

SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

2012 Update: Recommendations on Agricultural Burning

May 2012

I. EXECUTIVE SUMMARY

Historically, the practice for disposing of agricultural materials is through the open burning of the materials in the field. Burning agricultural materials provided an economically feasible method for the timely disposal of these materials, helped prevent the spread of plant diseases, and controlled weeds and pests. The air quality impact that emissions from open burning could have in the San Joaquin Valley Air Basin has long been a concern, and the District, ARB and Valley farmers have implemented a number of measures to minimize that impact.

In 2003, California Senate Bill (SB) 705 (California Health and Safety Code Section (H&SC) 41855.5 and 41855.6) established a schedule for specific types of agricultural material to no longer be openly burned in the field, but provided for a postponement of the phase-out where justified by technical and economic impediments. The San Joaquin Valley Air District (District) has implemented SB 705 through Rule 4103 (Open Burning) and the District's smoke management program and have reduced the total acreage of agricultural materials burned in the Valley by 80%. In 2010, the District prepared the *2010 Final Staff Report and Recommendations on Agricultural Burning (2010 Report)* which evaluated each crop category identified in H&SC Section 41855.5 and provided recommendations for allowing or prohibiting the open burning of categories as outlined by the senate bill. Based upon the 2010 Report, the California Air Resources Board (ARB) provided a two year concurrence on the District's recommended postponements, based on the lack of feasible alternatives to open burning.

This 2012 Report shows that in the two years since the 2010 Report, there have been no significant changes in the economic feasibility of various alternatives to agricultural burning. The amount of agricultural materials accepted at biomass facilities continues to fluctuate based on market conditions and, in fact, at least one biomass facility has ceased operation since 2010. There are currently no long-term federal or state funding commitments for the operation of biomass facilities or development of alternatives to burning. In addition:

- The additional processing and costs associated with vineyard removals and citrus continue to be a concern. However, it is economically feasible for the largest citrus growers to send removal matter to biomass plants, so open burning of citrus orchard removals for citrus growers of 3,500 acres or more will no longer be allowed.
- NRCS funding for chipping is being discontinued, and there has not been a significant change in the availability of chipping contractors, making chipping economically infeasible for some nut growers.

- Chipping is not a viable option for pome fruits due to susceptibility to bacteria.
- Raisin trays are no longer being accepted by recycling firms, and biomass facilities will not accept the trays due to polymers in the trays.
- Burning alternatives for rice stubble are also affected by fluctuations in market demand for rice stubble (making material removal infeasible) and by limited water allocations (making soil incorporation infeasible).

For these reasons, which are discussed in this 2012 Report, the District requests continued ARB concurrence regarding necessary postponements. The District carefully manages any remaining agricultural burning with its Smoke Management System and continues to consider the economic feasibility of burning alternatives on a case-by-case basis.

II. REGULATORY BACKGROUND

A. State Law Requirements

SB 705 requires the District to limit open burning for diseased crops, establish best management practices for other weeds and maintenance, and prohibit open burning for numerous crop categories. SB 705 authorizes the District to postpone the burn prohibition dates for specific types of agricultural material if the District makes three specific determinations and the ARB concurs:

- (1) There are no economically feasible alternatives to open burning that type of material;
- (2) Open burning of that type of material will not cause or substantially contribute to a violation of National Ambient Air Quality Standards (NAAQS); and
- (3) There is no long-term federal or state funding commitment for the continued operation of biomass facilities in the Valley or the development of alternatives to burning.

In the 2010 Report, the District fulfilled state law requirements and evaluated each crop category identified in H&SC Section 41855.5, providing recommendations for allowing or prohibiting the open burning of categories. While the H&SC is designed to reduce emissions from agricultural burning, it recognizes that technological and economic factors may limit the availability of options for disposing of agricultural materials without burning. The H&SC thus allows the District to determine the details and timing of the prohibitions. The 2010 Report documented the District's recommended determinations for specified crops and materials, particularly those that did not have any technologically or economically feasible alternatives to open burning.

