

BAY AREA AIR QUALITY MANAGEMENT DISTRICT

SMOKE MANAGEMENT PROGRAM

Program Description and Operating Procedures



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

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BAY AREA AIR QUALITY MANAGEMENT DISTRICT SMOKE MANAGEMENT PROGRAM

1. Introduction

A. Purpose

This document describes the Smoke Management Program (SMP) of the Bay Area Air Quality Management District (District). The purpose of the District's SMP is to establish a management program that reduces the public's exposure to air contaminants in smoke from open burning; to ensure compliance with the Bay Area District Regulations, Policies and Procedures; to protect public health and welfare; and to comply with the California Code of Regulations Smoke Management Guidelines for Agriculture and Prescribed Burning (Title 17). The intent of Title 17 is to provide for the continuation of agricultural burning, including prescribed burning, as a resource management tool, and provide increased opportunities for prescribed burning and agricultural burning, while minimizing smoke impacts on the public.

The District uses a variety of mechanisms to implement its Smoke Management Program. Outreach and education, policies and procedures documentation, compliance inspections, co-ordination with responsible agencies, decision making based on long established ambient air monitoring and on site observations are at the core of the District's SMP. These mechanisms are explained in greater detail in the sections that follow. They are arranged with reference to program sections and include all program elements required by Title 17.

B. Authority

The District is a duly constituted air quality management district, as provided in the California Health and Safety Code (HSC) Sections 40200 to 40234. The District is authorized by those HSC sections to make and enforce all necessary and proper orders, rules and regulations to accomplish the purpose of Division 26 of the HSC. The District's requirements for its Smoke Management Program are contained within District Regulation 5 and associated District policies.

C. Regulatory History

The first open burning regulations in the Bay Area were passed in 1957. Burning of garden prunings, leaves, grass cuttings, trash, or any other material has been prohibited since 1970. The District's Regulation 5 has been amended in various years, including 1982, 1990, 1994, 2002, and 2008.

On March 6, 2002, the Board of Directors of the District adopted revisions to Regulation 5: Open Burning to incorporate provisions of the new Title 17 prescribed burning requirements and on July 9, 2008 to prohibit recreational fires on any day the District

predicts an exceedance of the National Ambient Air Quality Standard (NAAQS) for PM_{2.5} and declares a mandatory curtailment for fireplace burning.

The District's rule development effort to incorporate the new Title 17 prescribed burning requirements took approximately two and a half years to complete. During this time period, District staff conducted two scoping workshops and two public workshops, and the District's Board of Directors conducted three public hearings.

On July 9, 2008, the District's Board of Directors adopted Regulation 6, Rule 3: Wood Burning Devices. Regulation 6, Rule 3 sets forth criteria for the prohibition of use and restrictions on residential wood burning devices. Regulation 5 no-burn day declarations are aligned with the prohibition of any solid fuel burning in wood burning devices on mandatory curtailment days.

D. District Characteristics

The District is located within the San Francisco Bay Area Air Basin and comprises Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, southern Sonoma, and the southwestern portion of Solano County.

The unifying feature of the area is the Bay itself, which is oriented north to south and covers about 400 square miles of the area's total 5,545 square miles. Nearly seven million people reside in the Bay Area. This is approximately 20 percent of the State's total population.

The topography of the Bay Area is quite complex, consisting of coastal mountain ranges, inland valleys, and the San Francisco Bay. The coastal mountain range is oriented north to south and inhibits marine air from the Pacific Ocean from spreading inland. However, several significant gaps in the coastal mountain range exist. These gaps allow air from the Pacific Ocean to exchange with air in the Sacramento Valley and San Joaquin Valley.

The most significant gap in the coastal range is the Golden Gate. This gap lies between San Francisco and Marin Counties. Air moving eastward through the gap is diverted into many different directions and generally follows the terrain the same way a river follows its banks.

Another significant feature in the topography of the Bay Area is the Carquinez Strait. This narrow gap in the coastal mountain range separates Contra Costa and Solano Counties. It is frequently the gateway for air to pass between the Bay Area and the Central Valley.

Most rain in the Bay Area occurs during the winter. San Francisco averages about 20 inches of rain per year, with only 10 percent of it falling between May and September. During summer, the coastal areas have an average maximum temperature in the mid-60's, while inland areas average in the low 90's. This strong contrast in temperatures is primarily due to the coastal mountains acting as a barrier that restricts the cooler marine

air from reaching the inland valleys. In winter, average high temperatures are in the low 60's at both coastal and inland locations, but low temperatures average in the upper 40's near the coast and in the low 40's inland.

During the summer, the large-scale meteorological condition that dominates the West Coast is a semi-permanent high pressure cell centered over the northeastern Pacific Ocean. This high pressure cell tends to divert storms to the north of California. This is why the Bay Area experiences little precipitation in the summer months and the coastal winds are usually from the northwest.

Winds flowing from the northwest are drawn inland through the Golden Gate and over the lower portions of the San Francisco Peninsula. These winds accelerate considerably and come more directly from the west as they stream through the Golden Gate. The channeling of the wind through the Golden Gate produces a wind maximum that spreads eastward toward the East Bay counties of Contra Costa and Alameda, and then splits to the northeast toward the Carquinez Strait and southeast toward Santa Clara County.

The air flowing eastward from the coast to the Central Valley, called the sea breeze, begins developing in late morning or early afternoon. As the day progresses, the sea breeze increases in velocity and spreads inland. Stagnant conditions do occur during summer when the sea breeze is weak or non-existent. This is usually accompanied by a large pool of warm air aloft with a north or northeasterly flow over the Central Valley.

In the winter season, the Bay Area frequently experiences stormy conditions with moderate to strong winds as well as periods of stagnation with very light winds. Winter stagnation episodes are characterized by nighttime drainage flows in the coastal valleys. Drainage is a reversal of the usual daytime airflow patterns; air moves from the Central Valley toward the coast and back down toward the Bay from the smaller valleys within the Bay Area.

The District is divided into three burn zones (Figure 1): the North, South, and Coastal Zones. Separate zones were developed due to the large difference in climate and smoke dispersion characteristics within the District. Each day is declared either a permissive burn or no-burn day for each zone. In addition, for burns above elevations of 2,000 feet, in a zone with a no-burn decision, a permissive-burn day may be declared if specific meteorological criteria are met.



Figure 1. Bay Area Boundaries and Burn Zones

E. Burn Types and Acreage

The District's Regulation 5 generally prohibits open burning throughout the Bay Area, with the exception of 17 types of fires that are allowed on designated burn days during prescribed burn periods. Appendix Exhibit 1 illustrates the burn periods. District staff tracks and annually reports to the California Air Resources Board (ARB) the reported quantities (acreage, tons or cubic yards) based on the type of burn by county. The annual report, which is submitted to ARB within 45 days of the end of each calendar year, includes the estimated tonnage or yardage of each waste type burned from open burning in agricultural operations and the estimated tonnage of waste from prescribed burning, and the county where the burning was performed. The report also includes the total number of acres burned during the spring and fall marsh burn seasons. A summary of the reports from 2005-2009 are indicated in the Appendix Exhibit 2.

A summary of all allowable fire types, with their respective administrative requirements, is found in Appendix Exhibit 3, including the Wildland Vegetation Management and Marsh Management fire types which were included in the March 2002 amendments to Regulation 5 to conform substantially to those requirements of Title 17. As indicated therein, those burn projects that require the most extensive evaluation are required to submit a Smoke Management Plan for District approval.

F. Public Outreach

As a part of the District's public outreach program, staff organizes and facilitates opportunities for local residents to share and receive information about air quality-related topics. Through these meetings the District provides information and seeks input on pending regulations, clean air plans and strategies, or other issues of interest to a particular community. The community outreach program also works to support

local clean air actions through grants, voluntary actions and education. The District has given support to local organizations that work to reduce fire danger and wood burning. One such program with Napa Firewise resulted in over 290,000 cubic yards of wood waste being chipped and not burned from 2004 to 2010 leading to a temporal reduction of over 190 tons of particulate matter.

Other outlets for distributing information intended to help minimize smoke impacts on public health include the District's website and various publications on open burning restrictions in the Bay Area. The District's open burn web page⁴ contains information on allowable fire types and permissive burn periods, prior District notification procedures; links to view and download Notification Forms for hazard reduction fires and orchard pruning and attrition fires, marsh burn and prescribed burn smoke management plan forms and instructions; and the daily burn status. District staff also works closely with the various local fire departments and responsible agencies to distribute information concerning open burning under their jurisdiction. A list of the agencies in the Bay Area is included in Exhibit 4⁵. At the beginning of each fire season open burning information packets are provided to fire agency partners. These information packets, which typically include District Regulation 5, Notification Forms, Compliance Advisories, a Frequently Asked Questions (FAQ) sheet, and a Burn Requirements Checklist and Open Burning pamphlet in Spanish and English, provide guidance to burners that helps reduce smoke impacts to the public. In addition, the District maintains a dedicated phone line for technical assistance and an inspection staff that is located exclusively in the field to assist with compliance.

G. Future Activities

A new information management system was implemented to evaluate the effectiveness of the recently adopted wood burning device rule. This new system utilizes targeted field and telephone surveys, an enhanced web site to register complaints, a new database and mapping features. This system is being evaluated for expansion to the smoke management program and all burn types.

The District reviews and periodically amends regulations to conform to changes in State and Federal amendments and local requirements. The most current activity is represented in the District's 2010 Clean Air Plan. In addition to the proposed amendments to Regulation 6: Particulate Matter to reduce the District's allowable weight rate limitations for particulate matter, the District is evaluating Regulation 5: Open Burning for improvements.

Other proposed enhancements to the District's smoke management program are focused on outreach efforts and education. The District continues to improve its messaging on the link between smoke impacts and public health.

⁴ <http://www.baagmd.gov/Divisions/Compliance-and-Enforcement/Open-Burning.aspx>

⁵ In addition to the list of agencies the District Enforcement Staff maintains a list of all burners on record and Fire Station locations.

2. Burn Permits

The District, like many air districts in the state, works in a cooperative working relationship with all fire officials within the jurisdiction to authorize and regulate open burning. All fires subject to Regulation 5 must be set or allowed by a public official having jurisdiction. No one may start a fire without their authorization. Most local fire officials have jurisdiction to authorize burn permits. However, other local, state, and federal officers such as the California Department of Fish and Game, County Agricultural Commissioner, California Department of Forestry and Fire Protection (CAL FIRE), County Flood Control Districts, and the U.S. National Park Service are also authorized to grant permission for open burning. Some fire agencies may issue or approve a burn permit for an extended period of time that corresponds to one or more specific burn seasons (permissive burn periods). Certain CAL FIRE ranger units may only issue burn permits seasonally (i.e., the time period when the “fire season” is declared) due to resource constraints during the rainy season while a few volunteer fire agencies in very rural areas don’t require a written burn permit at all. The burn authorization is secured when the burner calls the local or regional fire dispatch office prior to burning to determine the burn day status and to provide notification of their intent to burn. These burners are also required to provide prior written notification to the District according to Regulation 5, Section 406. In some areas, CAL FIRE or a local fire agency may use the District’s Open Burning Prior Notification form as a written burn permit (See examples of notification form in Appendix Exhibit 5).

All Marsh Management fires, irrespective of project size, must be certified by the California Department of Fish and Game (DFG) and require a smoke management plan (SMP) approved by the District prior to burning. In addition, a local fire agency burn permit is required prior to burning in the Suisun Marsh. For burns conducted outside of the Suisun Marsh, the local fire agency jurisdiction at the burn site determines compliance with any burn permit requirements.

3. Burn Registration and Smoke Management Plans

Special provisions in Regulation 5 that apply to all marsh management fires and prescribed burning activities require the burns to be registered and smoke management plans (SMP or “Plan”) to be submitted in advance and approved by the District.

Marsh management fires are open, outdoor fires set for the purpose of improvement of marshland for wildlife habitat. A “marshland” is defined as a type of wetland periodically or permanently covered up to a depth of 2 meters (6.6 feet) that supports low or tall emergent vegetation. Some examples are diked wetlands, seasonally managed wetlands, unmanaged tidal wetlands, sloughs and open bays.

For marsh burns of any size, SMPs must be submitted to the District for review at least 30 days prior to the proposed burning. The District also requires burn approval by the California Department of Fish and Game (DFG) seasonally for the fall and spring burning periods; this step of the approval process is viewed as a means of burn

registration. The DFG approval information, which is a written certification that the proposed burning is “desirable and proper” for the improvement of land for wildlife or game habitat, must be forwarded to the District prior to receiving final District authorization (i.e., written SMP approval) and obtaining a burn acreage allocation.

Required Elements of a Smoke Management Plan for a Marsh Burn. The following information must be included in any Plan for a marsh management fire:

1. Location and specific objectives of each proposed burn;
2. Acreage and arrangement of vegetation to be burned;
3. Directions and distances to nearby sensitive receptor areas;
4. Fire District with jurisdiction;
5. Meteorological prescription elements for the project;
6. Projected season (spring or fall) of the project;
7. Burn site preparations to be completed prior to burning (fire breaks, flooding ditches, mowing or discing);
8. Specifications for monitoring and verifying critical parameters including meteorological conditions and smoke behavior before and during the burn;
9. Contingency actions to reduce smoke exposure if smoke intrusions impact any sensitive receptor area;
10. Consideration of non-burning alternatives;
11. Certification by the landowner that the fire may be conducted by the burn applicant in accordance with all applicable rules and regulations;

Additional marsh burn approval information, instructions and forms for burners including a sample Marsh Management Fire SMP document (Form MM-1) are provided in Appendix Exhibit 6. Also see the specific marsh burning requirements in Regulation 5, Sections 401.13 and 410.

