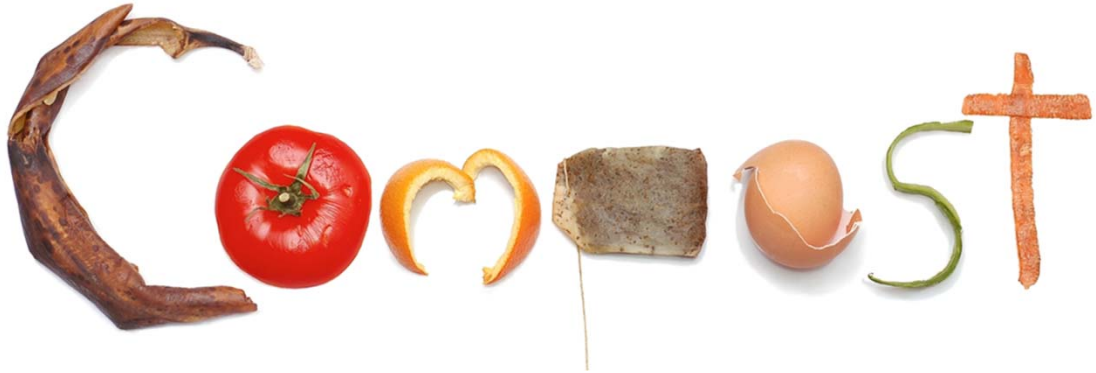


Solid Organic Waste Processing Facility

City Council/Board of Public Utilities Liaison Subcommittee
Emma Walton, Deputy Director of Engineering
May 30, 2019

Background

- 1992 SCWMA Formed (Zero Waste Sonoma)
- 1993 Sonoma Compost Opened
- 2015 Sonoma Compost Closed

Why did Sonoma Compost close?

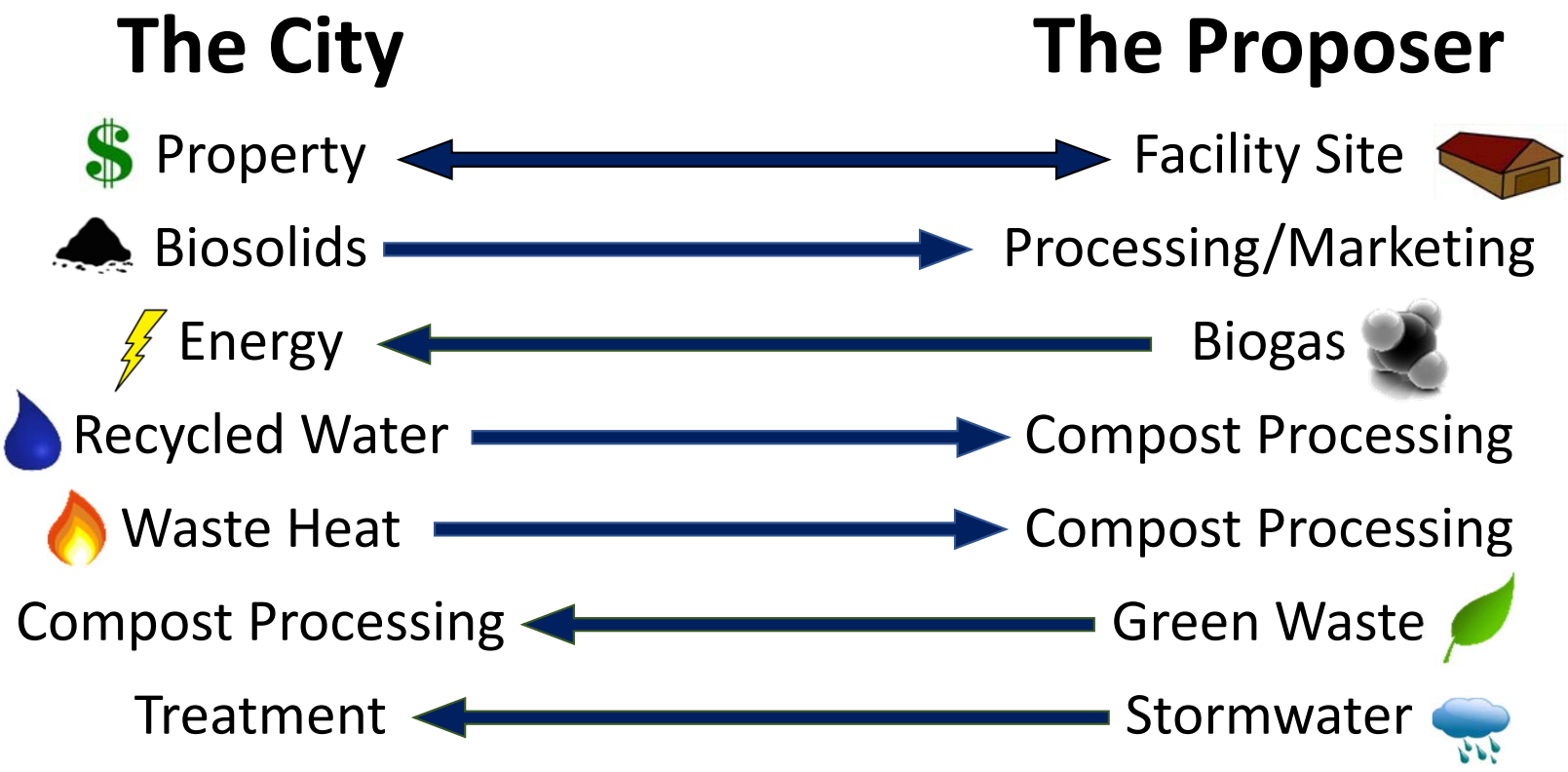
How do we avoid similar issues?

