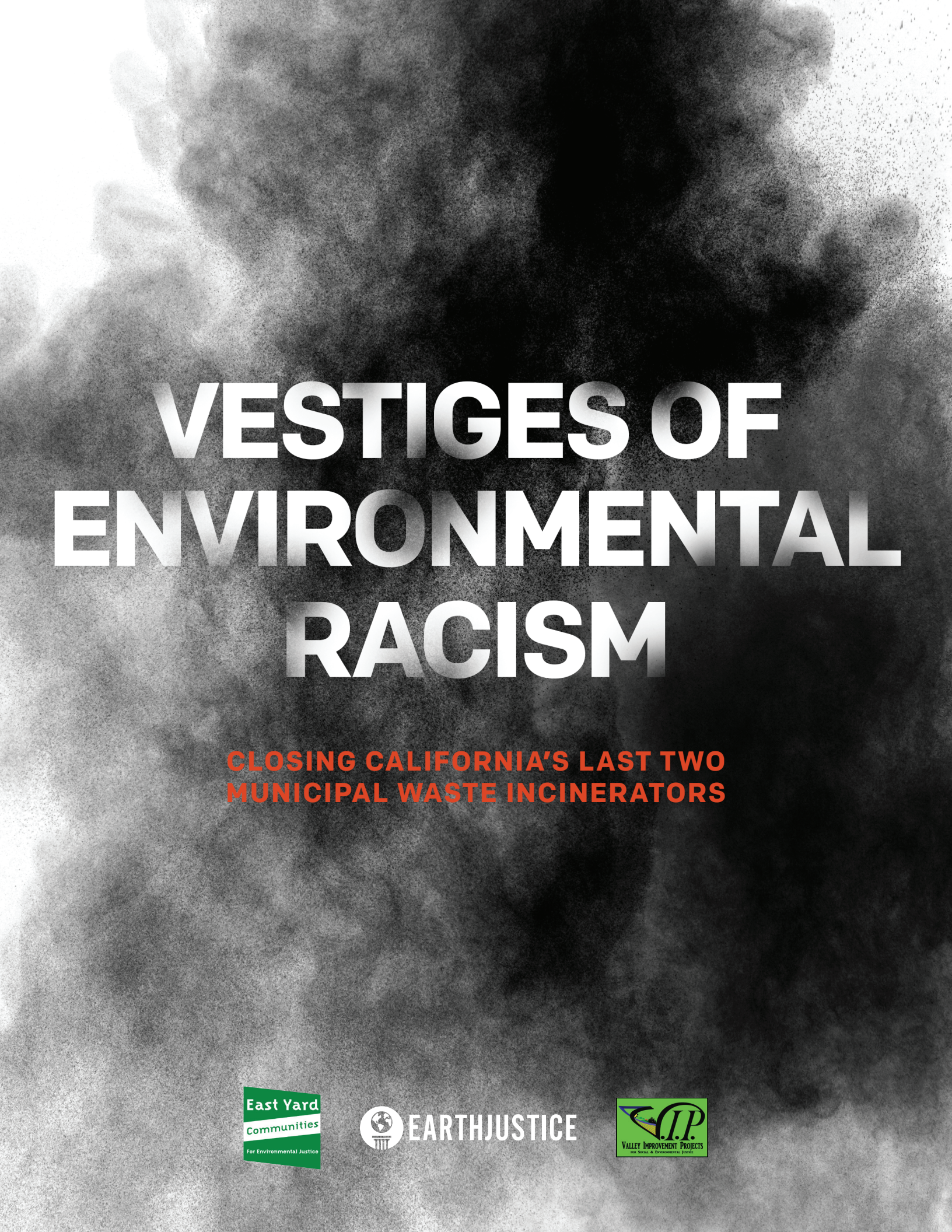

VESTIGES OF ENVIRONMENTAL RACISM

CLOSING CALIFORNIA'S LAST TWO MUNICIPAL WASTE INCINERATORS

East Yard Communities For Environmental Justice

EARTHJUSTICE

V.I.P. Valley Improvement Projects for Social & Environmental Justice

This report is presented by Earthjustice's Community Partnerships Program in partnership with East Yard Communities for Environmental Justice and Valley Improvement Projects.

East Yard Communities for Environmental Justice

East Yard Communities for Environmental Justice (East Yard) is an environmental health and justice non-profit organization working towards a safe and healthy environment for communities that are disproportionately suffering the negative impacts of industrial pollution. In particular, East Yard works with community members from East Los Angeles/Boyle Heights, Southeast Los Angeles, and Long Beach to raise awareness about environmental racism and hold agencies and polluting industries accountable for the harm they have caused. East Yard is committed to shutting down the SERRF incinerator in Long Beach and advocates for a just transition to a truly clean future with zero-emissions and zero-waste.

Valley Improvement Projects

Formed in 2012, Valley Improvement Projects (VIP) seeks to improve the quality of life of underrepresented and marginalized residents of California's Central Valley by advocating for social and environmental justice. VIP is made up of local activists and community members who have regularly been involved in protests against the Covanta Stanislaus incinerator and who have worked on raising awareness in the community about the incinerator and environmental justice for years. VIP continues to advocate against the practice of burning trash and for more sustainable waste management practices including the establishment of a carpet recycling location, restarting curbside recycling in the city of Modesto, banning single-use plastics/styrofoam, and implementing other zero-waste strategies.

Earthjustice's Community Partnerships Program

Earthjustice's Community Partnerships Program (CPP) provides legal and advocacy resources to local leaders demanding a safe, just, and healthy environment in which their communities can thrive – no matter how long the fight. CPP works hand-in-hand with frontline communities to remove environmental hazards and secure access to environmental benefits. CPP acts collectively with our community partners to challenge harmful social and political structures, and to improve the environmental conditions in neighborhoods. CPP supports community-led movements using a full range of advocacy strategies to challenge the status quo.