B. The District's Rule 4103 (Open Burning) and 2010 Report

The District amended Rule 4103 in April 2010 to incorporate H&SC requirements and require the District to review its determinations for any postponed crops and materials at least once every five years. This process would protect public health without adverse

impacts to the economic viability of growing these crops in the San Joaquin Valley (Valley).

In the 2010 Report, the District determined that the continued conditional issuance of burn permits for the crop categories specified in Table 1 under the District's smoke management system would not cause or substantially contribute to a violation of an applicable federal ambient air quality standard. The District's 2010 Report demonstrated that there were no economically feasible alternatives for these crop categories. In addition, for the purpose of providing alternatives to open burning, the District found that there are no long-term funding commitments for the continued operation of biomass facilities in the Valley.

Table 1 – CH&SC Crop Categories & Burn Prohibition Requirements

Crop Category	Burn Permits are no longer be issued for the following:	Burn Permits continue to be issued for the following:
Field Crops	alfalfa, asparagus, barley stubble, beans, corn, cotton, flower straw, hay, lemon grass, oat stubble, pea vines, peanuts, safflower, sugar cane, vegetable crops, and wheat stubble	rice stubble up to 70% per year of the total acreage of rice farmed by the operator residual rice stubble, spot burning of rice stubble, and burning of weeds and vegetative materials on rice field levees and banks
Prunings	apricot crops, avocado crops, bushberry crops, cherry crops, Christmas trees, citrus crops, date crops, eucalyptus crops, kiwi crops, nectarine crops, nursery prunings, olive crops, pasture or corral trees, peach crops, persimmon crops, pistachio crops, plum crops, pluot crops, pomegranate crops, prune crops, rose crops, and fig crops	apple crops, pear crops, and quince crops
Weed Abatement	berms, fence rows, pasture, grass, and bermuda grass	weed abatement activities affecting ponding and levee banks
Orchard Removals	orchard removal matter of more than 15 acres at a single location, per calendar year, citrus crops > 3,500 acres	citrus crops < 3,500 acres, apple crops, pear crops, quince crops, and orchard removal matter from a total of 15 acres or less of orchard removal at a single location, per calendar year
Vineyard Removals	none at this time	vineyard removal materials from grape and kiwi crops
Surface Harvested Prunings	grape canes (defined as "vineyard materials"), grape vines, and from prunings of almond, walnut, and pecan crops for each agricultural operation whose total nut acreage at all agricultural operation sites is 3,500 acres or more	raisin trays (defined as "vineyard materials"), and for up to 20 acres of prunings per year for almond, walnut, and pecan crops for agricultural operations whose total nut acreage at all agricultural operation sites is less than 3,500 acres with a case-by-case allowance of additional burn requests based on economic feasibility
Other Materials	brooder paper and deceased goats	diseased beehives

C. ARB's concurrence of the District's determinations

On May 27, 2010, ARB provided a two year concurrence with the District's extension of the burning prohibition date for specific crop categories. ARB's evaluation concurred that there continues to be a number of impediments to fully implementing alternatives to burning for selected crop categories.

ARB recommended working with state legislature, California Energy Commission, and California Department of Food and Agriculture to obtain incentive funding to increase utilization of agricultural materials at biomass facilities. Additionally, ARB recommended working with the District and Valley biomass waste-to-energy facilities to develop permit conditions that will provide more certainty regarding the use of agricultural materials. Finally, ARB staff's evaluation shows that due to the daily limitations on agricultural burning resulting from implementation of the District's Smoke Management System, as well as the significant decline in the overall amount of agricultural burning, the remaining burning will not cause or substantially contribute to violations of federal air quality standards.

ARB will reconsider the concurrence in 2012 based on progress made to obtain incentive funding and any other new information. ARB will provide an extension of the concurrence if the statutory criteria continue to be met.

D. EPA approval of Rule 4103

The U.S. Environmental Protection Agency (EPA) finalized an approval for Rule 4103 on June 4, 2012 (Revisions to the California State Implementation Plan, San Joaquin Valley Unified Air Pollution Control District [Rule 4103], 2012, 214-217). EPA concurred with the District's conclusions on the current economic and technological feasibility of alternatives to open burning. EPA recommended reevaluating the feasibility of sending citrus orchard removals to biomass facilities and the availability of contractors to shred nut prunings. The economic and technological feasibility of these alternatives will be reevaluated in this report.

