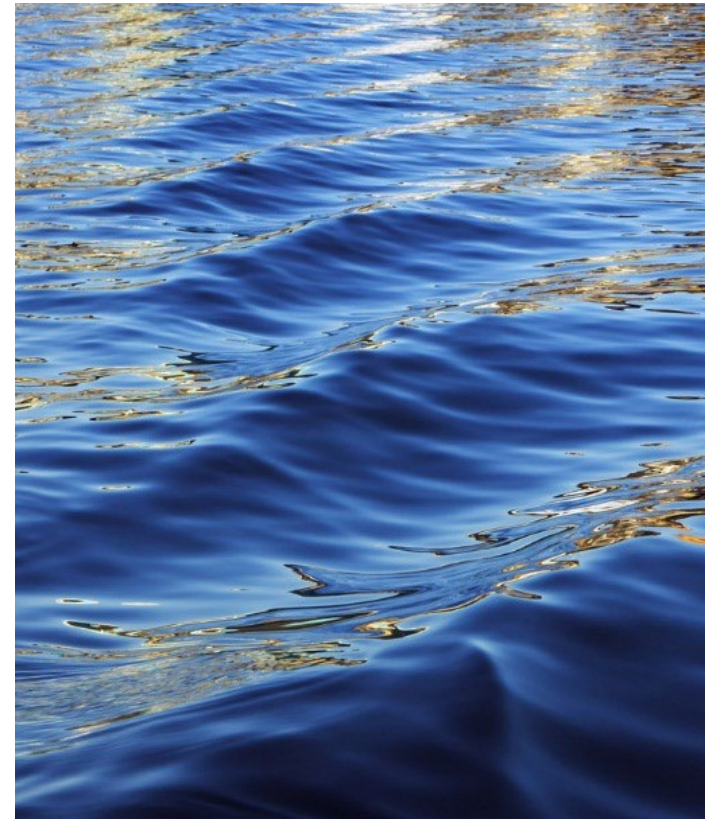




SB 1383 Procurement Options for El Dorado County

July 18, 2023



SB 1383 Background

SB 1383 passed in 2016 as part of California's strategy to combat climate change. Organics like food scraps, yard trimmings, paper and cardboard make up half of what Californians dump into landfills.

- One component of SB 1383 relates to procurement requirements for local jurisdictions. Jurisdictions have been given annual procurement targets related to compost, mulch, biomass-derived electricity, and renewable gas from anaerobic digestion.
- Jurisdictions can decide what mix of eligible products they want to procure.
- Procurement targets are calculated by multiplying the per capita procurement target (0.08 tons of organic waste per California resident per year) by the jurisdiction population.

Procurement Requirements

- Assembly Bill 1985 allows a tiered approach over the course of three years allowing jurisdictions to procure a percentage (30%, 65%, and 100% respectively) that meets or exceeds its recovered organic waste product procurement target.
- In 2023, El Dorado County has an estimated procurement target of 3,866 tons of organic products. This target increases to 8,376 in 2024 and 12,886 in 2025 and 2026.
- Procurement targets will be updated at the beginning of 2027 to reflect population changes.
- The procurement requirements are designed to build markets for recovered organic waste products to achieve the organic waste diversion targets mandated by SB 1383.

Types of Procurement & Conversion Factors

Conversion Factors

1 Ton of Organic Waste in a Procurement Target Shall Constitute:

Recovered Organic Waste Product	Quantity	Unit
Renewable Gas in the form of Transportation Fuel	21	DGE
Electricity from Renewable Gas	242	kWh
Heat from Renewable Gas	22	therms
*Electricity from Biomass Conversion	650	kWh
*Compost	0.58	tons
Mulch	1	ton

Option 1 – Electricity from Biomass Conversion



Organic Waste Procurement
Compliance for SB 1383





Organic Waste Procurement Compliance for SB 1383



SB 1383 Organic Waste Products Procurement Requi

Beginning January 1, 2022, SB 1383 requires cities and counties to procure annually a quantity of organic waste products to meet their annual procurement target

- Jurisdictions are required to procure 30% of their organic waste targets in 2023
- 65% of their organic waste targets in 2024
- 100% of their organic waste targets in 2025 and thereafter

There are 4 types of organic waste products that comply with SB 1383:

- Compost
- Mulch
- Renewable energy from anaerobic digestion
- **Electricity produced from biomass compliant feedstock**