All Wildland Vegetation Management fires (prescribed burns) irrespective of project size are subject to the SMP requirements in Regulation 5, Section 408.1. In addition, Forest Management, Range Management, Hazardous Materials (not related to Public Resource Code 4291) and Crop Replacement fires that are expected to exceed 10 acres in size or burn piled vegetation cleared or generated from more than 10 acres of land are considered to be prescribed burning in Regulation 5 by definition and, as such, are regulated as Wildland Vegetation Management fires subject to the same SMP requirements.

All Wildland Vegetation Management fire SMPs must be submitted to the Air Pollution Control Officer for review at least 30 calendar days prior to the proposed burning. A SMP must address individual burn block requirements where they are likely to require different smoke management prescriptions. Burning is allowed only in accordance with an approved SMP. Typically, SMPs are conditionally approved with additional requirements that impose wind speed and wind direction range limits, as determined by District meteorology staff. The step of the approval process when the District approves a prescribed burn project’s SMP is viewed as a means of burn registration.

Required Elements of a Smoke Management Plan for a Prescribed Burn. The following information must be included in any Plan for a prescribed burn:

1. Location and specific objectives of each proposed burn;
2. Acreage or tonnage, type, and arrangement of vegetation to be burned;
3. Directions and distances to nearby sensitive receptor areas;
4. Fuel condition, combustion and meteorological prescription elements for the project;
5. Projected schedule and duration of project ignition, combustion, and burn down time;
6. Specifications for monitoring and verifying critical parameters including meteorological conditions and smoke behavior before and during the burn;
7. Specifications for disseminating project information to the public;
8. Contingency actions to reduce smoke exposure if smoke intrusions impact any sensitive receptor area;
9. Certification by a resource ecologist, biologist, or forester that the proposed burning is necessary to achieve the specific management objective(s) of the burn Plan;
10. A copy of any environmental impact document prepared for the project that includes an evaluation of alternatives to burning, if such a document is required by state or federal law or statute;
11. Project fuel loading estimate by vegetation type(s) and a description of the calculation method; and
12. Particulate matter emissions estimate, including emission factor(s) and a description of the calculation method used.

Plans must also be consistent with the most current federal guidance on prescribed fires (*Interim Air Quality Policy on Wildland and Prescribed Fires*, USEPA 1998).

Additional prescribed burn approval information for burners including a sample Prescribed Burning SMP document (Form Rx-1) and instructions are provided in Appendix Exhibit 7. Also see the specific prescribed burning requirements in Regulation 5, Sections 401.15 and 408.

The burn registration process for naturally occurring wildland fires managed for resource benefits, which are regulated as prescribed burning by definition in Regulation 5, is discussed in Section 6.B. below.

By requiring advanced smoke impact planning and burn characterization through the prescribed burn and marsh burn smoke management plan approval process, the District ensures adequate smoke management requirements for planned burns are satisfied before allocations are provided. As a result, the potential smoke impacts to the public from both individual and multiple burns are minimized on any given day.

4. Burn Allocation

The District reviews current pollutant measurements and the latest forecast data to make a burn decision for the following day and to recommend acreage allocations on the morning of a burn. Current measurements include upper air meteorological data; surface meteorological data from District sites and nearby airports; and air quality data collected at District air monitoring stations. Forecast data include an estimate of the particulate emissions from expected burns and National Weather Service (NWS) surface and upper air temperatures and wind predictions.

The District also uses data provided by the California and Nevada Smoke and Air Committee (CANSAC). The CANSAC forecast data are specifically tailored for use in smoke management programs by air quality regulators, meteorologists, and burners in California and Nevada. This data includes predictions of critical smoke dispersion indicators such as mixing depth and surface wind speed and direction, and are displayed for each of the District's three burn zones for the following three days.

The District makes the burn decision for each of the three District burn zones based on the predicted meteorological conditions and the permissive-burn criteria for the San Francisco Bay Area Air Basin as described in Appendix Exhibit 8. The criteria are based on meteorological conditions that are conducive to optimal smoke dispersion. Occasionally, a no-burn day decision may be issued if a Fire Marshall contacts the District and requests no burning in their jurisdiction. The Fire Marshall advises the District when burning may again be permitted.

The District announces the permissive-burn day notice to the public on the District's 24-Hour Burn Recording (800) 792-0787. The notice is also posted on the District web site.⁶ The burn decision notice is available by 3:00 p.m. for the following day. However, conditions may warrant a delayed burn notice, in which case the announcement is made by 7:30 a.m. the following day. This approach ensures that the latest meteorological conditions are considered in order to reduce potential smoke impacts to the public.

Under the District's daily "Burn Authorization System" prescribed burners, marsh burners, and stubble burners in Sonoma County call (415) 749-4600 to obtain an acreage burning allocation. The burners must call on the day of the burn, prior to ignition, to receive the acreage allocation. Typically, these burn acreage allocation requests are prioritized according to the order that calls are received. However, after receiving the acreage allocation, burning is not permitted unless all other applicable conditions are satisfied. For example, Regulation 5, Section 111, specifies that all prescribed, marsh, and Sonoma County stubble burns are subject to the following restrictions unless a specific exemption is approved by the District in writing:

1. The on-site wind speed must be at least 5 mph (unless crossfiring is the ignition technique used); and

⁶ www.baaqmd.gov/tec/openburn.htm

2. Smoke from the burn must not move toward a populated area.

These restrictions help minimize smoke impacts because low wind speeds can cause smoke to accumulate at ground level in populated areas especially when combined with the wrong wind direction. Similarly, marsh burns (See Appendix Exhibit 10 for map of Suisun marsh properties) and Sonoma County stubble burns may not begin prior to 10:00 a.m. because morning inversions can inhibit vertical smoke dispersion and result in high concentrations at ground level. Prescribed burns may only begin when the burner has received an acreage allocation and the meteorological conditions (prescription) specified in the burner's District-approved Smoke Management Plan is present so that potential smoke impacts are minimized. The District may waive the 5-mph minimum wind speed requirement for prescribed and marsh burns if requested in the burner's Smoke Management Plan and the burner demonstrates a compelling need for burning when winds are less than 5 mph. Reasons for burning with light winds may include, but are not limited to:

1. Firefighter safety in steep or roughed terrain,
2. Sparse population density near the burn site; and
3. Wind direction required to avoid sensitive receptors usually occurs only when winds are light.

The District's Wintertime Spare the Air Alert campaigns, which are directed at the use of wood burning devices such as fireplaces, begin each year in November and runs through the end of February. A Wintertime Spare the Air Alert is triggered when meteorological and air quality data support a forecast that the 24-hour national Particulate Matter (PM_{2.5}) standard will be exceeded (the NAAQS is currently 35 µg/m³). Open burn declarations are aligned with this process; when the alert is declared, the use of wood burning devices and open burning is prohibited. The procedures for declaring a Wintertime Spare the Air Alert are described in Appendix Exhibit 10.

5. Burn/No-Burn Decision

Procedurally, after a prescribed burn smoke management plan is approved, burners may call the Duty Forecaster to request a burn day forecast or decision. Burners may make requests 96 hours, 72 hours, or 48 hours in advance of the scheduled burn date, but they are not required to do so. However, burners are required to request a 24-hour burn day decision from the Duty Forecaster on the day prior to the burn.

The difference between a burn forecast and a burn decision is that a burn forecast is considered a prediction and is subject to change, while a burn decision is a final burn or no-burn determination and will not be changed the next day. However, if meteorological conditions change on the day of the burn, the Duty Forecaster can recommend an acreage allocation less than the number of acres that the burner requested for that day (including an allocation of zero acres).

When a burner calls, the Duty Forecaster responds by 3:00 p.m. on the day of the request to discuss the expected burn day status for the day of the planned burn. If the 24-hour decision is to approve the burn, the Duty Forecaster provides the burner with a confidence level of receiving the requested acreage allocation for the next day.

After giving a burn decision to the burner, the Duty Forecaster e-mails the Burn Coordinator Group a list of prescribed burn projects that have a favorable decision for burning on the next day. For those projects, the Duty Forecaster also sends the recommended acreage allocation to the Burn Coordinator Group by 8:30 a.m. on the day of the burn. In practice, this recommendation effectively prioritizes or limits the number of prescribed burns on a given day.

For marsh burns procedurally, the Duty Forecaster will determine the allowable acreage to be burned and sends it to the Burn Coordinator Group by 8:30 a.m. on permissive marsh burn days. Although the acreage allocation is discussed with the ARB Duty Forecaster on the previous afternoon, it is not finalized until the morning of the burn. This allows the Duty Forecaster an opportunity to check the latest smoke dispersion and air quality conditions before issuing the acreage allocation. If conditions have changed, the Duty Forecaster calls the ARB Duty Forecaster to discuss revising the marsh acreage allocation.

If the following day will not be a permissive burn day for marsh burning, the Duty Forecaster e-mails the decision to the Burn Coordinator Group by 3:00 p.m. No acreage allocation is sent to the Burn Coordinator Group on the following morning because a no-burn decision cannot be changed, even if smoke dispersion or air quality conditions improve.

Each afternoon the Duty Forecaster includes the marsh burn decision on the 24-hour Burn Status Recording. When the following day is a permissive marsh burn day, the Duty Forecaster includes a statement reminding marsh burners to call the District to receive final approval and to request an acreage allocation on the morning of the burn.

On the morning of a permissive marsh burn day, the marsh burn acreage is only allocated to burners with approved Plans and prioritized according to the order that calls are received until the daily burn acreage allocation is expended.

6. Smoke Management Planning

A. Cross Jurisdictional and Smoke Sensitive Area Process Description

To assist the duty forecaster in providing 96-hour, 72-hour, 48-hour, and 24-hour forecasts and decisions, the ARB Meteorology Section and the U.S. Forest Service Predictive Services Office are available for a 1:00 p.m. conference call. Air district personnel and prescribed burners from across the state may also participate in the discussion. The discussion focuses on the present meteorology across California and is followed by an assessment of computer model forecasts from the National Weather Service for the next 3-4 days. The discussion also addresses cross-jurisdictional

impacts from prescribed fires and wildland fires. If a prescribed burn in the Bay Area could have a significant smoke impact in an adjacent air district, the Duty Forecaster must contact the meteorologist (or Burn Coordinator) for that district and ARB before giving approval for a prescribed burn project.

Also, smoke management plans for marsh burns and prescribed burning activities are required to include public notification procedures. This required Plan element is reviewed for adequacy by District staff prior to Plan approval.

B. Naturally Ignited Wildland Fires Managed for Resource Benefits

Any naturally-ignited wildfire managed for resource benefits (as opposed to immediate fire suppression) is considered to be prescribed burning if the fire is expected to exceed 10 acres. In wildland areas where a fire official is seeking to conduct this type of burning, the fire official is required to register the potential project with the District annually, with updates as wildfires or changes to the project occur.

To register a burn project, the burner must provide the District with a description of the potential project burn location, the number of acres to be burned, the amount and type of fuels expected to be consumed, and the expected duration of the fire. When a project is registered, the Program Coordinator notifies MQA staff of the project details. After a fire official decides to manage a fire for resource benefits, the fire official must provide a Plan to the District. The Plan must be sent to the District 72 hours before the fire consumes more than 10 acres of vegetation. When a Plan is received, the Program Coordinator sends a copy to MQA for review. The Plans submitted include elements that describe smoke management procedures that the burner is responsible for satisfying irrespective of the burn day status.

C. Alternatives to Burning

Smoke management plans for marsh burns and prescribed burning activities are required to include an evaluation of alternatives to burning. These evaluations are reviewed for adequacy by District staff prior to Plan approval.

In order to encourage the use of alternatives to burning, the District has also issued \$16,000 grants for an open burning fuel reduction chipping program (See Section 1.F. above).

In addition, each year staff reviews and publishes a regulatory calendar of potential amendments to its regulations. The Rule Development Section of the Planning Division solicits input for proposed new or amended regulations. Staff reviews program tracking and field experience to develop a scoping report to submit to the District's Rule Development Council⁸. The Council's decision starts the public process in the form of workshops and board hearings and makes formal the publishing of a proposed

⁸ The District's Rule Development Council consists of the APCO, DAPCOs, Legal Counsel, and the Division Directors.

regulatory amendment. Included in this process are a review of regulations within other agencies' jurisdictions and an evaluation of new technologies. State law requires the District to implement all feasible measures, so as new alternatives are developed, applicable rule changes are made.

D. Prescribed Fire Information Reporting System (PFIRS)

PFIRS is an on-line database developed and managed by ARB to log, track, and archive data about prescribed burns state-wide. PFIRS is intended to facilitate communications between air quality managers, land management agencies and individuals involved with prescribed burning by providing access to information about burn planning, burn approvals, and emissions. The District is exploring the usefulness of PFIRS as a method to streamline the prescribed burn SMP submittal and approval process. With further refinements, PFIRS also has potential in the long term to be used to issue prescribed burn acreage allocations and address cross-jurisdictional smoke issues, and to be expanded to include marsh burning activities. The District is also committed to working with ARB on outreach to prescribed burners that promotes the use of PFIRS in the Bay Area.