III. THE DISTRICT'S SMOKE MANAGEMENT SYSTEM

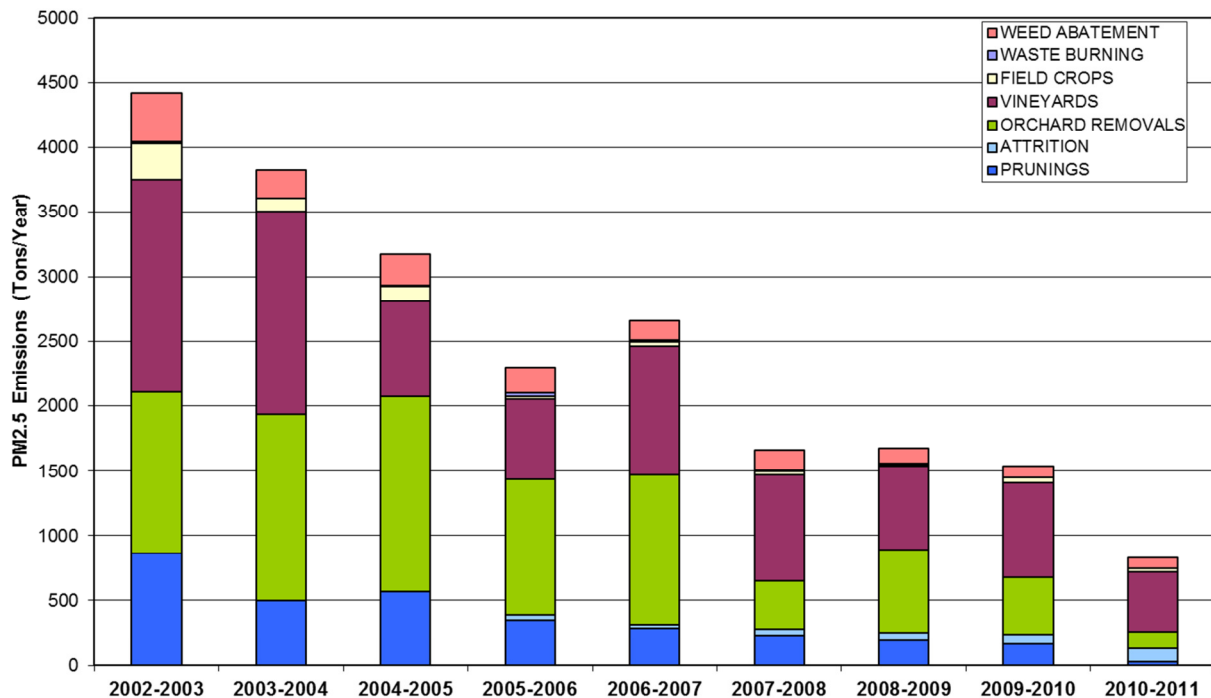
The use of agricultural burning has sharply decreased in the San Joaquin Valley. The District uses a Smoke Management System (SMS) to manage the Valley's remaining open burning of agricultural crops and materials. The SMS uses real-time meteorological information and computer modeling to determine the amount and location of agricultural burning that can be allowed without resulting in ambient air pollutant concentrations that exceed federal health-based standards. The SMS analyzes 103 zones in the Valley and allocates daily burning allowances in each zone based on local meteorology, the air quality conditions, the atmospheric holding capacity, the amount of burning already approved in a given area, and the potential impacts on downwind populations. This approach allows the District to better distribute

air pollutant emissions from open burning temporally and spatially, providing flexibility of burn days for growers while minimizing the impact on the public.

Properly managed burning allocations under the existing District SMS ensures that air quality and health impacts of open burning of agricultural materials, prescribed burning, and hazard reduction burning are minimized to the fullest extent feasible. Under the SMS, combustion emissions are limited to levels below the violation threshold of any applicable federal ambient air quality standard and burns are not allowed in zones on days when exceedances of the federal standards have occurred in that zone. The District determined that the continued issuance of burn permits for the crop categories outlined in Table 1 above would not cause or substantially contribute to a violation of an applicable federal ambient air quality standard.