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EXECUTIVE SUMMARY

There are two municipal solid waste incinerators still operating in California: the Southeast Resource Recovery Facility (SERRF) in Long Beach and the Covanta Stanislaus incinerator in Stanislaus County. The problems with these incinerators in California are emblematic of the larger problems with incinerators across the country. To start, these incinerators pollute the environment and harm public health by converting waste into harmful air emissions and toxic ash. Financially-strapped local governments and residents have also been forced to pay millions of dollars to subsidize the expensive maintenance and operations of these aging incinerators. Further, SERRF and Covanta Stanislaus emit a large amount of greenhouse gases, while producing very little energy – contrary to their branding as "waste-to-energy" facilities. These incinerators also stand in the way of a zero-waste future because they compete with more sustainable methods of waste management for the same materials and the same government funds. Additionally, the State of California incentivizes local jurisdictions to send their waste to the incinerators through the use of "diversion credits" – credits towards meeting State goals to reduce waste for recycling and composting – and then does not provide adequate funding so that local jurisdictions can effectively transition to zero-waste. Ultimately, these facilities are obstacles to a full investment in a zero-waste future for California residents and should not be subsidized or supported any longer.

Community groups across California, including East Yard Communities for Environmental Justice and Valley Improvement Projects, support the creation of a zero-waste economy in the State, which precludes the continued use of incinerators and landfills. Zero-waste is both a goal and a strategy that aims to (1) conserve resources through various practices such as composting, recycling, and improved product design; and (2) stop the incineration and landfilling of waste – practices that harm human health and the environment. It does not make sense to continue to spend millions of dollars on facilities that burn and destroy materials – which then leads to continued extraction – instead of figuring out how to conserve these resources for future generations and protect public health and the environment from contamination.

TO THAT END, EAST YARD COMMUNITIES FOR ENVIRONMENTAL JUSTICE AND VALLEY IMPROVEMENT PROJECTS MAKE THE FOLLOWING RECOMMENDATIONS:

END
MUNICIPAL WASTE INCINERATION

CALIFORNIA LEGISLATURE:

- Ban the construction or approval of any new incinerators and thermal treatment facilities (*e.g.*, gasification and pyrolysis) in California.
- Ban the use of diversion credits – both foreign and domestic.

LOCAL GOVERNMENTS:

- Close the SERRF and Covanta Stanislaus incinerators as soon as their current contracts expire, in 2024 and 2027, respectively. In the meantime, local governments should minimize the use of the incinerators and divert waste into composting, recycling, reduction, and reuse.

PLAN
FOR A ZERO-WASTE FUTURE

LOCAL GOVERNMENTS:

- Implement zero-waste plans in the City of Long Beach and Stanislaus County by no later than 2024 that actively incorporate community feedback and ideas from the beginning of the planning process through implementation.

INVEST
IN A ZERO-WASTE FUTURE

CALIFORNIA LEGISLATURE:

- Provide consistent funding from the State's General Fund for CalRecycle to effectively support and expand zero-waste programs and infrastructure, including grant and loan programs.

LOCAL GOVERNMENTS:

- Enact new funding mechanisms to provide long-term support for zero-waste programs, like recycling and composting.

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INTRODUCTION

There are numerous problems with municipal solid waste incinerators – from the health and environmental impacts to the fact that these facilities serve as barriers to a transition to a zero-waste future, and so much more. This report will discuss the environmental, financial, and public health harms of incinerators with a focus on the two incinerators left in California and then provide an overview of an alternative approach for managing waste through the implementation of a zero-waste strategy. This report will also describe the current state of waste management in California. Finally, this report will provide recommendations to move California closer to implementing more sustainable waste management methods, instead of continuing to invest in costly, aging, and polluting incinerators that harm human health and the environment.

CHAPTER 1. THE PROBLEMS WITH INCINERATORS

SERRF And Covanta Stanislaus Harm Community Members And The Environment

Incinerators tend to be located in communities of color and low-income communities that already face high pollution burdens, otherwise known as environmental justice communities. In fact, a recent report found that about 80% of incinerators are located in environmental justice communities.[1] As the report noted, the "siting of incinerators and other polluting facilities in environmental justice communities is not a coincidence but rather it is a product of historic residential, racial segregation and expulsive zoning laws that allowed whiter, wealthier communities to exclude industrial uses and people of color from their boundaries."[2] This trend holds true in California as well. The population within a five-mile radius of SERRF is 81% people of color with a per capita income of $28,312.[3] And within a five-mile radius of Covanta Stanislaus, the population is 80% people of color with a per capita income of $23,534.[4]

Toxic Air Pollution

SERRF and Covanta Stanislaus harm the health of nearby community members and the environment. These incinerators regularly emit numerous harmful pollutants, including nitrogen oxides, sulfur oxides, particulate matter, ammonia, and lead, among others. *See* Table 1.[5] SERRF has also had numerous pollutant exceedances (*i.e.*, releases above the permitted limit) each year resulting in excess emissions of carbon monoxide and nitrogen oxides. Carbon monoxide and nitrogen oxides are precursors to the formation of ozone and particulate matter – dangerous air pollutants that can make it difficult to breathe, damage the lungs, and increase the frequency of asthma attacks.[6] SERRF avoids accountability for its excess emissions by claiming that these exceedances are the result of exempt equipment startup, shutdown, or malfunction (SSM) events.[7] As a result of this SSM exemption, the state air agency has not issued notices of violation for these ongoing exceedances. However, the SSM exemption is improper and cannot excuse SERRF's harmful pollution and the detrimental impacts it has on surrounding communities and the environment.

SERRF is also the only incinerator in the country located within five nonattainment areas.[8] Nonattainment areas are geographical regions that have exceeded pollution standards established by the U.S. Environmental Protection Agency (EPA) for common air pollutants, including

QUICK FACTS: SERRF

Location: **Long Beach, CA**
Operational Since: **1988**
Amount of Waste Processed Annually: **500,000 tons**
Amount of Toxic Ash Produced Annually: **150,000 tons**
Population within 5-mile radius: **81% people of color**
$28,312 per capita income

QUICK FACTS: Covanta Stanislaus

Location: **Stanislaus County, CA**
Operational Since: **1989**
Amount of Waste Processed Annually: **320,000 tons**
Amount of Toxic Ash Produced Annually: **96,000 tons**
Population within 5-mile radius: **80% people of color**
$23,534 per capita income

"Burning waste must no longer be an option. We need to safeguard the air we breathe."