Procurement of Biomass Attributes (Greenleaf) Model

- Greenleaf is collecting SB 1383 biomass eligible material from local transfer stations and offering to sell the eligible “attributes” to local jurisdictions to comply with their procurement requirements
- Greenleaf believes it can sell approximately 200,000 tons of SB 1383 compliant biomass material annually
- Greenleaf is selling 1 ton of SB 1383 compliant biomass that will be burned for the purposes of producing biomass energy for approximately \$32.50 (the equivalent of 650 kwh of biomass energy)



Proposal for Pioneer's Assistance



Representative Role

- Pioneer facilitated and negotiated on behalf of its participating members and also answered questions for each member agency throughout their approval process. Benefits include:
 - Better bargaining strength representing multiple jurisdictions and quite possibly better terms than jurisdictions on their own
 - Save member agencies significant staff time by negotiating the draft agreement on behalf of multiple parties
 - The terms and conditions of the final agreement are up to the individual jurisdiction's counsel to negotiate and approve
 - This approach allowed Pioneer to assist its members without any liability for compliance
 - Compliance would be largely handled by Greenleaf with the exception of reporting that requires direct input from the jurisdictions, wherein Greenleaf would provide that data to submit

2023 Estimated Targets and Costs

	2022 Energy		Max. Tons	2023 Target		Cost
	Usage kwh	kwh Per Ton	Procurable*	in Tons	Price Per Ton	2023
Placerville	2,612,315	650	4,019	261	\$ 32.50	\$8,483
E.D. County	4,281,309	650	6,587	3,866	\$ 32.50	\$125,645
Auburn (w/o OMI)	1,214,993	650	1,869	347	\$ 32.50	\$11,278
Auburn (with OMI)	2,198,649	650	3,383	347	\$ 32.50	\$11,278
Colfax	876,129	650	1,348	52	\$ 32.50	\$1,690
Lincoln	3,821,239	650	5,879	1,191	\$ 32.50	\$38,708
Loomis	218,204	650	336	164	\$ 32.50	\$5,330
Grass Valley	Unknown	650	Unknown	306	\$ 32.50	\$9,945
Nevada City	Unknown	650	Unknown	74	\$ 32.50	\$2,405
						\$347,828

*The maximum tons procurable through biomass attributes is calculated by taking the energy usage in kwh of the municipality divided by 650kwh (the CalRecycle equivalent of 1 ton of biomass attribute)

2024 Estimated Targets and Costs



	2022 Energy		Max. Tons	2024 Target		Cost	Unmet Target
	Usage kwh	kwh Per Ton	Procurable	in Tons	Price Per Ton	2024	in Tons
Placerville	2,612,315	650	4,019	566	\$ 32.50	\$18,400	
E.D. County *	4,281,309	650	6,587	8,376	\$ 32.50	\$214,065	1,789
Auburn (w/o OMI)	1,214,993	650	1,869	751	\$ 32.50	\$24,399	
Auburn (with OMI)	2,198,649	650	3,383	751	\$ 32.50	\$24,399	
Colfax	876,129	650	1,348	113	\$ 32.50	\$3,676	
Lincoln	3,821,239	650	5,879	2,581	\$ 32.50	\$83,883	
Loomis *	218,204	650	336	354	\$ 32.50	\$10,910	18
Grass Valley	Unknown	650	Unknown	664	\$ 32.50	\$21,580	
Nevada City	Unknown	650	Unknown	159	\$ 32.50	\$5,168	
						\$694,879	

*Any targets that exceed the Max Tons Procurable must be met through purchase of either compost or mulch

2025 Onward Estimated Targets and Costs

	2022 Energy		Max. Tons	2025 Target		Cost	Unmet Target
	Usage kwh	kwh Per Ton	Procurable	in Tons	Price Per Ton	2025	in Tons
Placerville	2,612,315	650	4,019	871	\$ 32.50	\$28,308	
E.D. County *	4,281,309	650	6,587	12,886	\$ 32.50	\$214,065	6,299
Auburn (w/o OMI)	1,214,993	650	1,869	1,155	\$ 32.50	\$37,538	
Auburn (with OMI)	2,198,649	650	3,383	1,155	\$ 32.50	\$37,538	
Colfax	876,129	650	1,348	174	\$ 32.50	\$5,655	
Lincoln	3,821,239	650	5,879	3,970	\$ 32.50	\$129,025	
Loomis *	218,204	650	336	545	\$ 32.50	\$10,910	209
Grass Valley	Unknown	650	Unknown	1,021	\$ 32.50	\$33,183	
Nevada City	Unknown	650	Unknown	246	\$ 32.50	\$7,995	
						\$947,906	