The implementation of the District’s SMS and the use of sustainable agricultural practices have significantly reduced the amount of materials being burned. Since June 2010, PM2.5 emissions from open burning have been further reduced by 46%. Overall, since 2002, the San Joaquin Valley has seen emissions from open burning reduced by 81%, or 9.8 tons of PM2.5 per day. Figure 1 shows the gradual reduction in open burning emissions in the Valley since 2002.

Figure 1 – Annual Agricultural Open Burning Emissions for PM2.5
Emissions are Summarized from June to May



While the SMS has been effective at reducing PM2.5 emissions, California state law still requires the District to evaluate alternatives to open burning to further reduce emissions in the Valley.

IV. CURRENT ECONOMIC FEASIBILITY OF ALTERNATIVES TO OPEN BURNING

A. Biomass

Agricultural materials remaining from the pruning or the removal of orchards and vineyards can be ground or chipped, and then converted into biomass fuel or land incorporation. Biomass burning allows for more complete combustion of the fuel and since the equipment is regulated with air pollution controls, biomass burning results in fewer emissions than open burning. The biomass industry thus reduces pollutants created by open burning and landfilling of potential biofuels such as agricultural, urban, and forest wood materials.

1. Fuel Use and Storage Capacities

There are currently fourteen biomass power plants in the Valley, with one additional plant under construction, two Authority to Construct applications under review, and one recently cancelled application. The fourteen operating facilities each burn between 25 – 1,951 biomass tons per day. Otherwise, the amount of agricultural material to be burned as fuel by these plants fluctuates based on market conditions and is determined by the facility. One facility Authority to Construct application under review is proposing to commit to utilizing agricultural biomass that could still be open burned for at least 6.4% of its fuel.

Biomass facilities generally accept agricultural materials, forestry materials, and urban wood residues to be used as fuel for their boilers. However, it is often more affordable for the biomass power plants to obtain urban materials from building demolition projects than agricultural materials, because these urban sources can afford to pay significantly more for material disposal.

The average annual percentage of agricultural material burned at the biomass plants from the plants that reported the total bone dry tons (BDT) and agricultural material BDT in their quarterly reports is shown in Table 2 below. The percentage of agricultural material fuel versus non-agricultural material fuel that a biomass power plant accepts is constantly changing. While there is a year to year fluctuation in the amount of agricultural materials to be burned as fuel, there has been a general increase in the amount of agricultural material used as fuel due to the economic recession and overall lack of development-related construction.

Table 2: Average Percentage of Agricultural Material Burned

Year	Ave % Ag Material
2008	25%
2009	43%
2010	53%
2011	44%

The combined storage capacity for the biomass facilities in the Valley at the time this report is approximately 310 acres. The available storage capacity at any given facility at any given time can vary due to multiple factors. Due to the variability of tons/acre storage capacity, it would be difficult to calculate that amount of material that the biomass plants could actually store of the remaining crop types. Some of the larger orchard removal contractors also have storage capabilities, but as this is dependent on which contractors are used each time; this potential storage has not been factored into the totals below in Table 3.

Table 3: Fuel Storage Capacity for Biomass Plants That Use Ag Materials

Facility Name	Region Served	Daily Fuel Use (GT)	Fuel Storage Capacity (Acres)
Rio Bravo Fresno	Central	850	8
Covanta Mendota	Central	800	35
Madera Power	Central	830	80
Ampersand Chowchilla	Central	360	2
Subtotal/Average		2,840	125
Covanta Delano	South	1,625	77
Dinuba Energy	South	415	20
Sierra Power	South	295	4
Rio Bravo Jasmin	South	837	0.1
Rio Bravo Poso	South	837	0.1
Mount Poso Cogen.	South	1400	6
Subtotal/Average		5,409	107
Merced Power*	North	360	10
Thermal Energy	North	631	28
SPI Sonora	North	250	5
Chinese Station	North	710	15
SPI Lincoln	North	600	20
Air Products	North	450	0
Musco Olive Products	North	25	0
Subtotal/Average		3,026	78
TOTAL ALL		11,275	310

* Merced Power has recently ceased operation, but its permit to operate remains valid.