Background

- May 2017
  SCWMA
  Released RFP

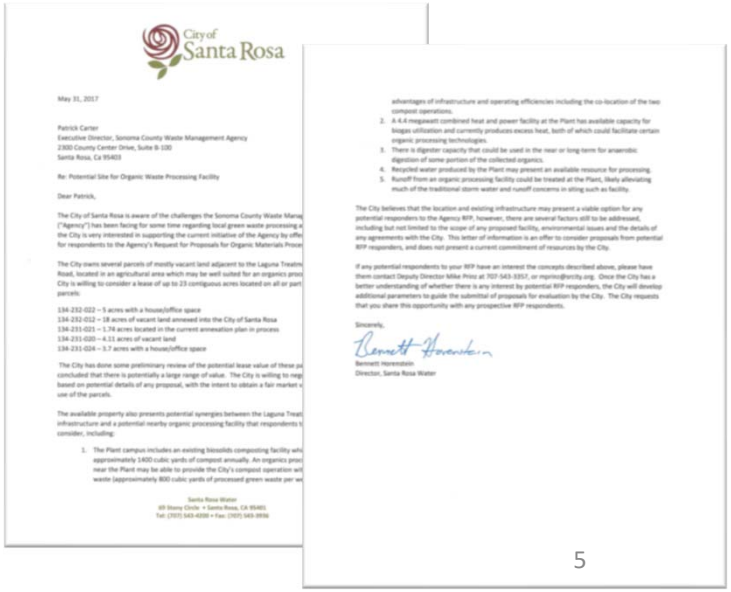
- July 2017
  City of Santa Rosa
  Released RFP

Potential Synergistic Benefits



Background

- Dec 2017 City Issued LOIs to 4 Proposers
- Aug 2018 SCWMA Selected Renewable Sonoma (Formerly Sonoma Compost)
- Feb 2019 BPU Authorized ENA with Renewable Sonoma
  - Agreement to Negotiate in Good Faith
  - Site Lease with 20-30-year term
  - Project Agreement(s) Developed upon Agreement by Both Parties