Rosenda Mataka, member of Valley Improvement Projects and co-founder of the Grayson Neighborhood Council

ozone, particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide, and lead.[9] Thus, SERRF's toxic emissions are contributing to the pollution burden of an already highly over-burdened area. Similarly, Covanta Stanislaus has exceeded its emissions limits and violated its air permit. According to EPA's enforcement database, Covanta Stanislaus has had a high priority violation of its air permit requirements for the last four quarters.[10] In addition, the facility exceeded emission limits for nitrogen oxide, sulfur dioxide, and carbon monoxide in March 2020 and exceeded nitrogen oxide and carbon monoxide emission limits again in August 2020.[11]

SERRF and Covanta Stanislaus emit many different types of pollutants that vary due to the heterogeneous and changing nature of the waste being burned. But both incinerators only measure and monitor for some pollutants. So, although state records show exceedances of pollutants like nitrogen oxides, carbon monoxide, and sulfur dioxide, SERRF and Covanta Stanislaus may be releasing additional pollutants during emission events that are not tracked. In addition, emissions measurements are often inaccurate because SERRF and Covanta Stanislaus take measurements during "optimal operating" times and not during, for instance, SSM events, when emissions are often highest.[12]

Thus, permit compliance does not mean a lack of harm to human health and the environment. Emission standards for incinerators like SERRF and Covanta Stanislaus are not based on what is safe for public health but rather on what is technologically feasible.[13] As a result, meeting permit limits does not necessarily mean that the harm to community members' health and the environment has been minimized.[14] Incinerators – no matter how "advanced" they are – inevitably release numerous pollutants that contaminate the air, water, and soil, and harm public health.[15]

Deadly Diesel Pollution

The trucks that service SERRF and Covanta Stanislaus are also a source of health-harming chemicals. The diesel exhaust that is emitted from these trucks contains diesel particulate matter, which is composed of soot or black carbon, as well as over forty known cancer-causing substances, such as benzene and formaldehyde.[16] In addition, diesel exhaust contains pollutants like volatile organic compounds and nitrogen oxides – a cause for additional concern because, as noted above, nitrogen oxides are precursors to the formation of lung-damaging ozone.[17]

Since SERRF and Covanta Stanislaus operate every day around the clock – similar to other incinerators across the country – the impact of the diesel trucks on nearby

Table 1. Air Emissions from SERRF and Covanta Stanislaus, 2014-18.

	SERRF	Covanta Stanislaus
	Total (lbs), 2014-18	
1,3-Butadiene	1.6	--
Acetaldehyde	2	--
Acrolein	1.2	--
Ammonia	748,788.3	28,293.9
Arsenic	10.1	1.8
B[a]anthracene	--	0.4
B[b]fluoranthen	--	0.4
B[k]fluoranthen	--	0.2
Benzene	8.7	90.4
Beryllium	2.7	--
Cadmium	21.8	10.2
Copper	--	7.0
Diesel Exhaust PM	--	12.1
Ethyl Benzene	2.9	--
Formaldehyde	29	846.8
Hexane	1.9	--
Hexavalent Chromium	0.2	--
Hydrochloric Acid	0.2	2,777.6
Lead	129.1	51.2
Manganese	--	9.0
Mercury	--	1,058.6
Naphthalene	0.5	1.4
Nickel	85	--
PAHs-w/	--	9.6
PAHs-w/o	4	--
Toluene	11.3	--
Xylenes	8.4	--
Zinc	--	283.4
	Total (tons), 2014-18	
TOG	146	27.1
ROG	26.9	4.7
CO	272.2	88.6
NOx	1,402	1,490.1
SOx	103.6	126.4
PM	150.6	93.1
PM10	48.7	91.6
PM2.5	34.1	86.6

communities can be substantial.[18] For instance, it takes about twenty to thirty trucks each day to transport the ash from SERRF to the El Sobrante Landfill.[19] In recent years, Long Beach has started to use compressed natural gas refuse trucks but these are also a source of harmful pollutants, including particulate matter and ammonia.[20] The air emissions from the truck traffic adds to the significant toxic burden that communities living near incinerators like SERRF and Covanta Stanislaus already face.

Toxic Ash

The incineration process at SERRF and Covanta Stanislaus produces ash that contains heavy metals and toxic compounds, such as lead, cadmium, and dioxins. The presence of these toxic compounds in the incinerator ash represents a serious threat to human health and the environment since these pollutants can cause cancer, alter DNA, and harm reproductive health, neurodevelopment, and other bodily processes and organ systems.[21] Another added danger of the ash from SERRF and Covanta Stanislaus is that the heavy metals in the ash are now fine particles that pose a greater danger than they did before they were incinerated. This is because these fine particles are more mobile and easily absorbed so they are more likely to impact people by entering the food chain and contaminating ground and surface water supplies.[22]

On average, about 30% of the waste that is delivered to an incinerator ends up as toxic ash to be disposed of in a landfill – a fact that further highlights why incinerators are not a sustainable waste management method since they simply produce more toxic versions of the waste they initially received. In particular, Covanta Stanislaus processes about 320,000 tons of waste per year and produces about 96,000 tons of ash per year.[23] SERRF can process up to 500,000 tons of waste per year and produces about 150,000 tons of ash per year.[24] Disposing of this toxic ash at landfills results in a significant risk that the contaminants will eventually leach into the soil or groundwater. This is because, even though landfills are required to have certain controls in place to prevent the migrations of contaminants into the soil and groundwater, such as liners and leachate collection systems, EPA acknowledges that "even the best liner and leachate collection systems will ultimately fail due to natural deterioration."[25] This ash is so toxic that many landfills in California do not even accept it at their facilities.[26] In addition, residents who live near landfills where incinerator ash is disposed risk breathing in contaminated dust from the ash, which is often used as a cover on landfill waste.