*Any targets that exceed the Max Tons Procurable must be met through purchase of either compost or mulch

Cost Comparison



Purchase Biomass Attributes

- Greenleaf Power is offering SB 1383 compliant biomass attributes for \$32.50 per ton
- El Dorado County's estimated 2023 target is 3,866 tons
- Total estimated cost for El Dorado County is **\$125,645**
- Pioneer would charge an administrative fee to recover out of pocket attorney's costs related to negotiating the contract (\$10,000). This cost will be divided equally amongst participating jurisdictions.

Purchase Compost

- Western Placer Waste Management Authority in Lincoln quoted \$21/ton for SB 1383 compliant compost (If El Dorado County is a member agency, then they may be eligible for a discount)
 - Multiplied by El Dorado County's estimated 2023 target of 2,320 (60% of target for compost) tons equals a cost of \$48,720
- JT Trucking quoted \$300/trip with a 24-ton truck for 12 miles (the distance between Western Placer Waste Management facilities and El Dorado County is 38 miles so the cost may be more)
 - It would take 162 trips to haul 3,866 tons at \$300 a trip for a total of \$48,600
 - Total estimated cost for El Dorado County is **\$97,320**
- El Dorado County would also need to figure out what to do with 2,320 tons of compost

What Does 50 Tons of Compost Look Like?



Considerations

- The price of compost and mulch vary wildly, and Greenleaf acknowledges that their product is not for everyone
- Prices range from 25% cheaper to 4 times more expensive for mulch and compost depending upon proximity to product, the hauler, and operational costs
- Beginning January 1, 2027, jurisdictions' procurement targets will be recalculated to reflect population changes
- If jurisdictions have SB 1383 local assistance grant money, they should contact their grant manager regarding using the funds to pay for the organic waste procurement
- **EACH JURISDICTION SHOULD CONDUCT THEIR OWN FISCAL ANALYSIS AND DETERMINE THE BEST OPTION FOR COMPLIANCE BEFORE SIGNING CONTRACT**

Notice of Violation



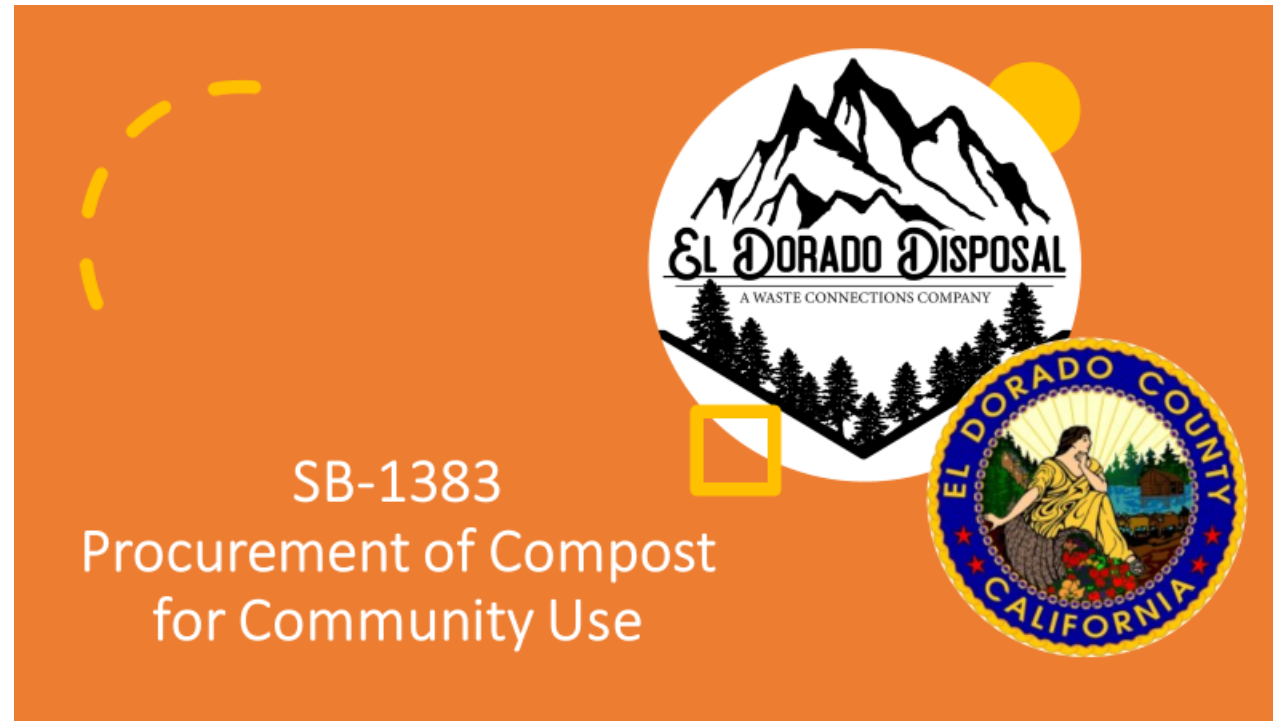
- Pioneer first learned of a possible Notice of Violation (NOV) from the Environmental Protection Agency (EPA) on May 10
- Pioneer contacted Greenleaf, CalRecycle, and our Board members
- The NOV is for alleged violations for hourly exceedances and stack tests during a period covering 2016-2021
- Greenleaf believes strongly that the ongoing discussions with the EPA will significantly reduce or eliminate the alleged exceedances
- CalRecycle will conduct compliance evaluation of jurisdictions which will require written certification from the biomass conversion facility certifying the feedstock came from eligible and permitted facilities, documentation that there are no duplicate sales, and the quantity procured does not exceed the amount used for municipal operations
- CalRecycle does not have regulatory oversight on the biomass plant regarding this type of NOV and the NOV, even if it results in a fine, will not impact this solution of applying the attributes for compliance
- With this information, staff resumed talks with Greenleaf to amend the contract to extend the original June 30th deadline until July 31, 2023, and include notification requirements and remedies regarding the outcome of the pending NOV and all other related violations.

