



December 21<sup>st</sup>, 2020

California Air Resources Board  
1001 I St.  
Sacramento, CA 95814

Dear CARB Board Members and Staff,

On behalf of National Parks Conservation Association (NPCA), Central California Environmental Justice Network (CCEJN), Central Valley Air Quality Coalition (CVAQ), Earthjustice, and Leadership Counsel for Justice & Accountability, we submit this comment letter to California Air Resources Board Members and Staff in response to the 2020 Staff Report from the San Joaquin Valley Air Pollution Control District (SJVAPCD or District) on open agricultural burning (ag burning) in the San Joaquin Valley (Valley).

## **I. Introduction**

Open agricultural burning is of extreme concern to advocates and residents throughout the San Joaquin Valley due to the significant threat it poses the health and wellbeing of those living, working, and breathing near these burns. Further troubling is the role ag burning plays in contributing to climate change and ongoing violations of the Clean Air Act's (CAA) National Ambient Air Quality Standards (NAAQS). We firmly believe continued use of this practice will harm both Valley residents and the environment and impede state progress in meeting the goals set out in the Valley's various State Implementation Plans (SIPs). With the San Joaquin Valley Air Pollution Control District (SJVAPCD or District) voting to finalize the 2020 Staff Report—which requests an additional five years to phase out ag burns for numerous crop types—we call on the California Air Resources Board (CARB) to end this dirty and unnecessary practice one and for all.

In 2003, the California State Legislature passed SB 705 (Florez) aiming to combat the rising emissions from agricultural burning.<sup>1</sup> This bill required a phase out of agricultural burning for all crop types in the San Joaquin Valley by 2010. Despite industry knowing about this phase out for the past 17 years, SJVAPCD has now requested extensions to comply with SB 705 on 4 separate occasions, with previous requests being granted by CARB in 2010, 2012, and 2015. Once again, the District is looking to delay adherence with state law for numerous crops until 2025. This decade plus delay blatantly disregards the central purpose of SB 705 and puts the health of our communities and environment at risk.

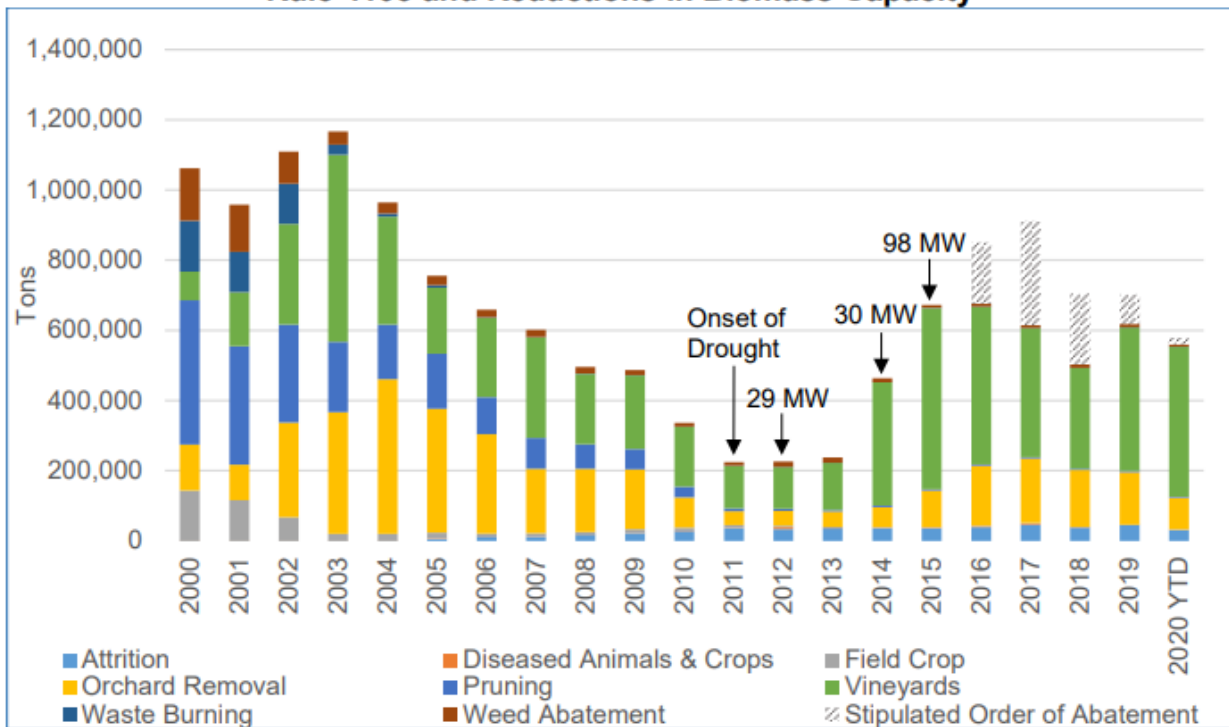
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<sup>1</sup> Codified in California Health and Safety Code §§ 41855.5 and 41855.6.

Given the existing air pollution problems in the San Joaquin Valley as well as the recent proliferation of climate change driven mega-wildfires across California, we have seen PM<sub>2.5</sub> air pollution levels continue to degrade over the last few years—reaching levels higher than at any time in recent memory. While wildfires are labeled as extraordinary events and thus their emissions do not count towards NAAQS violations on paper, the real-world effects of these fires and their accompanying pollution acutely impact the health and wellbeing of Valley residents, environmental justice communities, and the surrounding environment. Adding to this challenge is an ongoing COVID-19 pandemic that affects the respiratory system of those infected, putting those infected at greater risk when exposed to smoke from these fires.

SJVAPCD often points to their successful past efforts that reduced emissions from this source by 80% following the passage of SB 705. While there was indeed some level of success early on in this program, the reality, as shown in the chart below, is that since 2012 emissions from agricultural burning have consistently risen as the District has granted more and more permits to burn.

**Figure 1-2: Historical Agricultural Material Burned under Rule 4103 and Reductions in Biomass Capacity**



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SJVAPCD’s own projections show that, without the implementation of feasible alternatives, emissions from this source could continue to rise to levels similar to what were seen prior to the passage of SB 705.<sup>3</sup>

<sup>2</sup> SJVAPCD, *2020 Staff Report and Recommendations of Agricultural Burning*, (hereby *2020 Staff Report*), at 5.

<sup>3</sup> See, SJVAPCD, Central Valley Summit on Alternatives to Agricultural Burning, <http://valleyair.org/cvsummit/documents/presentations/Session02-Jessica-Olsen.pdf>, at slide 11.

The years of delay and inaction by industry, agencies, and the public when it comes to reducing local air pollution emissions has made it abundantly clear that Valley residents cannot afford the continued issuance of ag burn permits. Especially when various, cleaner alternatives exist. It is time for agencies to put a stop to ag burning and ensure full compliance with SB 705 once and for all.

## **II. The Valley Air District Has Not Met the 4 Criteria Required to Postpone Compliance with SB 705**

SB 705, as codified in Cal. Health & Safety Code § 41855.5, requires the District to stop issuing burn permits for specific crop types under the following schedule:

- Commencing June 1, 2005, for field crops, prunings and weed abatement
- Commencing June 1, 2007, for orchard removals; and
- Commencing June 1, 2010, for other materials, vineyard removals, and surface harvested prunings.<sup>4</sup>

Parallel to § 41855.5's schedule for phasing out the burning of different crop types, the legislature provided a narrowly tailored exemption under § 41855.6, allowing the District to postpone the scheduled phase out of certain crop types if all 4 of the following criteria are all demonstrated:

- (a) The district determines that there is no economically feasible alternative means of eliminating the waste.
- (b) The district determines that there is no long-term federal or state funding commitment for the continued operation of biomass facilities in the San Joaquin Valley or development of alternatives to burning.
- (c) The district determines that the continued issuance of permits for that specific category or crop will not cause, or substantially contribute to, a violation of an applicable federal ambient air quality standard. [and]
- (d) The state board concurs with the district's determinations pursuant to this section.<sup>5</sup>

In the past decade, the District has used various excuses to postpone the phase out of numerous remaining crop types utilizing § 41855.6. For example, in 2015 when the District last submitted a report requesting an extension for compliance with SB705 for numerous crops, SJVAPCD pointed to drought conditions, the decline of local biomass incineration plants, and a lack of viable alternatives as evidence for why it required an additional 5 years to end ag burning. 5 years have now passed since the District's last report and many things have changed in the Valley. Unfortunately, the District's approach has not changed little, and they are once again seeking to postpone phasing out a majority of the crops remaining using many of the same old excuses. In reality, over the last 5 years, the severe drought that impacted California from 2012-2016 is over, the District and agriculture industry have had years to adjust to the closures of biomass facilities, and numerous alternatives to burning have been researched, tested, and proven viable. Additionally, since the 2015 report was finalized, California has approved the long-delayed SIP for the 1997, 2006, and 2012 24-hr and annual PM<sub>2.5</sub> standards (2018 PM<sub>2.5</sub>

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<sup>4</sup> Cal. Health & Safety Code § 41855.5.

<sup>5</sup> *Id.* at § 41855.6.

SIP), which has drastically highlighted the need for emission reductions from as many sources as possible to ensure attainment by the 2024/2025 deadlines.

For the reasons stated below, we believe the determinations within the District's report have failed to demonstrate compliance with the first 3 criteria above as it relates to all of the remaining crop types still permitted for burning. Therefore, CARB must exercise its authority under part (d) and withhold concurrence with the District's legally flawed report.

A. The Districts Report Failed to Properly Analyze Numerous Available and Economically Feasible Alternatives to Burning

In response to SB 705's requirement that the District "determines that there is no economically feasible alternative means of eliminating the waste," the 2020 Staff Report states only that "[t]he District has determined that there were no economically feasible alternatives to managed burning without incentives." Despite this stance taken by SJVAPCD and supported by the ag industry, we firmly believe that the District's Staff Report failed to properly analyze the economically feasible available alternatives and that numerous cost-effective alternatives to ag burning already exist.

i. *The District's Economic Feasibility Analysis is Arbitrary and Failed to Incorporate all Relevant Economic Data*

We profoundly disagree with the one-sided methodology the District and their 3<sup>rd</sup> party contractor utilized to analyze the economic feasibility of alternatives and for the following reasons believe that the District's economic feasibility analysis is legally flawed on a number of fronts.

a. *The 10% Per Acre Net Profit Economic Feasibility Test has no Rational Connection to Whether an Alternative is Economically Feasible.*

Since 2010, the District has utilized the same defective test to analyze if alternatives are economically feasible. As stated in the District's report,

The analysis compares the per-acre costs for each alternative to the per-acre net profit for each crop category, utilizing the 10 percent significant threshold established in prior evaluations and for other District and CARB regulatory efforts. The 10 percent threshold utilized in this analysis represents the economic significance level utilized by the District in the development of District rules, and represents the level that a regulatory action would pose a significant economic impact to affected sources.<sup>6</sup>

We disagree with the District's determination that the arbitrary 10% of net profit cutoff provides an actual indicator of whether a regulatory action would pose a significant threat to industry. The flaws inherent in this 10% of profits test were thoroughly debunked a decade ago by Earthjustice, et.al. in their May 26, 2010 comments to Mary Nichols responding to the May 6, 2010 CARB Staff Report on ag burning. (See Appendix A).

