CALIFORNIA COMPOST COALITION

WOODAGEDDON

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Ode to Climate Depression

A forest burning in Northern California, black carbon smoke filling the air, record setting heat punishing the people, Helene hurricanes, biblical floods, extreme weather and a mile-long Antarctic glacier breaking apart…..these stark reminders of climate change are constantly on TV and in your news feed and may cause additional stress to your daily tasks. Some may feel guilty about plastics and overconsumption, or you may struggle about how to stop worrying about your actions affecting future generations. Climate depression is distress related to worries about the effects of global warming. It is not a mental illness. Instead, it is anxiety rooted in uncertainty about the future and alerting us of the dangers. Climate change is real, and therefore it's typical that many worry and fear about the consequences. Anxiety about the climate is often accompanied by feelings of grief, anger, guilt, and shame, which in turn can affect mood, behavior, and thinking.

According to a survey by the American Psychological Association, more than two-thirds of Americans experience some form of climate anxiety. As uncertainty and a loss of control characterize climate anxiety, the best treatment is to take action. On an individual level, it's therapeutic to share your worries and fears with trusted friends, a therapist, join the Sierra Club, or write a newsletter. You can also make changes to your lifestyle consistent with your values. This may include deciding to take fewer flights, joining a protest, throwing an Earth Day party, driving a Prius, or increasing public awareness about climate change through advocacy. Climate professionals go even further by producing carbon negative fuel, developing biomass gasification facilities, and operating compost facilities as our community plight is to reduce greenhouse gases and reverse climate change while also expanding their companies to sustain their multi-generational family businesses.

But climate change is about to change everything for the Sierra Club and other do-gooders. To cut U.S. greenhouse gas emissions to zero, the country is going to have to do something environmentalists have traditionally opposed: It's going to have to build a lot of energy infrastructure and fast, beyond just solar and wind. There are bills (SB 1420, Caballero and SB 1045, Blakespear) to streamline and speed up permitting most environmentalists oppose — because it could also promote hydrogen development. But the shift will be a change for an environmental movement that has spent decades learning to block, not to build. It will require careful analysis of how to rapidly expand wind, solar, bioenergy and hydrogen with community input. California Made renewable energy is so much more equitable and sustainable than mining the world to produce electric vehicle batteries.

The government is also getting in their way of themselves. By promoting electrification and the Advanced Clean Fleet rule, CARB will re-carbonize the refuse fleet from carbon negative today to carbon positive tomorrow while leaking our emissions onto low-and-middle income countries with mining exploitation to build batteries. There are an estimated 36 million bone-dry tons of biomass technically available from the urban, agricultural, and forest sectors to produce bioenergy as a base load, but state agencies are turning their back on funding bioenergy. Projects are taking decades to get permitted and years to interconnect, leaving many projects stranded with those millions of dead trees.

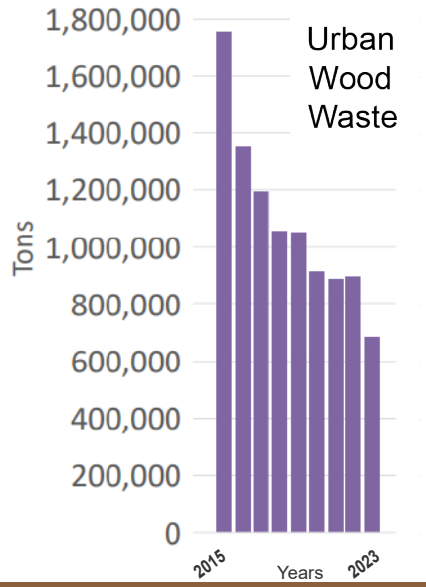
In a 2016 Industry Report, Edgar & Associates projected that the urban sector could lose 1.2 million tons of bioenergy capacity by 2020 due to forest sector incentives where the last CalRecycle Report posted that over 1.1 million tons were lost by 2023. We have alerted CalRecycle each year about this and developed several Wood Waste Market Development Plans and pursued legislation to no avail. CalRecycle's mandated Market Development Plan is not even on their back burner as wood waste has no where to go but back to landfills and the front burner of raging forest fires.

Climate depression is compounded as even the best-laid carbon negative plans go awry. Developing recovery programs to combat climate change is a 12-step program mired with the disingenuous environmental groups and the duplicitous government that both need to move beyond denial and into action. Woodageddon is becoming an annual fire sale event for bioenergy assets with CalRecycle presenting the same SB 498 Annual Report where it will be another Groundhog Day for Ground Wood.