Negotiated Provisions in the Contract



- The contract delivery term is up to you, but Greenleaf expects a minimum of 3 years, and prefers 5 years (through 2027)
- Whatever term you choose, you will have the option to terminate the contract with 60 days notice in the event there is any change in law making the agreement impossible or impracticable
- Pricing is improved as more Pioneer members join – there are 3 tiers of volumetric pricing listed in Schedule 1, and the cutoff date for calculating enlisted volumes (using total 2025 volumes)
- The attorney's fees for assistance in negotiating this contract (\$10,000) will be shared equally amongst all participants
- It is up to each jurisdiction to negotiate any final provisions in the contract
- Jurisdictions will need to enter into a contract with Greenleaf by July 31, 2023 to secure attributes and pricing

Option 2 – Procurement of Compost





SB-1383

Procurement of Compost for Community Use

Compost as an Option for SB-1383 Compliance

- El Dorado Disposal, a Waste Connections company, is offering to backhaul compost from Waste Connections owned facilities to meet the procurement requirements associated with SB-1383.
- Compost would be a tangible benefit to the community, including residents, farms, parks, schools, and the environment.
- Compost would meet or exceed the quality and health standards set by SB-1383 and CalRecycle.
- Waste Connections is prepared to bring compost to El Dorado County for **\$32/ton delivered.**

SB-1383 Organic Procurement Requirements

- SB-1383 requires procurement of 'Recovered Organic Waste' on behalf of all jurisdictions at a rate of **0.08 tons/Resident**.
- The County of El Dorado is required to procure **12,886 tons** of Recovered Organic Waste to meet this requirement.

AB-1985 Changes to Implementation Timeline

- AB-1985, passed in September 2022, allows for the gradual implementation of a procurement program.
- The benchmarks start at 30% in 2023, 65% in 2024, and 100% by 2025.
- Compost has an 'Organic Waste Conversion Factor' of 0.58 tons compost/ton of Recovered Organic Waste.
- This means that **7,474 tons of compost** annually would be needed to fulfill this requirement by 2025.



Benefits of Compost

- Increased soil health
- Decreased need for fertilizers
- Erosion control
- Rehabilitates soil in fire scars
- Increased water retention, decreased watering needs
- Increased yields to farmers
- Increased interest in organics waste recycling
- Improved public perception of SB-1383

Beneficiaries of Compost

- Residential lawns and gardens
- Community gardens
- Parks
- Farming & Winery Associations
- Schools
- Caltrans
- Golf course and other recreational sites



Implementation Cost of Compost

* Additional costs may be associated with community site design and maintenance.