Historically, there have been occasions when biomass plants have turned away agricultural materials. During the fall of 2007, several biomass power plants in the District had to temporarily shut down plant operations due to equipment failures or maintenance purposes. In addition, some biomass power plants had to refuse chipping material because storage space was not available. Issues such as lack of storage space and equipment failure can create situations when the biomass power plant

operators must turn away agricultural materials. This inability to guarantee that a facility can accept agricultural biomass at all times creates uncertainty in the ability of the biomass plants to accept increased amounts of agricultural fuel that would be generated by a complete prohibition of open burning.

Another important factor is the recent economic downturn in the construction industry. As the construction industry recovers in the future, biomass plants are more likely to accept construction wood materials over agricultural materials to burn. Biomass facilities are thus unable to acceptance agricultural biomass at all times. This creates uncertainty in the ability of the biomass plants to accept increased amounts of agricultural fuel that would be generated if that District were to completely prohibit open burning. In general, due to the fluctuating circumstances described, biomass plants have been unwilling to commit to accepting higher levels of agricultural biomass through conditions on their operating permits.

2. Availability of long-term federal or state funding commitments

Monetary incentives have been provided to increase use of biomass. Funding or tax credits are or have been available through some short-term programs such as the Existing Renewable Facilities Program through the California Energy Commission (CEC) and federal corporate tax credits from a short-term federal program called the Renewable Electricity Program Tax Credit. In addition, as part of ARB's and CEC's landmark programs to decrease greenhouse gas emissions, incentives and funding are currently available to identify and promote alternative biomass-based feedstocks, including agricultural materials, for the production of alternative fuels. Some federal programs provide funding opportunities to promote the development of advanced, next generation energy technologies and fuels from biomass resources.

However, these monetary incentive programs are short-term in nature, either because the program sunsets within a few years, funding for the program has to be re-appropriated, or funding per project is for a limited period. Therefore, there are currently no long-term federal or state funding commitments for the operation of biomass facilities or development of alternatives to burning.

B. Specific Crop Categories

1. Vineyard Removal Materials from Grape and Kiwi Crops

Biomass power plant operators have indicated that they may accept vineyard materials. However, grape and kiwi vine cultivation requires use of extensive trellis systems to support the vines. The support system consists of wires and may include wood or metal posts and stakes. In many instances, grape canes remaining after pruning get wrapped around the wires to provide the needed support. As vines mature and age, trellis wires become deeply embedded into the canes or cordons. To avoid mechanical damage to chippers and biomass power plants, the embedded wires need to be removed. Wire removal requires intensive manual labor, adding significant potential cost to vineyard growers. Many chipping operators refuse to process these materials because of the

wires. In addition, due to the limited number of chipping contractors operating in the Valley, service may not be available according to the vineyard grower's schedule, which can cause delays in planting for the following season.

There has been no significant change to the economic feasibility of chipping and hauling vineyard removals since the 2010 Report. Additionally, there has been no change in the availability of chipping operators. There is currently no economically feasible alternative to remove the wire that is embedded in the cordon and canes to prevent damage to the chipping equipment or prevent wires from going to the biomass plants. Wire removal adds a significant cost to the growers. Increasing the amount of materials going into landfills is not considered a viable alternative as landfills are required to divert wood and green materials. Most chipping operators are not willing to chip and haul away the vineyard removal materials. Those who would be willing to take the material would charge a higher fee. For these reasons, District staff concludes that there is no change to the determinations made in the 2010 report to continue to allow this category to be open burned through the District's smoke management system. This category will be reevaluated in the next evaluation under Rule 4103, when more economic and other data is available.