Biomass Ton

Down a Million One

SB 498 (Lara, 2014) requires that the operator or owner of a biomass energy facility provide an Annual Report to CalRecycle regarding the total amount and type of biomass material accepted by the facility, starting with calendar year 2015 data. The SB 498 Annual Reporting for 2023 shows that 3.38 million total tons were accepted. The urban sector provided 1.76 million tons for biomass energy in 2015, which has steadily declined to just 683,000 tons in 2023 (a loss of 1.1 million tons over 9 years). Urban wood chips are being crowded out by the forest and agricultural wood chips. We had hoped that those tons would go to SB 1383 woody mulch or compost bulking agents. When comparing CalRecycle Waste Characterization Studies, there were 2.68 million tons of urban wood waste disposed of in 2014, 3.15 million tons disposed of in 2018, and 2.95 million tons disposed of in 2021. In addition, there were still 1.5 million tons of treated wood waste being disposed of in 2021. Meanwhile, as SB 1383 is being phased in, there are about 1.9 million tons of urban biomass that needs a home away from the landfill which could be a combination of SB 498 combustion, BioMAT bioenergy, SB 1383 procurement, compost feedstock, and/or hydrogen.



Leg Watch

AB 2514 (Aguiar-Curry)

TOPIC: Solid waste: organic waste: diversion: biomethane: biosolids.

POSITION: Support by the Bioenergy Association of California

This bill would define pyrolysis as the thermal decomposition of material at elevated temperatures in the absence or near absence of oxygen. This bill would require CalRecycle, no later than January 1, 2026, to amend those regulations to include, as a recovered organic waste product attributable to a local jurisdiction's procurement target, pipeline biomethane converted exclusively from organic waste, as specified. This bill would, until January 1, 2030, make the Town of Windsor and the Windsor Water District eligible for that grant program for purposes of a biosolids handling project.

STATUS: Died on the Senate Floor on August 29, 2024

NOTES: This bill started out as a SB 1383 procurement bill for hydrogen and pipeline biomethane and defined pyrolysis as a technology to convert biomass into energy products and fuel types. With the non-combustion thermal conversion of biomass via pyrolysis to produce a renewable hydrogen that was going to be defined in SB 1420 (Caballero) but did not, wood waste would have new markets and the Advanced Clean Fleet rule could be fulfilled with hydrogen fuel cells over battery electric.

The bill was amended by the Committee Consultant in Assembly Natural Resources to remove hydrogen procurement due to strong opposition from Californians Against Waste and the environmental groups they dragged along. Pipeline biomethane prevailed. Since CalRecycle developed the current SB 1383 procurement five pathways by regulation, you would think that CalRecycle could have added both pipeline biomethane and hydrogen administratively, but statute could get it done more quickly. The bill limped through the Senate until it hit the Senate Floor where it was amended by Senate Pro Tem McGuire to the point the bill was shelved. Plus, Windsor wanted a technology such as pyrolysis to destroy the PFAS in their biosolids with possible CalRecycle grant funding.

CA Made Energy

Senate President Pro Tem Mike McGuire drafted five energy measures at the very end of session to promote California Made renewable energy. The aim was to revamp the way the state approves and supports solar, offshore wind, battery storage and other green energy projects. However, he left out bioenergy and hydrogen production from the suite of sources. Since it failed, we expect theses bills will come back next year where the industry will fight to add bioenergy and hydrogen into the energy mix.

The end-of-session package of proposed laws could have streamlined the building of solar and offshore wind energy projects. Democratic legislators, who have shared drafts with environmental groups, industry, lobbyists and other interested parties, were negotiating the details with Gov. Gavin Newsom. "We can all agree that California has serious energy needs," McGuire said in a statement to CalMatters, noting brownouts, rising utility costs, increasing demand for electricity and climate change. "This is why the Senate will be embarking on a two-year effort to modernize our grid, expand the number of large-scale green energy plants and storage facilities in California, and kick a modernized permitting process into high gear."

Simultaneously, the Newsom administration was working on separate proposed legislation that aims to make electric bills more affordable for Californians, two sources told CalMatters. No details were immediately available but look for a $30 to $70 rebate soon. Electric rates have nearly doubled over the last decade. The state Public Utilities Commission overhauled the rate structure with a controversial new billing system this year.