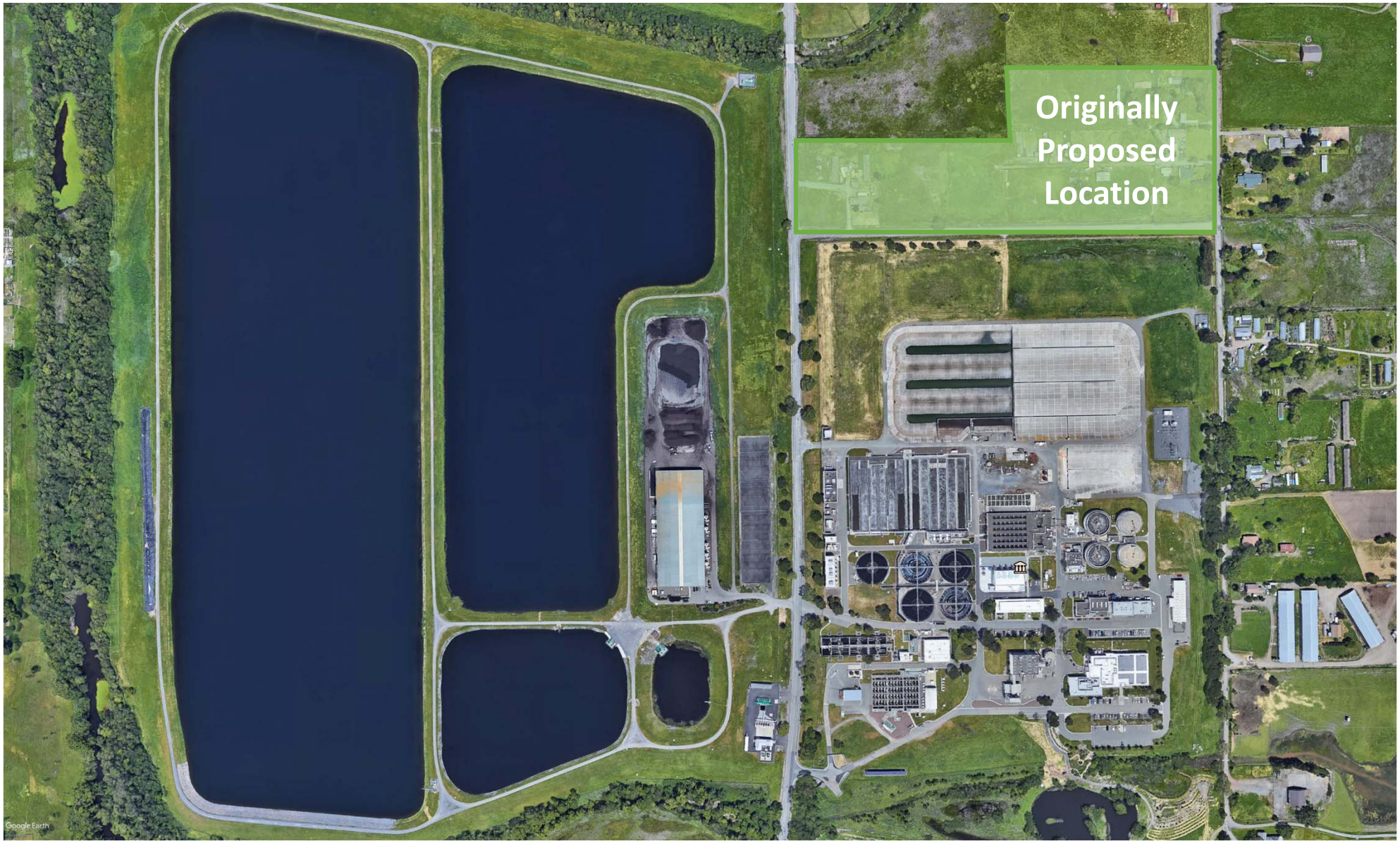

City of Santa Rosa

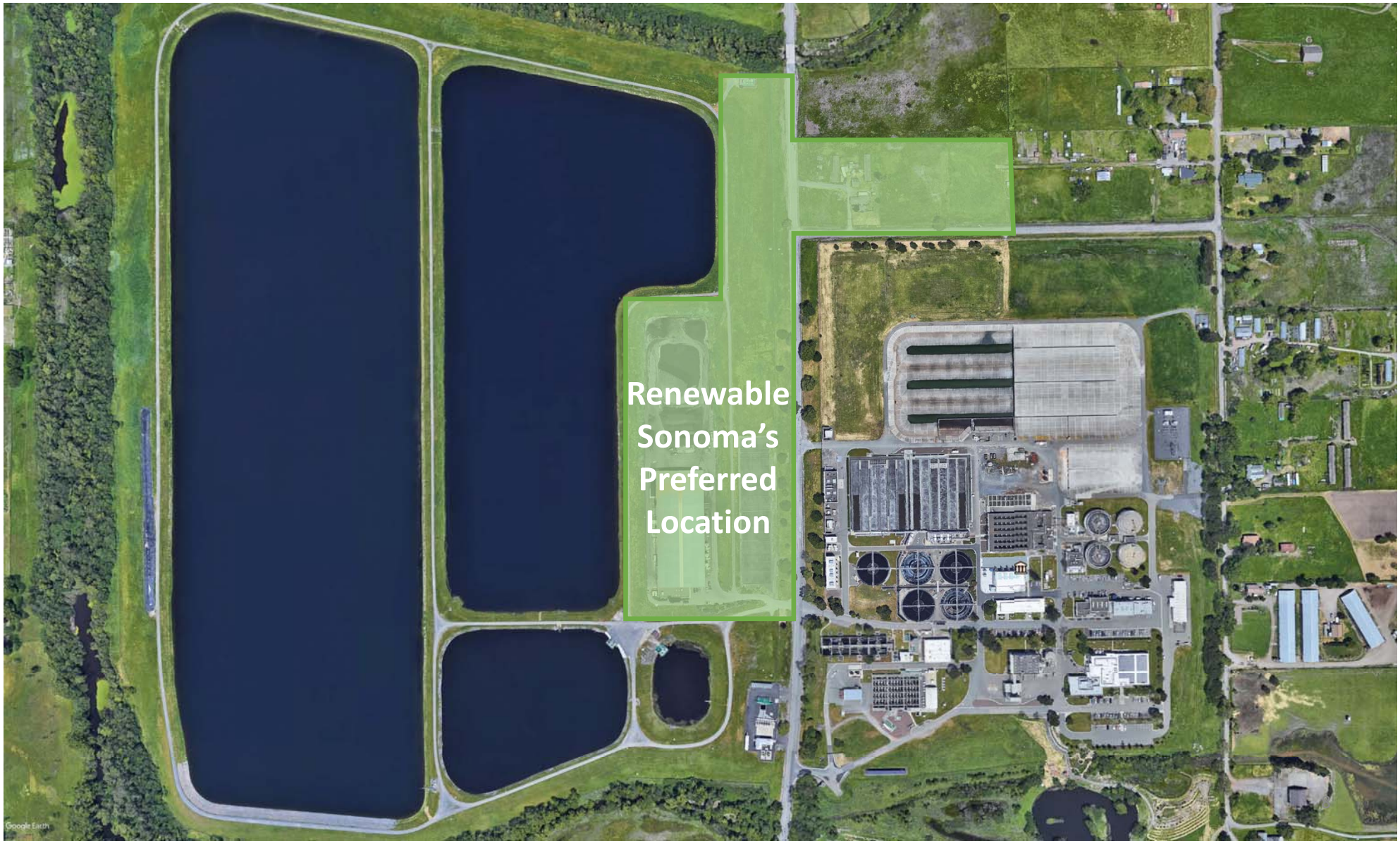
Renewable Sonoma's Proposal

Green and Food Waste Receiving

Covered Aerated Static Piles

Anaerobic Digestion

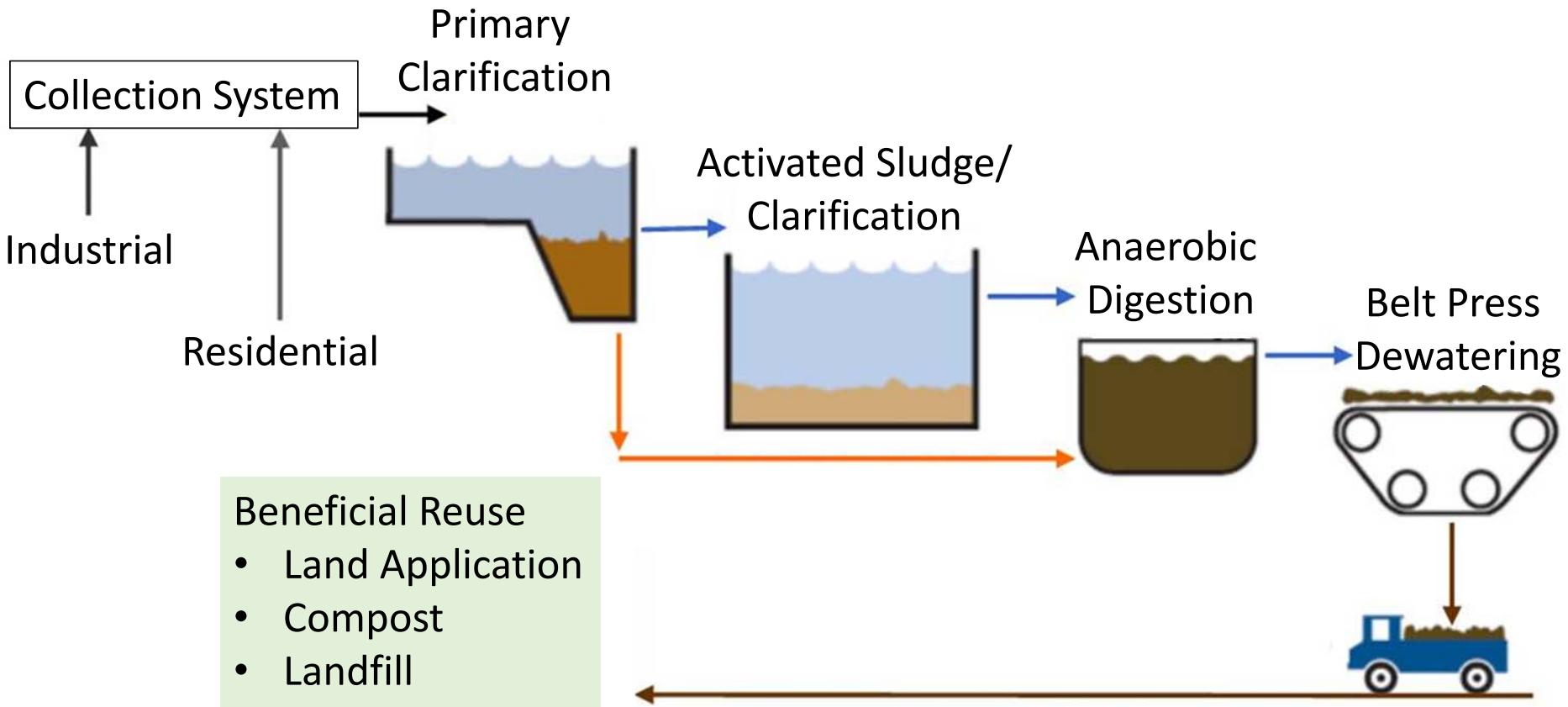