Further, inspections at SERRF have noted numerous instances of mismanagement of this ash. For instance, in March 2018, a CalRecycle inspector found an excessive

Image of the bottom ash building at SERRF (March 2018). *Source: CalRecycle*

"SERRF is a terrible neighbor, which is why we want it to cease all operations, its location decontaminated, and the implementation of actual sustainable solutions."

Wendy Rosales, member of East Yard

buildup of ash near the facility's roads with heavily clogged sewage drain grates near SERRF's ash storage building.[27] The inspector also noted that ash was tracked off-site and that it was difficult to breathe due to the amount of ash outside of SERRF.[28] The accumulation of ash on the roads around the facility and throughout the facility has been a recurring issue that puts community members and the environment at risk.[29]

SERRF And Covanta Stanislaus Are Outdated And Expensive

The finances of incinerators, and especially aging incinerators like SERRF and Covanta Stanislaus, are a significant cause for concern. The exorbitant costs to maintain and upgrade these facilities are often passed along to local governments and residents. Insufficient revenue and the inability to afford necessary upgrades are the main reasons why thirty-one other municipal solid waste incinerators across the country have closed since 2000, including the incinerator in Commerce that closed in 2018.[30]

SERRF is dealing with similar financial problems as the facility has seen significant drops in energy sales and lost its contract with Southern California Edison in 2018.[31] Further, in a proposed budget for fiscal year 2020, the City of Long Beach noted that the expenditures at SERRF totaled close to $43 million, whereas revenue was only about $36 million, resulting in a financial gap of approximately $7 million.[32] Thus, SERRF's future financial prospects are grim as the City of Long Beach – meaning residents – will need to continue to invest tens of millions of dollars to upgrade an aging facility that is not profitable and is a barrier to the future residents want to see.[33]

In addition, SERRF and Covanta Stanislaus are both over thirty years old (the life expectancy of an incinerator is thirty years) and will continue to need costly upgrades to function. Aging facilities are also at greater risk of equipment failure that could lead to fires or other harmful incidents.[34] Financially-strapped local governments and their residents are forced to pay for these upgrades and repairs with funds that could instead be put to better use by investing in zero-waste strategies. Specifically, in 2018, the Long Beach City Council approved an amended agreement that keeps SERRF in operation until at least June 30, 2024, by investing $13.7 million to replace old and failing equipment (of this total, the City of Long Beach invested $8.7 million; Covanta invested $5 million).[35] Thus, the residents of Long Beach are forced to subsidize SERRF's pollution of their communities.

SERRF And Covanta Stanislaus Do Not Produce Much Energy, But Do Produce A Large Amount Of Greenhouse Gases

The precarious finances of incinerators are part of why this industry has tried to re-brand itself as "waste-to-energy" or "energy-from-waste" facilities. By disguising themselves as energy producers, incinerator companies like Covanta can then push for renewable energy subsidies to generate additional revenue streams.[36] In California, incinerators' push for renewable energy subsidies failed thanks to the advocacy of community and environmental groups like East Yard Communities for Environmental Justice, Valley Improvement Projects, the Global Alliance for Incinerator Alternatives, and others.[37]

Image of the SERRF Incinerator in Long Beach. *Source: East Yard*

The claim that incinerators are energy producers does not reflect the reality of their operations. These facilities produce miniscule amounts of dirty energy and, thus, the energy they produce cannot justify keeping these facilities open. Overall, in 2015, incinerators produced about 0.4% of the total electricity generation in the U.S.[38] Similarly, SERRF only provides a small fraction – about 0.3% – of the total electricity used in Los Angeles County.[39] And Covanta Stanislaus only produces about 0.2% of the total electricity consumed in Stanislaus County.[40]

In addition to generating only minimal amounts of energy, incinerators also waste energy by burning materials that could be reused, recycled, or composted.[41] By destroying materials, these materials then need to be replaced by new products – thus continuing the cycle of resource extraction, processing, consumption, and burning, which disproportionately impacts people of color, low-income communities, and Indigenous communities. Incinerators keep communities locked into an extractive, wasteful economy and then attempt to profit from this dynamic by generating a small amount of energy.

Although incinerators have tried to convince states and the federal government to classify them as renewable energy sources to receive subsidies, the impact of incineration is far from renewable. Incinerators contribute to greenhouse gas emissions and climate change because they emit pollutants such as carbon dioxide, nitrogen oxide, and sulfur dioxide. Incinerators even emit more carbon dioxide per unit of energy than coal-fired power plants.[42] Further, a recent EPA report found that carbon dioxide emissions from incineration of waste increased 42% since 1990.[43] This increase occurred even though the incineration of municipal solid waste has actually decreased over this time period.[44] The increase is a result of the rise in the carbon content of waste, in part driven by the increased burning of plastic materials.[45] As of 2015, more plastic was incinerated than recycled.[46] The incineration of plastic not only results in the emission of greenhouse gases but also other harmful pollutants like dioxins. Dioxins bioaccumulate in the ecosystem and the human body because of their chemical stability and the fact that they are absorbed by fat tissue.[47] Dioxins are known as persistent organic pollutants due to their "highly toxic potential" and their impact on numerous organs and body systems.[48]

In contrast to incineration, activities aligned with a zero-waste strategy, like recycling and reuse, provide greenhouse gas reduction benefits because these practices conserve resources instead of continuing to extract and process additional finite resources.[49] Zero-waste strategies also have the benefit of improving local air quality and reducing environmental degradation and water pollution.[50] Ultimately, zero-waste is "one of the fastest, cheapest, and most effective strategies" that can be implemented to protect the climate, the environment, and the health of communities.[51]

FALSE SOLUTIONS

Gasification and pyrolysis are two alternative thermal treatment technologies that are being touted as a solution to the waste problem. But these methods are not the answer.

