

Board of Public Utilities
Emma Walton, Deputy Director of Engineering
September 19, 2019

### Presentation Outline

- Biosolids Introduction
- The City's Biosolids Program
  - Overview
  - Challenges
  - Opportunities
- Proposed Next Steps

# Biosolids -Introduction

#### What are Biosolids?

- Solids from Wastewater Treated at LTP
- Available for Beneficial Reuse
- Degree of Treatment Dictates
   Reuse Options
  - Class B: Anaerobic Digestion
  - Class A: Composting/Lystek



# The City's Biosolids Program

#### Goals

- Regulatory Compliance
- Reliable Performance
- Operational Flexibility
- Value to Ratepayer
- Resilience



# The City's Biosolids Program



32,600 tons of Biosolids/yr Totaling \$2,166,000/yr

65% \$40/ton 22/2/2017

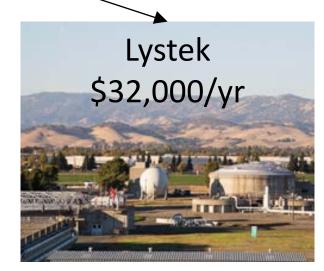
SSATON

\$98/ton









## Land Application

- South County Properties
  - 7 Properties with Annual Agreements
  - 1 City-Owned Property (Twin House)
- North County Properties
  - 3 City-owned Farms (Stone, Brown, Alpha)
- Storage
  - Alpha Barn (7,000 wet tons)



## Compost

- City-Owned Facility Commissioned in 1996
- Produces Class A, Marketed Compost
- Operates Seasonally (October May)
- Weather Independent Operation



## Landfill

Alternative Daily Cover at Redwood Landfill

Pre-1985 100% Landfilled

• By 1997 33% Landfilled

• Currently 10% Landfilled



## Lystek

- Canadian-Based Company
- Facility Located at the Fairfield-Suisun Sewer District
- Operational since 2016
- Processing Capacity of 150,000 tons/year
- SR was First 3<sup>rd</sup> Party Customer
- Produces Class A, Liquid Fertilizer (LysteGro)



## Biosolids Program - Challenges

#### **Land Application**

- Seasonal Restrictions (May - October)
- South County Properties
   Rely on Annual Agreements
- North County Properties have CTS Constraints
- Potential Regulatory Pressure
- Competition for Available Land



## Biosolids Program - Challenges

#### **Compost**

- High Unit Cost
- Aging Facility
- Needs Capital Investment
  - Near-term ~\$4M
  - Long-term ~\$10M

#### <u>Landfill</u>

 Landfill Option Phasing Out (SB 1383)



# Biosolids Program - Summary

Reuse Option	Volume of Biosolids Reused (wet tons)	Unit Cost of Reuse Option (per wet ton)	Benefits	Challenges
Land Application	21,190	\$40.00	Low Unit Cost	Restricted During Rainy Season
Compost	7,824	\$142.00	Weather Independent, Produces Class A Product	High Unit Cost
Landfill	3,260	\$54.00	Low Unit Cost	Increased Regulatory Restrictions (SB 1383)
Lystek	326	\$98.00	Weather Independent, Produces Class A Product	3 <sup>rd</sup> Party Processor

## Biosolids Program - Opportunities

#### Alternatives to Compost may Provide Savings

- Existing Lystek Facility
  - Potential \$10.5M Savings over 20-yrs
    - ~\$350,000/yr O&M Savings
    - \$4M Avoided Near-Term Capital Investment
    - Potential Lease Revenue of Biosolids Compost Facility
- Proposed New Suez Facility
  - Potential \$4.2M Savings over 20-yrs
- Others?
  - Expected Savings while Meeting Program Goals
  - RFP to Identify Additional Opportunities

## Request for Proposals

Anticipated to Include Commitment to Process:

- Approximately 11,000 wet tons of Biosolids,
- from October through May,
- for a Mid-Term Contract Length\*



\*A mid-term contract (10-15 years) provides near-term savings and allows for potential participation in a long-term, regional solution.

## Proposed Next Steps

Sept 19, 2019 Anticipated BPU Approval

to Issue RFP

Oct/Nov 2019 Advertise RFP

Late 2019 Convene Selection Panel

 Early 2020 Recommendation to CC/BPU Liaison Subcommittee

Early 2020 Recommendation to Full BPU

Ongoing Continual Evaluation of Biosolids Program

Opportunities for Regional Solutions

## Recommendation

It is recommended by the Water Department and the CC/BPU Liaison Subcommittee that the Board, by motion, approve issuing a Request for Proposals for the beneficial reuse of a portion of the biosolids produced at the City's Laguna Treatment Plant.