To summarize a Earthjustice et. al.'s argument as it relates to whether the District's 10% of profits test is applicable in determining the economic feasibility of alternatives—because the term "economically feasible" itself is not defined in the California Health and Safety Code, the

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<sup>6</sup> 2020 Staff Report, at 23.

plain meaning of the term as well as relevant statutory and case law definitions demonstrate that this test is arbitrary.

The common usage of the term feasible as seen in Merriam-Webster's Online Dictionary is understood as "capable of being done or carried out."<sup>7</sup> Other examples as taken from the California Environmental Quality Act ("CEQA") Guidelines define "feasible as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."<sup>8</sup> Thus, using these definitions, the economic feasibility of alternatives does not rest on whether costs will exceed a certain arbitrarily defined percentage of industry profits, but instead rests on whether industry is *capable* of handling the costs associated with alternatives and whether the various benefits of alternatives outweigh those of ag burning. In this case, when factoring in the ever-decreasing costs and economic benefits of several of the alternatives it is clear that industry is indeed capable of adopting them. Contrary to the District's position, it is in fact Valley residents and our local environment, not industry, who are no longer capable of paying for ag burns in terms of the external social costs of this practice.

Federal and California state caselaw further illustrates this point. For instance, in *American Textile Manufacturers Institute v. Donovan*, the court notes that Congress understands the difference between "feasible" and "cost-beneficial" and that the use of the former reflects a decision to impose the costs of control as a cost of doing business in order to protect public health.<sup>9</sup> In *Uphold Our Heritage v. Town of Woodside*, the court holds that "[t]he fact that an alternative to the proposed project may be more expensive or less profitable is not sufficient to show that the alternative is financially infeasible."<sup>10</sup> Additionally, in *Maintain Our Desert Environment v. Town of Apple Valley*, the court states that "[e]conomic unfeasibility is not measured by increased cost or lost profit."<sup>11</sup>

Because Earthjustice et. al.'s explanation for why the 10% of profit test is arbitrary still holds relevance today, we point you to pages 3-7 of Appendix A for a further in-depth discussion of our position as it relates to this topic.

b. The District's Economic Feasibility Analysis Fails to Factor in Economic Benefits of Available Alternatives as well as the Externalized Costs of Burning.

In addition to the arbitrary nature of the District's 10% of profit test, the District's economic feasibility analysis also fails to incorporate all economic data needed to fully understand the true costs and benefits of adopting available alternatives. As stated in the District's 2020 Staff Report, "The cost estimates used to determine the economic feasibility of the selected alternatives could include capital costs, maintenance costs, and operational costs."<sup>12</sup> Absent from this analysis is the economic benefits of several available alternatives as well as the external costs of burning compared to alternatives.

As explained in the following section, there are significant financial benefits farmers receive through the adoption of alternative practices such as soil reincorporation and composting.

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<sup>7</sup> Merriam-Webster's Online Dictionary (2020), available at <https://www.merriam-webster.com/dictionary/feasible>.

<sup>8</sup> 14 Cal. Code Regs. § 15364 (2007).

<sup>9</sup> 452 U.S. 490, 519-20 (1981).

<sup>10</sup> 147 Cal.App.4th 587, 599 (Cal. App. 1 Dist. 2007), (quoting *Citizens of Goleta Valley v. Board of Supervisors*, 197 Cal.App.3d 1167, 1181 (Cal. App. 2 Dist. 1988)).

<sup>11</sup> 124 Cal.App.4th 430, 449 (Cal. App. 4 Dist. 2004).

<sup>12</sup> 2020 Staff Report at 23.

These include lower long-term costs for watering and fertilizer as well as significantly higher crop yields. By ignoring the benefits of these available alternatives and focusing only on the various costs of alternatives compared to burning, the District's economic analysis clearly fails to portray the entire economic picture.

Additionally, the economic analysis on behalf of the District and their 3<sup>rd</sup> party contractor also fails to factor in the external costs of ag burning compared to the alternatives. Although the District's report does recognize that open burning has extensive impacts on the health and wellbeing of residents and the environment, such as nearby national parks, the report completely ignores the economic price being paid by the environment and especially by Valley residents who are forced to breathe in this smoke.<sup>13</sup> These externalized costs include factors such as localized and national climate impacts, lost school or workdays, medication, increased hospitalizations, and even the loss of loved ones. Because the external social costs of burning are not factored in, the District's report fundamentally fails to offer a fair and reasonable analysis of the costs and benefits of burning versus those of alternatives. Instead, it provides a wholly one-sided and arbitrary assessment of the issue entirely to the benefit of industry.

c. The District's Economic Feasibility Analysis Fails to Account for the Ability of Farmers to Spread the Costs of Alternatives Over the Long Lifespans of Certain Crop Types

In displaying the costs of alternatives as one lump sum, the District's economic analysis presents a deceptively harsh picture of whether certain alternatives are feasible. This picture fails to clarify that the costs of alternatives can be spread out over the lifespan of crop types like vineyards and orchards. The District's analysis also fails to address the fact that sustainably grown vineyards and orchards have a productive lifespan that lasts for numerous decades before removal and replanting is required.<sup>14</sup> Thus, costs are not an annual expense or even 5-to-10-year expense as the District's report might lead one to believe but can occur only once or twice in a farmer's lifetime and can be accounted for in the farmer's business model.

As it related to any crops that are removed well in advance of their loss of productivity, the District is incentivizing unsustainable and polluting farming practices by giving farmers the option to cheaply tear out, burn, and replace crop types with a more profitable crops before their productive lifespan are over. We should not be carving out exemptions that encourages such an unsustainable practice, especially at the expense of our environment and public health.

ii. *Overview of Available Alternatives*

In 2017, following the advice of advocates and stakeholders, the Valley Air District hosted the Central Valley Summit on Alternatives to Agricultural Burning. As a result of summit and other research done by institutions such as the University of California Cooperative Extension, the District identified numerous examples of viable alternatives that they have highlighted in their 2020 report. In addition to these alternatives addressed generally below, we believe that there are several alternatives the District failed to properly review.

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<sup>13</sup> *Id.* at 64.

<sup>14</sup> See Haley Borriess and Henrich Brunke, *Commodity Profile: Almonds* (2005) at 1, available at <https://aic.ucdavis.edu/wp-content/uploads/2019/01/agmr-profile-Almonds-2005.pdf>. (Specifying that the average life span of an almond tree is 20-25 years. See also Julie Christensen, *How Long Do Grapevines Live?*, SF Gate, Available at. <https://homeguides.sfgate.com/maximum-height-grapevines-69918.html>. (specifying that grapevines can live for 50-100 years or more).

Soil incorporation and land application: We strongly support the use of soil incorporation and land application as a primary alternative to burning. The chipping or shredding of biomass to create mulch is economically feasible for farmers to adopt now and provides numerous short and long-term benefits for farmers and the environment. As stated in the 2020 Staff Report, “Soil incorporation of woody agricultural material has been found to increase soil organic matter content, increasing microbial communities in the soil, storing carbon, increasing water retention, and potentially increasing yields in second-generation trees.”<sup>15</sup> This point is further supported by recent studies from researchers out of the University of California, Davis, who found that trees following whole orchard recycling “significantly out-yielded those in burn treatment over nine years after establishment . . . , which led to increased irrigation water use efficiency (IWUE) compared to burn treatment.”<sup>16</sup>

Given the increased benefits of higher yields, increased irrigation water efficiency, and improved soil health, it is clear that over a relatively short period the cost saving and environmental benefits of chipping and reincorporation easily make up for the higher upfront costs compared to burning. Lower costs and improved yields might even produce more money over the lifespan of an orchard compared to the existing remove and burn regimen. Despite this fact, the District’s economic analysis wholly ignores these benefits and looks only at the costs of this practice.

With the San Joaquin Valley set to become hotter and drier in the coming years due to anthropogenic climate change, it is to the benefit of farmers to rapidly adopt more sustainable practices such as chipping and reincorporation or land application. The endless cycle of ripping out, burning, and replanting crops based on short term economic trends must end if Valley farms are to remain competitive in the face of climate change, and the District is doing a disservice to farmers by incentivizing these unsustainable combustion-focused practices over environmentally beneficial alternatives.

Composting: Alongside soil incorporation or land application of mulch, we strongly support the use of composting as a key alternative to agricultural burning. We also believe the District’s report fails to fully analyze this practice as an inexpensive, viable, and wide-ranging alternative for numerous crop types and categories.

In evaluating composting as an alternative, the District’s report takes an extremely narrow view of the practice, looking only at the transportation and industrialized composting of biomass at large-scale landfill facilities. In reality, composting is a highly adaptable practice that can be utilized at any scale. For instance, when mixed with other local biomass materials, such as food and livestock waste, farmers (especially small scale operations), can easily compost materials for free on their own land instead of burning it. Moreover, even at an industrial scale, the District’s own report states that the costs of industrial composting are similar to biomass plants minus the “tipping fees” paid to composting facilities at delivery, which are typically \$20 per ton.<sup>17</sup> It is unclear why the loss of biomass plant capacity remains a valid excuse to continue allowing burning in the Valley when composting requires similar preparations and is at a comparable price point.

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<sup>15</sup> *Id.* at 50.-51

<sup>16</sup> Emad Jahanadz, et. al., Orchard recycling improves climate change adaptation and mitigation potential of almond production systems, *Plus One* at 7. Available at <https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0229588&type=printable>.

<sup>17</sup> 2020 Staff Report at 77.