6. District Resources

The Compliance & Enforcement Division (CED) and the Meteorology & Quality Assurance Section (MQA) of the Technical Services Division jointly administer the District's Smoke Management Program (SMP). CED staff receives and approves Plans; responds to smoke complaints from the public; performs inspections to ensure that burners comply with District regulations; and maintains records on the actual acres burned in the District. MQA staff monitors air quality levels; issues next day permissive burn or no-burn notices; reviews Plan prescriptions; recommends acreage burning allocations; and, if necessary, imposes conditions on Plans.

The MQA forecast staff typically consists of a section manager and three full-time meteorologists. Each week a meteorologist is assigned as the Duty Forecaster. The Duty Forecaster monitors air quality conditions, issues permissive burn day notices, and determines burn acreage allocations.

The Duty Forecaster is available seven days a week, including holidays, to recommend acreage burning allocations each morning, when required. The Duty Forecaster is also available to provide a 24-hour burn/no-burn decision for prescribed burns on the day prior to the burn upon request of a burner. If neither an acreage allocation nor a 24-hour burn/no-burn decision is required over a weekend or holiday, the Duty Forecaster may issue a permissive burn notice for the following two or three days.

CED staff assigned to SMP operations consists of an Air Quality Specialist designated as the Open Burning Program Coordinator (Program Coordinator); an Air Quality Technician, designated as the Burn Coordinator; and a Radio/Telephone Operator (RTO), who acts as Burn Coordinator during weekends and holidays. CED inspectors respond to public smoke complaints, identify the possible sources of smoke, and

contact burners if necessary. CED Inspectors observe burns to provide smoke performance feedback to forecasters and have the authority to cite individuals who are illegally burning or are in violation of any approved smoke management plan requirement such as burn specific monitoring and the project's meteorological prescription.

All smoke complaints received by the District are automatically forwarded to the Duty Forecaster and the MQA section manager on the day they are received. This facilitates a near real-time meteorological evaluation of the burn day decision and the acreage burning allocation so that future complaints can be minimized.

Several tools are used to aid staff in their compliance determinations. In addition to remote access to web-based tools, Inspectors use wind gauges, hygrometers and digital cameras that aid in compliance determinations and documentation of conditions at the site of the burn. The web-based tools provide access to the District's and third-party ambient air monitoring results including meteorological conditions and particulate matter.

The District is also in the process of expanding the air monitoring network to improve particulate matter (PM) monitoring. This includes moving to instrumentation capable of hourly measurements and, where applicable, capable of measuring organic carbon, which is an indicator for wood smoke. The nineteen PM air monitoring stations, 70% of which are continuous monitors, provide a dense network with a high spatial resolution for observing smoke impacts. Three of these sites were added in the last two years. The high number of monitors providing hourly PM data provides a high degree of temporal resolution throughout the Bay Area where open burning is occurring, allowing staff to provide better burn forecasts and monitor smoke impacts near real-time. Plans to install two additional aethalometers, for a total of four, will provide increased insight to organic carbon particulate matter. Additionally, four chemical speciation sites and C-14 analysis at four sites provide advanced research and development for particulate matter analysis and planning.

7. Inspection and Enforcement

Open burning inspections occur as part of a complaint investigation, in response to a notification or plan submittal, or when an inspector initiates an investigation based on an unknown or suspected source of smoke observed in the field. A compliance determination is made then appropriate enforcement action is taken. This may include providing information only, handing out educational materials on proper burning procedures and regulatory requirements, or issuing a notice of violation.

When an open burning violation is documented, the inspector will typically issue a Notice of Violation (NOV) to the responsible party. However, if a violation is considered minor, the inspector will issue a Notice to Comply (NTC) provided the violation meets the criteria in the District's NTC Guidelines. Any penalties associated with a NOV are determined by legal staff through negotiated settlements as part of the District's Mutual Settlement Program.

The inspection of an open burn for compliance with Regulation 5 (See Appendix Exhibit 11 for copy of Regulation 5) usually focuses on identification of the responsible party, determination of fire type, whether or not the burn is an allowable fire, and the applicable requirements for each allowable fire (e.g., burn hours, permissive burn period, public official authorization, fuel moisture, burn acreage limitations, burn day status, etc.). Additionally, the inspector will ensure compliance with any notification and record keeping requirements, and petition or smoke management plan submittal provisions.

The following are guidelines given to inspection staff as part of ongoing in-service training.

A. Determination of Allowable Fire Type

One of the primary objectives of any open burning investigation is to determine whether or not the fire is allowed under District Regulation 5. This requires the inspector to first verify the type of fire (or the real purpose of the fire) being investigated.

1. The inspector should contact the person responsible for the fire and proceed with a line of questioning to make a determination about the material being burned or that was burned. For example, ask the person to describe what the material is, how the material is generated (from what type of operation), what they intend to accomplish by burning the material, where the material is grown or originated, and the specific land uses associated with the material.
2. The inspector should then inspect the burn site and write down all observations related to the fire. Be sure to note the location of the fire, the appearance of the material burned, the number and size of any burn piles, whether or not the fire is actively burning or smoldering, and the presence of recognizable burned debris in the ashes.
3. Once the fire type is verified, the inspector should determine the type of fire allowed in Regulation 5 by cross-referencing the information and facts gathered during the investigation with the allowable fire types specified in Section 401 and the exemptions in Section 110.
4. The inspector should contact his/her supervisor, the acting burn coordinator or the assigned Air Quality Specialist if any questions about the fire type need to be clarified.

B. Checking for Burn Authorization

The inspector should determine if the appropriate public official has authorized the fire by talking to the person who is responsible for the burn.

1. When a written burn permit has been issued, the inspector should ask to review the document and verify that it is valid, accurate, and complete. Remember that the public official having jurisdiction, usually a public fire agency official, must allow each allowable fire type.

2. When the responsible person claims that he obtained verbal authorization to conduct the burn, the inspector should note the name of the public official who allegedly approved the fire. The inspector should then visit the public agency in question to confirm the authorization if it is necessary to verify compliance or document a violation.

C. Determination of "Gainful Occupation"

During an agricultural burning investigation, the inspector should determine whether the purpose of the fire is to initiate, continue or maintain an agricultural operation as a gainful occupation. This means that the person conducting the burn must be able to demonstrate proof of gross profit or loss from the agricultural operation (as evidenced by tax receipts, sales slips, property lease agreements or other such documents. Agricultural programs conducted by public educational institutions or non-profit organizations do not need to establish gainful occupation.

1. During the investigation of all agricultural fires, the inspector should request (verbally or in writing) of the person conducting the burn, proof of gross profit or loss from the agricultural operation. If such documentation is not readily available, then set up a subsequent meeting for reviewing it.
2. When a person donates products he/she has grown to food banks, churches, etc., and claims the donation(s) as a tax deduction in their income tax returns, the operation does not qualify as a gainful occupation because this type of tax documentation is not considered evidence of gross profit or loss. The burning of agricultural waste generated from this type of operation is therefore not allowed.

D. Complaint Investigations

Both legal and illegal open burning activities may result in complaints about smoke and odors. These complaints are handled, as described in the Complaint Guidelines of the District Enforcement Division's Policies and Procedures Manual. Investigations may result in non-compliance with standards in Regulation 5: Open Burning, Regulation 6: Particulate Matter and Visible Emissions, or Regulation 1: Public Nuisance.

E. Investigating Fire Agency "Run" Reports

A "Run" Report is written by a fire agency to document their response to an incident such as an accidental fire, traffic accident or illegal fire. These reports are important documents because they provide District staff the investigative facts regarding open burning investigations and violations. Once a fire agency notifies the District of the previous occurrence of an illegal outdoor burn, the message should be dispatched to the area inspector for follow-up. "Run" Reports are available upon request (and sometimes after paying a fee) at the administrative offices of the fire agency that responded to the incident.

1. The inspector should first visit the fire agency that responded to the alleged burn and obtain a copy of the "Run" Report. After reviewing the document, the inspector should ask the fire official to clarify any information about the incident and record the official's name.
2. After the burn investigation, the "Run" Report should be attached to the inspector's inspection report or notice of violation report package for documentation

APPENDIX

EXHIBIT 1: Open Burning Calendar

Regulation 5 - Section - Type	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec				
401.1 Disease and Pest	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green				
401.2 Crop Replacement	Green	Green	Green	Green	Red	Red	Red	Red	Red	Green	Green	Green				
401.3 Orchard Pruning & Attrition	Green	Green	Green	Green	Red	Red	Red	Red	Red	Red	Green	Green				
401.4 Double Crop Stubble	Red	Red	Red	Red	Red	Green	Green	Green	Red	Red	Red	Red				
401.5 Stubble	Red	Red	Red	Red	Red	Red	Red	Red	Green	Green	Green	Green				
401.6 Hazardous Material	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green				
401.7 Fire Training	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green				
401.8 Flood Debris	Green	Green	Green	Green	Green	Red	Red	Red	Red	Green	Green	Green				
401.9 Irrigation Ditches	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green				
401.10 Flood Control	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green				
401.11 Range Management	Green	Green	Green	Green	Red	Red	Green	Green	Green	Green	Green	Green				
401.12 Forest Management	Green	Green	Green	Green	Red	Red	Red	Red	Red	Red	Green	Green				
401.13 Marsh Management	Red	Red	Green	after 15th	Red	Red	Red	Red	Green	after 15th	Red	Red				
401.14 Contraband	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green				
401.15 Wildland Vegetation Management	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green				
401.16 Filmmaking	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green				
401.17 Public Exhibition	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green				
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; background-color: red; color: black;">No Burn</td> <td style="width: 25%;"></td> <td style="width: 25%; background-color: green; color: black;">Permissive Burn</td> <td style="width: 25%;"></td> </tr> </table>													No Burn		Permissive Burn	
No Burn		Permissive Burn														

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EXHIBIT 2: Summary Report to ARB

Reg 5, Section	FIRE TYPE	2005			2006			2007			2008			2009		
		Yds ³	Tons	Acres	Yds ³	Tons	Acres	Yds ³	Tons	Acres	Yds ³	Tons	Acres	Yds ³	Tons	Acres
401.1	Disease & Pest	6126	101	303	2743	344	1106	1430	766	364	962	1	65	1702	168	223
401.2	Crop Replacement	2027	123	100	14597	93	203	2729	8972	147	3899	33	87	11966	219	
401.3	Orchard Pruning & Attrition	56518	4021	390	29962	4157	1109	46421	20824	840	48365	2,341	1095	62078	2,789	33
401.4	Double Crop Stubble			100			306	37	10	415	3	8		24		113
401.5	Stubble and Straw	14		1609			974		113	112	52		542			511
401.8	Flood Debris	424	29		2985	220	6	497	1175	1	608	120		385	85	
401.9	Irrigation Ditches	10		3				10		2	25			50	3	
401.11	Range Management	18646	456	135	8443	155	306	3903	2734	3647	6231	187	111	6453	407	127
401.12	Forest Management	1607	159	2	1647	385	25	8677	248	2	1490			2272	29	
401.13	Marsh Management			219			518			570			451			231
401.15	Wildland Management			1179			1692			2783			1868			526
	Agricultural TOTAL	85372	4889	4040	60377	5354	6245	63704	34842	8883	61634	2690	4219	84930	3700	1764

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Exhibit 3: Notification and Plan Requirements for Fire Types

Regulation 5-§,	Fire Type	Prior Notification (Pursuant to Reg 5)	District Smoke Management Plan (Agency Other than District*)	District Acreage Allocation Required
401.1	Disease and Pest Prevention*	Yes (5-406)	(Agricultural Commissioner of the County)	No
401.2	Crop Replacement*	Yes (5-406)	If > 10 acres	Yes, If > 10 acres
401.3	Orchard Pruning*	Yes (5-406)	(Public Fire Official)	No
401.4	Double Crop Stubble*	Yes (5-406)	(Public Fire Official)	No
401.5	Stubble*	(5-401.5a)	(Public Fire Official)	Yes
401.6	Hazardous Materials	Yes (5-406)	If > 10 acres (and not related to PRC-4291)	Yes, If > 10 acres (and not related to PRC-4291)
401.7	Fire Training	Yes (5-401.7, 406)	(Public Fire Official)	No
401.8	Flood Debris*	Yes (5-406)	(Public Fire Official)	No
401.9	Irrigation Ditches*	Yes (5-406)	(Public Fire Official)	No
401.10	Flood Control	Yes (5-406)	(Public Fire Official)	No
401.11	Range Management*	Yes (5-406)	If > 10 acres	Yes, If > 10 acres
401.12	Forest Management*	Yes (5-406)	If > 10 acres	Yes, If > 10 acres
401.13	Marsh Management*	Yes (5-410)	Yes	Yes
401.14	Contraband	Yes (5-406)	(Peace Officer or Public Fire Official)	No
401.15	Wildland Vegetation Management*	Yes (5-408)	Yes	Yes
401.16	Filmmaking	Yes (5-409)	(Public Fire Official)	No
401.17	Public Exhibition	Yes (5-409)	(Public Fire Official)	No