2. Citrus Crops Orchard Removal Matter

Similar to vineyard removals, the chipping of citrus orchard removals with subsequent transport and processing at biomass power plants is considered the most technologically and viable alternative to open burning. The adobe soil in which citrus crops are usually grown is extremely difficult to remove from the extensive root system of citrus trees. Separating the roots from the trunk prior to chipping, as well as screening the chipped root material to remove excessive clumps all increase the costs associated with chipping citrus material. In addition, ground citrus wood produces stringy material. It takes about six to eight weeks of drying time for a typical non-citrus orchard, whereas citrus typically takes longer. As a result, biomass facilities which do accept citrus chips will blend 25% to 30% of citrus material with other crops to promote better flow of the material through the equipment. There is significant concern whether sufficient biomass capacity exists to handle all of the orchard removal material generated in the Valley if open burning was completely prohibited for that category.

a. Biomass Capacity

While there have been some new facilities and a few facilities that started burning biomass, in addition to other fuels, there has not been a significant increase in biomass fuel consumption or storage capacity from the addition of these facilities. One newly added facility has indicated it will primarily burn olive pits from its own olive processing operation. Another application for a facility adding the option to burn biomass has indicated biomass fuel is expected to be nut shells and fruit pits, which are not normally open burned.

Concerns raised by stakeholders in the 2010 Report remain valid. One concern is the whether or not biomass plants will accept citrus along with the additional processing and

costs that are required to make the citrus chips acceptable as fuel. Another concern is whether biomass operators will take citrus once the economy improves and construction material is more abundant as described above.

b. Large Citrus Farms

Under the District's agricultural burn permit program, open burning of citrus orchard removals is dependent on a case-by-case analysis which determines if there is sufficient biomass plant capacity and availability of economically feasible chipping services. However, District staff has determined that it is economically feasible for the largest citrus growers (>3,500 acres) to send removal matter to biomass plants, as described in the June 27, 2011 letter to EPA (attached). This determination was based primarily on the ability of large growers to provide a steady demand for chippers, the availability of chipping equipment for these large growers, and the currently reduced supply of urban wood materials as fuel for biomass plants at this time. Therefore, open burning of citrus orchard removals for large citrus growers (>3,500 acres) will no longer be allowed.

With regard to other sizes of citrus growers, there has been no significant change to the economic feasibility of chipping and hauling removals since the 2010 Report. There is also still uncertainty in whether all of the citrus materials, if burning was prohibited, could be accepted at biomass power plants at this time, due to the lack of future commitments to biomass plant operation. For these reasons, District staff concludes that there is no change to the determinations made in the 2010 report to continue to allow this category to be open burned through the District's smoke management system. This category will be reevaluated in the next evaluation under Rule 4103, when more economic and other data is available.

3. Surface Harvested Prunings from Almond, Walnut, and Pecan Crops

Nut trees are usually pruned after harvesting, either late or early in the year. In the past, growers generally open burned nut prunings to dispose of the material. However, many growers have found alternative ways to convert prunings into something useful, such as soil amendment. Many nuts growers are currently shredding the prunings and leaving the materials on the orchard floor. The ability to shred the materials varies among growers of different size farms and regions, with commercial shredders potentially being infeasible due to either excessive cost or unavailability. Additionally, there are also concerns for this practice, including preventing the pruning material from interfering with the harvesting of the crop and potential build-up of chipped material on the ground. This situation can then cause the chipped material to be picked up during harvest. Although tilling could be done to bury the chipped material to promote faster decomposition, growers try to minimize the number of tractor passes in their orchards. Leaving chipped material on the ground has caused issues during harvesting; therefore, many growers have mostly relied on removing the pruning material from the field and open burning the pruning material. Due to harvesting and pruning practices, there is a

short window of opportunity to have these types of prunings chipped. Some growers usually find it more conducive to their operations to gather the prunings and burn them.

a. Economic Feasibility of Alternatives

The economic feasibility of using an alternative to open burning surface harvested prunings is evaluated for every burn permit application received. Since the 2010 determinations, there have been 53 applications to obtain approval to burn. There were 21 approved applications, meaning the price to implement an alternative was economically infeasible. Seven applications were denied due to the cost of the alternative provided determined to be economically feasible. The remaining 25 applications were withdrawn due to a variety of reasons.

