shall be furnished as a liquid solution and meet the following requirements:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water
- 50% Citric Acid by weight (+/-2%)
- Technical Grade or better
- Free from particulate matter.

Citric Acid will be used to clean PVDF membranes manufactured by Memcor. The nominal pore size is 0.04 microns.

The bid price, per pound, shall be based on the net weight of the shipping container (pounds of solution as opposed to pounds of active ingredients).

|                        |   |
|------------------------|---|
| Delivery Method:       | Totes – 330 gallons each (must be returnable)   |
| Delivery Instructions: | The District will offload the material.<br>Deliveries are accepted Mon thru Fri 7A to 2P. |
| Typical Delivery:      | 1 Totes   |
| Delivery Frequency:    | Variable <sup>1</sup>   |
| Annual Usage:          | Variable <sup>1</sup>   |

Totes shall meet the following requirements:

- Outlet must be 2" male camlock fitting.
- Must have 2" female NPT connection on top of tote for venting.
- Must be able to be moved with pallet jack.

Empty Totes shall be loaded on delivery truck after each shipment for return to supplier. Return cost shall be included in bid price.

<sup>1</sup>Usage estimation based on anticipated operation of membrane filtration system and could be subject to change. The system is currently offline and is not anticipated to be used much during 2025.



## CHEMICAL SPECIFICATIONS

### SODIUM BISULFITE

Sodium Bisulfite shall be furnished as a liquid solution and meet the following requirement:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water
- 40% Sodium Bisulfite by weight (+/- 2%).

Sodium Bisulfite will be used to neutralize chlorine used in the cleaning of membrane filtration units and remove manganese during the acid cleaning process.

The bid price, per pound, shall be based on the net weight of the shipping container (pounds of solution as opposed to pounds of active ingredients).

|                        |   |
|------------------------|---|
| Delivery Method:       | 55-gallon drums   |
| Delivery Instructions: | Drums are required to be shipped on pallets.<br>The District will offload the material.<br>Deliveries are accepted Mon thru Fri 7A to 2P. |
| Typical Delivery:      | 4 Drums   |
| Delivery Frequency:    | Variable <sup>1</sup>   |
| Annual Usage:          | Variable <sup>1</sup>   |

<sup>1</sup>Usage estimation based on anticipated operation of membrane filtration system and could be subject to change. The system is currently offline and is not anticipated to be used much during 2025.

## CHEMICAL SPECIFICATIONS

### SODIUM HYDROXIDE (CAUSTIC SODA)

Sodium Hydroxide (Caustic Soda), NaOH, shall be furnished as a liquid solution and meet the following requirements:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- Conform to AWWA standard B501-19
- 50% Sodium Hydroxide by weight
- Contain no soluble or insoluble material, organic or inorganic, capable of producing deleterious or injurious effects on the health of these consuming water that has been properly treated with its use
- Diaphragm or membrane grade

The manufacturer or supplier shall furnish a certificate of analysis that includes but is not limited to the following parameters: sodium hydroxide, sodium oxide, sodium chloride, sodium carbonate, sodium chlorate, sodium sulfate, aluminum, silicon, calcium, magnesium, iron, manganese, lead, mercury, arsenic, potassium, bromide, and bromate.

Liquid sodium hydroxide shall be delivered bulk or minibulk from properly cleaned self-unloading trucks.

The bid price, per pound, shall be based on the actual pounds of solution delivered.

|                        |  |
|------------------------|--|
| Delivery Method:       | Bulk / Minbulk   |
| Storage Capacity:      | 800 gallons  |
| Delivery Instructions: | The fill pipe connection is located near ground level.<br>The supplier shall pump the material to the storage tank located 40' above ground level.<br>Deliveries are accepted Mon thru Fri 7A to 2P. |
| Typical Delivery:      | 500 gallons  |
| Delivery Frequency:    | Variable <sup>1</sup>  |
| Annual Usage:          | Variable <sup>1</sup>  |

<sup>1</sup>Usage estimation based on anticipated operation of membrane filtration system and could be subject to change. The system is currently offline and is not anticipated to be used much during 2025.

## CHEMICAL SPECIFICATIONS

### **SULFURIC ACID (50%) (TOTES)**

Sulfuric Acid, H<sub>2</sub>SO<sub>4</sub>, shall be furnished as a liquid solution and meet the following requirements:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- 50% H<sub>2</sub>SO<sub>4</sub> by weight
- Reasonably clear liquid and be free from visible foreign matter and sediment
- Contain no inorganic or organic substances in quantities capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with its use

Sulfuric Acid will be used to lower pH for potable water treatment.

