

**Central Valley Air Quality Coalition  
Central California Environmental Justice Network  
Central California Asthma Collaborative  
Medical Advocates for Healthy Air  
Association of Irrigated Residents**

March 17, 2017

VIA ELECTRONIC MAIL to [fcac.fire@fire.ca.gov](mailto:fcac.fire@fire.ca.gov)

The Honorable Ken Pimlott  
California Department of Forestry and Fire Protection  
1416 9th Street  
Sacramento, CA 95814

CC: The Honorable Members of the Forest Carbon Action Team (FCAT)  
The Honorable Veronica Easy, Assistant Executive Officer for Environmental Justice,  
California Air Resources Board

**RE: DRAFT FOREST CARBON ACTION PLAN**

Dear Chair Pimlott and Honorable FCAT Members:

As representatives of public health and environmental justice organizations based in the San Joaquin Valley, we feel it important to highlight the connection between proposed forest waste management actions laid out in the Draft Forest Carbon Action Plan (FCAP) and public health concerns in the San Joaquin Valley. At present, the Valley has the worst air quality in the nation and is home to some of the most environmentally overburdened communities in the state. Industrial-scale biomass incinerators, poorly zoned within neighborhoods across Valley cities, are some of the largest single sources of pollution. Before ramping up use and investment in the biomass industry, we ask FCAT Members to acknowledge the public health interests of overburdened communities in the state and explicitly prioritize actions that do least harm.

**A. Public Health & Environmental Justice**

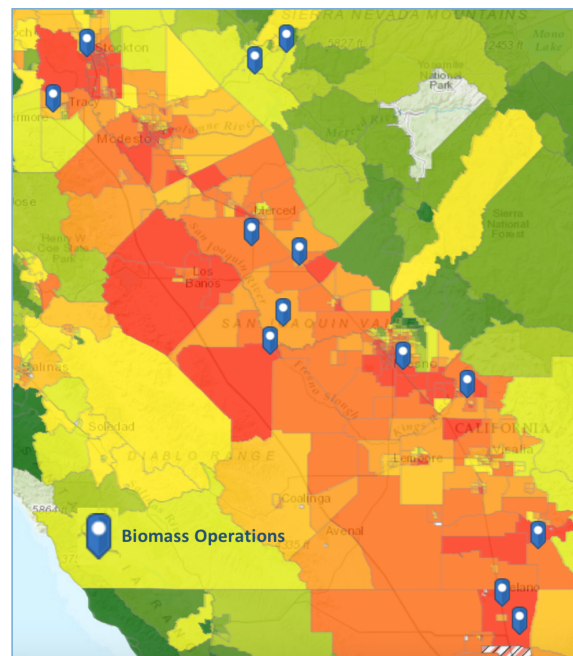
The San Joaquin Valley suffers from the worst levels of fine particulate pollution, or PM<sub>2.5</sub>, in the nation. Bakersfield tops the list of cities in the U.S. with the highest number of unhealthy air

days, followed by the Valley cities of Fresno, Visalia, and Modesto.<sup>1</sup> PM2.5 penetrates deep into the lungs, enters the bloodstream, and travels directly to the heart and brain - potentially causing heart attack and stroke. High PM causes an estimated 1,200 cases of premature mortality in the Valley every year.<sup>2</sup> PM 2.5 is also a major trigger for asthma attacks in children and adults. Recent studies show that PM2.5 can directly enter the brain cavity through nasal membranes and cause an array of cognitive and developmental problems. For instance, a recent study found that older women living in the Valley are 92 percent more likely to develop dementia, including Alzheimer's disease.<sup>3</sup>

**Biomass incinerators are major point sources of pollution.** When active, the Covanta Mendota incinerator was the largest stationary source of direct PM2.5 in all of Kings, Fresno and Madera counties combined (2014).<sup>4</sup> Next to two Chevron facilities in Kern County, the Mendota plant was the largest emitter in the entire Valley. The Covanta Delano incinerator ranks 9<sup>th</sup> for PM2.5 pollution out of the 5,353 permitted facilities in the Valley (2015).<sup>5</sup> The Rio Bravo incinerator in Fresno follows; it is now the largest point source of pollution in Fresno County, and 12<sup>th</sup> in the Valley (2015). Rio Bravo is also the third largest stationary source of NOx emissions in Fresno County. Unfortunately for those nearby, it sits next door to PPG Industries, the largest stationary source of NOx and SOx (2015).

