

City of Edgewater WRF

Interim Biosolids Removal Cost Analysis

Background: The plant dewatering centrifuge has been inoperable since 5/27/24. Parts and services costs to repair the centrifuge is on the July 1, 2024 council agenda. Half of the biological treatment unit (BTU) had been down for some rehab work and returned to service June 4, 2024. The plant is currently not wasting sludge due to the dilution of the treatment unit solids when the second half of the BTU was put on line, but we are expecting to resume wasting on June 17, 2024. The expected centrifuge downtime is 10 weeks.

Analysis Data:

Daily Wasting Amount – 30,000 GPD

Interim Removal Time Period – 10 weeks

Interim Removal Gallons – 2,100,000

Vendors For Biosolids Removal:

Shelley's Environmental Systems

Disposal Method – Liquid Biosolids Hauling and Disposal

Cost Information - \$0.40/gallon

Chemical Cost - \$0

City Labor Cost - \$0

Biosolids Removal Cost - \$840,000

Synagro

Disposal Method – Onsite dewatering (city supplies power and biosolids disposal)

Cost Information - \$0.068/gallon

Dewatering Cost - \$142,000

City Disposal Cost - \$16,929 (18 loads @ \$940.50)

Mobilization/Demobilization Cost - \$8,000 (4 times)

Chemical Cost - \$0

City Labor Cost - \$0

Biosolids Removal Cost - \$166,929

Falcon Environmental Corp.

Disposal Method – Onsite dewatering (city supplies power, labor, and biosolids disposal)

Cost Information - \$3,000/week equipment rental

Dewatering Cost - \$30,000 (10 weeks @ \$3,000/week for equipment rental)

Equipment Startup and Training Cost - \$10,000

Equipment Delivery and Return Freight - \$12,000

City Disposal Cost - \$16,929 (18 loads @ \$940.50)

Chemical Cost - \$9,990 (10 drums)

Labor Cost - \$21,875 $(2,100,000 \text{ gal.} / 40 \text{ GPM}) = 52,500 \text{ minutes}$
 $(52,500 \text{ min.} / 60 \text{ min./hr.}) = 875 \text{ hrs.}$
 $(875 \text{ hrs.} \times \$25/\text{hr.}) = \$21,875$

Biosolids Removal Cost - \$100,794

Discussion: Although used in the cost analysis, costs for chemical, biosolids disposal, and labor are budgeted items for the current fiscal year. The Falcon Environmental Corp. proposal appears to be the option of choice as it is the cheapest and least disruptive (plant loading, hauling schedule, power requirement) to plant operations.

Matthew Hixson

From: jay <jay@shelleysseptic.com>
Sent: Thursday, May 30, 2024 1:49 PM
To: Matthew Hixson
Cc: Joe Lavender
Subject: RE: Liquid Sludge Hauling

Matt, I would be at 40 cent per gallon. Let me know if you need us.

Sent from my T-Mobile 4G LTE Device

----- Original message -----

From: Matthew Hixson <mhixson@CITYOFEDGEWATER.ORG>
Date: 5/30/24 12:35 PM (GMT-05:00)
To: 'Jay Andrews' <jay@shelleysseptic.com>
Cc: Joe Lavender <jlavender@CITYOFEDGEWATER.ORG>
Subject: RE: Liquid Sludge Hauling

On average, yes. We can store it in the digester but that's what we're wasting per day.

Matt Hixson

City of Edgewater

Wastewater Plant Manager

Office: (386) 424-2400 x4043

Fax: (386) 424-2453

Cell: (321) 302-5387

From: Jay Andrews <jay@shelleysseptic.com>
Sent: Thursday, May 30, 2024 12:26 PM
To: Matthew Hixson <mhixson@CITYOFEDGEWATER.ORG>
Cc: Joe Lavender <jlavender@CITYOFEDGEWATER.ORG>
Subject: RE: Liquid Sludge Hauling

You would need to haul 25-30k per day?

Thanks,

Jay Andrews

Shelley's Environmental Systems

407-889-8042 Office

352-383-5775 Lake County

407-889-4408 Fax

From: Matthew Hixson <mhixson@CITYOFEDGEWATER.ORG>

Sent: Thursday, May 30, 2024 11:56 AM

To: Jay Andrews <jay@shelleysseptic.com>

Cc: Joe Lavender <jlavender@CITYOFEDGEWATER.ORG>

Subject: Liquid Sludge Hauling

Our centrifuge went down a few days ago. What would Shelley's charge (per gallon or per load) to haul from our plant in Edgewater? We usually waste 25,000-30,000 GPD of ~1% solids. Probably won't have our centrifuge back on line until at least mid-August. Let me know if you need more info.