Gasification and pyrolysis share many of the same problems as incinerators, including the production of toxic ash and toxic air emissions, including dioxins, carbon monoxide, and particulate matter, among others. These facilities are also expensive to construct and operate and are a barrier to the zero-waste future that communities want to see.

SERRF And Covanta Stanislaus Are Incompatible With A Zero-Waste Future

SERRF and Covanta Stanislaus – as well as other incinerators across the country – block the path to a zero-waste future. Zero-waste, as discussed in more detail below, is focused on moving away from disposal of waste in incinerators and landfills and towards a method of waste management that focuses on conserving resources through various methods, including composting, recycling, and reuse. Incinerators stand in the way of a zero-waste future because they compete with these more sustainable methods of waste management for the same materials and the same government funds.
This issue is exemplified in the use of "diversion credits"

in California. The Integrated Waste Management Act (AB 939) mandates that 50% of waste must be diverted away from landfills and into source reduction, recycling, reuse, and composting activities. However, the disposal of waste at incinerators is included in the definition of "diversion" and thus, the City of Long Beach, Modesto, and other municipalities receive diversion credits for waste sent to SERRF or Covanta Stanislaus to meet their 50% targets. In some cases, the jurisdictions that are taking advantage of diversion credits and sending their waste to the incinerators include places with affluent communities, such as Los Angeles, Santa Monica, and San Marino. These jurisdictions – and all the other jurisdictions that claim diversion credits from incineration (*see* Appendix) – should focus on creating adequate zero-waste infrastructure instead of continuing to rely on incinerators located in low-income communities and communities of color to handle the burden and toxic residues of their waste.

The contracts between local governments and incinerators also block progress towards zero-waste. The agreement between the City of Long Beach and Covanta for SERRF (which is publicly co-owned by the City of Long Beach and the Los Angeles County Sanitation District and privately operated by Covanta) includes a waste commitment clause that requires the City to transport to SERRF "all residential and commercial solid waste collected by the City."[52] For Covanta Stanislaus, the operating agreement entered into between Stanislaus County and the incinerator requires the County to bring at least 243,000 tons of waste to the facility each year.[53] Clauses like these lock governments into an outdated waste management model where materials that could be recycled (*e.g.*, cardboard, newspaper) or composted (*e.g.*, organic waste, grass, dirt, tree trimmings) instead end up being burned.[54] It also creates a situation where local governments cannot fully commit to the implementation of zero-waste because they are contractually obligated to continue to feed the incinerators.

Incinerators are not the solution for dealing with our waste when these facilities present so many problems, including: harming human health and the environment through their production of toxic air emissions, greenhouse gases, and toxic ash; straining the finances of local governments; and impeding the transition to zero-waste that community members are advocating for. The next section will provide an overview of the current waste management landscape in California and opportunities to transition away from the use of incinerators and towards a zero-waste future.

CHAPTER 2. WASTE MANAGEMENT IN CALIFORNIA

California has taken important steps towards transforming its waste management system, including enacting strong legislation (*see* Table 2), but gaps remain. These gaps threaten California's waste goals and a zero-waste future.

The most recent State of Disposal and Recycling report by CalRecycle found that overall waste generation in the State in 2019 was about 77.5 million tons.[55] Of this total, about 28.9 million tons were recycled or diverted resulting in a statewide recycling rate of 37%, which is down from a peak of 50% in 2014.[56] CalRecycle, however, notes that according to their field research, about "two-thirds of the paper, plastic, and metals found in the disposed waste stream could reasonably be expected to be recycled."[57] Also, only one percent of California's waste is managed through incineration (described as "transformation").[58] Thus, the impact of phasing out incinerators on the waste management landscape will not be significant. But it will result in meaningful benefits to the environment and to community members who will no longer be exposed to the harmful emissions and toxic ash from these facilities.

Table 2.
Key Waste-Related Legislation in California

AB 341 (2011)	**Modified the California Integrated Waste Management Act** and established a goal that 75% of solid waste generated be source reduced, recycled, or composted by 2020. California did not meet the 2020 target.
AB 1826 (2014)	**Required businesses to recycle their organic waste** starting April 1, 2016, depending on the amount of waste generated each week. Also requires jurisdictions to implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings.[59]
AB 901 (2015)	**Established the Recycling and Disposal Facility Reporting System law;** requires businesses to report the types, quantities, and destinations of materials that are disposed, sold, or transferred; will assist CalRecycle to better understand material flows, better estimate total recycling and composting, and track progress towards state goals; regulations to implement this bill became effective July 2019.[60]
SB 1383 (2016)	**Short-Lived Climate Pollutants:** jurisdictions[61] must divert 50% of organic waste from landfills by 2020 and 75% by 2025. California did not meet the 2020 target.

Currently, the largest destination for statewide recycling is overseas exports of recyclable materials, mainly to Southeast Asia.[62] The Statewide Commission on Recycling Markets and Curbside Recycling[63] ("the Statewide Commission") noted that facilities in Southeast Asia that receive California's recyclable materials "utilize substandard processing methods, with considerable amounts of the waste going unrecycled, dumped and burned resulting in pollution and health impacts."[64] Consequently, the Statewide Commission recommends that diversion credits for recycling overseas end "unless the recycling can be demonstrated to be lawful in all relevant global jurisdictions."[65]