Moreover, if done properly, the natural decomposition process achieved through composting also produces enough heat to kill off any fungal and bacterial infestations or pests—making composting a feasible option for the disposal of some diseased crops. The sterilized compost that results from this process is a valuable commodity that provides various economic and environmental benefits to farmers, serving as a natural source of fertilizer for crops and limiting the number of synthetic fertilizers that must be used. It is also much more climate friendly option compared to burning crops or putting them in a landfill. For this reason, there are various statewide efforts to promote composting under the state’s healthy soils and short-lived climate programs. Sadly, the added flexibility and various co-benefits available through composting are entirely left out of the District’s feasibility analysis.

**Biomass Plants:** We strongly oppose the widespread use of any alternative that results in emissions within the Valley, including biomass incineration plants. While we recognize biomass plants produce less air emissions than open burning, they still result in significant NOx and PM2.5 pollution that impacts environmental justice communities living near these facilities. It is also clear that the Valley’s outdated biomass plants are becoming less economically viable as cheaper and cleaner renewables come online. We do not support the Districts request that the state bail out these outdated plants with additional incentive funding and believe that any and all incentive funding should instead be focused instead on ecologically beneficial alternatives.

With non-combustion alternatives, like soil incorporation and composting, available at similar price points to biomass incineration, we strongly urge the District to end its support for Biomass and encourage the use of other alternatives.

**Advanced Bioenergy (Pyrolysis/gasification/ethanol):** The reality of practices such as pyrolysis and gasification, as explained in the District’s report, is that these are still new, unproven, and costly technologies.<sup>18</sup> Moreover, while it may result in far less localized air and climate emissions compared to existing Valley biomass plants, the syngas and ethanol produced still emits pollutants. Thus, we encourage the District and farmers to focus their efforts on more cost-effective and environmentally sound alternatives.

**Air Curtain Burners:** As with biomass plants, we do not support the use of any combustion-based alternatives that result in additional emissions in the Valley. While air curtain burners can address some amount of the localized air pollution concerns, they will still result in high levels of air emissions regionally. Additionally, as of now, air curtain burners are not widely available and remain too expensive for most farmers to utilize. As with biomass, we firmly believe any state or local incentive funds should be reserved exclusively for non-combustion alternatives, and not for technologies like curtain burners.

**Other alternatives:** In addition to these alternatives listed by the District, there are several alternatives the District failed to properly analyze. The first and most obvious is for farmers to simply not burn and instead store, recycle, or find other uses for their waste. This alternative could be utilized for various crop types, including raisin trays, surface harvested prunings, or chipped mulch from orchards or vineyards. Another alternative not addressed by the air District is for farmers to switch to crops that do not require the use of burning or other costly alternatives. With the Valley projected to become hotter and drier in the coming years due to climate change, water intensive crops like nut and citrus trees will become less and less viable for farmers in the Valley’s already arid environment. Without the option of cheaply burning

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<sup>18</sup> *Id.* at 52-53.



crops, farmers will be more inclined to replace their crops with less water intensive plants that do not need to be burned. Finally, the District failed to address the use of livestock as an alternative. Livestock, such as goats, are already being utilized in some places as an environmentally friendly option for the removal of weeds in areas such as steep pond or levee banks, eliminating the need to use fire or herbicides and lessening future maintenance through seed reduction.<sup>19</sup>

a. Crop Specific Recommendations

Field Crops: We support the Districts proposals to prohibit burning of residual rice stubble left over after baling or compaction due to mobile equipment by January 1, 2021. We disagree, however, with the Districts proposal to prohibit the open burning of only 75% of rice stubble. Instead, we support a burning prohibition on 100% of rice stubble in the Valley. By the Valley Air District's own admission, the average yearly acreage of all types of rice stubble burned in the Valley between 2015-2019 was only 547 acres. With such a small number of acres burned annually, it seems unreasonable to carve out an exemption to the complete phase out the burning of this crop type. Moreover, as the report mentions, the majority of rice straw in the Sacramento Valley is disposed of by soil incorporation. This method should also be adopted and utilized in the Valley.

Prunings: We understand the complexity of dealing with diseased crops such as apple, pear, and quince prunings suffering from fire blight. We believe, however, that SB 705 provides a specific legal avenue through which diseased crops can be burned on a case-by-case basis.

Cal. Health & Safety Code § 41855.5(d)(1) specifically details how the Valley Air District is to regulate the burning of diseased crops, stating:

The San Joaquin Valley Unified Air Pollution Control District shall develop and adopt, by January 1, 2005, rules to regulate the burning of diseased crops. The rules shall become operative no later than June 1, 2005. The rules shall provide for the issuance of a conditional crop burning permit if all of the following criteria are met:

- (A) The fields to be burned are specifically described.
- (B) The applicant has not been cited for a violation of burning rules or regulations in the past 3 years, unless the violation was of a de minimis nature, as determined by the district and the county agricultural commissioner.
- (C) The county agricultural commissioner has determined all of the following:
  - (i) During the growing season for that crop, there is the presence of a disease that will cause a substantial, quantifiable reduction in yield or poses a threat to the health of adjacent vines, trees, or plants in the field proposed to be burned, during the current or next growing season.
  - (ii) There is no economically feasible alternative means of eliminating the disease other than burning.
- (2) A conditional crop burning permit shall authorize the burning of only the identified diseased crop.

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<sup>19</sup> See generally, US Army Corps of Engineers, *Goats return to manage levee vegetation along Mill Creek; temporary leash rules in effect to help protect goats, visitors*, available at <https://www.nwww.usace.army.mil/Media/News-Releases/Article/754779/16-024-goats-return-to-manage-levee-vegetation-along-mill-creek-temporary-leash/>.

- (3) The holder of a permit may not transfer, sell, or trade the permit to any other individual.
- (4) A citation for a violation of burning rules or regulations may be appealed to the San Joaquin Air Pollution Control District Hearing Board.<sup>20</sup>

With a specific case-by-case exemption built into SB 705's phaseout schedule, it is unclear why the District is seeking blanket postponements of entire crop types instead of looking at individual instances through a regulatory lens already established by state law. By the District's own admission, diseased crops account for an extremely small percentage of crops burned in the Valley and it is thus unnecessary to postpone the phase out of burning for crops types like prunings through Cal. Health & Safety Code § 41855.6 instead through using the criteria set out in § 41855.5(d)(1).

Weed Abatement: We disagree with the District's assessment that there are no alternatives available to abate weeds that grow along pond or levee banks. As mentioned above, livestock grazing is one practice that has been employed in other areas to solve this issue. In addition, even a cursory google search shows a plethora of options available for mowers and other equipment specially designed to cut weeds on steep slopes.

Orchard Removals: Next to vineyard removals, orchard removals are the second biggest source of agricultural burning emissions and should be phased out immediately for each of the following crop types:

- Citrus: Citrus farmers should be required to end burning for all citrus categories immediately. Because the average lifespan on citrus trees is roughly 50 years, farms of all sizes have extended periods to plan and pay for the removal of their orchards.<sup>21</sup> Additionally, while we understand the District's concerns about limiting the phase out of burning for small citrus orchards equal to or less than 15 acres, we believe that concerns about financial impacts to these smaller farms can be addressed by limiting any and all incentive funding to go towards smaller scale farmers who need the funding, as opposed to the larger scale farms that currently receive the majority of alternative incentive funds.
- Apple, Pear, and Quince: As discussed in the above section related to the burning of prunings from these crops, we see no need to postpone the phase out of burning for these crops through Cal. Health & Safety Code § 41855.6, and instead believe all burnings of diseased orchards should be addressed on a case-by-case basis using the criteria set out in § 41855.5(d)(1).
- Remaining orchard removals less than 15 acres: As with citrus orchard removals, we believe, given the long lifespan of crops like almond trees, all remaining small scale orchard removals can be adequately addressed if the District limited its funding to smaller farms as opposed to larger operations.

Vineyard Removals: Of all remaining crops types yet to be phased out, vineyard removals make up the single largest source of emissions from agricultural burning. Despite their oversized contribution to the problem, there are no existing prohibitions on this category and the District's

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<sup>20</sup> Cal. Health & Safety Code § 41855.5(d)(1)(A)-(C).

<sup>21</sup> US Citrus, Citrus Tree Lifespan: What's the Average Life Expectancy of a Citrus Tree. Available at, <https://uscitrus.com/blogs/citrus-simplified/citrus-tree-lifespan-whats-the-average-life-expectancy-of-a-citrus-tree>.

report only recommends the phase out of vineyards greater than 15 acres that “lend themselves to feasible alternatives” by the beginning of 2022.<sup>22</sup>

The excuse the District uses to exempt this crop type from regulation is that the wire used as part of a trellis system to support these crops is too expensive to be removed. However, because grape vineyards have a 50 to 100 year or more lifespan,<sup>23</sup> this excuse should be tempered by the lack of frequency in which vineyard removals should occur and the long-term financial planning farmers can utilize to cover any related expenses. Moreover, as the District’s report specifies, farmers already expend time and money removing plastic irrigation and metal or wooden posts or stakes prior to burning.<sup>24</sup> The additional time or technology needed to remove wire should not be enough to exempt this crop type from a full phase out. Also, as with all other exemptions carved out for smaller farming operations, we believe all incentive funding aimed at alternatives should be limited to smaller scale vineyards.

Surface Harvested Prunings: As with orchard removals, we request a complete and immediate phase out of all burning for this crop type. Any remaining concerns related to economic feasibility of phasing out burning for smaller farming operations should be addressed through focusing incentives aimed at smaller scale farms instead of large operations.

Other Materials: as with prunings and other diseased crop types, we believe that the remaining exemption carved out for diseased beehives should be addressed on a case-by-case basis using the criteria set out in § 41855.5(d)(1).

B. Long-Term Federal or State Funding Commitment for the Continued Operation of Biomass Facilities in the San Joaquin Valley or Development of Alternatives to Burning Exists

In addressing SB705’s requirement that “[t]he district determines that there is no long-term federal or state funding commitment for the continued operation of biomass facilities in the San Joaquin Valley or development of alternatives to burning”<sup>25</sup> the District’s 2020 report simply claims that “there were no long-term federal or state funding commitments for the operation of biomass facilities or development of alternatives to burning.”<sup>26</sup> This determination is entirely wrong, and legally inexcusable. In reality, there are several funding opportunities that exist for the development of alternatives to burning. For example, at their recent board meeting where the 2020 Staff Report was approved, the District received testimony confirming the existence of federal funds for alternatives like chipping and reincorporation from staff at the Natural Resources Conservation Service (NRCS). Sadly, District staff and board members chose to ignore the legal requirements under SB 705 as it relates to the availability of federal funding sources and pushed to approve a report without the inclusion of additional funding sources.

