

**LAS GALLINAS VALLEY SANITARY DISTRICT**

**B I D F O R M**

**FOR PROVIDING SERVICES FOR IRRIGATION PASTURE OPERATION & MAINTENANCE and for BIOSOLIDS REMOVAL AND SURFACE INJECTION (1,500,000 GALLONS) DURING FISCAL YEAR 2022-2023**

The undersigned, as bidder, declares that he/she has examined thoroughly the attached SPECIFICATIONS AND NOTICE INVITING SEALED BIDS, and that he/she hereby agrees, if this bid is accepted, to provide services for biosolids removal and surface injection to the Las Gallinas Valley Sanitary District in accordance with said Specifications and Notice for the following prices. **Agreement Term for all bid items is April 21, 2022 to June 30, 2023**

**BASE BID**

DESCRIPTION	ITEM PRICE
<p><b>ITEM 1:</b> Sludge removal and sub-surface injection into DLD Area of 1.5 million gallons from Sludge Storage Ponds (approx. ½ of total pond volume) Price includes:</p> <ul style="list-style-type: none"> <li>• Mowing biosolids injection field and roadways</li> <li>• Initial and periodic disking of DLD area to maximize disposal capacity/infiltration</li> <li>• Mixing of pond contents prior to and during removal</li> <li>• Removal of contents, transport, and uniform injection in DLD site</li> <li>• Daily sludge flow monitoring</li> <li>• Collection of daily composite samples on sludge removal days and delivery to District Lab</li> <li>• Mowing levee roads around sludge lagoons and DLD (once)</li> <li>• Other work as required to complete project</li> </ul>	
<b>Total Item 1</b>	<b>\$</b>
<p><b>ITEM 2:</b> Reclamation Area and Pasture Irrigation Operations &amp; Maintenance Price includes:</p> <ul style="list-style-type: none"> <li>• Irrigation of approximately 100 million gallons of stored water from District’s three effluent ponds</li> <li>• Chisel ripping Pastures #1 - #5 to 12” depth prior to commencement of irrigation</li> <li>• Disking Pastures #1 - #5 (Four Times)</li> <li>• Mowing levee roads around irrigation pastures as needed up to 3 times</li> <li>• High weed mowing in fields 1 through 5 prior to tillage of fields.</li> </ul>	

DESCRIPTION	ITEM PRICE
<ul style="list-style-type: none"> <li>• Disk cattail spoils north of storage ponds.</li> <li>• O&amp;M of the pivot irrigation systems and of the available fixed irrigation equipment in areas of pasture not covered by pivots. Operation shall comply with the restrictions of Order R2-1992-064.</li> <li>• Maintenance of all above ground piping and appurtenances</li> <li>• Collection of one set of four soil samples for analysis by outside laboratory. Cost of analysis to be paid by the District.</li> <li>• Remove vegetation from main runoff ditch to turn in north portion of pivot field #3, approximately 1500 feet of length.</li> <li>• Remove vegetation from main runoff ditch to intersection of pivot field #5, approximately 425 feet of length.</li> <li>• Other work as required to complete the project</li> </ul>	
<b>Total Item 2</b>	<b>\$</b>

Bidder agrees to abide by The Las Gallinas Valley Sanitary District's requirements and all California State and Federal laws, regulations, and restrictions related to Biosolids handling and disposal. Bidder also agrees to abide by The Las Gallinas Valley Sanitary District's requirements under the San Francisco Bay Area Regional Water Quality Control Board under Order No. 92-064 and any Federal laws, regulations, and restrictions related to Land Application of Secondary Treated Effluent.

Bidder encloses a Payment Schedule (Exhibit C), a copy of its insurance certificate in accordance with District Insurance Requirements (Exhibit D), identification of the Service Provider Team (Exhibit E) and a signed acknowledgment of the Contractor/Service Provider Safe Work Requirements (Exhibit F) with bid.