The renewable energy proposals — a package called the "California Made" package — seek to offer incentives for building projects and their components in California. They would create tax credits, streamline local and state permitting and change how environmental reviews are conducted for some projects. California is facing twin challenges: Meeting renewable energy targets mandated by law, as well as dealing with some of the highest energy bills in the country. Under state law, 60% of California electricity must be generated by clean energy sources by 2030 and 100% by 2045.

Markets, Markets

CalRecycle is commended for their infrastructure grants for compost and anaerobic digestion facilities but leaves wood waste at the curb without any funding or plan. SB 1383 procurement for woody mulch could be a windfall but will not as CALTRANS has failed over 30 years to utilize woody mulch as we should expect the same out of County Public Works and City Parks. A conceptual top down 75% Wood Waste Market Development Plan chart is included herein to:

The old-line biomass combustion markets has been crowded out by over 1 million tons by forest sector waste, while SB 1383 was being promulgated that required that 75% of solid waste be diverted. Projecting a 75% diversion rate by 2030 and following current incentives and policies, the following markets are projected:

• 200,000 tons per year of SB 498 biomass combustion.

• 250,000 tons per year of SB 498 biomass gasification with the BioMAT program, which will need to be extended past 2025.

• 500,000 tons per year in SB 1383 procurement of woody mulch.

• 650,000 tons per year of compost feedstock to balance out the C:N ratio for the added food waste to composting. Note to the Sierra Club- you cannot compost all of the wood waste. With PFAS in biosolids – the market could lose woody biomass bulking agents for composting.

• 1,300,000 tons of biomass to renewable hydrogen

• 1,000,000 tons of non-treated wood waste may still be disposed of to divert 75%, and we hope that with the CalRecycle Zero Waste Plan, this biomass could also be converted to hydrogen. Biomass to renewable hydrogen is the future market as this non-combustion thermal technology can pass the Article 2 process.

SB 1383 Regs - Bioenergy

Procurement of Recovered Organic Waste Products is authorized in SB 1383, and is being phased in with AB 1985 (Rivas, 2022) CalRecycle has presented a fair share calculation with flexibility of procuring compost, mulch, bioenergy and RNG. The per capita procurement target is 0.08 tons of organic waste per California resident per year. CalRecycle has calculated the annual recovered organic waste product procurement target for each jurisdiction. One ton of organic waste recovered constitutes 650 kilowatt-hours of electricity derived from biomass conversion. The BioMAT programs allow biogas from wastewater treatment, municipal organic waste diversion, food processing, and co-digestion in the amount of 110 MW where about 21 MW is projected to generated from urban biomass to bioenergy using gasification which is considered non-combustion thermal biomass conversion and counts as 100% diversion. It takes about 250,000 tons of biomass to produce 21 MW of bioenergy which needs to be in place by the end of 2025 when the program is scheduled to expire. The BioMAT program needs to be extended to 2030 or we lose this market.

SB 1383 Regs- Woody Mulch

Procurement of Recovered Organic Waste Products is authorized in SB 1383 and is being phased in with AB 1985 (Rivas, 2022). CalRecycle has presented a fair share calculation with flexibility of procuring compost, mulch, bioenergy and RNG. One ton of organic waste recovered constitutes one ton of mulch. Local government has embraced compost use with the use of www.CaliforniaCompost.Net powered by Agromin, with some woody mulch use. Laws have been passed over the last 30 years to require CALTRANS to purchase mulch where just 10% of their right-of-way with just 1 inch of wood mulch could utilize 1.3 million tons per year. In 2018, CALTRANS was just 5% of the market for about 270,000 tons but is mostly STA compost with limited wood mulch use. An estimated 500,000 tons per year of woody mulch is a pragmatic market amount, but requires CalRecycle working with CALTRANS and County and City Public Works to roll out a plan.

SB 498 Combustion Tons

SB 498 defined the future of biomass combustion tons as no other bill has since 2012. Urban wood waste has been crowded out by 1.1 million tons over 9 years and is projected to decrease in the future to just 500,000 tons by 2030 as forest waste incentives dominate the market. Several legislative efforts have been attempted to update the 2012 Bioenergy Action Plan with a more comprehensive Organic Waste Scoping Plan. Three Aguiar-Curry bills: AB 144 (2019), AB 1567 (2020) and AB 1086 (2021-22) failed at multiple scenarios to develop funding and find a responsible agency to provide this type of leadership. These bills were killed in Appropriations by state agencies with inflated budget estimates to prepare such a study that had been prepared with existing staff in the past. The anticipated outcome was to reduce conflict among State policies intended to reduce net air and climate pollution while balancing the immediate needs of local communities. By default, biomass from the urban, ag and forest sectors are now competing. Instead, there should be harmonizing policies to harness the biomass for biofuels and for a FIRM bioenergy baseload for when the sun does not shine and when the wind does not blow.