Potential federal or state funding sources we have identified include:

- Federal Environmental Quality Incentives Program (EQIP): EQIP provides financial and technical assistance to agriculture producers in order to address natural resource concerns and deliver environmental benefits. As NRCS staff testified to at the District’s Board meeting on this item, USDA, through the 2018 Farm Bill, have allocated \$37.5

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<sup>22</sup> 2020 Staff Report at 38.

<sup>23</sup> *Supra* note 12.

<sup>24</sup> 2020 Staff Report at 39

<sup>25</sup> CH&SC Section 41855.6.

<sup>26</sup> District 2020 Report at 94.

million in EQIP funding through 2023 to fund practices that limit air pollution in California non-attainment areas. EQIP program recipients may receive (directly or indirectly) payments, in the aggregate of up to \$450,000. Normally the program covers 1/3 of costs. Practices include reincorporation, tilling, and mulching. Socially disadvantaged, beginning and limited resource farmers, Indian tribes, and veterans are eligible for an increased payment rate and may receive advance payment of up to 50 percent to purchase materials and services needed. Beginning in 2020, States may provide increased payment rates for high-priority practices. The 2018 Farm Bill's EQIP Updates also provide funding for smaller farmers, with historically underserved participants being eligible for advance payments to help offset costs related to purchasing materials or contracting through EQIP.<sup>27</sup>

- Federal Conservation Stewardship Program (CPS): CPS encourages land stewards to improve their conservation performance by adopting sustainable activities and improving, maintaining, and managing existing activities on agricultural land. This program covers activities such as Vine or Tree removal (\$33.09/acre), Chipping and Hauling off-site (\$31.70/acre), mulching (\$131.70/acre) and tilling (\$2.38- 6.44/acre).<sup>28</sup>
- State Healthy Soil Program (HSP): The California Department of Food and Agriculture (CDFA) provides financial assistance for farmers demonstrating the implementation of conservation management practices that sequester carbon, reduce greenhouse gases, and improve soil health. In 2017, 12 projects that included an element of mulching were funded. For example, \$50,000 was awarded to Silverwood Ranch in Fresno to chip and reincorporate into the soil two fruit orchards totaling 205 acres. The funding level to date is \$7.5 million and future funding for Healthy Soils is included in the natural resources bond, SB 5. Since 2019 HSP now includes whole orchard recycling. HSP has received \$40.5 million in funding between 2016 and 2019. CDFA has also received funding of \$10 million from the California Drought, Water, Parks, Climate, Coastal Protection and Outdoor Access for all Act of 2018. HSP Covers cropping, no-till, reduced-till, mulching, compost application, and conservation plantings.

Moreover, there are several state incentive funding sources meant to promote the use of composting that could be utilized by Valley farmers, such as CalRecycle's "Community Composting for Green Spaces Grant Program" or "Organics Grant Program."<sup>29</sup>

C. Continued issuance of permits will cause, or substantially contribute to, a violation of NAAQS Standard

In response to SB705's requirement that "[t]he district determines that the continued issuance of permits for that specific category or crop will not cause, or substantially contribute to, a

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<sup>27</sup> See generally, USDA Natural Resource Conservation Service, Environmental Quality Incentives Program, available at <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/eqip/#:~:text=The%20Environmental%20Quality%20Incentives%20Program,and%20reduced%20soil%20erosion%20and>.

<sup>28</sup> See generally, USDA Natural Resource Conservation Service, *Conservation Stewardship Program*, available at <https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/financial/csp/>.

<sup>29</sup> See generally, CalRecycle Grants and Loans at <https://www.calrecycle.ca.gov/climate/grantsloans/communitycomposting>, and <https://www.calrecycle.ca.gov/climate/grantsloans/organics>.

violation of an applicable federal ambient air quality standard,” the District simply state’s the following with no additional analysis or evidence:

The District determined that the continued issuance of burn permits would not cause or substantially contribute to a violation of an applicable federal ambient air quality standard. The District’s Smoke Management System (SMS) manages burning of agricultural waste materials. The SMS uses a combination of real-time meteorological information and computer modeling to determine the allowable amount and location of agricultural burning. District’s use of the SMS would limit combustion emissions to levels below the violation threshold of any applicable federal ambient air quality standard.

This determination is flawed based on clear evidence. The failure to end open agricultural burning has and will continue to result in violations of the 1997, 2006, and 2012 annual and 24-hr PM<sub>2.5</sub> NAAQS standards, as well as potential violations of existing ozone and PM<sub>10</sub> NAAQS standards in the San Joaquin Valley.

As stated in Earthjustice et. al.’s 2010 comments,

The smoke management program does not stop pollution from burning; it merely reschedules those emissions. The contribution to unhealthy air from the pollutants created by burning – NO<sub>x</sub>, VOC, and PM<sub>2.5</sub> – is not limited to those days that are already at or near the federal standard. These pollutants remain in the atmosphere and add to the load that has made the Valley one of the worst PM<sub>2.5</sub>-polluted area in the country. S.B. 705 was adopted in the face of this smoke management system because the legislature recognized that it was not enough just to shuffle the timing of this pollution.<sup>30</sup>

For instance, the theory that SMS prevents 24-hr PM<sub>2.5</sub> NAAQS violations holds true if you only look at emissions from a single day and not at cumulative emissions from all the prior days when burning is allowed. Moreover, evidence shows that the District’s excuse falls apart when it is put into practice. For instance, on the 10<sup>th</sup> of December 2019 the daily air quality index value in Fresno reached 112—well beyond the District’s level 5 warning—yet agricultural burning was still allowed.<sup>31</sup> It is obvious that any nearby burns permitted by the district on that day would have contributed to this 24-hr PM<sub>2.5</sub> NAAQS exceedance in Fresno.<sup>32</sup> This example illustrates a larger problem with the ability of SMS to prevent violations of 24-hr standards. Because the District announces burn days the evening before such a burn is meant to take place, the District’s permitting system is fundamentally incapable of accounting for real time conditions on the day of the burn, and thus cannot prevent all potential 24-hr NAAQS violations.

As it relates to the annual NAAQS Standards, such as the 1997 and 2012 PM<sub>2.5</sub> standards, the District’s unsubstantiated determination that SMS prevents violations defies all logic. It is wholly unclear how SMS would prevent PM<sub>2.5</sub> NAAQS violations that are measured annually. Emissions from agricultural burns are not limited to the days in which the burn takes place. Emissions can linger in the Valley for days or even weeks. The District provides no clear

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<sup>30</sup> Appendix A, at 13.

<sup>31</sup> See, EPA, *Air Quality Index Daily Values Report (2019 daily PM<sub>2.5</sub> value report for Fresno)*, available at <https://www.epa.gov/outdoor-air-quality-data/air-quality-index-daily-values-report>.

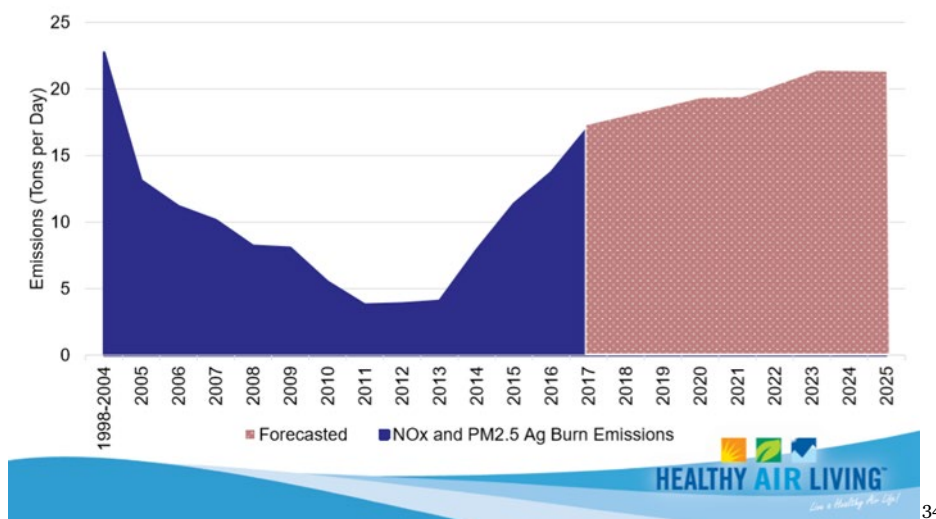
<sup>32</sup> See, Fresno Bee, *Fresno and Valley air particularly bad this week. Why was burning still allowed?*, (Dec., 11, 2019), available at, <https://www.fresnobee.com/news/local/article238277323.html>.

evidence or explanation to support its conclusion as it relates to annual standards. Moreover, while the District staff pointed to CARB modeling at their recent board meeting to support their determinations on this issue, it is worth noting that the Report itself contains no relevant discussion of CARB modeling.

The Staff Report does make clear that between 2015 and 2019, the remaining crop types contributed to an average of 1,435 tons per year (TPY) of NO<sub>x</sub>, 1,956 TPY of direct PM<sub>2.5</sub>, 1,738 TPY of VOCs, and 2,087 TPY of PM<sub>10</sub>.<sup>33</sup> (It is worth noting that ag burning generally only occurs during only a portion of the year and not year-round, so these yearly emissions are mostly limited to a short period of heavy burning). At levels this high, it is clear that agricultural burning is a significant contributor to annual PM<sub>2.5</sub> violations, as well as potential ozone and PM<sub>10</sub> NAQPS violations.

Future projections show the problem could get even worse. As seen in the chart below, the District's own projections indicate that without the use of alternatives the combined direct PM<sub>2.5</sub> and NO<sub>x</sub> emissions from ag burning could rise above 20 tons per day (TPD) by 2023.

### Open Burning Emissions to Increase Without Cost Effective Alternative



To put that into perspective, the aggregate state emission reduction commitment in the state's 2018 PM<sub>2.5</sub> SIP by both CARB and SJVAPCD is roughly 33 TPD of NO<sub>x</sub> and 2.8 TPD of PM<sub>2.5</sub>.<sup>35</sup> Putting a stop to open agricultural burning by itself could get us roughly half of the way towards achieving the state's remaining aggregate reduction goals as included in this SIP. Therefore, ending agricultural open burning is both the only option available to prevent ongoing

<sup>33</sup> SJVAPCD, *2020 Staff Report on Agricultural Burning*, at 58.

<sup>34</sup> See, SJVAPCD, Central Valley Summit on Alternatives to Agricultural Burning, <http://valleyair.org/cvsummit/documents/presentations/Session02-Jessica-Olsen.pdf>, at slide 11.

