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Socio-Economic Impact Study of Proposed Amendments to Regulation 5: Open Burning

Submitted to: Bay Area Air Quality Management District

September 9, 2019

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EXECUTIVE SUMMARY

Description of Proposed Rule

Wildfire smoke presents immediate impacts to local air quality and public health, and atmospheric conditions can quickly transport smoke great distances, with even distant fires affecting the air quality throughout the Bay Area. The fires in Napa and Sonoma County in 2017 and in Butte County in 2018 generated unprecedented levels of particulate matter, which reached hazardous levels never before experienced in the Bay Area.

The Bay Area Air Quality Management District ("Air District" or "BAAQMD") proposes to amend Regulation 5 to help reduce potential cost barriers associated with open burning fees to align with statewide efforts to prevent larger, more destructive wildfires through increased prescribed burning. The draft Regulation 5 amendments would:

- Exempt public agencies from paying Open Burning Operation Fees when conducting prescribed burns for the purpose of wildfire prevention (Regulation 5, Section 113).
- Clarify the administrative requirement for Open Burning Operation Fees (Regulation 5, Section 411).

Prescribed burning is a way to reduce the potential for larger, more destructive wildfires, prevent harmful wildfire smoke impacts, and maintain healthy forest ecosystems. The Air District proposes to amend Regulation 5 to eliminate fees to public agencies that conduct prescribed burning for wildfire prevention for the benefit of the public and environment. Currently, the Wildland Vegetation Management fire type is defined in Regulation 5, Section 401.15 as "prescribed burning by a state or federal agency or through a cooperative agreement involving the state or federal agency." The Air District proposes to replace "state or federal" agency with "public" agency to be consistent with the draft limited exemption for public agencies (Regulation 5, Section 113). Other changes in Regulation 5 are limited to administrative clarifications (e.g., fee must be paid before the proposed burn activity) and replacement text (e.g., "Curtailment Period" replaced by "Mandatory Burn Ban") and thus are not material changes that could potentially lead to socioeconomic impacts. The Air District does not anticipate this fee exemption to significantly impact program revenue; it is intended to complement statewide efforts to remove potential cost barriers associated with prescribed burning for wildfire prevention.

Affected Industries

The direct impacts of the proposed amendments to Regulation 5 will fall on public agencies, and take the form of reduced fees, resulting in minor cost savings for those agencies and minor decreases in revenues for the Air District. The total cost of the 45 permits issued from 2013 through 2018 was only $20,772, or approximately $460 per permit, a negligible amount. Furthermore, the fees to be eliminated represent a minor benefit for the applicant agencies, rather than a cost. The amendment also has no impact on the private sector. As a result there are no expected socioeconomic impacts associated with the proposed rule change in either the private or public industry sectors.

Socio-Economic Impacts

As noted above, aside from administrative changes, the amendment primarily entails reduced fees for public agencies applying for permits for prescribed burns. There are no costs to these agencies associated with the rule change, and the decrease in revenues to the Air District is negligible. Thus there are no expected socioeconomic impacts associated with the amendments to Regulation 5.

Small Business Impacts

According to California Government Code 14835, a small business is any business that meets the following requirements:

- Must be independently owned and operated;
- Cannot be dominant in its field of operation;
- Must have its principal office located in California;
- Must have its owners (or officers in the case of a corporation) domiciled in California; and
- Together with its affiliates, be either:
    - A business with 100 or fewer employees, and an average annual gross receipts of $10 million or less over the previous three tax years, or
    - A manufacturer with 100 or fewer employees.

None of the impacts are related to private businesses, thus there is no expected potential for significant impacts for any small business.

DESCRIPTION OF PROPOSED RULE AMENDMENT

Over the last several years, California has experienced some of the deadliest and most destructive wildfires in its history, with wildfire events becoming the "new normal."[1] As a result, new wildfire prevention initiatives and actions are needed. Climate change is causing higher temperatures and longer dry periods, as well as lengthening the fire season and increasing the risk of wildfires. In addition to destroying entire communities and burning everything in their path, wildfires generate a mixture of fine particulate matter and hazardous chemicals and compounds in the air.

Wildfire smoke presents immediate impacts to local air quality and public health, and atmospheric conditions can quickly transport smoke great distances, with even distant fires affecting the air quality throughout the Bay Area. The fires in Napa and Sonoma County in 2017 and in Butte County in 2018 generated unprecedented levels of particulate matter, which reached hazardous levels never before experienced in the Bay Area.

As a result, the Bay Area Air Quality Management District ("Air District" or "BAAQMD") proposes to amend Regulation 5 to help reduce potential cost barriers associated with open burning fees to align with statewide efforts to prevent larger, more destructive wildfires through increased prescribed burning. The draft Regulation 5 amendments would:

- Exempt public agencies from paying Open Burning Operation Fees when conducting prescribed burns for the purpose of wildfire prevention (Regulation 5, Section 113).
- Clarify the administrative requirement for Open Burning Operation Fees (Regulation 5, Section 411).