Exhibit 4: List of Fire Agencies

Alameda County.			
Alameda County Fire Department	835 E 14th St	San Leandro	CA 94577-3767
Albany Fire Department	1000 San Pablo Ave	Albany	CA 94706-2226
Berkley Fire Department	2100 Milk Jr Way	Berkeley	CA 94704
City of Alameda Fire Department	1300 Park St	Alameda	CA 94501-4508
Emeryville Fire Department	2333 Powell St	Emeryville	CA 94608
Fremont Fire Department	3300 Capitol Ave	Fremont	CA 94537
Hayward Fire Dept	777 B St	Hayward	CA 94541
Lawrence Livermore Fire Department	7000 E L-388 Ave	Livermore	CA 94550
Newark Fire Department	37101 Newark Blvd	Newark	CA 94560
Oakland Fire Department	150 Frank H Ogawa Plz	Oakland	CA 94612-2007
Parks Reserve Forces Training Area Fire Emergency Services	636 5th St.	Dublin	CA 94568-5201
Piedmont Fire Department	120 Vista Ave	Piedmont	CA 94611
San Antone Valley Volunteer Fire Department	47405 Mines Rd	Livermore	CA 94550-8454
Union City Fire Department	34009 Alvarado-Niles Rd	Union City	CA 94587-4452
Contra Costa County			
C & H Sugar Co. Fire Department	830 Loring Ave	Crockett,	CA 94525
Chevron Fire Department	841 Chevron Way	Richmond,	CA 94802-0272
Contra Costa County Fire Protection District	2010 Geary Rd	Pleasant Hill,	CA 94523
Crockett - Carquinez Fire Dept.	746 Loring Avenue	Crockett,	CA 94525
East Contra Costa Fire Protection District	134 Oak St	Brentwood,	CA 94513
El Cerrito Fire Dept	10900 San Pablo Ave	El Cerrito,	CA 94530-2323
Federal Fire Department	10 Delta St	Concord,	CA 94520
Kensington Fire Protection District	217 Arlington Ave	Kensington,	CA 94707
Kensington Fire Protection District	10900 San Pablo Ave	El Cerito,	CA 94530-2323
Martinez Refining Company Fire Brigade	3485 Pacheco Blvd	Martinez,	CA 94553
Moraga - Orinda Fire District	33 Orinda Way	Orinda,	CA 94549
Pinole Fire Dept	880 Tennent Ave	Pinole,	CA 94564-1724
Richmond Fire Dept	330 25th St	Richmond,	CA 94804-1727
Rodeo Hercules Fire District	1680 Refugio Valley Rd	Hercules,	CA 94547
San Ramon Valley Fire Protection District	1500 Bollinger Canyon Rd	San Ramon,	CA 94583
Ultramar Fire Dept	Golden Eagle Refinery	Martinez,	CA 94553
Marin County			
Bolinas Fire Protection District	100 Mesa Rd	Bolinas	CA 94924
Corte Madera Fire Department	342 Tamalpais Dr	Corte Medera	CA 94925
Inverness Volunteer Fire Department	50 Inverness Way 1004 Sir Francis Drake	Inverness	CA 94937-0469
Kentfield Fire Protection District	Blvd	Kentfield	CA 94904-1468
Larkspur Fire Dept	400 Magnolia Ave	Larkspur	CA 94939
Marin County Fire Department	33 Castle Rock Rd	Woodacre	CA 94973
Marinwood Fire Department	777 Miller Creek Rd	San Rafael	CA 94903
Mill Valley Fire Department	1 Hamilton Dr	Mill Valley	CA 94942

Muir Beach Volunteer Fire Department	Star Rt Box A	Muir Beach	CA 94965-9716
Novato Fire Protection District	7025 Redwood Blvd	Novato	CA 94945
Ross Fire Department	33 Sir Francis Drake Blvd	Ross	CA 94957-0320
Ross Valley Fire Department	777 San Anselmo Ave	San Anselmo	CA 94960-2045
San Rafael Fire Department	1039 C Street St	San Rafael	CA 94901
Sausalito Fire Dept	333 Johnson St	Sausalito	CA 94965
Skywalker Ranch Fire Brigade	5858 Lucas Valley Rd	Nicasio	CA 94946
Southern Marin Fire Protection District	308 Reed Blvd	Mill Valley	CA 94941
Stinson Beach Volunteer Fire Department	3410 Shoreline Hwy	Stinson Beach	CA 94970
Tiburon Fire Protection District	1679 Tiburon Blvd	Tiburon	CA 94920
Throckmorton Ridge	816 Panoramic Highway	Mill Valley	CA 94941
Marin City	850 Drake Ave.	Marin City	CA 94965
Point Reyes	4th and B Streets	Point Reyes Station	CA 94956
Hicks Valley	7330 Red Hill Road	Petaluma	CA 94952
Tomales	599 Dillon Beach Road	Tomales	CA 94971

Napa County

American Canyon Fire District	225 James Rd	American Canyon	CA 94503
Calistoga Fire Department	1235 Washington St	Calistoga	CA 94515
City of Napa	1539 First St	Napa	CA 94559
Napa County Fire Department	1199 Big Tree Rd	Saint Helena	CA 94574
St. Helena Fire Department	1480 Main St	Saint Helena	CA 94574

San Mateo

Brisbane Fire Department	10 Wembley Dr	Daly City	CA 94015
Colma Fire Protection District	50 Reines St	Colma	CA 94014-2552
Daly City Fire Dept	10 Wembley Dr	Daly City	CA 94015-4314
Foster City Fire Department	1040 E Hillsdale Blvd	Foster City	CA 94404
Half Moon Bay Fire Protection District	1191 Main St	Half Moon Bay	CA 94019-2158
La Honda Fire Brigade	484 La Honda Rd	La Honda	CA 94020
Menlo Park Fire Protection District	300 Middlefield Rd	Menlo Park	CA 94025
Millbrae Fire Department	510 Magnolia Ave	Millbrae	CA 94030
Pacifica Fire Department	10 Wembley Dr	Daly City	CA 94015
Point Mantara Fire Protection District	1191 Main St	Half Moon Bay	CA 94019-2158
Redwood City Fire Department	775 Marshall St	Redwood City	CA 94063-1818
San Bruno Fire Department	555 El Camino Real	San Bruno	CA 94066-4247
San Mateo County Fire Department	20 Tower Rd	San Mateo	CA 94402
San Mateo Fire Department	1900 O'Farrell St, Ste 140	San Mateo	CA 94402-1332
South County Fire Protection Area	600 Elm St	San Carlos	CA 94070-1309
South San Francisco Fire Department	33 Arroyo Dr	South San Francisco	CA 94080
Woodside Fire Protection District	3111 Woodside Rd	Woodside	CA 94062

San Francisco

Presidio Fire Department	201 Fort Mason	San Francisco	CA 94123
San Francisco Fire Department	698 Second St	San Francisco	CA 94107-2015

Santa Clara

CDF Santa Clara	15670 Monterey St	Morgan Hill	CA 95037-5431
City of Sunnyvale Department of Public Safety	700 All America Way	Sunnyvale	CA 94088
Gilroy Fire Dept	7070 Chestnut St	Gilroy	CA 95020-6610

Milpitas Fire Department	777 S Main St	Milpitas	CA 95035
Moffett Field Fire Department	Mail Stop 580-1	Moffett Field	CA 94035-5103
Palo Alto Fire Dept	250 Hamilton Ave	Palo Alto	CA 94301
San Jose Fire Department	4 N Second St	San Jose	CA 95113
Santa Clara County Fire Department	14700 Winchester Blvd	Los Gatos	CA 95032-1818
Santa Clara Fire Department	777 Benton St	Santa Clara	CA 95050
Saratoga Fire District	14380 Saratoga Ave	Saratoga	CA 95070
South Santa Clara County Fire District	15670 Monterey St	Morgan Hill	CA 95037-5431

Solano

Benicia Fire Department	250 E L St	Benicia	CA 94510
California Medical Facility Fire Department	1600 California Dr	Vacaville	CA 95696
City of Suisun City Fire Department	621 Pintail Dr	Suisun City	CA 94585-2100
Cordelia Fire Protection District	2155 Cordelia Rd	Suisun	CA 94585
Fairfield Fire Department	1633 Union Ave	Fairfield	CA 94533
Suisun Fire Protection District	445 Jackson St	Fairfield	CA 94533
Travis AFB Fire Department	191 W St	Travis Afb	CA 94535
Valero Refinery Fire Department	3400 E Second St	Benicia	CA 94510
Vallejo Fire Department	970 Nimitz Ave	Vallejo	CA 94592

Sonoma

Gold Ridge Fire Protection District	4500 Hessel Rd	Sebastopol	CA 95472
Graton Fire Protection District	3205 Ross Rd	Graton	CA 95444
Kenwood Fire Protection District	9045 Sowoma Hwy	Kenwood	CA 95452
Lakeville Volunteer Fire Department	5100 Lakeville Hwy	Petaluma	CA 94954-9519
Petaluma Fire Department	198 D St	Petaluma	CA 94952
Rincon Valley Fire Protection District	91 Middle Rincon Rd	Santa Rosa	CA 95409-3406
Rohnert Park Dept of Public Safety	500 City Hall Dr	Rohnert Park	CA 94928
San Antonio Volunteer Fire Company	1550 Petaluma Blvd S	Petaluma	CA 94952
Santa Rosa Department of Emergency Services	126 Leland St	Santa Rosa	CA 95404
Santa Rosa Fire Department	955 Sonoma Ave	Santa Rosa	CA 95404
Schell - Vista Fire Protection District	22950 Broadway	Sonoma	CA 95476
Sebastopol Fire Department	7425 Bodega Ave	Sebastopol	CA 95472
Sonoma County Department of Emergency Services	2300 County Center Dr	Santa Rosa	CA 95403
Sonoma Valley Fire & Rescue Authority	630 Second St W	Sonoma	CA 95476-6901
Wilmar Volunteer Fire Department	3825 Bodega Ave	Petaluma	CA 94952
Windsor Fire Protection District	8200 Old Redwood Hwy	Windsor	CA 95492-0530

Exhibit 5: Allowable Fires Notification Forms



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000
Fax # (415) 928-0338
24-Hour Burn Status Recording (800) 792-0787

**REGULATION 5
OPEN BURNING**

NOTIFICATION FORM "A"

ALLOWABLE FIRES (EXCEPT VINEYARD OR ORCHARD AND HAZARD REDUCTION)

Please Print Legibly

BURNER INFORMATION

Name of Responsible Person Setting the Fire: _____	
Address: _____	Tel: () _____
City: _____	Zip: _____

BURN SITE INFORMATION

Location: _____	_____
City: _____	County: _____
Material to be Burned: _____	_____
Quantity: _____	() Tons or () Yds ³
Planned Burn Date(s): _____	_____

ALLOWABLE FIRES (Check only one)

- | | | |
|---|--|--|
| <input type="checkbox"/> 401.1 Disease and Pest ^{1,4} | <input type="checkbox"/> 401.8 Flood Debris ¹ | <input type="checkbox"/> 401.12 Forest Management ¹ |
| <input type="checkbox"/> 401.2 Crop Replacement ¹ | <input type="checkbox"/> 401.9 Irrigation Ditches ¹ | <input type="checkbox"/> 401.14 Contraband ¹ |
| <input type="checkbox"/> 401.4 Double Cropping Stubble ¹ | <input type="checkbox"/> 401.10 Flood Control ¹ | <input type="checkbox"/> 401.16 Filmmaking ^{1,3} |
| <input type="checkbox"/> 401.7 Fire Training ^{1,2} | <input type="checkbox"/> 401.11 Range Management ¹ | <input type="checkbox"/> 401.17 Public Exhibition ^{1,3} |

¹ The person setting the fire must make written, electronic, or FAX notification to the District prior to burning. If written notification is submitted by mail, the document must be postmarked at least 5 calendar days prior to burning. For Filmmaking and Public Exhibition fires, the person must make notification on the day of each burn prior to ignition.

² Where a structure(s) will be burned for fire training purposes, separate notification must also be made to the District pursuant to Regulation 11, Rule 2, Section 401: Asbestos Demolition and Renovation Reporting (see Regulation 11-2 for reporting requirements).

³ Written Air Pollution Control Officer (APCO) approval of a petition must be granted prior to burning for filmmaking and public exhibition (see Regulation 5, Section 409 for burn petition requirements).

⁴ The District will accept "Application for Permit for Agriculture Fire for Disease and Pest Prevention" forms as burn notifications.

Fires must be set or allowed by the public fire official, agricultural commissioner, or other public official having jurisdiction. Compliance with Regulation 5 does not relieve the applicant of the responsibility to know and comply with any other applicable rule, regulation, or law governing the use of fire.

BURN AUTHORIZATION (if required by local fire agency)

Authorizing Public Official: _____	Tel: () _____
Title: _____	Date Authorized: _____
Authorizing Agency: _____	_____

By submitting this notification, I understand and acknowledge the applicable restrictions set forth for an agricultural fire as defined in BAAQMD Regulation 5-201, "Agricultural Fire," and for the non-agricultural fires found in Regulation 5-401.

Name: _____ Date: _____

SEE BACK OF FORM FOR INSTRUCTIONS AND EMERGENCY WAIVER

Emergency Waivers (Only authorizing agencies can complete this section to grant an emergency waiver for the sections listed below.)