<sup>35</sup> See 2018 PM<sub>2.5</sub> plan at 4-12 and 4-29.



NAAQS violations and the best option available to ensure timely attainment with current PM<sub>2.5</sub> NAAQS Standards for the San Joaquin Valley.

As it stands, the state's current PM<sub>2.5</sub> strategy for the Valley is failing and we are not on track to meet attainment with NAAQS requirements due to multibillion-dollar funding shortfalls for the plan's incentive-based measures and other regulatory failures built into the 2018 PM<sub>2.5</sub> plan. While CARB has recently proposed a handful of new regulatory control measures to help plug the gap left by the state's incentive-based strategy, there is no guarantee these efforts will be enough to guarantee timely attainment. The District on the other hand, has done little to fulfill their commitment to address the additional emissions reductions required under their plan.

The 2018 SIP specifies that both the District and CARB are committed to achieving aggregate emissions reductions necessary to meet attainment. As the 2018 SIP states, "if a particular measure does not get its expected emission reductions, the State is still committed to achieving the total aggregate emission reductions."<sup>36</sup> CARB further specified that this could be through further reductions in emissions from stationary sources.<sup>37</sup> Given the current problems with the state's 2018 PM<sub>2.5</sub> plan and lack of a clear path forward to ensure attainment we need whatever emission reductions we can get.

Finally phasing out ag burning is the simplest and cheapest control measure remaining to ensure timely attainment. We know that reductions in direct PM<sub>2.5</sub> is a far more cost-effective way to meet attainment than reductions in precursors like NO<sub>x</sub> emissions from mobile sources. Moreover, with dwindling opportunities left to seek timely reductions from mobile sources of NO<sub>x</sub> pollution, the time has come for SJVAPD to stop dragging their feet and help address the failures of the current plan.

#### D. CARB Should Not Concur with District Report.

As shown in the above sections, SJVAPD has failed to support all the determinations required to receive a postponement under Cal. Health & Safety Code § 41855.6. CARB is thus legally required to withhold concurrence with the determinations made by SJVAPCD in their flawed and one-sided staff report.

It is our understanding that CARB Staff will be deciding on whether or not to issue a conditional letter of concurrence to allow burning to continue until the CARB Board has a chance to vote on this issue at the February 2021 board meeting. We strongly urge CARB Staff not to issue any such concurrence and ask that Staff recommend to the CARB board that all ag burning be phased out on January 1<sup>st</sup>, 2021. If a short-term letter of concurrence is issued by CARB staff, we then call on CARB board members to reject the District's determinations at the February board meeting and end agricultural burning in the Valley once and for all.

### **III. Additional Co-benefits of Ending Agricultural Burning in the San Joaquin Valley**

In addition to the issues raised above specific to the District's staff report and criteria specific to requesting a postponement under provisions of SB 705, we also want to highlight a number of additional co-benefits from ending ag burning that will help local communities and aid the state reach various other clean air and climate commitments.

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<sup>36</sup> *Id.* at 4-29

<sup>37</sup> *Id.*



#### A. Localized Environmental Justice Co-Benefits of Ending Agricultural Burning

Perhaps the most significant impact of agricultural burning in the Valley is the direct harm it causes to individuals living or working next to these burns. Sadly, in many cases this burden is shouldered by low-income populations and persons of color residing in the many environmental justice communities that exist throughout the Valley. These communities already face more than their fair share of environmental, health, and economic harms. Allowing continued burning within the Valley would reaffirm the historically racist circumstances in which Valley communities are considered by those in power to be sacrifice zones, where industry profit always takes precedent over lives.

This struggle is exemplified by the three current AB 617 communities within the San Joaquin Valley and by multitude of AB 617 candidate communities scattered from Stockton to Bakersfield. Opting to end burning would be a step in the right direction in terms of meeting state AB 617 commitments and ending the consistent trend of sacrificing the health and wellbeing of environmental justice communities throughout the Valley of short-term profit.

#### B. Local, State, and National Greenhouse Gas Co-benefits

As with any type of organic combustion, black carbon from agricultural burns is a significant source of green-house gas emissions. Yet, unlike wildfires and other natural sources of black carbon climate pollutants, the burning of agricultural biomass is entirely avoidable. It is also a practice that we cannot afford to continue if we are going to meet local, state, and federal climate commitments in the coming years. Sadly, once again the economic feasibility analysis in the District's report failed to fully weigh the external long-term costs of burning—in this case from a climate standpoint—against the short-term financial benefits to industry. Moving forward, any consideration as to whether or not to end burning should strongly consider existing climate commitments and the co-benefits of ending this polluting practice.

#### C. Forest Management Co-benefits

On top of ag burns, the District's burn permitting system also covers manmade prescribed burns and managed wildfires. Prescribed burn and managed wildfire practices are utilized for the express goal of providing resource benefits, such as the reduction of the excess forest biomass that has contributed to the massive climate driven wildfires in recent years. It is undeniable that smoke from these mega wildfires presents an enormous public health threat from both an air pollution and climate standpoint. We should be doing all we can to prevent or contain future natural wildfires in the Sierra. Therefore, we believe that any burning permitted by the Valley Air District should be exclusively limited to burns that provide resource benefits aimed at reducing wildfires. Limiting District permitting to prescribed burns and managed wildfires would help preserve agency capacity and remove administrative hurdles that hinder additional resource beneficial burning in the Sierra Nevada.

#### D. Agricultural Burn Enforcement Co-benefits

Alongside the District's permitting system, enforcement against illegal agricultural burns stands out as another area necessitating improvement. Far too many residents of the Valley can attest to driving through rural areas and seeing illegal agricultural burns on non-burn days. Illegal burns even occurred during the smokiest days during this past summer's wildfires. Because of the District's patchwork "burn day" permitting system currently in place it is hard for citizens and even agencies to know for sure whether a specific burn is permitted for a certain day.

Moreover, once a permitted burn is allowed, it incentivizes those in the vicinity to also light up their burn piles even if they do not have a permit. Ending agricultural burning would drastically simplify enforcement against illegal burns by making all burning illegal. This would both encourage citizen complaints by removing any confusion as to whether a neighboring burn is permitted or not, as well as free up District capacity to focus on enforcement against illegal burns.

#### **IV. Conclusion:**

For the reasons stated above, we firmly believe the Valley Air District's 2020 Staff Report on Agricultural Burning fails to demonstrate that the District has met all legal requirements under SB 705 necessary to postpone compliance with that act for any remaining crop types.

Furthermore, numerous other contributing factors clearly prove that the benefits of ending agricultural burning far out way the harms. We thus demand that the SJVAPCD and CARB take immediate end all agricultural burning in the Valley.

Sincerely,

*Mark Rose*

Sierra Nevada Program Manager, National Parks Conservation Association

*Nayamin Martinez*

Executive Director, Central California Environmental Justice Network

*Catherine Garoupa White*

Executive Director, Central California Environmental Justice Network

*Paul Cort*

Staff Attorney, Earthjustice

*Shayda Azamian*

Climate Policy Coordinator, Leadership Counsel for Justice & Accountability

## Appendix A:

May 26, 2010 Earthjustice et. al. Comment “Re: San Joaquin Valley Modifications to Agricultural Burning Requirements.”



May 26, 2010

VIA ELECTRONIC MAIL

Ms. Mary Nichols  
Chair  
California Air Resources Board  
P.O. Box 2815  
Sacramento, CA 95812

**Re: San Joaquin Valley Modifications to Agricultural Burning Requirements**

Dear Chair Nichols:

This letter is submitted on behalf of The California Food Project, Pesticide Watch Education Fund, Coalition for Clean Air, Fresno Metro Ministry, Tri-Valley CAREs, Medical Advocates for Healthy Air, TriCounty Watchdogs, Comite Civico de Valle, Inc., California Rural Legal Assistance Foundation, National Parks Conservation Association, Center on Race, Poverty and the Environment, California Communities Against Toxics, Sierra Club, and the Central Valley Air Quality Coalition's Watchdog Committee to urge the Board not to concur with the San Joaquin Valley Unified Air Pollution Control District's ("District") decision to postpone the agricultural burning bans required under S.B. 705 (Health & Safety Code § 41855.5).

It has been seven years since the Governor signed S.B. 705 into law to eliminate the air pollution caused in the San Joaquin Valley by open burning practices. And yet with this final phase of the District's actions to implement the law, half of the emissions of fine particulate matter ("PM2.5"), oxides of nitrogen ("NOx"), and volatile organic compounds ("VOC") caused by open burning will be left unabated. The District will allow burning to continue to add over 1,200 tons per year of PM2.5, 1,000 tons per year of NOx, and 1,100 tons per year of VOC to the Valley's filthy air. The District's actions meet neither the spirit nor the letter of S.B. 705, and it is ARB's responsibility to reject these attempts to avoid the required controls.

The May 6, 2010 "Staff Report on the San Joaquin Valley Smoke Management Program and Consideration of Modifications to Agricultural Burning Requirements" (hereinafter "ARB Staff Report") submitted to the Board recommending concurrence under S.B. 705, does a disservice to the Board. The ARB Staff Report does little more than parrot back the conclusions of the District without investigating any of the factual bases for them. The only new analysis offered is a cynical presentation of emissions data to claim that the emissions that will be exempted by

the District are of no concern. The Board should reject the Staff recommendations and require the District to prohibit the burning of the crops discussed below.

### **Summary of S.B. 705**

In 2003, the State legislature, frustrated with the failure of the District's "smoke management system" to control air pollution from widespread open agricultural burning in the Valley, adopted an aggressive schedule to phase out the practice at all agricultural sources. Cal. Health & Safety Code §§ 41855.5 and 41855.6. Under the law, the District is to stop issuing permits for specific types of burning according to the following schedule:

- Commencing June 1, 2005, for field crops, prunings and weed abatement;
- Commencing June 1, 2007, for orchard removals; and
- Commencing June 1, 2010, for other materials, vineyard removals, and surface harvested prunings.

Cal. Health & Safety Code § 41855.5(a).

The law includes a very carefully tailored exception for addressing the need to burn certain diseased crops. Section 41855.5(d) directs the District to adopt rules by January 1, 2005 to regulate the burning of diseased crops. The rules are to provide for the issuance of a conditional crop burning permit on a case-by-case basis if *all* of the following criteria are met:

- (1) The fields to be burned are specifically described;
- (2) The applicant has not been cited for a burning violation in the last three years; and
- (3) The county agricultural commissioner has determined *all* of the following:
  - (i) A disease is present that will cause "substantial, quantifiable reduction in yield or poses a threat to the health of adjacent vines, trees or plants" during the current or next growing season;
  - (ii) There is no economically feasible alternative means of eliminating the disease other than burning.