Matt Hixson

City of Edgewater

Wastewater Plant Manager

Office: (386) 424-2400 x4043

Fax: (386) 424-2453

Cell: (321) 302-5387

JUNE 11, 2024

City of Edgewater
500 W. Ocean Avenue
Edgewater, FL 32132

Attn: Mr. Matt Hixson, Plant Supervisor

Sent via email to: mhixson@cityofedgewater.org

RE: Budgetary Pricing Mobile Centrifuge Dewatering at Edgewater WWTP

Dear Mr. Hixson:

Synagro South, LLC (Synagro) is pleased to offer the City of Edgewater the following proposal to centrifuge dewater your wastewater sludge from your wastewater treatment facility in Edgewater, FL.

Synagro is uniquely positioned to work with the City of Edgewater as the only biosolids management company in Florida who operates a fleet of mobile centrifuge dewatering trailers to handle the volume of wastewater sludge processing along with composting facilities to sustainably repurpose the dewatered cake. Synagro has been in business for over 30 years and is the largest municipal biosolids management company in the country with over 700 municipal customers in 48 states. This includes over 35 contracts with municipalities throughout the State of Florida. We provide various residual management services, including sludge holding tanks cleaning, retention pond and lagoon dredging and mobile centrifuge dewatering of sludge. We offer these services to water and wastewater treatment plants and have extensive equipment and personnel resources to perform your needs for biosolids management.

Mobile Centrifuge Scope of Work:

Synagro will provide the following resources on an emergency or as-needed basis:

- One (1) Mobile Centrifuge and Operator (estimate 1 – 10 hour shift @ 250 GPM)
- One (1) Road Tractor and CDL Driver
- Sufficient Polymer for sludge solidification
- Hoses, cables and fittings for connection to centrifuge

We ask the City to provide the following:

- Sufficient workspace for the proposed activities and uninterrupted access to the work area during operations

- A minimum of 250,000 gallons of sludge per event, accessed by a 4-inch camlock fitting outlet within 50 feet of our equipment
- Reclaimed water source (2" connection, 140 gpm at 60 psi) within 50 feet of our equipment
- Access to manway or EQ tank to be used for filtrate return (250 GPM) within 50 feet
- Provide electrical, or generator, for running our centrifuge (250 amps, 480 volts, 3-phase)
- Staging of necessary end dump trailers from H&H to convey sludge cake into; Synagro operator will maneuver trailer during the day in order to evenly distribute cake
- Hauling and disposal of dewatered cake (estimate 19% solids) with replacement trailers

Residuals Specifications:

The City of Edgewater, and their contracted provider H&H, will handle the hauling and disposal of the biosolids cake residuals.

Budgetary Pricing:

Dewatering Services based on the % solids of the in-feed sludge and volume of sludge to dewater:

- **Dewatering = \$0.068 per gallon (sludge infeed solids between 1.0 and 2.5%)**
- **Mobilization/Demobilization of Equipment and Crew = \$2,000/service**

Our proposal is delivered in good faith, and we are prepared to enter into a mutually acceptable contract. Please note that this proposal is based on Synagro's standard terms and conditions and shall be strictly non-binding upon Synagro until all parties negotiate and execute a binding contract. Sludge sample may be required to verify pricing. This proposal shall not obligate Synagro to negotiate an agreement and any of the terms of the contract shall be subject to Synagro's approval.

We appreciate the opportunity to submit this proposal for your consideration and look forward to the opportunity to provide our services. Should you have any follow up questions, please contact me at 813-495-1060 or cdebrunner@synagro.com. Thank you!

Sincerely,

Curt DeBrunner

Curt DeBrunner
Area Sales Manager



Falcon Environmental Corp.
PO Box 710
Frederick, CO 80530 US
303-833-9998
heidi@fecal.us
www.fecal.us

Estimate



ADDRESS
City of Edgewater 104 N Riverside Drive Edgewater, FL 32132

SHIP TO
City of Edgewater 104 N Riverside Drive Edgewater, FL 32132

ESTIMATE #	DATE	
2455	06/11/2024	

SHIP VIA
Best Way

SALES REP
AJP

DESCRIPTION	QTY	RATE	AMOUNT
Trailer Mounted 48-inch Single Rotary Fan Press Mobil Dewatering Rental (\$3,000 per week and billed monthly at \$12,000)	1	12,000.00	12,000.00
3-Day Startup & Training provided by Prime Solutions	1	10,000.00	10,000.00
Delivery and Return Freight	1	12,000.00	12,000.00

SUBTOTAL	34,000.00
TAX (0%)	0.00
TOTAL	\$34,000.00

Accepted By

Accepted Date