() 401.1 Disease and Pest

() 401.10 Flood Control

Public Safety considerations requiring the use of summary action resulting in a waiver from any portion of Section 5-111 will be certified as necessary and submitted in a written report to the APCO within 10 calendar days following completion of burning by the following official pursuant to the provisions of Section 5-404:

Authorizing Public Official: _____ Tel: () _____

Authorizing Agency: _____ Date: _____

INSTRUCTIONS

1. Clearly print the requested information on the notification form. Please provide complete and accurate data.
2. Obtain written burn authorization, if required by local fire agency with jurisdiction. Check with your local fire agency.
3. Prior to burning, send the completed notification form to the District via FAX or by mail. **Send only one notification per burn season, unless additional material is added to quantity listed on front side of form.**
 - FAX this form to the District at (415) 928-0338.
 - MAILED notification forms must be **postmarked at least 5 days** before burning.
1. On the planned burn date, call the 24-Hour Burn Day Status Recording at (800) 792-0787 to determine if it is a Burn Day. Fires are only allowed on permissive burn days as determined by the District.

*This notification form is **not** an application for a permit. The District does **not** require a permit in order to burn. You are required to notify the District prior to burning by submitting this form. You will **not** receive a response.*

You cannot burn residential or "backyard" waste, garden trimmings, leaves, landscape (tree branches, plants, and grass) debris and cuttings.

Remember: It is the responsibility of the person who conducts an allowable burn to know and satisfy all of the following additional conditions:

- Burn Day Status – Fires are only allowed on permissive burn days, as determined by the District.
- Burn Hour Restrictions – Do not burn before 10:00 a.m. In the afternoon, fires cannot be ignited and material cannot be added to fires after two hours before sunset.
- Smoke Production – piled material must be managed to ensure that burning the material does not produce smoke after sunset any day.
- Fuel Conditions – The material to be burned must be dried for at least 60 days and be reasonably free of dirt and soil.
- Pile Size Limits – the base area of each pile must not exceed 25 square yards and the pile height must be at least two-thirds of the average width of the pile.
- Wind Conditions – Fires cannot be ignited and material cannot be added to fires when the wind velocity is less than 5 miles/hour or when the wind direction at the burn site is such that the direction of smoke drift is toward a populated area.

For Vineyard or Orchard Pruning and Attrition fires, see Form "B." For Hazard Reduction fires, see Form "C."



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

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SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000
Fax # (415) 928-0338
24-Hour Burn Status Recording (800) 792-0787

REGULATION 5
OPEN BURNING

NOTIFICATION FORM "B"

VINEYARD OR ORCHARD PRUNING AND ATTRITION FIRES

Please Print Legibly

BURNER INFORMATION

Name of Responsible Person Setting the Fire: _____		
Address: _____	Tel: () _____	
City: _____	Zip: _____	

BURN SITE INFORMATION

Property Owner(s): _____	Tel: () _____
Location (Street Address): _____	
City: _____	County: _____
Planned Burn Date(s): _____	

SPECIFIC TYPE(S) OF MATERIAL TO BE BURNED

Quantity of Grapevine Prunings: _____ () Yd ³ or () Tons	Quantity and type of Cane Fruit Prunings: _____ () Yd ³ or () Tons
Quantity and type of Fruit Tree Prunings: _____ () Yd ³ or () Tons	Quantity and type of Nut Tree Prunings: _____ () Yd ³ or () Tons
Quantity and type of Other (specify, e.g., olives): _____	() Yd ³ or () Tons

Fires must be set or allowed by the public fire official having jurisdiction. Compliance with Regulation 5 does not relieve a person of the responsibility to know and comply with any other applicable rule, regulation, or law governing the use of fire.

BURN AUTHORIZATION (if required by local fire agency)

Authorizing Public Fire Official: _____	Tel: () _____
Title: _____	Date Authorized: _____
Authorizing Fire Agency: _____	

This notification form is not an application for a permit. The District does not require a permit in order to burn. You are required to notify the District prior to burning by submitting this form. You will not receive a response.

By submitting this notification, I understand and acknowledge the restrictions set forth for an agricultural fire as defined in BAAQMD Regulation 5-201, "Agricultural Fire."

Name: _____ Date: _____

SEE BACK OF FORM FOR INSTRUCTIONS

INSTRUCTIONS

1. Clearly print the requested information on the notification form. Please provide complete and accurate data.
2. Obtain written burn authorization, if required by local fire agency with jurisdiction. Check with your local fire agency.
3. Prior to burning, send the completed notification form to the District via FAX or by mail. **Send only one notification per burn season, unless additional material is added to quantity listed above.**
 - FAX the front side of this form to the District at (415) 928-0338.
 - MAILED notification forms must be **postmarked at least 5 days** before burning.
4. On the planned burn date, call the 24-Hour Burn Day Status Recording at (800) 792-0787 to determine if it is a Burn Day.

DEFINITIONS

Agricultural Fire – A fire used for the purpose of initiating, continuing or maintaining agriculture as a gainful occupation. Fuels are limited to those grown on-site.

Attrition Losses – The removal of dying crops approaching, or dead crops that have reached the end of their plant life cycle.

Commercial Agricultural Operation – Any operation occurring on a ranch or farm directly related to the growing of crops, or raising of fowl or animals for the primary purpose of making a profit or for a livelihood, or of conducting agricultural research or instruction by an educational institution.

Gainful Occupation – Any occupation from which there is proof of gross profit or loss as evidenced by tax receipts, sales slips or other such documents.

REMEMBER: It is the responsibility of the person who conducts a Vineyard or Orchard Pruning and Attrition fire to know and satisfy all of the following additional requirements and conditions:

- Burning is limited to the following: prunings and attrition losses from fruit trees (apple, peach, apricot, cherry, plum, etc.), nut trees (almonds, walnuts, etc.), grapevines, and cane fruit (boysenberry, raspberry, blackberry, etc.).
- You cannot burn residential or “backyard” waste, garden trimmings, leaves, landscape (tree branches, plants, and grass) debris and cuttings, and any of the above agricultural waste that is not from a **commercial agricultural operation**.
- Burn Period – Fires are limited to a period beginning November 1 and ending April 30; however, upon the determination of the District’s Air Pollution Control Officer that heavy winter rainfall has prevented such burning, the burn period may be extended to no later than June 30.
- Burn Day Status – Fires are only allowed on permissive burn days, as determined by the District.
- Burn Hour Restrictions – Do not burn before 10:00 a.m. In the afternoon, fires cannot be ignited and material cannot be added to fires after two hours before sunset.
- Smoke Production – piled material must be managed to ensure that burning the material does not produce smoke after sunset any day.
- Drying Times – The material to be burned must be dried for at least 60 days. When pruning is done between February 15 and April 30 for integrated pest management purposes, the following drying times shall apply: trees and branches over six inches in diameter: 30 days; for grape vines and branches less than or equal to six inches in diameter: 15 days.
- Fuel Condition – The material to be burned must be reasonably free of dirt and soil.
- Pile Size Limits – The base area of each pile must not exceed 25 square yards and the pile height must be at least two-thirds of the average width of the pile.
- Wind Conditions – Fires cannot be ignited and material cannot be added to fires when the wind velocity is less than 5 miles/hour or when the wind direction at the burn site is such that the direction of smoke drift is toward a populated area.

For other allowable fires, see Form “A.” For Hazard Reduction fires, see Form “C.”



BAY AREA
AIR QUALITY
MANAGEMENT
DISTRICT

939 ELLIS STREET
SAN FRANCISCO, CALIFORNIA 94109
(415) 771-6000
Fax # (415) 928-0338
24-Hour Burn Status Recording (800) 792-0787

REGULATION 5
OPEN BURNING
NOTIFICATION FORM "C"

HAZARD REDUCTION FIRES

Please Print Legibly

BURNER AND BURN SITE INFORMATION

Property Owner(s): _____	Date: _____
Location (Street Address): _____	Tel: () _____
City: _____	County: _____
Planned burn dates: _____	
Name of Person Setting the Fire if different: _____	

SPECIFIC TYPE(S) OF MATERIAL TO BE BURNED

Natural Vegetation Cleared From Around Buildings or Structures: _____ (PRC Section 4291-related)	Quantity: _____ () Yd ³ or () Tons
Natural Vegetation Cleared From Other Areas on Property: _____ (Unrelated to PRC Section 4291)	Quantity: _____ () Yd ³ or () Tons

Fires must be set or allowed by the public fire official having jurisdiction. Compliance with Regulation 5 does not relieve a person of the responsibility to know and comply with any other applicable rule, regulation, or law governing the use of fire.

BURN AUTHORIZATION (if required by local fire agency)

Authorizing Public Fire Official: _____	Tel: () _____
Title: _____	Date Authorized: _____
Authorizing Fire Agency: _____	

Emergency Waivers (This section should only be completed by an authorizing public fire official to grant an emergency waiver, pursuant to Regulation 5-404.)

() 5-401.6 Hazardous Material – See Regulation 5 for definition.

Authorizing Public Fire Official: _____ Tel: () _____

This notification form is not an application for a permit. The District does not require a permit in order to burn. You are required to notify the District prior to burning by submitting this form. You will not receive a response.

By submitting this notification, I understand and acknowledge the restrictions set forth for a Hazardous Material fire as defined in BAAQMD Regulation 5-208, "Hazardous Material."

Name: _____ Date: _____

SEE BACK OF FORM FOR INSTRUCTIONS

INSTRUCTIONS

1. Clearly print the requested information on the notification form. Please provide complete and accurate data.
2. Obtain written burn authorization, if required by local fire agency with jurisdiction. Check with your local fire agency.
 - FAX the front side of this notification form to the District at (415) 928-0338 before setting the fire.
 - MAILED notification forms must be **postmarked at least 5 days** before burning.
1. Prior to burning, send the completed notification form to the District via FAX or by mail. **Send only one notification per burn season, unless additional material is added to quantity listed above.**
2. On the planned burn date, call the 24-Hour Burn Day Status Recording at (800) 792-0787 to determine if it is a Burn Day.

DEFINITIONS

Hazard Reduction Fire – A fire set for the purpose of prevention or reduction of a fire hazard. Refer to Regulation 5-401.6 for explanation of all materials included.

Public Resources Code (PRC) Section 4291 – A public law that requires any person who owns, leases, controls, operates, or maintains any building or structure in, upon, or adjoining any land area which is covered with flammable vegetation or other combustible growth, at all times to do the following:

Maintain around and adjacent to such buildings and structures a firebreak made by **removing and clearing away**, for a distance of not less than 30 feet on each side thereof or to the property line, whichever is nearer, **all flammable vegetation, or combustible growth**. This requirement does not apply to single specimens of trees, ornamental shrubbery, or similar plants, which are used as ground cover, if they do not form a means of rapidly transmitting fire from the native growth to any building or structure.

LIMITATIONS

Burning is limited to the following:

- (1) Only natural vegetation or other native growth;
- (2) The amount of material from a single property cleared and burned annually is greater than 5 cubic yards; and
- (3) The material cannot be abated by an economically, ecologically or logistically viable option.

IMPORTANT NOTE: Wildland vegetation management fires (prescribed burning activities) require submission of a Smoke Management Plan at least 30 calendar days prior to proposed burning. (Regulation 5-408)

You cannot burn residential or “backyard” waste, garden trimmings, leaves, landscape (tree branches, plants, and grass) debris and cuttings, and any type of agricultural waste as a Hazard Reduction fire.

REMEMBER: It is the responsibility of the person who conducts a Hazardous Reduction fire to know and satisfy all of the following additional conditions:

- Burn Day Status - Fires are only allowed on permissive burn days, as determined by the District.
- Burn Hour Restrictions – Do Not Burn before 9:30 a.m. In the afternoon, fires cannot be ignited and material cannot be added to fires after two hours before sunset.
- Smoke Production – piled material must be managed to ensure that burning the material does not produce smoke after sunset any day.
- Fuel Conditions – The material to be burned must be dried for at least 60 days and be reasonably free of dirt and soil.
- Pile Size Limits - the base area of each pile must not exceed 25 square yards and the pile height must be at least two-thirds of the average width of the pile.
- Wind Conditions - Fires cannot be ignited and material cannot be added to fires when the wind velocity is less than 5 miles/hour or when the wind direction at the burn site is such that the direction of smoke drift is toward a populated area.

For other allowable fires, see Form “A.” For Vineyard or Orchard Pruning & Attrition fires, see Form “B.”

Exhibit 6: Frequently Asked Questions and Forms for a Marsh Burn Smoke Management Plan

 <p>BAY AREA AIR QUALITY MANAGEMENT DISTRICT</p>	<p>COMPLIANCE & ENFORCEMENT DIVISION</p>	<p>Frequently Asked Questions (FAQ)</p> <hr/> <p>Reg. 5 – Marsh Management Fires</p>
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Where can I find the Smoke Management Plan (SMP) form for marsh burns?

The SMP form with instructions can be found on the District website at www.baaqmd.gov/enf/forms/index.htm. The form and instructions are in Adobe format, so you will need to copy and fill out.

Who reviews the SMP?

SMP is first reviewed by the California Department of Fish and Game (DFG). This process takes two weeks for review. After initial review and certification is completed, the plans are mailed by DFG to the District.

When should a SMP for Marsh burns be submitted to the District?

The District must receive the SMP for review at least 30 days prior to burning in order to issue an acreage burning allocation. The SMP must include a signed certification from the DFG that the proposed burning is necessary. The SMP must also include three (3) copies of a detailed property map.

What phone number do I call in order to initiate an acreage forecast?

Marsh burners must call **(415) 749-4915** by 12:00 p.m. the day before their intended burn to initiate an acreage forecast from meteorology.

What phone number do I need to call in order to receive an acreage allocation?