Cal. Health & Safety Code § 41855.5(d). The burn permit must be limited to the identified diseased crop and cannot be transferred to any other individual. *Id.*

The only other mechanism for avoiding the burning prohibition deadline is through a postponement allowed under section 41855.6. This section allows the District to "postpone" the deadlines provided in section 41855.5(a) for any category of agricultural waste or crop if *all* of the following are satisfied:

- (1) The District determines there is no economically feasible alternative means of eliminating the waste;

- (2) The District determines that there is no long-term federal or state funding commitment for the continued operation of biomass facilities in the Valley or development of alternatives to burning;
- (3) The District determines that the continued issuance of permits will not cause or contribute to a violation of a national ambient air quality standard; and
- (4) The Board concurs with the District's determinations pursuant to this section.

Cal. Health & Safety Code § 41855.6.

### **The San Joaquin Valley Air District's Implementation of S.B. 705**

Since the first phase of prohibitions required in 2005, the District has used a variety of excuses to undermine the requirements of S.B. 705. The latest round of requirements are no different. In this final phase, the District was to ban burning of all vineyard removals, surface harvested prunings, and other materials such as diseased bee hives, brooder papers and deceased goats. Cal. Health & Safety Code § 41855.5(a) and (c). The District's requirements submitted for your concurrence, however, exempt burning for all vineyard removals, raisin trays, almond, walnut, and pecan prunings from orchards under 3,500 acres, prunings from any orchard less than 15 acres in size, and diseased beehives. The result is that over 90 percent of the emissions that should have been eliminated by this final phase of S.B. 705 will be allowed to continue. In addition to the massive exemptions in this final phase, the District has also decided to extend the exemptions adopted in earlier phases for 70 percent of rice stubble field burning, all burning of citrus, apple, pear and quince orchard removals, all burning of other orchard removals of less than 15 acres in size, and all burning of apple, pear and quince prunings.

The District uses different arguments to justify postponing the burning ban for the different categories. None of these arguments, however, satisfies the criteria for postponement provided in state law. California Health and Safety Code section 41855.6 allows the District to postpone the deadline for the burning ban only if it determines that "there is no economically feasible alternative" to burning these materials. The District either fails to assess "economic feasibility" at all, or applies a made-up test that has no relevance to the ability of the regulated industry to use alternatives to burning. This letter explains why the arguments for postponement do not meet the legal requirements of the Health and Safety Code.

### **The District's Economic Feasibility Analysis is Fundamentally Flawed.**

#### **1. The Test Applied to Determine Economic Feasibility is Arbitrary in the Extreme**

The District found that there were no economically feasible alternatives to the burning of many of the crop types that have been postponed or have yet to be phased out under S.B. 705, including citrus orchard removals, almond, walnut, and pecan prunings from orchards less than 3,500 acres, vineyard removals, and all orchard removals of 15 acres or less. In order to

conclude that the added costs of the alternatives to burning rendered these alternatives economically infeasible, the District applied a “10 percent of the crop category’s net profits” test. See San Joaquin Valley Unified Air Pollution Control District, “Revised Proposed Staff Report and Recommendations on Agricultural Burning” at 1-4 (May 20, 2010) (hereinafter “District Staff Report”). Under this test, “If the cost of implementing the alternative exceeds ten percent of the crop category’s net profit, District staff will recommend a temporary postponement of the burn prohibition for that specific crop/material.” *Id.*

The fundamental defect in the District’s “10 percent of profits” test is that it has no rational connection to whether an alternative is “economically feasible.” Although “economic feasibility” is not defined in the California Health and Safety Code, the common usage of “feasible” is understood as “capable of being done or carried out.” Merriam-Webster’s Online Dictionary (2010), available at <http://www.m-w.com/dictionary/feasible>. “Feasible” is also defined in the California Environmental Quality Act (“CEQA”) Guidelines as “capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.”<sup>1</sup> 14 Cal. Code Regs. § 15364 (2007). Thus, the key question is whether an industry is *capable* of handling the costs of an alternative to burning.

It is not enough to show that a control will be expensive, or even that the costs might exceed the benefits. See, e.g., *American Textile Manufacturers Institute v. Donovan*, 452 U.S. 490, 519-20 (1981) (noting that Congress understands the difference between “feasible” and “cost-beneficial” and that the use of the former reflects a decision to impose the costs of control as a cost of doing business in order to protect public health.); see also *Uphold Our Heritage v. Town of Woodside*, 147 Cal.App.4th 587, 599 (Cal. App. 1 Dist. 2007) (“The fact that an alternative to the proposed project may be more expensive or less profitable is not sufficient to show that the alternative is financially infeasible.” (quoting *Citizens of Goleta Valley v. Board of Supervisors*, 197 Cal.App.3d 1167, 1181 (Cal. App. 2 Dist. 1988)); *Maintain Our Desert Environment v. Town of Apple Valley*, 124 Cal.App.4th 430, 449 (Cal. App. 4 Dist. 2004) (“[e]conomic unfeasibility is not measured by increased cost or lost profit.”). In *American Textile*, the Supreme Court upheld the Occupational Health & Safety Administration’s (“OSHA”) determination that its cotton dust workplace standard was “economically feasible” based on OSHA’s finding that it was “within the financial capability of the covered industry.”<sup>2</sup> 452 U.S. at 531 n.55. OSHA based this finding on its

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<sup>1</sup> ARB has cited to this CEQA Guideline in defining, “every feasible measure” for purposes of achievement of emissions reductions by stationary sources under the California Clear Air Act. See ARB, Identification of Performance Standards for Existing Stationary Sources - A Resource Document, (ARB, 2001), <http://arb.ca.gov/ssps/ssps.htm>.

<sup>2</sup> OSHA’s finding that the standard was “economically feasible” was based on a much more comprehensive economic analysis of the industry than that conducted by the District, including an estimate of the total compliance cost, an estimate of the total and annual economic impact on each sector of the industry, an output demand elasticity analysis, and consideration of the impacts on employment requirements, energy use, increased production costs and consequent



conclusion that the industry as a whole would not be threatened, although some marginal businesses may close as a result of adopting the standard. *Id.* at 531.

The “10 percent of the industry’s profits” test used by the District has no connection to whether each industry is “capable” of bearing the costs of control. It gives no indication of whether the industry will be threatened or whether sources will shut down. First, the 10 percent cutoff itself is meaningless. If an industry is highly profitable, a reduction of 10 percent of profits does not mean that it is no longer profitable (e.g., the difference between a 20 percent return and an 18 percent return does not mean that the industry is not capable of applying controls). Similarly, an industry that has extremely low profit margins will not necessarily be forced to shut down if those marginal profits are reduced by 10 percent (e.g., the difference between a 2 percent rate of return may not be meaningfully distinct from a 1.8 percent rate of return).

More importantly, the “10 percent of the industry’s profits” test created by the District does not mean profits will actually be reduced at all. The test does not attempt to assess how profits will in fact be affected. It is a simplistic comparison of costs to profits. The impact of these additional costs on profits depends on the ability of sources to raise their prices or lower their costs as a result of the regulation. In order to assess how the costs of control will affect an industry, the District must look at how those costs will impact production, employment, competition, and prices. None of these impacts can be determined from the proposed “10 percent” test.

That this test answers none of the basic questions necessary for evaluating economic feasibility should not be surprising given that the test is derived from one that ARB and the District have traditionally used as a standard for assessing whether a District rule will have “significant economic impacts.” *See* District Staff Report at 1-5. The test does not indicate whether an industry is “capable” of meeting a new requirement because this was never the purpose of the test. *Just because a rule may have a significant economic impact does not mean that it is economically infeasible.*

The ARB Staff Report misleadingly states that ARB has used a similar test “to decide if alternatives are economically feasible.” ARB Staff Report at 3. ARB and the District have historically used the “10 percent of the industry’s profits” test to show that the economic impacts will be *insignificant*. The 10 percent test is akin to a *de minimis* test for showing that a given rule will have no significant adverse impacts. It does not mean that impacts over 10 percent are significant, let alone that such impacts render the tighter controls economically infeasible.

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price increases by affected industries, capital requirements and capital financing problems, competition effects on profit and market structure, inflationary impact on consumers and the U.S. economy, and employment impact due to the contraction of output demand. *See American Textile*, 452 U.S. at 531-34.

The ARB and District Staff Reports reference the methodology prepared by Dr. Peter Berck of U.C. Berkeley. *See* ARB Staff Report at 3; District Staff Report at 1-5 (referencing Peter Berck, “Development of a Methodology to Assess the Economic Impact Required by SB513/AB969” 7 (ARB, Aug. 1995)). In that analysis, Dr. Berck explained that one way to look at whether a rule’s economic impacts would be significant is to assess the impacts on an industry’s ability to compete. *See* Berck at 7. One way to assess impacts on competitiveness is to look at whether the return on equity or investment might be reduced to the point that an industry would be better off moving its investments elsewhere. *Id.* at 5. As an example, Dr. Berck looked at the return on equity for three industries and compared the rates of return at the regional and national level. Citing to other studies, Dr. Berck noted that “there is considerable variation in the rates of return both within and between sectors” and that rates of return for most sectors varied between 9 and 15 percent. *Id.* at 7. Given this variability, Dr. Berck found that “*a change in the rate of return of even a full percentage point may not have important deleterious effects for competitiveness. That size change is well within the natural variance from one industry to the next.*” *Id.* (emphasis added). As a result, Dr. Berck concluded that a “10 percent change in Return on Equity (i.e., a change from 10 percent return to a 9 percent return) as a threshold for finding no significant, adverse impact on either competitiveness or jobs seems reasonable or even conservative” because even larger impacts on return could be expected without negatively impacting competitiveness. *Id.* *Far from concluding that impacts greater than 10 percent were significant, Dr. Berck concluded that such impacts on returns might not affect competitiveness or jobs at all.* To then apply this threshold defining insignificant impacts to demonstrate economic infeasibility has no basis whatsoever.

## 2. The District’s Application of the Profits Test is Arbitrary

Even if one were to accept this test for determining economic infeasibility, the District’s oversimplified analysis would still need to be rejected due to the numerous defects in the way it is applied. For example, Dr. Berck notes that because profits and equity data are “after tax,” the cost of compliance needs to be calculated “after tax” as well. *Id.* at 6. The District makes no attempt to account for tax implications of increased control costs. As Dr. Berck explained, “A \$10,000 additional expenditure, therefore, reduces net after-tax profits by only \$5,895.” *Id.* Because the District makes no attempt to adjust its cost estimates to allow any analysis of how these costs will actually translate into lost return on equity or sales, the exercise is merely an “apples to oranges” comparison of two numbers that have no relationship to one another.