To compound effects, most biomass incinerators located near the southern Sierras are located in Valley communities already overburdened with pollution. According to the CalEnviroScreen tool, a science-based screening methodology developed by Office of Environmental Health Hazard Assessment, 11 of the 13 incinerators located near the southern Sierras are sited in the top 25% of California census tracts most overburdened by and vulnerable to pollution (See Appendix A).<sup>6</sup>

CalEnviroScreen 3.0 Results



<sup>1</sup> American Lung Association, *State of the Air Report* (2016):

<http://www.lung.org/assets/documents/healthy-air/state-of-the-air/sota-2016-full.pdf>

<sup>2</sup> California Air Resources Board, *Meeting PM2.5 Standards in the San Joaquin Valley* (2016):

<https://www.arb.ca.gov/planning/sip/sjvpm25/workshop/slides.pdf>

<sup>3</sup> Translational Psychiatry, *Particulate air pollutants* (2017)

<http://www.nature.com/tp/journal/v7/n1/full/tp2016280a.html>

<sup>4</sup> Air Resources Board Facility Search Engine, San Joaquin Valley Air Pollution Control District, 2014

<https://www.arb.ca.gov/app/emsinv/facinfo/facinfo.php?dd=>>

<sup>5</sup> Air Resources Board Facility Search Engine, San Joaquin Valley Air Pollution Control District, 2015

<https://www.arb.ca.gov/app/emsinv/facinfo/facinfo.php?dd=>>

<sup>6</sup> CalEnviroScreen3.0, Office of Environmental Health Hazard Assessment, 2016

**Furthermore, the top five most polluting biomass facilities in the San Joaquin Valley are located in the top four percent most disadvantaged census tracts in the state (see Appendix B).**

Illustrating this point, the Rio Bravo Biomass incinerator in Malaga, an unincorporated community within the city of Fresno, is located less than a half-mile from the Malaga Community Park, Malaga Elementary School and surrounding homes. According to the CalEnviroScreen tool the pollution burden score for this neighborhood is 100. It ranks in the 90<sup>th</sup> percentile for asthma and in the 92<sup>nd</sup> percentile for cardiovascular risk. The Covanta Mendota plant is less than a half mile from residential housing as well. Cardiovascular risk in this area is in the 93<sup>rd</sup> percentile. The 16,000 people who live within ten miles of the Covanta-Delano and Mt. Poso biomass incinerators rank in the 99<sup>th</sup> percentile for PM2.5 pollution. The poor placement of these facilities exacerbates ambient air quality and causes direct harm to residents who live nearby.

**B. Policy Position**

Due to the public health impacts of the current biomass industry and the extremely poor ambient air quality in the San Joaquin Valley, we are opposed to any FCAP action that increases harm to Valley communities and others across the state already overburdened by pollution. Specifically, **we are opposed to:**

- The trucking in of forest waste to Valley-based biomass incinerators. Trucking forest waste to the Valley floor not only sustains the use of facilities that harm human health, it adds emissions from heavy-duty trucks to the air basin. Trucking in waste also encourages the open burning of agricultural waste if/when current facilities reach maximum capacity.
- The construction, reopening, or extension of contracts with incinerators located in disadvantaged communities. The reopening of currently inactive biomass plants would be extremely detrimental to the health of Valley residents and would thwart progress toward clean air attainment. The same is true for the construction of new biomass incinerators on the valley floor and the extension of energy contracts with current facilities.
- Subsidies to biomass incinerators, including Cap and Trade funds, Cap and Trade exemptions, and rate-payer increases.