Originally
Proposed
Location
Google Earth


Renewable Sonoma's Preferred Location

Renewable Sonoma's Proposal

- Phase 1 Near-term Biosolids Management Plan
  - Provide Alternatives to Biosolids Compost Facility
- Phase 2 Solid Organic Waste Processing Project
  - Re-purpose Biosolids Compost Facility to Organic Waste Processing Facility
- Phase 3 Regional Biosolids Facility

Biosolids Processing



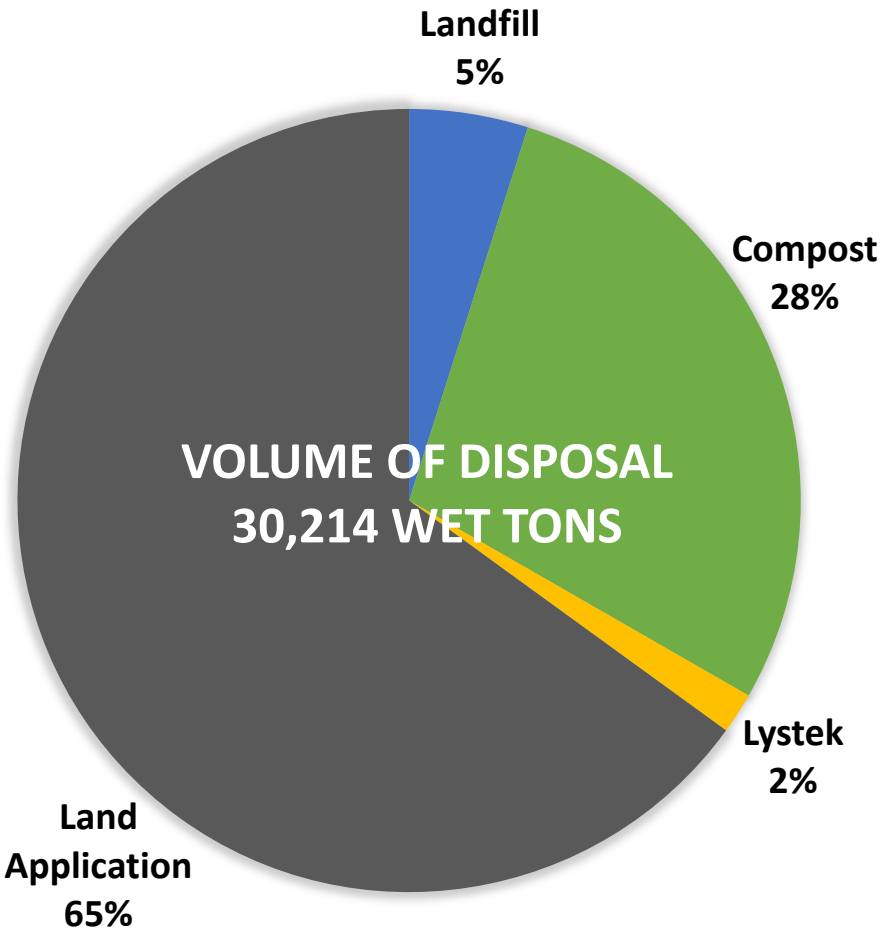
Beneficial Reuse
- Land Application
- Compost
- Landfill
- Lystek