The District also makes a number of simplifying assumptions that undermine any claim that the rejected controls are truly economically infeasible. For example, the District uses a 10-year cost amortization schedule for vineyards and orchards when formulating the “cost to profits” ratio of alternatives to burning. This 10-year assumption has no rational basis and produces artificially high annual cost figures for the one-time expense of removing an orchard. The productive lifespan of vineyards and orchards is much longer than 10 years. Documents

submitted by the agriculture industry explain that “25 years is the standard production lifetime for a vineyard” and “the life of the [citrus] orchard is assumed to be 40 years.” *See* District Staff Report at Appendix H. Similar cost and return studies from the University of California Cooperative Extension show the expected life of almond, walnut, cherry, and pomegranate orchards to be 25 years, of pecan orchards to be 40 years, of nectarine and peach orchards to be 15 years, of olive orchards to be 40 - 60 years, and of fig orchards to be 50+ years. In fact, many of these crops do not reach their peak productive capabilities for several years, with citrus hitting its peak only after year 10 years. *See* District Staff Report at Appendix H. By using a 10-year cost amortization schedule and a 10-year net profit figure, the District artificially reduces the overall profitability of the crop while creating an inaccurately high annual cost for the one-time burn alternative that would be used when the orchard is removed.

Using citrus as an example, the District estimates that the 10 year net profit per average farm greater than 100 acres is \$3,167,489. *See* District Staff Report, Appendix E at E-21. The cost of the burn alternative for citrus orchard removals (grind and haul) per average farm greater than 100 acres is assumed to be \$326,064. *Id.* The District concludes, using its “10 percent of profits” test, that the cost is too high because it is 10.3% of the crop category’s ten-year net profits. However, if the District had instead used the actual expected life of a citrus orchard – 40 years – to calculate net profits, the total net profits for 40 years would be \$12,669,954, making the District’s estimated cost for grinding and hauling the orchard removal only three percent of the crop category’s net profit. This more than meets the District’s “10% of profits” threshold.

### 3. ARB Must Reject the District’s Feasibility Analysis

ARB cannot allow the District to rely on this arbitrary test to meet the statutory requirement to demonstrate economic infeasibility. There is no connection between the artificial ratio that the District has invented and any rational claim that the alternatives to burning are economically infeasible. Moreover, even if ARB could envision some theoretical argument for why the District’s invented test could act as a surrogate for infeasibility, the District’s calculations must all be redone to reflect the evidence in the record and provide a realistic picture of how the cost of alternatives compares to the real profits of each crop category. In most cases, the cost of the alternatives to burning are far less than 10% of the crop category’s real net profits and a postponement cannot be granted even under this made-up test for economic infeasibility.

Because the feasibility analysis is fundamentally flawed throughout the District’s analysis, the postponements must be rejected in their entirety. The remaining discussion below, nonetheless, addresses specific defects in the analysis for several of the crops that should not be allowed to burn and addresses the other criteria for a postponement allowed under S.B. 705 that have been manipulated by District and ARB Staff to try to justify these exemptions.

### **Burning of Citrus Orchard Removal Material Must Be Banned**

The District's justification for allowing the continued burning of citrus orchard removal materials typifies the faulty analysis throughout the District's Staff Report as well as ARB Staff's failure to provide any meaningful basis for concurrence. The District first claims that alternatives to burning will be too costly. This conclusion is based on the arbitrary profits test discussed above. To ensure that these alternatives would fail this made up test, the District inserts baseless assumptions to inflate the costs. For example, the District assumes citrus removal root material must be separated from the tree material and transported to a composting facility at an additional cost of \$244 per acre. *See* District Staff Report, Table 6-5 at 6-14. However, conversations with biomass facility operators and two of the largest orchard removal contractors in the Valley, confirmed that no such special treatment is needed for citrus roots. These can be chipped and transported to biomass facilities along with the rest of the chipped material.

The District next suggests that grinding and hauling material to a biomass plant may not be *technically* feasible, either. The District cites "concerns" by unidentified agricultural representatives that not all biomass plants accept citrus chips and that the existing biomass plants may not have the capacity to handle the additional wood material that would be generated if burning citrus removal were prohibited. These conclusions are again not supported by any evidence in the record.

The biomass industry testified repeatedly and submitted comments contradicting the District's claims that citrus is not readily accepted at the facilities serving the Valley. The District Staff Report admits: "Biomass power plant operators have indicated that previous concerns regarding certain materials have been alleviated over the past few years as the operators have improved the methods in processing the materials to better suit the needs of the plant." District Staff Report at 7-8. The District Staff Report further acknowledges the multi-million dollar investments many biomass operators have made to upgrade their facilities. *See Id.* at 7-13. Yet the technical infeasibility conclusions of the District and ARB Staff reflect none of these findings. *See, e.g.,* ARB Staff Report at 13.

In the version of the District Staff Report reviewed by ARB Staff, the District concluded that "staff does not believe that the biomass power plants have the capacity to use tonnage of agricultural material generated by the prohibition of burning of citrus orchard removals." ARB Staff blindly accept these conclusions. *See* ARB Staff Report at 13. However, in the District's May 20, 2010 revisions to the Staff Report, that language was removed and the District acknowledges the following:

- All 12 biomass power plants have very broad acceptance policies for wood fuel, which include citrus orchard and vineyard removals.

- The Delano biomass power plant currently has the capacity to accept approximately 130,000 Bone Dry Tons (“BDTs”) of citrus annually.
- The total maximum storage capacity at all 12 facilities that use San Joaquin Valley agricultural waste is 782,500 tons. The current storage capacity of Covanta Delano alone is 125,000 green tons. Further, the majority of these facilities can store 60-175 operating days of fuel. This large storage capacity allows the use of wood fuel such as citrus and other types of fuel that may be stockpiled at significantly higher amounts and percentages than the actual fuel mix to the boiler (i.e., Covanta Delano may receive 50% citrus in the total agriculture deliveries for several months and then blend the fuel later to achieve an ideal mix to the boilers of 30% citrus).
- Citrus handling and grinding practices have changed resulting in a wood product that may be used in higher percentages than in past years. For example, Covanta Delano alone may now burn up to 100,000 BDTs of this fuel in any one year. Rio Bravo Fresno and Covanta Mendota are capable of burning up to 40,000 BDTs and 20,000 BDTs of citrus annually, respectively.

This new information provided by the biomass industry proves not only that the 12 biomass facilities serving the Valley are physically capable of handling the 54,035-ton increase in material that would be caused by a total prohibition on burning citrus orchard removals, but that the entire amount could be handled by just one plant (Covanta Delano). In an apparent attempt to support its now-debunked argument, the District highlights the fact that in spite of its capacity, the Covanta Delano plant only actually received 34,000 tons of citrus—as if the lack of supply of citrus material was somehow related to the plant’s acceptance policies. These attempts to manipulate the facts and the numbers in order to preserve an exemption for the citrus industry from the burn prohibition are absurd.

More alarming still is the fact that ARB Staff rely on these baseless conclusions without any attempt to verify any of them. ARB concurrence with no independent analysis of the factual basis for its conclusions is the very definition of arbitrary and capricious agency action.

### **Burning of Almond, Walnut, and Pecan Prunings Must Be Banned**

The District’s decision to exempt the burning of almond, walnut and pecan prunings is even more absurd. The District admits that “most nuts growers are currently shredding the prunings and leaving the materials on the orchard floor” and that “comments from growers and custom shredders indicat[e] that shredding of nut prunings has been a successful procedure in the farming operation.” District Staff Report at 3-30. Despite this, and findings in its economic feasibility analysis<sup>3</sup> that shredding almond, walnut, and pecan prunings is economically

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<sup>3</sup> Shredding was determined to be economically feasible even using the District’s flawed “10%

feasible for farms of all sizes, the District is proposing to allow growers whose total nut acreage is less than 3,500 acres to burn 20 acres of prunings, plus an unrestricted additional amount if:

- The operator submits to the APCO before the pruning operation is completed, a representative cost estimate(s) for shredding all prunings generated by the total nut acreage at the agricultural operation site. The cost estimate(s) shall reflect shredding in a time frame that allows the operator to proceed with established post-pruning cultural practices.
- The APCO determines that either the submitted cost estimate(s) represent(s) an unreasonable financial impact to the operator, or that adequate shredding services are not available in time for the operator to proceed with established post-pruning cultural practices.

District Staff Report at 3-29.

There is absolutely no authority under S.B. 705 for this type of open-ended, case-by-case exemption from the burning ban. The criteria and procedures the District proposes to use do not follow the criteria and procedures required for a postponement under Health and Safety Code section 41855.6. Most obviously, ARB is being asked to provide a “blank check” concurrence with no factual basis for finding that alternatives are economically infeasible.

ARB cannot rationally conclude that this type of open-ended exemption is justified. The District admits that most of these prunings are already being shred. *See* District Staff Report at 3-39 (noting that “about 18% of the [almond and walnut] acreage pruned per year is contributed to open burning, while most of the growers are using other alternative practices rather than open burn”). The District, nonetheless, suggests that it is infeasible to require a total ban on burning these prunings because 1) there may not be enough shredding/chipping contractors/equipment available to handle the additional material and 2) there are “concerns” over chips interfering with the harvest of the product.

Had ARB Staff investigated either of these claims, it would have quickly rejected them. In conversations with several of the largest shredding contractors in the Valley, all indicated that they are at nowhere near capacity for work and could easily take on the additional acres that would come with a burn ban. A quick look through the Ag Source Magazine shows as many as 30 contractors who can chip, shred, or grind agricultural materials. There are several types of shredding equipment available in the Valley to do this work (*see* District Staff Report at 3-37), including Flory, Rears, DiAnna, and JackRabbit machines. Over 80 percent of the pruned acres (or over 300,000 acres) are already being shred by the existing contractors. *See id.* at 3-38.

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of profits” test and a two year net profit period.

Furthermore, as the District Staff Report suggests, the amount of material being pruned has decreased significantly as growers move to lighter pruning (*see id* at 3-37), so the additional burden on contractors should be even less than assumed. There is simply no basis for the claim that the industry cannot handle the remaining acres if the burn ban is implemented as intended by law.