Marsh burners must call **(415) 749-4600** between 8:30 a.m. and 11:30 a.m. the day of their intended burn to get acreage allocation. No messages are accepted – you must get verbal allocation.

What phone number do I need to call after the burn date?

Marsh burners must call **(415) 749-4600** line by 12:00 p.m. the day after their burn to give the amount of acres actually burned.

Why can't burning begin before 10:00 a.m. or go beyond 3:00 p.m.?

It's basically the same rationale to minimize potential adverse smoke impacts on populated areas by optimizing smoke dispersal. Before 10:00 a.m., smoke can be trapped in a shallow inversion layer of air near the ground. After 10:00 a.m., heating by the sun deepens this layer and allows better vertical mixing.

After 3:00 p.m. restriction provides better smoke dispersion by preventing burning when weak inversions begin to develop in late afternoon.

 BAY AREA AIR QUALITY MANAGEMENT DISTRICT	COMPLIANCE & ENFORCEMENT DIVISION	CHECKLIST
		Reg. 5 – Marsh Management Fires

✓ **At least 30 days before planned burn:**

- Submitted SMP with CA Dept. of Fish and Game signed certification form on _____
(Date)
- Received District approval letter on _____
(Date)

✓ **Day before planned burn:**

- Called (415) 749-4915 by 12:00 p.m., the day before intended burn and left message with property name, property number and acres requested on _____ at _____
(Date) (Time)

✓ **Day of planned burn:**

- Called (415) 749-4600 between 8:30 a.m. and 11:30 a.m., to receive acreage allocation of _____ on _____ at _____
(Acres) (Date) (Time)

✓ **Day after planned burn:**

- Called (415) 749-4600 by 12:00 p.m., to report actual acreage burned on _____ at _____ (# of acres burned)
(Date) (Time)

✓ **ALWAYS:**

- Ensure SMP and approval letter conditions are met prior to ignition.
- Burn only between 10:00 a.m. and 3:00 p.m.
- Prevent fire from escaping your property.
- Burn only your acreage allotment.



MARSH MANAGEMENT FIRE
SMOKE MANAGEMENT PLAN

(Please complete the following information)

1. Property Number & Name: _____ 2. Total Acreage to be burned: _____
3. Property Location: (Provide only one of the following location descriptions)
 Legal: Township _____ Range _____ Section(s) _____ or,
 Lat/Long: North Latitude _____ (deg.) _____ (min) _____ (sec)
 West Longitude _____ (deg.) _____ (min) _____ (sec)
4. Fire Agency: _____ 5. County: _____
6. Burner's Name: _____ 7. Phone Number _____
8. Burner's Address (street, city, zip code): _____

Note: Please include 3 copies of your property map with this document

9. Field Contact Name: _____ 10. 24-Hour Phone Number _____
11. Burn Season: Fall / Spring Year _____
12. Proposed maximum number of acres to be burned per day: _____
13. Specify number of people on burn site during burn: _____
14. Vegetation type(s) to be burned:

Tall Emergent (cattails, tules, phragmites, etc.)						Number of Acres: _____
Average % cover	Average height					
	0 to 1 ft	1 to 5 ft	5 to 8 ft	8 to 10 ft	10 ft and over	
76-100%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
52-75%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
26-50%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
0-25%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Low Emergent (salt grass, baltic rush, cocklebur, etc.)						Number of Acres: _____
Average % cover	Average height					
	0 to 1 ft	1 to 5 ft	5 to 8 ft	8 to 10 ft	10 ft and over	
76-100%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
52-75%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
26-50%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
0-25%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Upland Grasslands (Annual grass, rye, vetch, etc.)					Number of Acres: _____
Average % cover	Average height				
	0 to 1 ft	1 to 5 ft	5 to 8 ft	8 to 10 ft	10 ft and over
76-100%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52-75%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26-50%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0-25%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Describe the specific resource management objective(s) and goal(s) of burn:

- Eliminate pest weeds
- Open up seedbed for planting
- Other (specify): _____
- Change plant species composition to improve feed/cover
- Control invasive non-desirable vegetation

16. Have other activities (i.e., alternatives to burning) such as discing, mowing, or water management on the proposed burn site been considered or tried at achieving the desired habitat management objectives and goals of your property?

- YES
- NO

If no, explain why not (e.g., vegetation too thick to penetrate by mechanical means, soils are too wet, etc.)

If yes, explain the extent and success of your efforts. _____

17. Describe burn site preparation to be completed prior to burning to minimize potential adverse impacts:

- Create fire breaks
- Flood ditches prior to burning
- Other (specify): _____
- Minimize area to be burned with mowing and/or discing

18. Ignition technique and material to be used, Specify:

- Pressurized diesel torches
- Napalm or Blivets
- Fuses
- Commercial safety fuses
- Commercial fuses
- Propane or LPG torches
- Commercial safety fuses
- Lighters or matches
- Commercial petroleum gel materials
- Commercial type ignition grenades
- Orchard Torches
- Drip Torches

19. Contingency actions or measures the burner will take in the event that smoke impacts begin to occur:

- Disc incremental firebreaks
- Flood fields and ditches
- Other (specify): _____
- Have water pump and hose readily available on-site

20. Contingency actions or measures the burner will take in the event that the burn is declared "out of control" and continues to advance after 3:00 p.m. or a peat fire is ignited and continues to burn after 3:00 p.m.:

- Disc incremental firebreaks
- Flood fields and ditches
- Other (specify): _____
- Attempt to extinguish fire with water pump and hose on-site
- Call 911 for fire department assistance

21. Range of surface wind conditions acceptable to burner for satisfactory burn:

Wind Speed _____ (minimum & maximum, miles/hour)

Wind Direction(s) _____

Note: depending on property location in the Suisun Marsh, a North wind blows smoke into Pittsburgh/Antioch, and a Southeast wind blows smoke into Fairfield and Cordelia.

22. Describe planned method(s) of estimation and interval of weather observations:

Method

- On burn site, visual
- Hand held anemometer
- Remote weather station (at clubhouse, etc.)
- Other (specify): _____

Frequency

- Every 30 min.
- Hourly
- Other (specify): _____

23. Identify all sensitive receptor areas within a 10-mile radius from the burn site and indicate the distance(s) and direction(s) from the burn site to each sensitive receptor area:

Smoke Sensitive Receptor Area	Distance (miles)	Direction From Burn Site

NOTE: Sensitive receptor areas are populated areas and other areas where smoke and air pollutants from a burn project can adversely affect public health and welfare. Examples of such areas include, but are not limited to, towns, cities, highways, major roads, hospitals, nursing homes, schools and airports.

Landowner's Certification:

A Marsh Management Fire may be conducted by the designated burn applicant above for this property in accordance with all applicable rules and regulations. By signing below, I certify that the information submitted in this Smoke Management Plan is complete and accurate to the best of my knowledge.

Landowner's Signature _____ Date _____

Print Name _____ Phone Number _____

Address (street, city, zip code): _____



BAAQMD REGULATION 5: OPEN BURNING

INSTRUCTIONS FOR COMPLETING A MARSH MANAGEMENT FIRE SMOKE MANAGEMENT PLAN (FORM MM-1)

GENERAL INFORMATION & APPLICABILITY

Marsh Management fires are open, outdoor fires set for the purpose of improvement of marshland for wildlife habitat. A "marshland" is defined as a type of wetland periodically or permanently covered to a depth of up to 2 meters (6.6 feet) that supports low or tall emergent vegetation. Some examples are diked wetlands, seasonally managed wetlands, unmanaged tidal wetlands, sloughs and open bays.

All Marsh Management fires, irrespective of size, must be certified by the California Dept. of Fish & Game (DFG) and require a Smoke Management Plan (SMP) approved in writing by the Air District **prior to burning**. In addition, a local fire agency burn permit is required prior to burning in the Suisun Marsh. For burns conducted outside of the Suisun Marsh, contact the local fire agency with jurisdiction at the burn site to determine how to comply with any requirements.

Completed SMPs should be submitted to:

The Department of Fish and Game
2548 Grizzly Island Road,
Suisun, CA 94585

Submit your SMP as soon as possible, we recommend at least 45 Days before you plan to burn. The District **requires** that the plan be received 30 calendar days prior to the burn.

The SMP must include 3 copies of a detailed property map that identifies the area(s) to be burned (burn site and any interior unit contingency cutoff lines), and all access roads and gates to the property. Also, include an additional map showing the property's location within the marshland.

INSTRUCTIONS

Please read and follow these instructions.

Clearly write or print the requested information on the SMP (Form MM-1) and on any attachment as needed. **Completing all fields speeds up processing your application.**

1. Property Number & Name: Give the Suisun Resource Conservation District (SRCD)-designated ownership property number(s) and the property or club name, if applicable. A single SMP may be used for more than one property number when the properties are adjacent and have the same owner.
2. Acreage to be Burned: Give an estimate of the total number of acres you are planning to burn.

3. Property Location: Give the property address (the actual physical location, not mailing address), and the legal description (township, range, and sections) **or** the north latitude and west longitude (in degrees, minutes, and seconds) of the property where the burn will be conducted.
4. Fire Agency: Provide the name of the fire agency that has jurisdiction at the burn site. The three fire agencies with jurisdiction in the Suisun Marsh are the Cordelia, Montezuma, and Suisun Fire Protection Districts.
5. County: Enter the county where the burn will be conducted.
6. Burn Applicant's Name: Provide the complete name of the person who will be conducting the burn.
7. Burn Applicant's Phone Number: Enter the phone number of the person who will be conducting the burn.
8. Burn Applicant's Address: Enter the mailing address of the person who will be conducting the burn.
9. Field Contact Name: Provide the name of the person who can be reached by phone at the burn site or on the property during the burn.
10. 24-Hour Phone Number: Provide the phone number of the field contact or person responsible for the burn who can be reached at any time on a day when burning occurs.
11. Burn Season: Indicate whether you plan to burn during the fall burning period (September 1 through October 15) and/or the spring burning period (February 1 through March 31), and during what calendar year.
12. Proposed Maximum Number of Acres To Be Burned Per Day: Indicate the maximum number of acres you are proposing to burn on any given day.
13. Specify Number of People on Burn Site: Indicate how many people will be on the property prior to and during burning to document surface wind conditions, observe smoke behavior, and to ignite, maintain control of, and extinguish the fire.
14. Vegetation Types to Be Burned: (a) enter the estimated number of acres to be burned by vegetation type (i.e., tall emergent, low emergent, and upland grasslands). (b) for each vegetation type, characterize the arrangement of the vegetation, expressed as average percent cover and average height.

Example: Let's say that you are planning to burn 20 acres of tall emergent vegetation, and you estimate that 25% of the acreage is covered with vegetation with an average height of 5 feet and the remaining 75% is covered with vegetation with an average height of 9 feet. To provide the information from this example, enter '20' as the number of acres in the "tall emergent" vegetation type section of the SMP form. Then, in the same section, check the "1 to 5 ft" box on the line that


indicates 0-25% coverage and the “8 to 10 ft” on the line that indicates 52-75% coverage.

15. Specific Resource Management Objective(s) and Goal(s) of Burn: Describe the resource management objectives and goals of the burn you are proposing.
16. Consideration of Non-Burning Alternatives: Indicate whether any alternatives to burning have been considered or tried to achieve the resource management objectives and goals of your property. If “yes”, explain the extent and success of your efforts. If “no”, explain why alternatives to burning were not considered or tried.
17. Burn Site Preparation: Describe what preparations to the burn site you will complete prior to burning to minimize the risk of an “out of control” fire, adverse smoke impacts, and of exceeding burn acreage and burn hour limits.
18. Ignition Technique To Be Used: Describe the technique and materials you are planning to use to ignite the fire.
19. Contingency Actions or Measures - Smoke Impacts: Describe what actions **will be taken** if smoke from the fire adversely impacts any sensitive receptor area. This information may include your ability to extinguish the fire with equipment on the property or with assistance from a fire protection agency.

Note: “Sensitive receptor areas” are populated areas such as towns or cities, major roads, hospitals, schools and airports.
20. Other Contingency Actions or Measures: Describe what actions **will be taken** if the fire is declared “out of control” or continues to advance after 3:00 p.m., or a peat fire is ignited and continues to burn after 3:00 p.m.
21. Range of Surface Wind Conditions: Provide a proposed range of surface wind directions and a minimum and maximum wind speed range for the time of year under which burning is to be conducted. Note: This weather prescription **must be present** prior to ignition and the prescription **must be verified** during any burning.
22. Method of Estimation and Interval of Weather Observations: (a) describe the method you are planning to use to determine the surface wind speed and wind direction prior to ignition; and (b) indicate how frequently you will verify the wind conditions at the burn site during the fire (hourly, ½ hour, etc.).
23. Distance and Directions to Sensitive Receptor Areas: (a) identify **all** sensitive receptor areas within a 10-mile radius from the burn site; and (b) provide the distance(s) in miles and the compass direction(s) from the burn site to **each** sensitive receptor area identified.

Landowner’s Certification: To complete the SMP, a landowner of the property where the burn is proposed must certify that the information submitted is complete and accurate. To certify the information, the landowner should sign and print their name, and include their phone number, mailing address and the certification date.