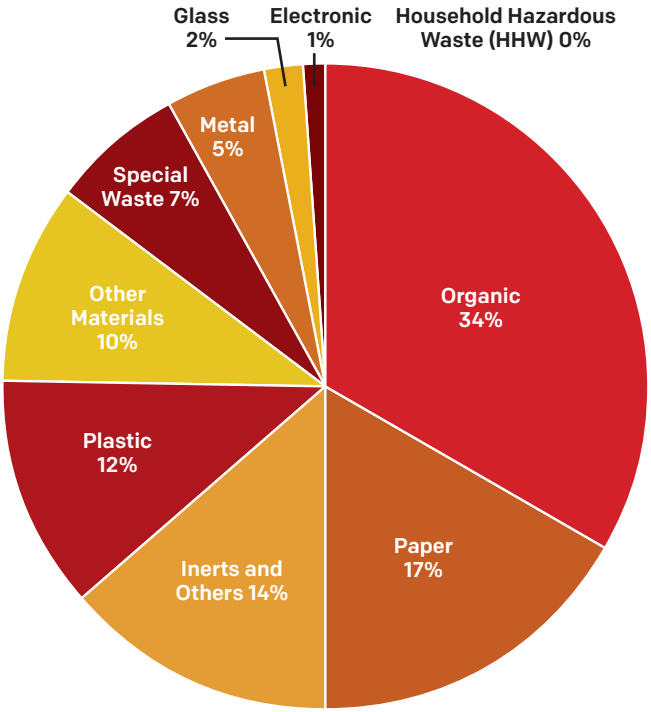
CalRecycle has also commented on the downsides of California exporting so much of its waste; namely, "[s]hipping recyclable materials to other states or nations does not ensure California's greenhouse gas reduction goals are met. In addition, exporting recyclables further subjects California to global market uncertainties and denies Californians the job-creating opportunities that are created when recovered materials are processed or used as feedstock for manufacturing in the state."[66] The unjust exportation of waste to other countries that aren't equipped to properly handle or process it is known as waste colonialism.[67] California must stop using communities in other countries as dumping grounds for its waste.

In addition to exporting a large amount of waste, California also disposes of significant amounts of organic materials, such as food waste. According to CalRecycle's 2018 Characterization of Solid Waste report, organic materials accounted for the largest share of the statewide waste disposal stream.[68] Moving organics away from incinerators and landfills and into composting is a key priority for California to reach its 75% goal for organic waste diversion.[69]

Currently, CalRecycle has identified eight focus areas to reach the 75% recycling goal. These include: (1) moving organics out of landfills; (2) expanding the recycling/manufacturing infrastructure; (3) exploring new models for state and local funding of materials management programs; (4) promoting state procurement of postconsumer recycled content products; (5)

promoting extended producer responsibility; (6) source reduction; (7) commercial recycling; and (8) addressing other products (packaging, waste tires, e-waste, and used oil).[70] Many of these ideas are key tenets of zero-waste plans and are essential to transform the waste management system. The continued use and funding of incinerators only serves as a barrier to implementing these focus areas. The State cannot both continue to feed incinerators while also working towards re-directing waste to composting, reuse, and recycling facilities. The next section describes in more detail what a zero-waste future looks like and provides recommendations to get there.

Figure 1. California's 2018 Waste Disposal Stream



Two-thirds of the paper, plastic, and metals found in the disposed waste stream could reasonably be expected to be recycled.

Source: CalRecycle

CHAPTER 3. ZERO-WASTE FUTURE

What Does Zero-Waste Mean?

Instead of continuing to invest in costly, polluting incinerators, it is imperative that California transition to zero-waste. Zero-waste contrasts with the current paradigm in which incinerators and landfills are used to destroy or dispose waste resulting in environmental and economic harms. Zero-waste is used to describe both a goal and a strategy – the goal is to conserve resources by no longer using incinerators and landfills; the strategy encompasses all the ways in which the goal can be achieved, including composting, recycling, reuse, and product redesign.[71] So while there are varying definitions of "zero-waste," in essence zero-waste seeks to:

1. End waste disposal in incinerators and landfills;
2. Require producers to take responsibility for the entire life-cycle of their products; and
3. Develop systems to ensure that the maximum amount of resources are recovered for reuse, recycling, and composting.

Zero-waste strategies are currently being implemented across the State (*see, e.g.,* Cities Moving Towards Zero-Waste[72]). These strategies look different in each community but all are grounded in affirmatively working to change the current waste management system from one that harms people and the environment to one in which resources are conserved and community members are no longer harmed.

CITIES MOVING TOWARDS ZERO-WASTE

Reduction and Redesign

As previously noted, one of the main problems with incinerating and landfilling waste is that it perpetuates the cycle of extraction, consumption, and discard that negatively impacts communities near incinerators and landfills. Zero-waste seeks to address this problem by shifting from our current linear system of waste management to a circular system. In a circular system, products do not need to be disposed because they are designed at the front end with a focus on reusing or recycling the product. This is key because "[s]imply increasing the recycling of ever burgeoning packaging and badly designed products will not get to the core issue of sustainable materials use and reduced consumption of virgin materials."[73] This idea is reflected in the concept of the zero-waste hierarchy in which strategies such as redesign, reduce, and reuse are at the top of the hierarchy to reflect the importance of prioritizing these strategies for

investment and action in order to create the greatest positive environmental impact.[74]

This idea also ties directly to the push to require companies to take responsibility for the entire life-cycle of their products – often referred to as Extended Producer Responsibility (EPR) or Product Stewardship. This is a strategy "to place a shared responsibility for end-of-life product management on producers and all entities involved in the product chain, rather than making the consumer and local governments responsible."[75]

East Yard community clothing swap event.
Source: East Yard

EPR requires the redesign of products and packaging so that they are non-toxic and recyclable, reusable, or compostable. EPR also often incorporates "take-back" laws that require producers to take back or be financially responsible for products that are hard to recycle, such as electronics. This strategy shifts the burden for dealing with products at the end of their life onto the companies that created the product, thus incentivizing them to design better products that can be recycled, reused, or composted. EPR laws have been enacted across the nation covering a variety of products and California currently has EPR programs for several products, including paint, carpets, mattresses, pharmaceuticals, mercury thermostats, and pesticide containers. [76] In order to achieve California's 75% recycling goal, the State will need to continue to expand the types of products that are covered under EPR laws.