Year	Procurement % of Goal	Tons of Compost	Annual Cost*
2023	30%	2,242	\$71,744
2024	65%	4,858	\$155,456
2025+	100%	7,474	\$239,168



Distribution

Compost is brought directly to the community and dropped at farms or a public collections site.

Compost Health

- Compost is analyzed for bacterial and heavy metal content and exceeds the quality requirements set by CalRecycle.
- Compost is sifted for contaminants.
- Compost is cured, minimizing smells and heat.

Sample ID #: 3030226 - 1/1

Nutrients				Stability Indicator:			
Total Nitrogen:	Dry wt. 1.5	As Rcvd. 0.97	units %	CO2 Evolution		Respirometry	
Ammonia (NH ₄ -N):	14	8.8	mg/kg	mg CO ₂ -C/g OM/day		2.6	
Nitrate (NO ₃ -N):	1.9	1.2	mg/kg	mg CO ₂ -C/g TS/day		1.4	
Org. Nitrogen (Org.-N):	1.5	0.97	%	<i>Stability Rating</i>		<i>stable</i>	
Phosphorus (as P ₂ O ₅):	0.59	0.38	%	Maturity Indicator: Cucumber Bioassay			
Phosphorus (P):	2600	1600	mg/kg	Compost:Vermiculite (v:v)		1:2	
Potassium (as K ₂ O):	0.85	0.55	%	Emergence (%)		100	
Potassium (K):	7100	4500	mg/kg	Seedling Vigor (%)		100	
Calcium (Ca):	2.1	1.4	%	<i>Description of Plants</i>		<i>one weed</i>	
Magnesium (Mg):	0.54	0.35	%	Pathogens			
Sulfate (SO ₄ -S):	110	72	mg/kg	Results	Units	Rating	
Boron (Total B):	42	27	mg/kg	Fecal Coliform	410	MPN/g	<i>pass</i>
Moisture:	0	36.0	%	Salmonella	< 3	MPN/4g	<i>pass</i>
Sodium (Na):	0.077	0.049	%	Date Tested: 09 Mar. 23			
Chloride (Cl):	0.13	0.085	%	Physical Contaminants**			
pH Value:	NA	8.08	unit			% by dry wt	
Bulk Density :	22	34	lb/cu ft	Total Plastic		< 0.1	
Carbonates (CaCO ₃):	< 0.1	< 0.1	lb/ton	Film Plastic		< 0.1	
Conductivity (EC5):	1.8	NA	mmhos/cm	Glass		< 0.1	
Organic Matter:	56.2	35.9	%	Metal		< 0.1	
Organic Carbon:	27.0	17.0	%	Sharps		ND	
Ash:	43.8	28.0	%	Total		< 0.5	
C/N Ratio	18	18	ratio				
AgIndex	> 10	> 10	ratio				

Thank You



Item 23-1319



23-1319 C 28 of 33



Summary of options & overall cost



Option 1 – GreenLeaf Energy Attributes (Pioneer)

SB 1383 CalRecycle Procurement Requirements			GreenLeaf Energy Attributes (1:1 Ratio)			
Year	Tons	Required	Product	Cost	Tons Short	Compliant
2023	30% of 12,866	3,860	3,866 tons	\$125,645	0	Yes
2024	65% of 12,866	8,363	6,587 tons	\$214,065	1,776	No
2025	100% of 12,866	12,866	6,587 tons	\$214,065	6,279	No
			3-year cost	\$552,775		

Option 2 – El Dorado Disposal Compost

SB 1383 CalRecycle Procurement Requirements			Compost (0.58:1 Ratio)*			
Year	Tons	Required	Product	Cost	Tons Short	Compliant
2023	30% of 12,866	3,860	2,239 tons	\$71,648	0	Yes
2024	65% of 12,866	8,363	4,851 tons	\$155,232	0	Yes
2025	100% of 12,866	12,866	7,462 tons	\$238,784	0	Yes
			3-year cost	\$465,664		

Side by side cost comparison for SB 1383 compliance

Option 1 – GreenLeaf Energy (Pioneer) with additional cost for supplemental compost			Option 2 – El Dorado Disposal Compost Program	
Year	Energy Cost	Compost Cost	Year	Cost
2023	\$125,645	\$0	2023	\$71,648
2024	\$214,065	\$32,963	2024	\$155,232
2025	\$214,065	\$116,538	2025	\$238,784
	3-year cost	\$702,276	3-year cost	\$465,664



Thank you!