Exhibit 7: Prescribed Burn Smoke Management Plan Forms

 <p>BAY AREA AIR QUALITY MANAGEMENT DISTRICT</p>	<p>FORM Rx-1</p> <p>PRESCRIBED BURNING SMOKE MANAGEMENT PLAN Provide All of the Following Information Using the Attached Instructions</p>
<p>GENERAL INFORMATION</p>	
<p>PREPARER'S NAME & ADDRESS (street, city, zip) _____ DATE _____</p> <p>PREPARER'S AFFILIATION _____ PHONE # _____</p> <p>PRIMARY RESPONSIBLE PERSON _____ PHONE # _____</p> <p>LAND OWNER(S) & MAILING ADDRESS (street, city, zip) _____ PHONE # _____</p> <p>FIELD CONTACT NAME & 24-HOUR PHONE/PAGER # (during burn) _____</p>	
<p>PROJECT DESCRIPTION</p>	
<p>1. LOCATION _____</p> <p>2. OBJECTIVES _____</p> <p>3. PROJECTED ACREAGE _____ 4. PROJECTED TONNAGE _____</p> <p>5. TYPE(S) AND ARRANGEMENT OF VEGETATION TO BE BURNED _____</p> <p>6. FUEL CONDITION _____ 7. COMBUSTION _____</p> <p>8. PROJECTED BURN SCHEDULE _____</p> <p>9. EXPECTED DURATION OF PROJECT (a) IGNITION _____ (b) COMBUSTION _____ (c) BURN DOWN _____</p>	
<p>SMOKE MANAGEMENT COMPONENTS</p>	
<p>10. DIRECTIONS AND DISTANCES TO NEARBY SENSITIVE RECEPTOR AREAS _____</p> <p>11. METEOROLOGICAL PRESCRIPTION _____</p> <p>12. SPECIFICATIONS FOR MONITORING AND VERIFICATION OF METEOROLOGICAL CONDITIONS AND SMOKE BEHAVIOR BEFORE AND DURING THE BURN _____</p> <p>13. SPECIFICATIONS FOR DISSEMINATING PROJECT INFORMATION TO PUBLIC: _____</p>	
<p>939 Ellis Street San Francisco, CA (415) 771-6000 www.baaqmd.gov</p>	
<p>Page 1</p>	

14. WHAT CONTINGENCY ACTIONS WILL BE TAKEN DURING THE BURN TO REDUCE EXPOSURE IF SMOKE INTRUSIONS IMPACT ANY SENSITIVE RECEPTOR AREA:

- Halt ignitions, except as needed to maintain control of fire.
- Allow fire to burn to contingency control lines.
- Suppress fire.
- Begin immediate mop up.
- Begin mop up within _____ hours of problem identification.
- Complete mop up within _____ hours of initiation.
- Discontinue mop up if favorable conditions return.
- Other (explain):

15. ATTACH A COPY OF THE ENVIRONMENTAL IMPACT ANALYSIS PREPARED FOR THE BURN PLAN THAT INCLUDES AN EVALUATION OF ALTERNATIVES TO BURNING, IF SUCH AN ANALYSIS IS REQUIRED BY STATE OR FEDERAL LAW OR STATUTE

16. PROJECT FUEL LOADING ESTIMATE (TONS VEGETATION/ACRE) BY VEGETATION TYPE(S) AND A DESCRIPTION OF THE CALCULATION METHOD

17. PARTICULATE MATTER EMISSIONS ESTIMATE INCLUDING REFERENCED EMISSION FACTOR(S) AND A DESCRIPTION OF THE CALCULATION METHOD USED

CERTIFICATION

18. I HEREBY CERTIFY, AS A QUALIFIED PROFESSIONAL RESOURCE ECOLOGIST, BIOLOGIST, OR FORESTER, THAT THE PROPOSED BURNING DESCRIBED ABOVE IS NECESSARY TO ACHIEVE THE SPECIFIC MANAGEMENT OBJECTIVE(S) OF THE SMOKE MANAGEMENT PLAN PREPARED FOR THIS BURN PROJECT.

Signature _____

Date _____

Name (print) _____

Title (print) _____



BAAQMD REGULATION 5: OPEN BURNING

INSTRUCTIONS FOR COMPLETING A PRESCRIBED BURNING SMOKE MANAGEMENT PLAN (FORM Rx-1)

GENERAL INFORMATION & APPLICABILITY

All Wildland Vegetation Management fires (i.e., prescribed burning), irrespective of project size, are subject to the Smoke Management Plan (SMP) requirements in Regulation 5, Subsection 408.1.

In addition, for the purposes of this Regulation,

- Forest Management fires
- Range Management fires
- Hazardous Material fires not related to Public Resources Code 4291, or
- Crop Replacement fires for the purpose of establishing an agricultural crop on previously uncultivated land,

That are expected to exceed 10 acres in size or burn piled vegetation cleared or generated from more than 10 acres of land, are regulated as Wildland Vegetation Management fires. Therefore, these specific fire types are also subject to the prescribed burning SMP requirements in Regulation 5, Section 408.1.

All Smoke Management Plans must be submitted to the Air Pollution Control Officer (APCO) for review at least 30 calendar days prior to the proposed burning (See Regulation 5, Section 408.1).

Exception - When a fire official decides to manage a naturally ignited wildland fire for resource benefits that is expected to exceed 10 acres in size, a SMP must be submitted to the APCO upon request (See Regulation 5, Section 408).

A smoke management plan (SMP) must address individual burn block requirements where they are likely to require different smoke management prescriptions.

INSTRUCTIONS

Please carefully read and follow these instructions

1. Location: Give the property address, legal description (township, range, and sections) and the longitude and latitude (degrees, minutes, and seconds) for the burn site. Attach a map of the project area and identify the boundaries and elevation range of the project area, and where applicable, the burn blocks within the area.
2. Objectives: Describe the resource and land management objective(s) or purpose of the burn project.
3. Projected Acreage: Give an estimate of the total number of acres to be burned by vegetation type(s), or if pile burning, the amount of acreage the material in the pile came from. Where the material is located in a series of burn blocks within a project area, provide the acreage for each burn block.
4. Projected Tonnage: Give an estimate of the total amount of vegetation (in tons) available to be consumed by the burn by vegetation type(s). Where the material is located in a series of burn blocks within a project area, provide the amount for each burn block.
5. Type(s) & Arrangement of Vegetation to be burned: Characterize the type, or types of vegetation expressed as a percentage to be burned (grass, chaparral, coastal scrub, etc), and describe how the vegetation is arranged (mosaic, continuous, vertical depth, etc).
6. Fuel Condition: Describe the condition or any pre-treatment of the vegetation to be burned (natural standing, piles, windrows, slash, drying time, etc).
7. Combustion: Provide the expected combustion efficiency of all fuels and the expected percentage of the total amount of material to be burned.

8. Projected Burn Schedule: Include the proposed time of year for the burn project (month/year), and the days of the week and number of days on which burning is planned. For example, you could enter August through November on weekdays (Monday-Friday) only. If the material to be burned is located in a series of burn blocks within a project area, then provide a schedule for each burn block, if applicable.
9. Expected Duration of Project: Describe the expected duration of ignition, combustion, and burn down in hours and/or days. For example, if you expect the burn project or a burn block within a project area to be completed in one day, then specify the hours of ignition, combustion and burn down for one day of burning. If after ignition the fire is expected to burn more than one day and to be actively burning throughout the night, then indicate the expected ignition period (in hours), and the expected combustion and burn down periods (in hours and days). If the burn ignitions are planned on more than one day but the fire is not anticipated to consume additional material through the evening hours, then indicate the expected ignition, combustion and burn down periods (in hours) for separate days of burning.
10. Directions & Distances to Nearby Sensitive Receptor Areas: "Sensitive receptor areas" are populated areas that could be adversely impacted by smoke from the burn project, such as towns or cities, major roads, hospitals, schools and airports. Burn projects with a project area of 10 acres or less must provide a 7.5 Minute USGS topographic map of the project delineating the distance (in miles) and compass direction of sensitive receptor areas within a 5-mile radius from the burn site. Burn projects with a project area greater than 10 acres must include a map showing sensitive receptor areas within a 20-mile radius from the burn site, and also indicate the projected direction(s) of smoke travel while burning in prescription day or night.
11. Meteorological Prescription: Provide a detailed meteorological prescription that is realistic for the time of year under which burning is to be conducted. The prescription must include acceptable minimum and maximum ranges of surface wind direction and speed, temperature, relative humidity, 1-hr. and 10-hr. fuel moistures, and the minimum mixing depth or venting elevation. Other considerations may include winds aloft and any other meteorological condition that may affect smoke dispersion and/or fire behavior. **NOTE: this prescription must be present prior to ignition and the prescription must be verified during any burning.**
12. Monitoring & Verification of Meteorological Prescription & Smoke Behavior: Describe the resources (e.g. equipment, and personnel) and methods or procedures that will be used to verify and document prescription conditions prior to ignition and through completion of the burn. Include what resources and methods or procedures will be used to monitor or track and document (e.g. an observer's log) the behavior of smoke plume(s), and document if sensitive receptor areas are adversely impacted. Also describe what steps will be taken to inform all members of the firing crews, volunteers and employees of smoke management requirements.
13. Public Notification Procedures: Describe what notification procedures are to be used to make sure the public is aware of the planned burn (e.g., media announcement, road signs, flyers, etc.) and for reporting of public smoke complaints. Include all planned activities and the timing of these activities.
14. Contingency Actions: Using the examples provided in the SMP form associated with these instructions, describe what actions will be taken if smoke from this burn project unexpectedly impacts any sensitive receptor area. This information may include the ability to extinguish the fire with equipment on hand or with assistance from a fire protection agency.
15. Evaluation of Alternatives to Burning: Attach a copy of the pertinent section(s) of the environmental analysis document prepared for the burn plan or project that describes any alternatives to burning that have been considered and to what extent they have been used, if such an analysis is required by law or statute.
16. Fuel Loading: Give an estimate of the total fuel loading within the project area by vegetation type(s), expressed for each type of vegetation (tons of vegetation type/acre). Include a description of the calculation method used to obtain the estimate.
17. Particulate Matter (PM₁₀) Emissions: Provide an estimate of the total PM₁₀ emissions (in tons) for the burn project, expressed as a sum total of the PM₁₀ emissions estimates for each vegetation type (tons/vegetation type). Include a description of the calculation method and any literature sources or references used to obtain the estimate.
18. Certification: Include the example of the certification language provided in the SMP form associated with these instructions. Be sure to sign and print your name, print your title, and include the certification date.

NOTE: To obtain prescribed burn forecasting services, please contact the BAAQMD duty meteorologist by calling (415) 749-4915. For general questions about open burning requirements, please call (415) 749-5118.

Exhibit 8: TITLE 17, SUBCHAPTER 2, ARTICLE 3, § 80190

San Francisco Bay Area Air Basin

- (a) The North Section of this basin includes Napa County, the San Francisco Bay Area Air Basin portion of Solano County, and that portion of Sonoma County within the San Francisco Bay Area Air Basin and east of Highway 101.
- (b) A permissive-burn day will be declared in the North Section when the following criteria are met:
 - (1) The maximum mixing depth is expected to be at least 1,500 feet above mean sea level (msl).
 - (2) The expected daytime resultant wind speed in the mixed layer is at least five miles per hour.
- (c) The South Section of this basin includes Contra Costa, Alameda, and Santa Clara Counties.
- (d) A permissive-burn day will be declared in the South Section when the following criteria are met:
 - (1) The maximum mixing depth is expected to be at least 1,500 feet msl.
 - (2) The expected daytime resultant wind speed in the mixed layer is at least five miles per hour.
- (e) The Bay Area Coastal Section of this basin includes San Mateo, San Francisco, and Marin Counties, and that portion of Sonoma County within the San Francisco Bay Area Air Basin and west of Highway 101.
- (f) A permissive-burn day will be declared in the Bay Area Coastal Section when the following criteria are met:
 - (1) The maximum mixing depth is expected to be at least 1,000 feet msl.
 - (2) The expected daytime resultant wind speed in the mixing layer is at least five miles per hour.
- (g) A permissive-burn day will be declared for regions above 2,000 feet msl when the following criteria are met:
 - (1) The maximum 500 mb height over the Basin is less than the limiting mean height given in Table 2 of Section 80320.
 - (2) The afternoon mixing depth representative of the entire Basin is below 1,500 feet msl.
- (h) The Bay Area Air Quality Management District may declare permissive-burn or no-burn days based on additional meteorological or public health and safety criteria not listed in the preceding paragraphs.

Exhibit 9: Procedures for Declaring Wintertime Spare the Air Alert

Procedures for Declaring Wintertime Spare the Air Alert

Background

The Wintertime Spare the Air Alert campaign begins November each year and runs through the end of February, the time when the public is most likely to burn wood or for the Air District to experience an exceedance of the 24-hour national PM_{2.5} standard.