Community-Centered

A zero-waste strategy is also grounded in community decision-making with a social and environmental justice lens. In transitioning to a zero-waste future, communities advocate for a "just transition," meaning that the places where inequality has been most widespread, including communities of color, low-income communities, and Indigenous communities, are prioritized; and that power and resources are redistributed so that "communities have the authority to make autonomous decisions, meet their own needs, and model system change on a local level."[77] A just transition to a zero-waste economy is part of the shift towards a regenerative system that does not unduly burden certain communities with pollution and harm.

It is essential that local governments work with community members as they create and implement a zero-waste plan. At every stage of the planning process, community members should be involved so that zero waste goals and the policies and programs created to effectuate those goals are aligned with and responsive to the community's needs. Consistent engagement with the community is key because it allows local governments to leverage "the unique knowledge, networks, and leadership held by members of a community to strengthen municipal programs and policies."[78] This is especially important when it comes to helping the workers at the incinerators transition into careers in

"My neighborhood is overburdened with pollution. Waste begins and ends in my community … It seems to be a never ending cycle; a big, inefficient machine running with no regards to the people around it. Shutting down the incinerator would be like taking a cog out of that machine. It would force those in charge to find better solutions. I can see a clean, zero-waste future for my community and I have hope that these changes will come soon."

Kimberly Amaya, member of East Yard

the zero-waste economy. Local governments should collaborate with the community to ensure that workers are offered priority job placement and that they receive the support and training they need to successfully transition into these new careers.

Job Creation

Zero-waste systems create significantly more jobs than incinerators. An analysis by GAIA found that in comparison to incinerators and landfills, recycling creates over 50 times as many jobs, repair creates over 200 times as many jobs, and remanufacturing creates almost 30 times as many jobs.[79] GAIA also found that zero-waste systems produce good quality jobs that have higher wages and better working conditions than jobs in comparable fields.[80] Similarly, NRDC conducted a study finding that reaching California's 75% recycling goal would create at least 110,000 additional jobs.[81] NRDC noted that this is not surprising since "treating materials as waste and paying to send these materials for landfill disposal or incineration is not labor intensive."[82]

As discussed, there are countless benefits that come from moving to a zero-waste system, including the creation of more jobs and the opportunity for community members to have a voice in how waste is managed. However, for zero-waste to truly become a reality, California must properly fund zero-waste efforts.

Valley Improvement Project members at Modesto's Earth Day event. *Source: VIP*

Lack Of Funding: An Obstacle To Achieving Zero-Waste

Lack of adequate funding is one of the primary roadblocks to California's zero-waste future. Further, the mechanism by which CalRecycle and local governments receive funding for waste management programs does not align with a transition to zero-waste.

Currently, CalRecycle does not receive regular funding from the State's General Fund. Rather, the agency's waste management and enforcement programs are primarily supported by a combination of fees, including tipping fees charged for each ton of waste

"Communities of color have to bear all of these health issues because environmentally racist policies say that it is okay to have incinerators built and run in communities of color. Adopting zero-waste would erase the 'need' for incineration as a means of waste management and better the quality of life of communities like mine, while also helping alleviate the climate crisis. Zero-waste encompasses a lot of change, but it is change that communities like mine need and deserve."

Diego Mayen, member of East Yard

disposed at landfills.[83] Many local governments also rely on landfill-based fees to pay for the costs of recycling and composting programs.[84] This structure does not provide adequate funding to achieve the State's 75% recycling goal and does not align with the State's commitment to reduce landfill disposal.[85]

CalRecycle has recommended that the State explore new models for state and local funding of sustainable waste management programs. In some parts of California, local jurisdictions have already started to implement new funding models to support their recycling and composting programs. For instance, Kern County implemented a land-use fee that is charged annually to residents and collected on their property tax bill, which results in a consistent funding stream for their recycling program.[86] The City of Fresno also charges residents for recycling programs, but residents can save money by increasing the amount that they compost and recycle and decreasing the amount of trash that is disposed.[87] New funding models like these are necessary to reach California's 75% recycling goal and move towards a zero-waste future. This is because currently the "capacity for recovering organics is less than half, and perhaps as little as a third, of what will be needed to handle about 10 million tons that are still being landfilled."[88] The State also "does not have sufficient manufacturing or recycling capacity" to accommodate an increase in recycling.[89] CalRecycle makes clear that the "current waste management system and infrastructure will need to be expanded," and that "[f]inancial resources need to be secured to accelerate this transition."[90]

In addition to the lack of funding for CalRecycle, there is generally a lack of adequate investment by the State in zero-waste programs, contrary to public commitments and goals. According to the Statewide Commission, "[i]nvesting in the State's recycling system will stimulate the economy and provide good green jobs; however, funding is needed to make this happen."[91] The Statewide Commission goes on:

> The Legislative Analyst's Office has consistently reported, most recently in 2016, that funding for recycling and organic waste management is the most cost-effective method for reducing GHG emissions – as low as $4 per ton of GHG emissions – while having the co-benefits of reducing other air pollutants and short-lived climate pollutants, creating green jobs, and bringing other improvements. Despite these findings, funding has remained a complicated and elusive matter. The State has only provided $140 million in grants and loans to develop organics infrastructure.[92]

The grant and loan programs administered by CalRecycle are an essential component of transitioning California to a zero-waste future and the State must continue to support and expand these programs. In a promising sign, in 2021, Governor Newsom allocated $270 million to support a circular economy.[93] These funds are going to CalRecycle to support various programs, including the organic infrastructure grants and the recycling market development zone loan program. However, the majority of these funds ($205 million) are allocated for budget year 2021-22, with only $65 million allocated for the following budget year. California must ensure that these programs continue to receive adequate and sustainable levels of funding year after year. It is also imperative that California implement a new funding model for CalRecycle and provide support to local governments so that they can sufficiently fund zero-waste programs to reach the 75% recycling goal and successfully transition towards a zero-waste future. Additional recommendations for how to move towards a zero-waste future are included in the next section.