Woody Compost Feedstocks

Biosolid compost facilities have been utilizing woody biomass from the urban and agricultural sectors for years, which could be curtailed with the advancement of PFAS regulations, which could limit biosolids composting. With SB 1383 requiring about 3.3 million tons of food waste to be diverted with about 1/3 heading to AD and 2/3 heading to compost, there will be about 2 million tons of food waste on the market. The C:N ratio will need to be balanced out where the addition of more finely ground woody biomass will be needed to also add porosity. An estimated 650,000 tons per year of wood waste could have a home at food waste compost facilties. We look forward to the next CalRecycle Infrastructure and Market Analysis Report to assess the amount of wood waste that could be used as compost feedstock, as there are limitations. Note to the Sierra Club: we can not compost those 36 million trees that have died in California.

CALIFORNIA COMPOST COALITION

The California Compost Coalition

is a registered Lobbying Coalition with the Fair Political Practices Commission (FPPC), created in 2002 by a group of compost operators in response to demands for increased recycling of organic materials & production of clean compost, bioenergy, anaerobic digestion, renewable natural gas, and biochar.

CCC Members
Agromin
American Refuse, Inc.
Atlas Disposal Industries LLC
BLT Enterprises of Fremont
Burrtec Waste Industries, Inc.
California Waste Recovery Systems
Cedar Ave Recycling and Transfer
Contra Costa Waste Service, Inc.
CR&R Environmental Services
Gilton Resource Recovery
Marin Sanitary Service
Monterey Regional WMD (ReGen)
Napa Recycling and Waste Services
Northern Recycling Compost
Peña's Disposal Service
Pleasanton Garbage Service
Quackenbush Mt. Compost
Recology
San Joaquin County Public Works
Soiland Co., Inc.
Tracy Material Recovery
Upper Valley Recycling
Vision Recycling
Zero Waste Energy, LLC.

CCC Partners
California Wood Recycling
GreenWaste Recovery
ReFuel Energy Partners
Resource Recovery Coalition of CA
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Z-Best Compost Facility
Zero Waste Energy Development

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CleanFleets.net
Compost Manufacturing Alliance
Engineered Compost Systems
JRMA Architects Engineers
Phoenix Energy / Yorke Engineering
Schaefer Systems International, Inc.
World Centric

CCC Governmental Affairs
Kayla Robinson, EEC
Neil Edgar, Edgar & Associates, Inc.
Evan Edgar, Edgar & Associates, Inc.
Sean Edgar, Clean Fleets Advocates

SF Environment C&D Third-Party Verifiers

Edgar and Associates (EA) is pleased to share that they have been approved as a third-party verifier for construction and demolition (C&D) debris recovery by San Francisco Environment (SFE).

The recycling of C&D waste is an expanding sector, bolstered by programs like the US Green Building Council's Leadership in Energy and Environmental Design (LEED) program, as well as state and local regulations that encourage the recovery and recycling of C&D materials. Stakeholder groups are seeking more transparency and verification of recovery and recycling rates from C&D recycling facilities. In response to this need, the EA protocol adheres to the National Standard CORR Protocol, which pertains to the Certification of Recycling Rates, developed in accordance with ISO-level standards. The verification process may differ depending on the size and nature of the facility, but it consistently utilizes standard protocols to assess and document the facility's material input and output. This assessment is used to evaluate the facility's overall performance in terms of re-use, recycling, and recovery. The primary goals of the verification are as follows:

1. Establish a systematic method for tracking the materials entering and leaving a facility within a designated time frame.

2. Offer an unbiased, clear, and cost-effective process for eligible businesses interested in disclosing their reuse, recycling, and recovery efforts pertaining to C&D materials.