There are solutions to the forest waste problem that exist that do not harm already overburdened communities. These include low-tech options of mulching and controlled burns, and high-tech options of anaerobic digestion, small-scale portable gasification units, and biomass facilities not located in disadvantaged communities (as defined by CalEnviroScreen). We ask the FCAT team to further explore these options and explicitly prioritize actions based on their impact to human

health.

## C. Specific Recommendations

### General

- ❖ We would like the Forest Carbon Action Team to evaluate the health impact of varying biomass utilization options, including their criteria pollutant emissions, the current or proposed facility's distance to human populations, and the density and vulnerability of the population affected. **We ask for the FCAP to prioritize actions that do least harm.**

### 3.3 Innovate Solutions for Wood Products and Biomass Utilization to Support Ongoing Forest Management Activities

- ❖ Build out ~~the 50 MW of~~ small scale, ~~wood-fired~~ bioenergy facilities:
  - Prioritize the location of new bioenergy facilities in areas of the state not designated as disadvantaged by the CalEnviroScreen tool. Prioritize new facilities with low criteria pollutant emissions over high polluting facilities.
  - Erase the mention of 50 MW facilities. 50 MW facilities are large and historically high-polluting. The designation of size also precludes the use of innovative technologies that, while smaller, have a range of co-benefits.
- ❖ ~~Maintain large-scale bioenergy capacity in the short term.~~ Maintain bioenergy capacity at facilities not located in communities designated as disadvantaged by the CalEnviroScreen tool.

### Section 8.3 Public Health

- ❖ We appreciate that the draft FCAT includes a section on health which speaks to the impacts of extreme wildfires and climate change. We ask that a paragraph is included in this section that addresses the public health crisis in the San Joaquin Valley.

### Section 9. Wood Products and Biomass Utilization

- ❖ This section notes the social co-benefits of FCAT implementation without the mention of health costs. Health costs need to be addressed.
- ❖ The section also notes that the diversion of material from open pile burning to renewable energy and fuels reduces GHG and black carbon emissions from the forestry sector. However, a mention of where the burning or gasification takes places and its effect on human health is needed.
- ❖ A comparison of criteria pollutants for all biomass utilization options must be included. Also recommended is a comparison of the GHG emissions and the levels of carbon in forest soils - including what happens to total forest carbon when trees and slash are removed for energy purposes. Global warming will affect environmental justice communities negatively in terms of health and welfare in many different ways. Excessive heat and drought due to climate change are already impacting air pollution levels in the

San Joaquin Valley. It is imperative, in light of tipping points and the need to reduce GHG in the short term, that biomass pathways be compared in order to choose a path minimizing criteria pollutants and total GHG emissions whether they be considered renewable or otherwise.

### Section 9.3 Biomass Energy

- ❖ A conversation on the emissions produced from biomass incinerators is needed, especially in relation to other biomass utilization pathways. Only comparing open-pile burning to “biomass utilization” fails to capture the range of potential utilization pathways. All pathways need to be compared and then prioritized based on their impact to human health.

#### Section 9.3.1 Challenges for Bioenergy and Biofuel Development

- ❖ Concerning the biofuel and bioenergy industry, the report states that only technical and economic challenges exist. Human health costs and environmental justice concerns need to be addressed as well. In the paragraph concerning hauling forest waste, the health costs of heavy-duty diesel trucks transporting waste to disadvantaged communities need to be included.

### **D. Conclusion**

At present, the Forest Carbon Action Plan will increase harm to Valley residents. Solutions to the forest waste problem exist that do not harm already overburdened communities, such as mulching, composting, controlled burns, anaerobic digestion, and the use and creation of facilities not located in disadvantaged communities. **By prioritizing pathways that do least harm, the state can avoid significant health costs and equity concerns while also addressing tree mortality.**

We thank you for your consideration. If you have any questions, please contact Genevieve Gale, Policy Associate for the Central Valley Air Quality Coalition at [genevieve@calcleanair.org](mailto:genevieve@calcleanair.org), or by calling (559) 272-4874.