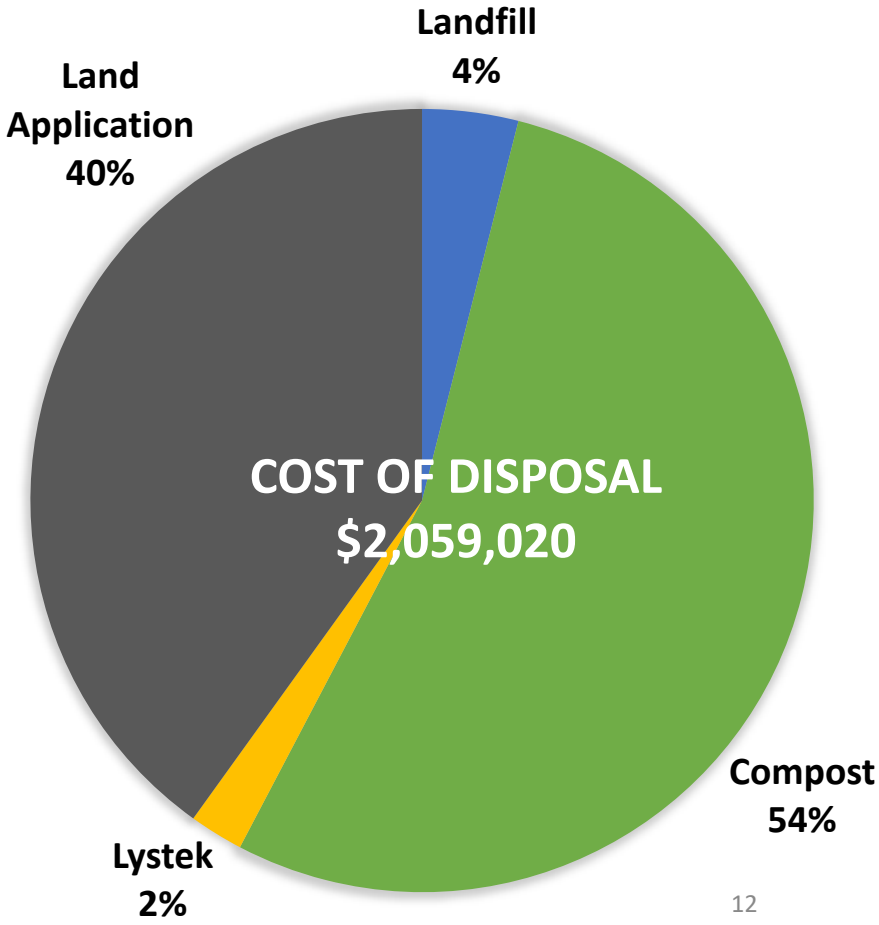
Biosolids Beneficial Reuse

Reuse	Wet Tons	Percent	Total Cost	Per Ton Cost
Land Application	19,644	65%	$825,048	$42
Compost	8,578	28%	$1,106,562	$129
Landfill	1,482	5%	$81,510	$55
Lystek	510	2%	$45,900	$90
Total	**30,214**	**100%**	**$2,059,020**	**$68**

note: unit costs do not include overhead nor value/liability of assets.