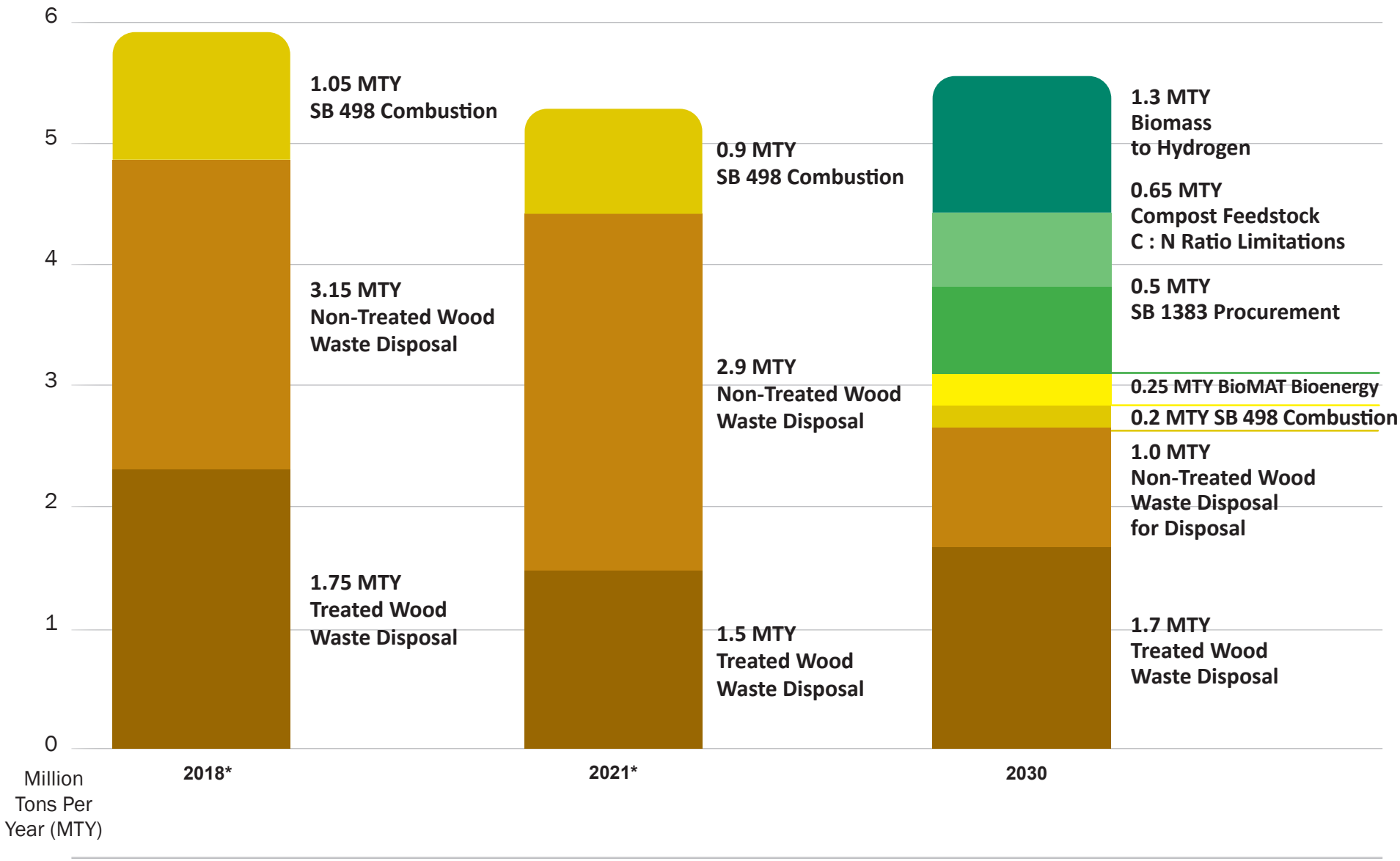
3. Provide stakeholders of verified facilities with confidence that the protocols and claims are consistently enforced and validated.

Once the report has been verified, it will undergo several iterations of review between the SFE and EA departments before final registration. Recovery rates will be evaluated in two categories: "with ADC" and "without ADC." The Recovery Rate is defined as the percentage of total material that is diverted or recovered from disposal at permitted landfills and transformation facilities through processes including source reduction, reuse, recycling, and composting.

The key issue over the years is how to count alternative daily cover (ADC) in the recycling rate. AB 939 has no credits for green waste ADC but good for C&D inert fines. Under AB 341, ADC does not count as diversion. For SB 1383, only non-organic C&D fines count as recycling and the organic fraction is SB 1383 disposal. And remember, treated wood waste needs to be disposed of whole and not be ground or processed as ADC.

If you are interested in becoming verified in accordance with SFE standards, please reach out to Riley at riley@edgarinc.org or (916)739-1200 ext. 104

Wood Waste Market Development Plan
75% Diversion by 2030



* CalRecycle Data

Prepared by Edgar & Associates, Inc. October 3, 2024
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Change in Tonnage 2015-2023