Regarding the District's second excuse that hullers have problems with chips getting mixed in with hulls, in conversations with contractors and representatives of the Almond Board of California, we have learned that this problem has been addressed as chipping/shredding has gotten finer and most contractors have not had any complaints about the chips in recent years.

Again, ARB Staff ignored the conflicting evidence in the record and made no attempt to verify any of the District's baseless claims by, for example, asking shredders about their capacity to handle additional material. Even the most superficial investigation would have revealed that the burning of these nut tree prunings is no longer a necessary option.

### **Exemptions for the Burning of All Vineyard Removal Materials Cannot Be Justified**

In addition to the general fundamental flaws associated with the test used to show economic infeasibility, the District's analysis of alternatives available for various types of vineyard removals again relies on arbitrary assumptions to manipulate the cost conclusions.

For example, in analyzing alternatives for burning of kiwi vineyards, the District arbitrarily uses a 10-year life for vineyards that are expected to last at least 25 years. Recalculating the net profits over 25 years and using even the industry stakeholders' higher estimate of the cost of burn alternatives, the "cost per net profit per average farm" would only be 5.6% for kiwi farms over 100 acres and 6.6% for kiwi farms under 100 acres. Thus, even under the District's arbitrary profits test, the highly profitable kiwi industry should easily be able to handle the additional cost necessary to avoid burning and should not receive an exemption. The analysis for wine grapes must also be reconsidered to reflect the actual lifetime profitability of the vineyard.

The other trick used by the District is to combine different industries to hide differences in profitability. For the raisin and table grape categories, it is impossible to determine the true impact of the cost of burn alternatives because, while these two categories enjoy vastly different profits, the District has lumped them together for the purposes of analyzing economic feasibility, leading to an unrealistic result. The profits of the raisin industry are significantly lower than those of the table grape industry. The District averaged the profits of these different industries together to artificially reduce the overall profitability of table grapes, making the one-time expense of vineyard removal appear infeasible.



ARB must reject these attempts to manipulate the feasibility analysis and direct Staff to conduct its own independent assessment using reasonable assumptions and a rational metric for determining compliance with S.B. 705.

### **Postponement for Pome Fruit Prunings and Orchard Removal Violates California Health and Safety Code**

Without any analysis, the District concluded that there are no technologically feasible alternatives to open burning of apple, pear, and quince prunings or orchard removals. District Staff Report at 3-23, 3-28. This conclusion is based not on any actual analysis of feasibility, but on “concerns” over the risk of spreading fire blight, a bacterial disease that affects these crop types. The District mentions treatment with Streptomycin and burying diseased material in double plastic bags, but offers no analysis of the technical or economic feasibility of these options. The District also explains that pruning and orchard removal equipment is routinely sterilized when moving from tree to tree but doesn’t explain why, with these routine precautions, removing waste materials for off-site destruction is infeasible but collecting these materials in a pile for burning is not.

The more fundamental problem with the District’s conclusion, however, is that the risk of disease is not an allowable basis for postponing burning bans under state law. *See* Cal. Health & Safety Code § 41855.6. The risk of disease can be used to justify continued burning only if the requirements of Health and Safety Code section 41855.5(d) have been met. Section 41855.5(d) provides a limited, narrowly-tailored exception to the prohibition on burning through the use of conditional burning permits to be issued *on a case-by-case basis* with a finding by the agricultural commissioner of *actual* disease. In order for a source to receive such a conditional burn permit, it must describe the specific fields to be burned, demonstrate that it has had no violations of burning requirements over the last three years, and include a determination from the county agricultural commissioner that the disease is present, poses a threat to the health of adjacent trees, and there is no economically feasible alternative for eliminating the disease. Cal. Health & Safety Code § 41855.5(d).

The District’s blanket exemption for the burning of pome fruit relies on the *risk* of disease to side step all of the specific findings required for a conditional burn permit. The District uses the possibility of disease to claim that there is no technically feasible alternative to burning whether or not the materials actually are diseased or pose any threat to adjacent plots. ARB cannot concur with this exemption because it meets none of the specific legal requirements for allowing burning to address disease.

### **Funding Commitment for Biomass and Other Burning Alternatives**

The District and ARB Staff assert that there is no long term federal or state funding to support biomass facilities. The brief analysis fails to acknowledge that nearly every biomass facility

serving the Valley has a long-term contract with one of California's investor owned utilities. Nor does the analysis mention the various agricultural incentive programs such as the Biomass Crop Assistance Program authorized under the 2008 Farm Bill that incentivize growers to send their agricultural waste to a qualified bioenergy facility. These funding sources along with the long list of initiatives intended to address greenhouse gas emissions and promote renewable energy more than satisfy the intent of S.B. 705 to ensure the continued viability of biomass as an alternative to burning.

### **The Emissions Exempted by the District Will Continue to Cause and Contribute to Violations of National Air Quality Standards**

The most disturbing portion of the ARB Staff Report is not its failure to conduct any of its own analysis on the feasibility of burning alternatives, but its misleading description of the air quality impacts that the various exemptions adopted by the District will have on one of the most polluted areas in the country. The ARB Staff Report's cynical presentation of the emissions data deserves a point-by-point review.

The ARB Staff Report first attempts to minimize the concern by claiming that burning on high pollution days is limited by the District's smoke management plan. ARB Staff Report at 3 and 16. The smoke management program does not stop pollution from burning; it merely reschedules those emissions. The contribution to unhealthy air from the pollutants created by burning – NO<sub>x</sub>, VOC, and PM<sub>2.5</sub> – is not limited to those days that are already at or near the federal standard. These pollutants remain in the atmosphere and add to the load that has made the Valley one of the worst PM<sub>2.5</sub>-polluted area in the country. S.B. 705 was adopted in the face of this smoke management system because the legislature recognized that it was not enough just to shuffle the timing of this pollution. For ARB to claim that pollution from this particular industry only matters on days when federal standards are being violated defies basic notions of atmospheric science and is inconsistent with decades of air quality planning efforts.

The ARB Staff Report next tries to craft an argument from chemical mass balance speciation data to claim that agricultural burning is responsible for less than 3% of the PM<sub>2.5</sub> measured in ambient air in Fresno and Bakersfield. ARB Staff Report at 3 and 16-17. The chemical mass balance analysis that ARB Staff uses looked at the chemical composition of the various particles collected in the studies to determine the portion of the particle mass that could be attributed to burnt vegetative matter. This data, however, does not include the secondary particle contribution to particle formation caused by the NO<sub>x</sub> and VOC emissions released from burning. As such, it underestimates the total contribution from burning.

Even more troubling, however, is that ARB Staff offer these numbers without providing any context to assess their significance. ARB Staff report the contribution of burning-related PM<sub>2.5</sub> as a percentage of the total PM<sub>2.5</sub> concentration, but that is not the relevant measure of how significantly these emissions contribute to the nonattainment problem. As the ARB Staff Report

notes, the design values in Fresno and Bakersfield are 17.1 ug/m<sup>3</sup> and 21.3 ug/m<sup>3</sup>, respectively. ARB Staff Report at 16. The national standard is currently 15 ug/m<sup>3</sup>. Thus, Fresno needs a 2.1 ug/m<sup>3</sup> improvement and Bakersfield needs a 6.3 ug/m<sup>3</sup> reduction in PM<sub>2.5</sub> concentrations to meet the national standard. ARB Staff claim that the remaining burning will only add .28 ug/m<sup>3</sup> in Fresno and .51 ug/m<sup>3</sup> in Bakersfield. *Id.* These concentrations represent 13% of the needed reductions in Fresno and 8% of the reductions needed for Bakersfield, even excluding the NO<sub>x</sub> benefits. These are hardly trivial portions of the pollution problem.

In order to understand how important this contribution is, ARB Staff should have provided a comparison to other major sources of pollution in the Valley. The ARB Staff Report is deliberately silent in providing such context. According to ARB's 2008 emissions inventory data for the San Joaquin Valley (available at [www.arb.ca.gov/app/emsinv/emssumcat\\_query.php?F\\_YR=2008&F\\_SEASON=A&SP=2009&F\\_DIV=-4&F\\_AREA=DIS&F\\_DIS=SJU](http://www.arb.ca.gov/app/emsinv/emssumcat_query.php?F_YR=2008&F_SEASON=A&SP=2009&F_DIV=-4&F_AREA=DIS&F_DIS=SJU)), the remaining emissions from agricultural burning, which is a subset of the managed burning and disposal inventory category, are 14.8 tons per day of PM<sub>2.5</sub>, 10.20 tons per day of NO<sub>x</sub>, and 12.46 tons per day of VOC. The final phase of the District's burning restrictions would lower these numbers by 0.34, 0.11, and 0.29 tons per day respectively. *See* District Staff Report at 5-7. Even with these reductions:

- Agricultural burning is the second largest category of direct PM<sub>2.5</sub> emissions, behind only dust from farming operations;
- Burning contributes results in more direct PM<sub>2.5</sub> emissions than all mobile sources combined and more than twice as much as all stationary fuel combustion sources combined;
- The remaining burning operations will add more NO<sub>x</sub> emissions than either electric utilities or cogeneration facilities;
- The NO<sub>x</sub> emissions from burning are roughly 60 percent of the NO<sub>x</sub> emissions from all passenger cars; and
- VOC emissions from burning are larger than any category of stationary source except oil and gas production.

To claim that these emissions are insignificant is to claim that virtually all sources of pollution are trivial and not worth controlling. Agricultural burning, with the massive exemptions that the District has adopted, will continue to be one of the largest categories of PM<sub>2.5</sub>, NO<sub>x</sub> and VOC emissions in the Valley. The Board must reject Staff's attempt to minimize the importance of this continuing problem.

Letter to Ms. Mary Nichols

May 26, 2010

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### **Conclusion**

The District's decision to exempt nearly half of all agricultural burning from the bans required by S.B. 705 is a terrible example of shaping the analysis to fit the desired outcome. The analysis comes nowhere close to meeting the legal criteria required for justifying postponements under state law. We urge you to reject the District's request for concurrence and direct the District to prohibit the burning of all feasible orchard and vineyard residues commencing June 1, 2010, as required by law. Special situations involving disease can be addressed on a case-by-case basis through conditional burn permits. Only through these changes can the Board assure that the requirements of S.B. 705 are met and that the pollution associated with burning is adequately addressed.

Sincerely,

A handwritten signature in cursive script, appearing to read "Paul Cort".

Paul Cort  
Staff Attorney

Cc: Hon. Dean Florez  
James Goldstene, Executive Officer, ARB