Currently, Air District Regulation 5 prohibits open burning with the exception of 17 types of fires that are conditionally allowed on designated permissive burn days when meteorological conditions are favorable for dispersion. One allowable fire type is "prescribed burning," which is the planned, controlled application of fire to vegetation to achieve specific natural resource management objectives, including wildfire prevention, and ensure fire safety. Prescribed burns are designed to burn less intensely than wildfires and are lit amid controlled conditions to minimize potential smoke impacts.

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[1] This rule description borrows much of its text from the "Reg 5 and Rule 6-3 Workshop Report" from July 2019.

Wildfire events are more likely to result in harmful air quality and public health impacts than prescribed burning because wildfires are unplanned and typically larger compared to prescribed burns. Wildfires tend to last longer and burn more vegetation per acre than prescribed burns. Due to historical fire suppression efforts, many forests in California contain excess amounts of vegetation that serve as fuel and, as a result, are highly susceptible to catastrophic wildfires. Prescribed burning is a way to reduce the potential for larger, more destructive wildfires, prevent harmful wildfire smoke impacts, and maintain healthy forest ecosystems.

Due to these statewide efforts to prevent wildfires, fuel reduction projects are expected to sharply increase throughout the next few years and beyond. While it is uncertain how many additional prescribed burns by public agencies the Air District will review, the Air District intends to support wildfire prevention measures taken to reduce fuels to prevent larger, more catastrophic wildfires that can create public health emergencies. The Air District proposes to amend Regulation 5 to eliminate fees to public agencies that conduct prescribed burning for wildfire prevention for the benefit of the public and environment. Currently, the Wildland Vegetation Management fire type is defined in Regulation 5, Section 401.15 as "prescribed burning by a state or federal agency or through a cooperative agreement involving the state or federal agency." The Air District proposes to replace "state or federal" agency with "public" agency to be consistent with the draft limited exemption for public agencies (Regulation 5, Section 113). Other changes in Regulation 5 are limited to administrative clarifications (e.g., fee must be paid before the proposed burn activity) and replacement text (e.g., "Curtailment Period" replaced by "Mandatory Burn Ban") and thus are not material changes that could potentially lead to socioeconomic impacts.

The draft amendments to Regulation 5 would remove potential cost barriers for public agencies conducting a prescribed burn for wildfire prevention purposes. The draft amendment is intended to complement statewide efforts by removing potential barriers to prescribed burning conducted for wildfire prevention purposes. The draft amendment would exempt a public agency from having to pay an Open Burning Operation Fee,[2] as currently required by Regulation 5, Section 411

[2] As of July 1, 2019, the fee is $602 for a proposed Wildland Vegetation Management Fire project less than or equal to 50 acres; $816 for a proposed project 50 acres to 150 acres; and $1,062 for a proposed project greater than 150 acres.

Since the fee schedule went into effect in July 2013, the Air District has collected approximately $20,772 in Wildland Vegetation Management Fire fees from 45 prescribed burn applications submitted by public agencies

Table 1: Total Fees & Submitted Plans for Prescribed Burns by Public Agencies, 2013-2018

	2013	2014	2015	2016	2017	2018	Total
Fees Paid	$3,400	$4,075	$2,214	$3,925	$3,463	$3,695	$20,772
Plans Submitted	5	9	9	6	8	8	45

Note: Fee was introduced in 2013.

Source: BAAQMD, 2019.

The Air District does not anticipate this fee exemption to significantly impact program revenue; it is intended to complement statewide efforts to remove potential cost barriers associated with prescribed burning for wildfire prevention.

REGIONAL TRENDS

This section provides background information on the demographic and economic trends for the nine-county San Francisco Bay Area, which represents the Air District's jurisdiction.[3] Regional trends are compared to statewide demographic and economic patterns since 2000, in order to show the region's unique characteristics relative to the State and to provide context for the impact analysis.

Regional Demographic Trends

Table 2 shows the population and household trends for the nine-county Bay Area and California between 2000 and 2019. During this time, the Bay Area's population increased by 14.7 percent, compared to 17.9 percent for California as a whole. Similarly, the number of Bay Area households grew by 10.4 percent, compared to 13.8 percent growth statewide, as average household size increased in both geographies.

Table 2: Population and Household Trends, 2000-2019

Bay Area (a)	**2000**	**2019**	**Total Change 2000-2019**	**% Change 2000-2019**
Population	6,784,348	7,783,460	999,112	14.7%
Households	2,466,020	2,723,550	257,530	10.4%
Average Household Size	2.69	2.80		
California				
Population	33,873,086	39,927,315	6,054,229	17.9%
Households	11,502,871	13,085,036	1,582,165	13.8%
Average Household Size	2.87	2.99		

Notes:
(a) Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties.

Sources: California State Department of Finance, 2019; US Census, 2000; BAE 2019.