DATED: \_\_\_\_\_

\_\_\_\_\_  
Signature of Bidder

\_\_\_\_\_  
Print Name and Title

NAME AND ADDRESS OF ORGANIZATION:

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

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

**Accepted:**

Per Board Action on: \_\_\_\_\_

By:

\_\_\_\_\_  
Chris DeGabriele, General Manager

\_\_\_\_\_  
Date

## Las Gallinas Valley Sanitary District

### Scope of Work for Sludge Removal & Disposal, Reclamation Pasture Irrigation Operations & Maintenance and Related Activity

FY 2022-23

#### I. Scope of Work for Sludge Removal and Disposal

##### ***Background***

Digested sludge from the District's anaerobic digesters is pumped throughout the year to three double-lined sludge storage ponds located on District property immediately east of effluent storage pond #1. The sludge storage ponds have a total surface area of approximately two acres and a total storage capacity of approximately 3.2 million gallons. In the ponds, the solids thicken by gravity. Supernatant from the ponds overflows by gravity to a wet well and is pumped back to the treatment plant's primary clarifier. During the summer, approximately one half of the contents are removed from the ponds and disposed of on the adjacent nine-acre sludge disposal field (DLD). Refer to Figure 1 for location of these facilities.

Use of the District's on-site sludge disposal field is regulated under the federal code of regulations, 40 CFR Part 503 subpart C (Surface Disposal). The District's treatment and disposal processes meet requirements for "Class B" biosolids.

##### ***Solids Removal and Placement***

The Contractor shall remove a minimum of 1,500,000 gallons of sludge pond solids, starting from the pond containing the oldest material, and continuing to the next pond in sequence (Pond A → Pond B → Pond C) until the specified volume has been removed. For 2022, removal shall begin in Pond A.

Prior to removal, and during the removal process, the contents of the pond shall be mixed by pumped recirculation, propeller mixer or by other suitable means, so as to produce a more-or-less uniform solids consistency for disposal. Material shall be pumped from the ponds into a transport/injection truck, or directly to the injection equipment through portable pipelines.

Prior to solids injection, the contractor shall prepare the disposal field by mowing and disking to maximize the field's ability to accept the material. The solids shall be injected 6" – 8" below the ground surface using equipment specifically designed for subsurface injection and applied at a rate that does not result in ponding. Each application shall be followed by approximately one week of non-application to provide time for absorption into the soil and drying. Experience has shown that when distributed over the entire available area, a properly prepared field can accept the specified quantity of wet solids in approximately 8-10 weeks.

Sludge removal and placement shall include the following activities. Estimated hours are indicated for information purposes only. Actual time requirements may be different.

- Mowing sludge disposal field & roadways (est. hrs included under Pasture Irrigation O&M).

- Initial disking and re-disking of sludge disposal field to maximize capacity (est. hrs included under Pasture Irrigation O&M).
- Sludge mixing, removal, transport and injection, 1,500,000 Gallons

Contractor shall provide and maintain all mechanical equipment needed to perform the above work.

### ***Monitoring***

The Contractor shall collect a representative composite sample of the sludge solids removed for each day that removal/disposal occurs. The composite sample shall consist of a 4-6 grab samples collected over the course of the day, combined into a single sample. An accurate composite sample is necessary to properly characterize the total solids content of the material, since biosolids quantities must be reported to regulatory agencies on a dry weight basis. The composite sample shall be labelled by date and pond number and delivered to the District laboratory for analysis. District staff will be responsible for collecting composite samples for analysis of metals, to verify compliance with 40 CFR Part 503 pollutant concentration limits. If requested, the contractor shall coordinate with laboratory staff for the collection of those samples.

The Contractor shall measure the total volume of sludge transferred each day using a flowmeter specifically designed for measurement of sludge flow, or by other method approved in advance by the District. The District reserves the right to test flowmeter calibration and adjust volumes based on the results. Records of daily volumes shall be recorded provided to the District staff.

The roadways around the effluent storage ponds adjacent to the sludge storage ponds are used by the public. The Contractor shall take appropriate measures to ensure public safety and to minimize generation of dust from Contractor activities

## **II. Scope of Work for Reclamation Area and Pasture Irrigation Operations & Maintenance**

### ***Background***

The District operates the Reclamation Area in accordance with the San Francisco Bay Regional Water Quality Control Board Order No. 92-064. The Reclamation Area is located on 385 acres of diked baylands located to the northeast of the treatment plant (see attached Figure 1 and Figure 2). The Area includes a 20 acre Wildlife Pond (a.k.a. Marsh Pond), two 20-acre Effluent Storage Ponds, 200 acres of irrigated pasture, 3 ½ miles of public trails, and the District's solar photovoltaic array.