LONG BEACH ZERO-WASTE VISIONING SESSIONS

In the summer of 2021, East Yard gathered community members to discuss their vision for a zero-waste future in Long Beach. Some of the specific ideas that came out of these visioning sessions include:

1. Implementing a right-to-repair policy.
2. Creating Repair Libraries or Fix-It Clinics where community members can bring broken items to be fixed.
3. Creating Tool-Lending Libraries for community members to be able to check out and bring back needed tools.
4. Conducting door-to-door zero-waste outreach in neighborhoods and having "green teams" at neighborhood events to provide educational information and resources.
5. Implementing community composting.
6. Incorporating art projects into the zero-waste transition.
7. Ensuring that there is a just transition for former incinerator workers, including retraining and priority job placement.
8. Creating new union jobs for cleanup and restoration of the SERRF site.

RECOMMENDATIONS

EAST YARD COMMUNITIES FOR ENVIRONMENTAL JUSTICE AND VALLEY IMPROVEMENT PROJECTS PROVIDE THE FOLLOWING RECOMMENDATIONS TO HELP MOVE CALIFORNIA AWAY FROM INCINERATORS AND TOWARDS A ZERO-WASTE FUTURE.

END
MUNICIPAL WASTE INCINERATION

CALIFORNIA LEGISLATURE:

- Ban the construction or approval of any new incinerators and thermal treatment facilities (*e.g.,* gasification and pyrolysis) in California.
- Ban the use of diversion credits – both foreign and domestic.

LOCAL GOVERNMENTS:

- Close the SERRF and Covanta Stanislaus incinerators as soon as their current contracts expire, in 2024 and 2027, respectively. In the meantime, local governments should minimize the use of the incinerators and divert waste into composting, recycling, reduction, and reuse.

PLAN
FOR A ZERO-WASTE FUTURE

LOCAL GOVERNMENTS:

- Implement zero-waste plans in the City of Long Beach and Stanislaus County by no later than 2024 that actively incorporate community feedback and ideas from the beginning of the planning process through implementation.

INVEST
IN A ZERO-WASTE FUTURE

CALIFORNIA LEGISLATURE:

- Provide consistent funding from the State's General Fund for CalRecycle to effectively support and expand zero-waste programs and infrastructure, including grant and loan programs.

LOCAL GOVERNMENTS:

- Enact new funding mechanisms to provide long-term support for zero-waste programs, like recycling and composting.

CONCLUSION

California has made progress moving towards a zero-waste future and yet, there is still a great deal more for the State and local governments to do. For starters, the City of Long Beach, Stanislaus County, and the City of Modesto must stop investing in SERRF and Covanta Stanislaus. Incinerators are a dying technology that cost significant sums to operate and maintain and produce very little energy – all while polluting communities and the environment with toxic air emissions, greenhouse gases, and toxic ash.

California must instead divert its resources away from the dying technology of incinerators and towards more sustainable methods of waste management. To reach the State's 75% recycling goal and move towards a zero-waste future, California must do more than enact legislation with admirable goals. The State must commit the proper amount of funding and provide an adequate amount of support to local governments and communities so that they can create the necessary infrastructure to make zero-waste a reality.

APPENDIX: Jurisdictions Claiming Diversion Credits for Waste Sent to SERRF or Covanta Stanislaus[1]

Alhambra
Aliso Viejo
Arcadia
Azusa
Baldwin Park
Bell
Bell Gardens
Bellflower
Carson
Colusa County Regional Agency
Commerce
Compton
Covina
El Monte
Escalon
Farmersville
Folsom
Fontana
Fremont
Gardena
Glendora
Huntington Park
Inglewood
Jurupa Valley
La Habra
Laguna Hills
Lake Forest
Lakewood
Lawndale
Loma Linda
Lomita
Long Beach
Los Angeles Area Integrated Waste Management Authority
Los Angeles - Unincorporated
Maywood
Modesto
Monrovia
Monterey Park
Nevada-Unincorporated
Ontario
Paramount
Pico Rivera
Rancho Cucamonga
Ripon
Rolling Hills Estates
San Bernardino
San Dimas
San Fernando
San Gabriel
San Joaquin-Unincorporated
San Marino
Santa Ana
Santa Fe Springs
Santa Monica
Seal Beach
Signal Hill
South Pasadena
Stanislaus County Regional Solid Waste Planning Agency
Stanton
Temple City
Tulare-Unincorporated
Tustin
Victorville
Watsonville

1 CalRecycle, Jurisdiction Diversion/Disposal Rate Summary
https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006

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[24] Report of Station for SERRF, *supra* note 19, at 5, 21.

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[27] CalRecycle, SWIS Facility/Site Inspection Details, Mar. 20, 2018 Inspection by CalRecycle of Southeast Resource Recovery Facility (19-AK-0083), https://www2.calrecycle.ca.gov/SolidWaste/Site/Summary/1423 (Click "Inspections" tab; then select "2018" (Year) from drop down menu; then select event with 3/20/18 (Inspection Date) and CalRecycle (Inspected By)).

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[29] *See, e.g.,* CalRecycle, Sept. 18, 2017 Inspection by Los Angeles County, *supra* note 27 (accumulation of ash observed on the road leading into the facility); CalRecycle, April 26, 2018 Inspection by Los Angeles County, *supra* note 27 (accumulation of ash on on-site roads); CalRecycle, May 18, 2018 Inspection by Los Angeles County, *supra* note 27 (accumulation of ash on on-site roads); and CalRecycle, July 18, 2019 Inspection by Los Angeles County, *supra* note 27, (accumulation of ash on on-site roads and equipment).

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[31] Report of Station for SERRF, *supra* note 19, at 25.

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[89] *Id.*

[90] *Id.* at 6, 7.

[91] Statewide Commission on Recycling Markets and Curbside Recycling, Policy Recommendations, *supra* note 63, at 25.

[92] *Id.*

[93] California State Budget – 2021-2022, Budget Addendum at 9 (2021), http://ebudget.ca.gov/BudgetAddendum.pdf.

East Yard Communities For Environmental Justice

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Valley Improvement Projects for Social & Environmental Justice

Designed by Heather Sourwine, hsstudios.net