The Bay Area's slower growth is tied to its relatively built-out environment, compared to the state overall. While Central Valley locations, such as the Sacramento region, experienced large increases in the number of housing units, the Bay Area experienced more moderate

[3] The Air District's jurisdiction consists of nine counties, including all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, as well as the western portion of Solano County and the southern portion of Sonoma County. See http://www.arb.ca.gov/app/dislookup/dislookup.php

increases in housing units. Nevertheless, the region has still gained almost one million residents since 2000.

Regional Economic Trends

Table 3 shows jobs by sector in 2013 and 2018 for the Bay Area and California. In the five-year period between 2013 and 2018, the Bay Area's employment base grew by 16.2 percent, increasing from 3.44 million jobs to almost 4.00 million jobs, as the economy has shown strong growth. Statewide employment only increased by 13.1 percent from 15.56 million jobs in 2013 to 17.60 million jobs in 2018. The rate of job growth for both the Bay Area and the State over the five-year period was far higher than the rate of population growth, another indicator of the strong recovery from recession.

The largest major economic sectors in the Bay Area economy are Professional & Business Services, Educational & Health Services, Government, and Leisure & Hospitality. Each of these sectors accounted for over 10 percent of all wage and salary employment in the region. Overall, the Bay Area's economic base largely resembles the state's base, sharing a similar distribution of employment across sectors. One noteworthy variation is the higher Bay Area employment in the Professional, Scientific, & Technical Services sector, which makes up 19.3 percent of employment in the Bay Area compared to only 15.1 percent statewide.

All major industry sectors showed an increase in employment in the Bay Area between 2013 and 2018, with increases of greater than 20 percent in Information; Mining, Logging, and Construction; and Transportation, Warehousing, and Utilities. The growth of over 50 percent in Information is especially noteworthy, indicating the continuing importance of the technology economy in the region. Statewide, the same three major sectors showed employment growth of more than 20 percent, but the growth in Information jobs was only 21 percent.

Table 3: Jobs by Sector, 2013-2018 (a)

	Bay Area					California				
	2013 (b)		**2018** (c)		**% Change**	**2013** (b)		**2018** (c)		**% Change**
Industry Sector	**Jobs**	**% Total**	**Jobs**	**% Total**	**2013-2018**	**Jobs**	**% Total**	**Jobs**	**% Total**	**2013-2018**
Agriculture	19,900	0.6%	20,100	0.5%	1.0%	412,400	2.6%	424,200	2.4%	2.9%
Mining, Logging, and Construction	152,400	4.4%	205,400	5.1%	34.8%	666,000	4.3%	882,400	5.0%	32.5%
Manufacturing	313,800	9.1%	362,700	9.1%	15.6%	1,262,500	8.1%	1,325,400	7.5%	5.0%
Wholesale Trade	119,600	3.5%	122,900	3.1%	2.8%	671,300	4.3%	698,900	4.0%	4.1%
Retail Trade	328,100	9.5%	346,000	8.7%	5.5%	1,593,900	10.2%	1,688,600	9.6%	5.9%
Transportation, Warehousing, and Utilities	90,000	2.6%	116,700	2.9%	29.7%	503,800	3.2%	664,000	3.8%	31.8%
Information	138,400	4.0%	211,500	5.3%	52.8%	449,800	2.9%	543,700	3.1%	20.9%
Financial Activities	177,200	5.2%	194,500	4.9%	9.8%	781,200	5.0%	836,300	4.8%	7.1%
Professional & Business Services	645,500	18.8%	771,500	19.3%	19.5%	2,349,200	15.1%	2,663,700	15.1%	13.4%
Educational & Health Services	516,700	15.0%	599,500	15.0%	16.0%	2,309,000	14.8%	2,726,500	15.5%	18.1%
Leisure & Hospitality	371,500	10.8%	432,100	10.8%	16.3%	1,674,800	10.8%	1,986,100	11.3%	18.6%
Other Services, except Public Administration	117,400	3.4%	129,900	3.3%	10.6%	515,500	3.3%	572,100	3.3%	11.0%
Government (d)	449,500	13.1%	483,000	12.1%	7.5%	2,374,300	15.3%	2,587,400	14.7%	9.0%
Total, All Employment (e)	**3,440,000**	**100.0%**	**3,995,800**	**100.0%**	**16.2%**	**15,563,700**	**100.0%**	**17,599,400**	**100.0%**	**13.1%**
Population	**7,417,430**		**7,751,650**		**4.5%**	**38,321,459**		**39,740,508**		**3.7%**

Notes:
(a) Includes all wage and salary employment.
(b) Represents annual average employment for calendar year 2013.
(c) Represents annual average employment for calendar year 2018.
(d) Government employment includes workers in all local, state and Federal workers, not just those in public administration. For example, all public school staff is in the Government category.
(e) Totals may not sum from parts due to independent rounding.

Sources: California Employment Development Department, 2019; CA Department of Finance, 2019; BAE, 2019.

AFFECTED INDUSTRIES

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