Table 4: Number of Burn Applications for Surface Harvested Prunings

Applications	
Approved	21
Denied	7
Withdrawn	25
Total	53

For growers that shred the pruning material as an alternative method to open burning, the practice varies depending on the availability of the custom shredder or the equipment and chipping contractors. Over the past ten years, the Natural Resources Conservation Service (NRCS) has encouraged growers to chip or shred the prunings from almond and walnut orchards by providing a cost-share basis through the Environmental Quality Incentives Program. In 2011, NRCS contracted for about 114 acres of surface harvested prunings to be chipped. According to recent conversations with NRCS staff, the program will not be continued into 2012.

Based on the case-by-case evaluations of specific grower’s permit requests, there has not been a significant change in the number of chipping contractors available, and the option of shredding is still potentially economically infeasible for some growers. District staff concludes that there is no change to the determination made in the 2010 report to continue to allow this category to be open burned through the District’s smoke management system. This category will be reevaluated in the next evaluation under Rule 4103, when more economic and other data is available.

4. Other categories

a. Pome Fruit

Pome fruits include apple, pear, and quince crops. The primary concern for pome fruits is their susceptibility to fire blight, a bacterial disease that kills blossoms, shoots, limbs, and potentially the entire tree. Chipping/grinding and composting create a potential

opportunity for transfer and infection of nearby orchards. Fire blight is prevalent in the Valley and is a difficult disease to control. Burning of infected material is a preventive measure used by growers to help ensure the disease does not spread. In light of the disease issue, the District concludes that there is no feasible alternative to burning pome fruit prunings or orchard removal matter at this time.

b. Raisin Trays

Raisin trays are paper trays used to dry the grapes on the ground. These trays contain polymer so that the moisture on the ground cannot be absorbed in the raisin tray. The grapes remain on the raisin trays until they meet the appropriate moisture content. In the past, growers used recycling firms to dispose of the trays. These recycling firms shipped the trays to China for reuse. However, due to the declining value of the U.S. dollar, China has cut off the import of raisin trays and this alternative is no longer broadly viable. Since the polymer does not degrade quickly, soil incorporation is not a feasible alternative to burning raisin trays. In addition, due to the polymer, biomass facilities will not accept raisin trays.

Through its Technology Advancement Program, the District is currently funding a project which will test a prototype device to reduce emissions from the burning of raisin trays. While this project, as well as many others, are in the process of developing alternatives to reduce emissions, it is still under evaluation and not commercially available. Therefore, at this time there are currently no feasible alternatives to burning raisin trays, and the District continues to recommend postponement of this burn prohibition until further information on potential alternatives are available.

c. Rice Stubble

Rice is planted in the spring and harvested in the fall. Once the rice is harvested, the rice straw remains in the field for disposition. Reducing the amount of post-harvest straw residue in the rice fields is important to the successful production of the next crop. Burning has been the historical cultural practice for removing straw and residues for the rice industry.

Another potential alternative is soil incorporation, but this requires water to be delivered to the operations post-harvest season. Most rice growers in the Valley are in the northern region and, due to the annual distribution schedules designated by irrigation districts, water is not available to be delivered post-harvest as needed. Most rice growers in the Valley also do not have access to water wells for their rice fields. Therefore, rice growers in the Valley do not typically rely on soil incorporation as a feasible option to dispose of their rice straw.

In 2007, District staff believed that rice growers could sell the rice straw to baling operators who would then sell it to their customers such as dairies. Therefore, the District prohibited open burning for 30% of rice stubble per year. This option works well when there was a market for the baled rice straw, but has not consistently provided

an economically feasible option for rice growers. Due to the fluctuation in market demand for rice stubble, which impacts growers ability to effectively remove the material, and issues with water allocation, District staff recommended that open burning of rice stubble be allowed to continue for burns at 70% per year of the total acreage of rice farmed by the operator after June 1, 2010 and until June 1, 2015. There has been no significant change to the economic feasibility of baling as an alternative to burning. District staff concludes that there is no change to the determination made in the 2010 report to continue to allow this category to be open burned through the District's smoke management system. This category will be reevaluated in the next evaluation under Rule 4103, when more economic and other data is available.

V. REFERENCES

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