Sincerely,

*Dolores Weller,*  
Central Valley Air Quality Coalition

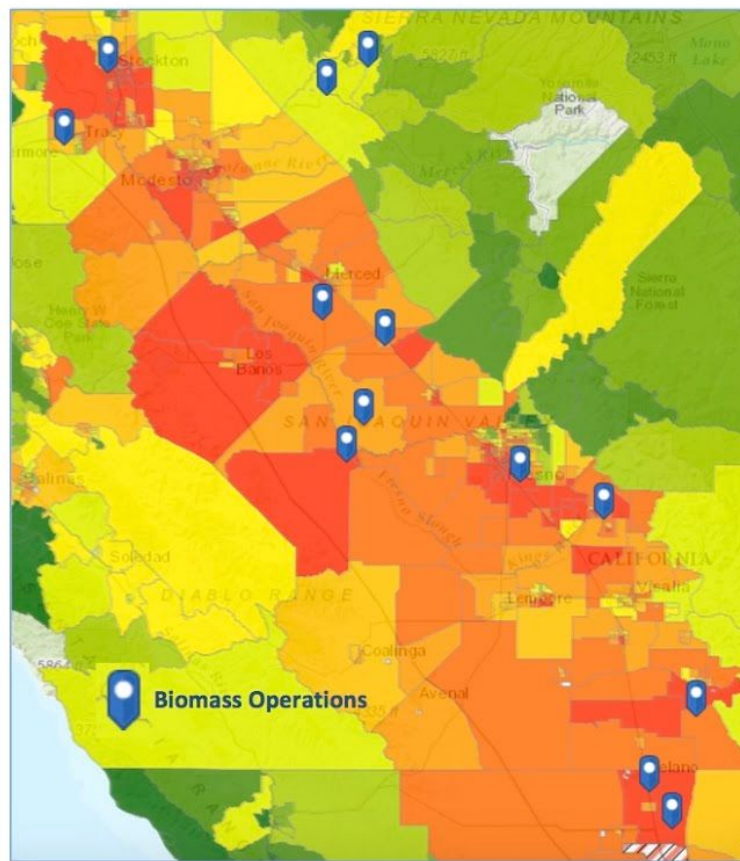
*Tom Frantz,*  
Association of Irrigated Residents

*Nayamin Martinez,*  
Central California Environmental Justice  
Network

*Kevin Hamilton,*  
Central California Asthma Collaborative  
Medical Advocates for Healthy Air

## Appendix A

### CalEnviroScreen 3.0 Results



February 14, 2017

CalEnviroScreen 3.0

1 - 10% (Lowest Scores)

11 - 20%

21 - 30%

31 - 40%

41 - 50%

51 - 60%

61 - 70%

71 - 80%

81 - 90%

91 - 100% (Highest Scores)

Developed by the Office of Environmental Health Hazard Assessment (OEHHA), the CalEnviroScreen tool is a screening methodology that can be used to help identify California communities that are disproportionately burdened by multiple sources of pollution. CalEPA has used the tool to designate California communities as disadvantaged pursuant to Senate Bill 535.

Locations of biomass operations in the state of California provided by the California Biomass Energy Alliance. <http://www.calbiomass.org/facilities-map/>

## Appendix B

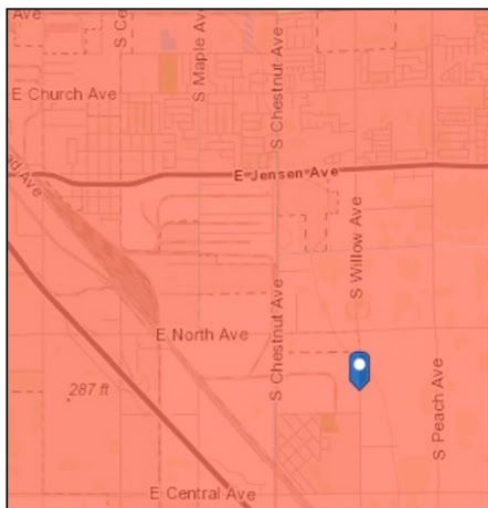
### TOP EMITTING BIOMASS FACILITIES IN THE SAN JOAQUIN VALLEY



**Covanta Mendota (idle)**  
Mendota, Fresno County  
25 MWs Biomass Facility  
Emits 84.3 tons PM2.5/year (2014)

**Census Tract: 6019008302**  
(City of Mendota)

Population:	6,562
CalEnviroScreen 3.0 Percentile:	96 - 100%
Pollution Burden Percentile:	73
Population Characteristics Percentile:	99
Ozone:	78
PM 2.5:	84
Asthma:	88
Low Birth Weight:	71
Cardiovascular Rate:	93