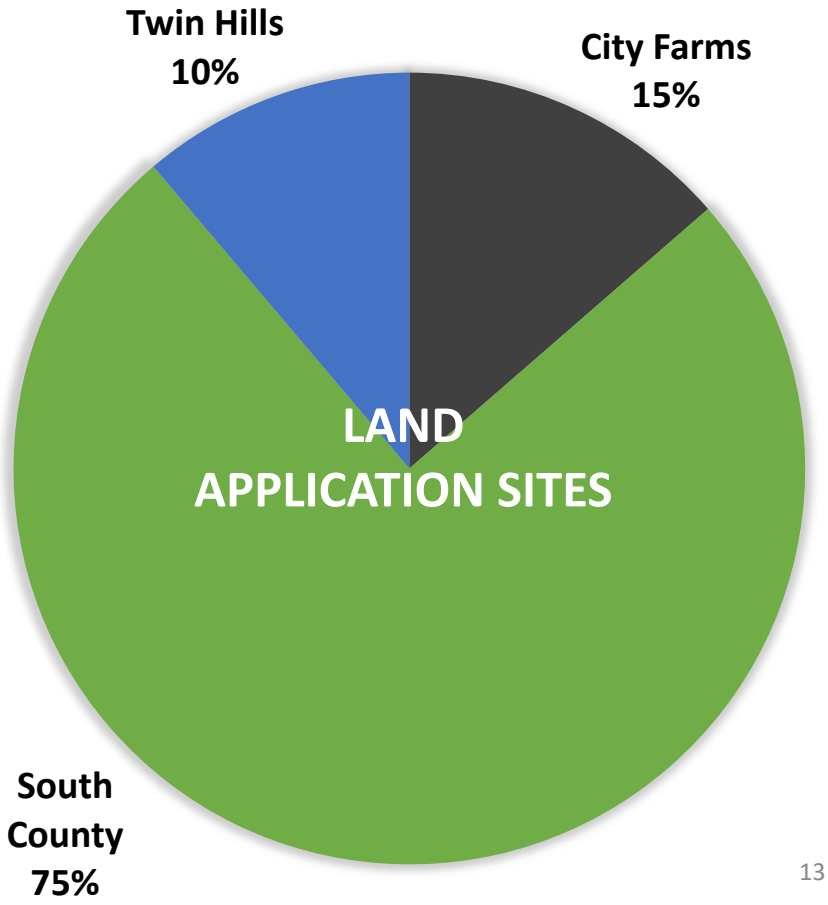
Biosolids Beneficial Reuse





Biosolids Land Application

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



Biosolids Compost Facility

Biosolids Compost Facility

- Commissioned in 1996
- Original Construction $12M
- CIP over last 20-years ~$4M
- CIP over next 5-years ~$4M
  - Roof Replacement ($3M)
  - Walking Floor Replacement ($350K)
  - Agitator Control Improvements ($250K)
- R&R over next 20-years $10M
- Supported by 6 Skilled Maintenance Workers

Biosolids Processing - Challenges

- Land Application
  - South County Properties Rely on Annual Agreements
  - North County Properties have CTS Constraints
  - Future Regulatory/Operational Unknowns
- Compost
  - High Unit Cost
  - Capital Investment Needed
- Landfill
  - Regulatory Changes (SB 1383)
- Lystek
  - Loss of Control

Phase 1 Alternatives

- Hydrolysis
  - Pre-Digestion
  - Heat to 285/330°F
  - Improves Digestion/ Dewaterability
- Drying
  - Post-Dewatering
  - Air Convection
  - Heat to 150/175°F

Potential Alternatives - Comparison

Alternative	CapEx	Savings	Pros	Cons
Compost	Low	None	Status Quo Maintain Control	High Unit Cost CapEx Investment Needs
Onsite Hydrolysis	High	High	Class A Product = ↑ Market	High CapEx ↑ O&M
Onsite Hydrolysis Merchant Plant	High	Highest	Revenue from Tipping fees	↑ Material Operational Complexities
Onsite Drying	High	High	Class A Product = ↑ Market	High CapEx
Offsite Drying	None	Low	No CapEx	↑ Hauling Costs Requires Location
Lystek	None	Lowest	No CapEx	Out of County Disposal

Next Steps

- Near-Term
  - Regular Meetings with Negotiation Team and Subcommittee
  - Decision Regarding Location of Facility
  - Pre-Development Agreement(s)
  - Conceptual Site Plan/Project Description
- Long- Term
  - CEQA (12-18 months)
  - Permitting (12-24 months)
  - Design/Construction (12-14 months)
  - Commissioning (4 months)

{ Approximately 3 to 5 years }

- Ongoing Communication with BPU and CC