In addition to its normal wastewater treatment process, the District also operates a Recycled Water Facility, producing recycled water for delivery to the North Marin Water District (NMWD) and Marin Municipal Water District (MMWD). During the period from June 1<sup>st</sup>-October 31 (referred to as the "Reclamation Season"), all treated wastewater not utilized by the NMWD and MMWD recycled water systems is sent to the Reclamation Area Effluent Storage Ponds. Although water quality requirements of Order R2-1992-064 are less stringent, the treated wastewater effluent delivered to the Storage Ponds typically meets requirements for "disinfected secondary 23" as defined by California Code of Regulations, Title 22, Section 60301.220, and is suitable for animal feed production. Water from the Storage Ponds is applied to the pasture starting as early after June 1 as conditions permit.

Because the total amount of recycled water delivered to the MMWD system will be lower than normal in the summer of 2020 pending completion of the Recycled Water Facility (RWF) expansion project, the District will need to dispose of the maximum quantity of water possible from the Effluent Storage Ponds through pasture irrigation. The estimated quantity of water requiring disposal on the pasture is approximately 100 million gallons. The actual volume could vary from 70 – 120 million gallons depending on weather conditions and startup date of the expanded RWF.

The District's Reclamation Pump Station is located north of the Sludge Storage Pond #1 as indicated in Figure 1. The Reclamation Pump Station has three pumps available for pasture irrigation, although typically only a single pump is used at a given time. The pump station is operated manually by the Contractor. An underground pipeline runs from the pump station to the pasture irrigation system.

### ***Operation and Maintenance – Base Requirements***

The Contractor shall be responsible for operation of the Reclamation Pump Station, and for preparation, operation and maintenance of the pasture and its irrigation system, and of related facilities as detailed below, in a manner that maximizes disposal volume. Operations and maintenance activities shall, at a minimum, include the following. Estimated hours are indicated for information purposes only. Actual time requirements may be different.

- Chisel Ripping Pastures #1 - #5 to 12" depth prior to commencement of irrigation
- Disking Pastures #1 - #5 and Sludge Disposal Field
- Mowing levee roads (58 hr)
- Removal of Vegetation from Main Drainage Ditch (~3100-ft) from Hamilton Field
- Grading Berms of Irrigation Fields 1,2,3
- O&M of the pivot irrigation systems and of the available fixed irrigation equipment in those areas the of the pasture not covered by pivots. Operations shall comply with the restrictions of Oder R2-1992-064, included as Attachment A to this Scope-of-Work.
- Maintenance of all above ground piping and appurtenances.
- Collection of one set of four soil samples for analysis by outside laboratory. Cost of analysis to be paid by the District.-
- Other work as required to complete the project

The Contractor may use the pasture for production of an animal feed crop , however, maximizing effluent disposal shall have priority over crop production.

The District shall be responsible for maintenance of the Reclamation Pump Station and of underground piping and other underground assets.

Some roadways around the adjacent to the irrigation pasture fields are used by the public. The Contractor shall take appropriate measures to ensure public safety and to minimize generation of dust from Contractor activities.

Figure 1. LGVSD Treatment Plant Map



Figure 2. LGVSD Reclamation Area Pasture





## Attachment A

### Reclaimed Water Use Restrictions (from Order R2-1992-064)

1. Reclaimed water shall not be applied to the disposal area during the wet weather season (November 15 through April 15) unless the following conditions are satisfied:

Use of reclaimed water for application to the land may be allowed during the period from November 15 through April 15, providing that there has been little or no rainfall during the weeks prior to discharge, and providing that the Executive Officer has approved the management plan as required in Provision 10.

Reclaimed water may be applied during the remainder of the year, except when the ground is saturated or during periods when rainfall or runoff from adjacent land can occur.

2. No waste shall be allowed to escape from the discharger's property into waters of the State via surface flow, airborne spray or resurfacing after percolation.
3. Reclaimed water shall not be injected into any fixed irrigation system connected to a domestic water supply.
4. Use of reclaimed water on areas not shown on the map which is attached to this order (Attachment A) is prohibited without written authorization from the Executive Officer.
5. Waste shall not be applied within 25 feet of any ephemeral stream or within 100 feet of any other stream, pond (excluding wastewater storage pond), well, or housing.
6. Persons shall be effectively excluded from the areas where reclaimed water is applied.
7. The use of reclaimed water under provisions of this order shall be limited to irrigation of fodder, fiber, and seed crops or discharge to the wildlife pond.
8. The discharge of water other than domestic wastewater is prohibited.
9. The treatment, storage, or disposal of waste shall not create a nuisance, as defined in Section 13050(m) of the California Water Code