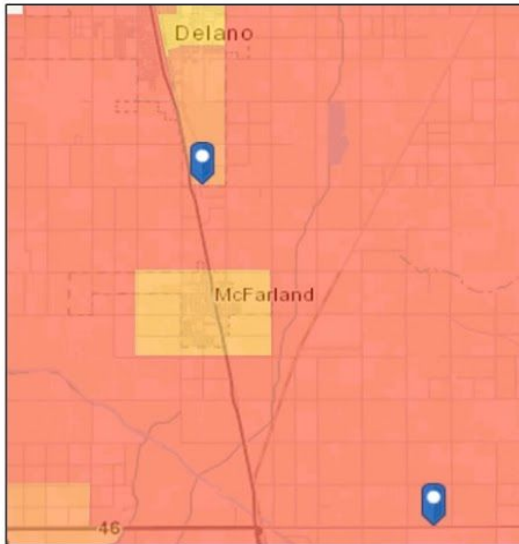
**Rio Bravo Fresno (active)**  
Fresno, Fresno County  
25 MWs Biomass Facility  
Emits 36.7 tons PM2.5/year (2015)

**Census Tract: 6019001500**  
(Community of Malaga)

Population:	2,206
CalEnviroScreen 3.0 Percentile:	96 - 100%
Pollution Burden Percentile:	100
Population Characteristics Percentile:	93
Ozone:	98
PM 2.5:	97
Asthma:	90
Low Birth Weight:	39
Cardiovascular Rate:	92



## TOP EMITTING BIOMASS FACILITIES IN THE SAN JOAQUIN VALLEY



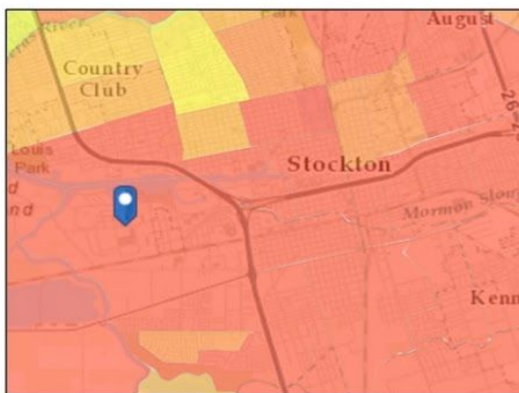
### **Census Tract: 6029004604**

(Areas surrounding Delano and McFarland)

Population:	15,845
CalEnviroScreen 3.0 Percentile:	96 - 100%
Pollution Burden Percentile:	92
Population Characteristics Percentile:	90
Ozone:	91
PM 2.5:	99
Asthma:	60
Low Birth Weight:	85
Cardiovascular Rate:	72

**Covanta Delano (idle)**  
Delano, Kern County  
49 MWs Biomass Facility  
Emits 49.2 tons PM2.5/year (2014)

**Mt. Poso Cogeneration (active)**  
Bakersfield, Kern County  
45 MWs Biomass Facility  
Emits 10.6 tons PM2.5/year (2015)



### **Census Tract: 6077000801**

(City of Stockton)

Population:	6,692
CalEnviroScreen 3.0 Percentile:	96 - 100%
Pollution Burden Percentile:	100
Population Characteristics Percentile:	98
Ozone:	53
PM 2.5:	84
Asthma:	98
Low Birth Weight:	81
Cardiovascular Rate:	97

**DTE Stockton (active)**  
Stockton, Stanislaus County  
45 MWs Biomass Facility  
Emits 10.2 tons PM2.5/year (2015)