The bid price, per pound, shall be based on the actual pounds of solution delivered.

|                     |   |
|---------------------|---|
| Delivery Method:    | Totes - 330 gallons each (must be returnable)   |
| Unloading Method:   | The District shall assist in unloading.<br>Deliveries are accepted Mon thru Fri 7A to 2P. |
| Storage Capacity:   | 5 Totes @ 330 gallons each  |
| Initial Delivery:   | 4 Totes   |
| Typical Delivery:   | 4 Totes   |
| Delivery Frequency: | Variable <sup>1</sup>   |
| Annual Usage:       | Variable <sup>1</sup>   |

Totes shall meet the following requirements:

- Outlet must be 2" male camlock fitting.
- Must have 2" female NPT connection on top of tote for venting.
- Must be able to be moved with pallet jack.

Empty Totes shall be loaded on delivery truck after each shipment for return to supplier. Return cost shall be included in bid price.

<sup>1</sup>Usage estimation based on anticipated operation of membrane filtration system and could be subject to change. The system is currently offline and is not anticipated to be used much during 2025.

## CHEMICAL SPECIFICATIONS

### **SULFURIC ACID (50%) (DRUMS)**

Sulfuric Acid, H<sub>2</sub>SO<sub>4</sub>, shall be furnished as a liquid solution and meet the following requirements:

- Certified as suitable for contact with, or treatment of, drinking water by an accredited certification organization in accordance with ANSI/NSF Standard 60, Drinking Water Treatment Chemicals - Health Effects
- 50% H<sub>2</sub>SO<sub>4</sub> by weight
- Reasonably clear liquid and be free from visible foreign matter and sediment
- Contain no inorganic or organic substances in quantities capable of producing deleterious or injurious effects on the health of those consuming water that has been properly treated with its use

Sulfuric Acid will be used to clean PVDF membranes manufactured by Memcor. The nominal pore size is 0.04 microns.

The bid price, per pound, shall be based on the actual pounds of solution delivered.

|                     |   |
|---------------------|---|
| Delivery Method:    | 55-gallon drums   |
| Unloading Method:   | The District shall assist in unloading.<br>Deliveries are accepted Mon thru Fri 7A to 2P. |
| Initial Delivery:   | 4 drums   |
| Typical Delivery:   | 4 drums   |
| Delivery Frequency: | Variable <sup>1</sup>   |
| Annual Usage:       | Variable <sup>1</sup>   |

<sup>1</sup>Usage estimation based on anticipated operation of membrane filtration system and could be subject to change. The system is currently offline and is not anticipated to be used much during 2025.

**BID FORM**

I/We agree to provide the items described in the document titled "Rend Lake Conservancy District Water Treatment Chemicals Bid Specifications" at the following price(s):

| <b>ITEM</b>                | <b>UNIT</b>          | <b>BID PRICE</b> |
|----------------------------|----------------------|------------------|
| Ammonium Sulfate           | Pound                | _____            |
| Carbon Dioxide             | Ton                  | _____            |
| Cationic Polymer (Filter)  | Pound                | _____            |
| Cationic Polymer (Clarif.) | Pound                | _____            |
| Ferric Chloride            | Dry Ton (100% basis) | _____            |
| Fluoride                   | Pound                | _____            |
| Hydrochloric Acid 15%      | Pound                | _____            |
| Lime                       | Ton                  | _____            |
| Powdered Activated Carbon  | Ton                  | _____            |
| Sodium Chlorite            | Pound                | _____            |
| Sodium Hypochlorite        | Gallon               | _____            |
| Citric Acid                | Pound                | _____            |
| Sodium Bisulfite           | Pound                | _____            |
| Sodium Hydroxide (Caustic) | Pound                | _____            |
| Sulfuric Acid 50% (Totes)  | Pound                | _____            |
| Sulfuric Acid 50% (Drums)  | Pound                | _____            |

Separate bids will be awarded for each item. Bidders are not required to submit a price for every item. Include Product Specifications and a Compliance Affidavit for each chemical. Delivery frequencies are just estimation.

Company Name & Address

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

Fax: \_\_\_\_\_

Signature \_\_\_\_\_

Print Name: \_\_\_\_\_