Procedures

1. A Wintertime Spare the Air Alert will be triggered when meteorological and air quality data support a forecast that the 24-hour national Particulate Matter (PM_{2.5}) standard will be exceeded (the NAAQS is 35 µg/m³).
2. The duty forecaster will post the next-day PM_{2.5} forecast on the Spare the Air website and the AirNow website by 1:15 pm. If an exceedance is forecast the duty forecaster will notify the duty PIO. The duty forecaster will send an email notifying District management, COO staff, enforcement staff, and air monitoring staff of the expected national exceedance.
3. Weekdays: The duty PIO will notify the Communications Director (CD) or designee. The CD or designee will notify the Deputy Air Pollution Control Officer – Policy (DAPCO) and the Executive Officer/APCO.
Weekends: The duty PIO will notify the DAPCO and the Executive Officer/APCO.
4. The Executive Officer/APCO will officially declare the Wintertime Spare the Air Alert. The Director of Technical Services or designee will be available to discuss the forecast with the Executive Officer and the DAPCO.
5. Weekdays: The CD will notify the duty PIO and COO staff that a Wintertime Spare the Air Alert has been declared.
Weekends: The duty PIO will notify the CD or designee that a Wintertime Spare the Air Alert has been declared after the Executive Officer/APCO approves it.
6. The duty PIO will put into effect the Wintertime Spare the Air alert notification and outreach procedures. Procedures include contacting the media, posting the alert on Air District websites, sending AirAlert emails and activating the Air District's phone notification service. If COO staff has questions about the forecast, they may contact the forecaster anytime, including weekends and holidays.
7. The Open Burn Status shall be declared No Burn when a Wintertime Spare the Air Alert is issued.

Exhibit 10 – Map of Suisun Tidal Marsh and Ownership

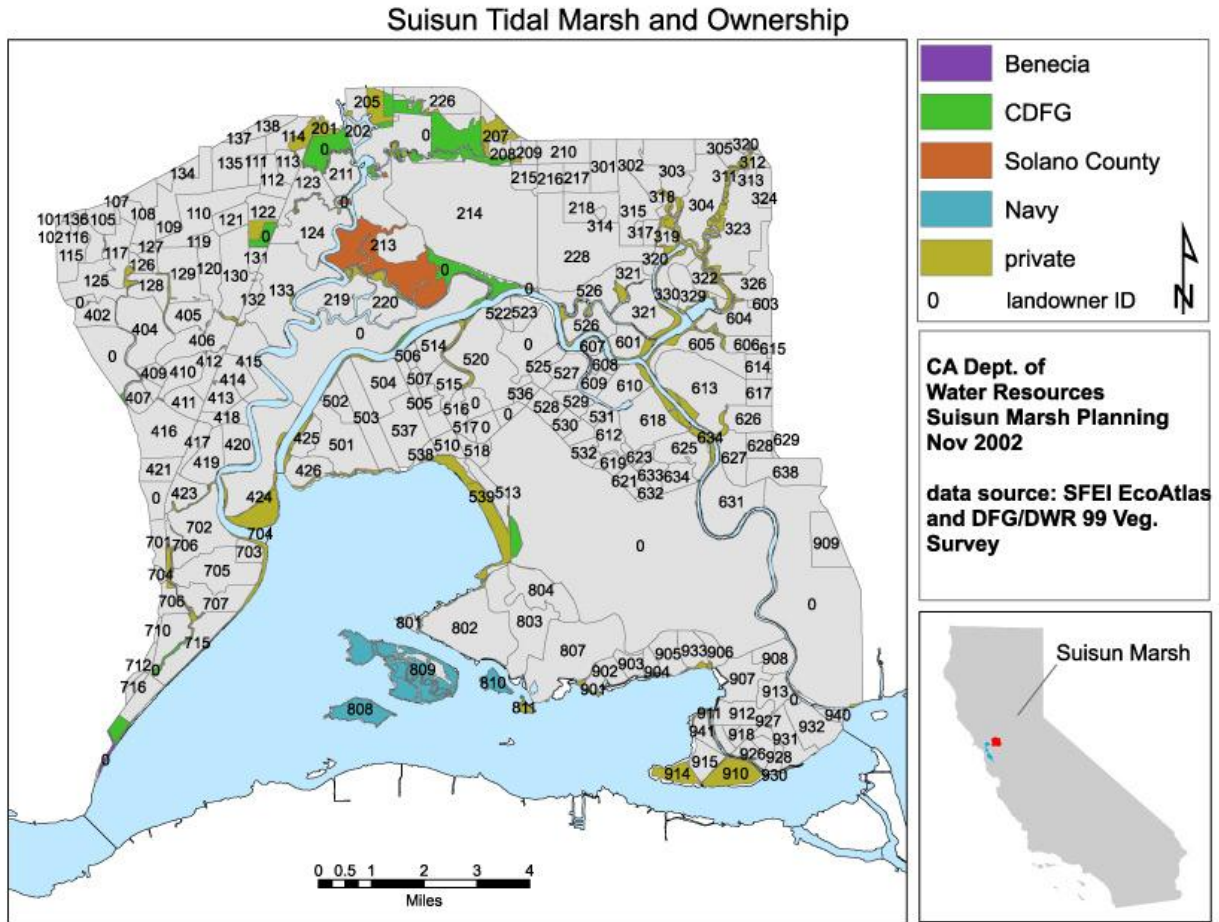


Exhibit 11: Regulation 5 - Open Burning

REGULATION 5 OPEN BURNING

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REGULATION 5 OPEN BURNING

5-100 GENERAL

5-101 Description: This Regulation forbids open burning within the District with certain exceptions.

(Amended November 2, 1994)

5-110 Exemptions: The following fires are exempt from this Regulation:

- 110.1 Fires set only for cooking of food for human beings.
- 110.2 Fires burning as safety flares or for the combustion of waste gases.
- 110.3 The use of flame cultivation when the burning is performed with LPG or natural gas-fired burners designed and used to kill seedling grass and weeds and the growth is such that the combustion will not continue without the burner.
- 110.4 Fires set for the purposes of fire training using one gallon or less of flammable liquid per fire.

(Amended 12/19/90; 11/2/94; 3/6/02; 7/9/08)

5-111 Conditional Exemptions: The following special conditions must be met for fires allowed by subsections 5-401.1 through 401.17 unless specifically exempted, altered, or further restricted in that subsection, or unless otherwise waived in writing by the APCO prior to burning, and these conditions shall be complied with during any burning permitted under those subsections. In addition, a condition, requirement, or parameter stated in or imposed by a smoke management plan approved by the APCO may supersede any one of these conditions.

- 111.1 No burning shall take place before 10:00 a.m. local time on any day.
- 111.2 No additional materials or fuel shall be ignited, nor shall any material or fuels be added to any fire after two hours before sunset on any day.
- 111.3 No material or fuel shall be ignited, nor shall any material or fuel be added to any fire when the wind velocity is less than five (5) miles per hour except for crossfiring, or when the wind direction at the site shall be such that the direction of smoke drift is toward a populated area in order to minimize local nuisances caused by smoke and particulate fallouts.
- 111.4 Prior to ignition, all piled material shall have dried for a minimum of 60 days, and be managed to ensure that burning the material does not produce smoke after sunset on any day.
- 111.5 All material to be burned shall be reasonably free of dirt or soil.
- 111.6 Piled material shall be limited to a base area not to exceed 25 square yards and the height shall be at least 2/3 of the average width of the pile.
- 111.7 Ignition material shall be limited to those listed by the State Director of Forestry, as follows: orchard torches; drip torches; pressurized diesel torches; propane or LPG torches; commercial petroleum gel materials, pressurized or solid (napalm or blivets); commercial safety fuses; commercial type ignition grenades, e.g. Fenner, etc.; fuses; commercial fuse lighters and matches. All fires shall be ignited so as to burn as rapidly as possible within conditions of safety and minimum pollution.
- 111.8 Ignition shall be initiated at or near the top of the piled material. No additional material, except ignition material, shall be added to the fire.
- 111.9 Tonnage, volume or acreage of material burned on any given day and/or at any specified site is subject to limitations set by the APCO, but may not exceed any limits set by the ARB.

(Amended 12/19/90; 11/2/94; 3/6/02)

5-112 Limited Exemption, Recreational Fires: A fire set for recreational purposes is exempt from the requirements of Section 301.

(Adopted July 9, 2008)

5-200 **DEFINITIONS**

5-201 **Agricultural Fire:** A fire used for the purpose of initiating, continuing or maintaining agriculture as a gainful occupation. Fuels are limited to materials grown on the site and shall not include feed or fertilizer containers, finished or treated wood, plastic or rubber products, plumage, hides, fur, offal or fecal material or refuse from plant or animal processing other than from initial crop harvesting, pruning or attrition of fruit and nut trees, vines and cane crops.

(Amended 11/2/94; 3/6/02)

5-202 **Fire:** Any combustion of combustible materials of any type outdoors.

(Amended July 9, 2008)

5-203 **Flue:** Any duct or passages for air, gases, or the like, such as a stack or chimney.

5-204 **Gainful Occupation:** Any occupation from which there is proof of gross profit or loss as evidenced by tax receipts, sales slips or other such documents.

5-205 **Deleted December 19, 1990**

5-206 **Permissive Burn Day:** Any day that is so declared by the APCO when, in his opinion, air pollution caused by open burning will not adversely affect ambient air quality or downwind population. In declaring such permissive burn days, the meteorological criteria established by the ARB for the San Francisco Bay Area Air Basin shall be used as a guideline.

(Amended November 2, 1994)

5-207 **Treated Brush:** Material which has been felled, crushed or uprooted with mechanical equipment, or has been desiccated with herbicide.

5-208 **Hazardous Material:** For purposes of this Regulation, any combustible or flammable material which may pose a fire or explosion hazard including but not limited to, natural vegetation or other native growth cleared away to create or maintain a firebreak around any building or structure on a property as required to comply with Section 4291 of the State Public Resources Code to reduce the risk of a wildfire.

(Adopted 3/17/82; Amended 12/19/90; 11/2/94; 3/6/02)

5-209 **Public Fire Official:** An officer of a public agency charged with the responsibilities of setting or allowing fires. Public fire official includes but is not limited to, local, state, and federal officers.

(Adopted December 19, 1990)

5-210 **Contraband:** Any illegal or prohibited good that has been confiscated by a public law enforcement agency, including but not limited to explosives, pyrotechnics and illegal drugs.

(Adopted 12/19/90; Amended 11/2/94)

5-211 **Deleted March 6, 2002**

5-212 **Stubble:** The remaining stalk, stem, or trunk of a herbaceous plant or cereal grass (primarily oats, wheat and hay) after harvest of a field crop.

(Adopted November 2, 1994)

5-213 **Prescribed Burning:** The planned, controlled application of fire to vegetation to achieve a specific natural resource management objective(s) on land areas selected in advance of that application. The fire is conducted within the limits of a plan and prescription that describes both the acceptable range of weather, moisture, fuel, and fire behavior parameters to achieve the desired effects. For the purposes of this regulation, prescribed burning also means any Forest Management fire, Range Management fire, Hazardous Material fire not related to Public Resources Code Section 4291, or any Crop Replacement fire for the purpose of establishing an agricultural crop on previously uncultivated land, that is expected to exceed 10 acres in size or burn piled vegetation cleared or generated from more than 10 acres of land. These specific fire types shall be regulated as Wildland Vegetation Management fires and subjected to all of the requirements applicable to subsection 5-401.15. In addition, prescribed burning includes any naturally-ignited wildland fire managed for resource benefits that is subject to the applicable requirements in Section 5-408.

(Adopted 11/2/94; Amended 3/6/02)

- 5-214 **Backfiring:** A field crop burn ignition technique where the fire is ignited at the downwind side of the burn area, so that the fire must burn into the wind towards the fuel source.
(Adopted November 2, 1994)
- 5-215 **Stripfiring:** A field crop burn ignition technique where the fire is ignited in parallel strips by walking straight through the burn area into the wind.
(Adopted November 2, 1994)
- 5-216 **'X' or Crossfiring:** A field crop burn ignition technique where the fire is ignited in two semi-circle arch patterns that almost intersect in the middle of the burn area. The first fire is lit by walking into the wind from the downwind side. The second fire is lit by walking with the wind from the headwind side of the field. This technique is used during light (less than five miles per hour) and variable winds only.
(Adopted November 2, 1994)
- 5-217 **Property:** A single parcel of real property, as determined by the County Assessor. The term also includes contiguous parcels under the same ownership.
(Adopted November 2, 1994)
- 5-218 **APCO:** The Air Pollution Control Officer of the Bay Area Air Quality Management District or the designee thereof.
(Adopted November 2, 1994)
- 5-219 **ARB:** The Air Resources Board of the State of California.
(Adopted November 2, 1994)
- 5-220 **District:** The Bay Area Air Quality Management District.
(Adopted November 2, 1994)
- 5-221 **Forest:** A vegetation type or plant community covering a tract of land, which is named and described as a series, habitat or unique stand according to the California Native Plant Society (CNPS) classification system set forth in the most current edition of *A Manual of California Vegetation* published by CNPS, and dominated by trees growing more or less closely together. For the purposes of this regulation, the dominant vegetation form must be described as a broadleaf deciduous, broadleaf evergreen, conifer, or mixed broadleaf-conifer forest. Forest does not include chaparral, scrub and grassland communities, or the eucalyptus series, as these vegetation types are described in the CNPS classification system.
(Adopted March 6, 2002)
- 5-222 **Marshland:** A type of wetland ecosystem periodically or permanently inundated to a depth of up to 2 meters (6.6 feet) that supports a cover of low or tall emergent vegetation. Habitats within these water-land areas include diked, seasonally managed wetlands, unmanaged tidal wetlands, open bays, sloughs, and associated upland grasslands.
(Adopted March 6, 2002)
- 5-223 **Curtailment Period:** Any period so declared to the public by the APCO when negative impact upon public health is anticipated, as defined in Regulation 6-3-203.
(Adopted July 9, 2008)
- 5-224 **Recreational Fires:** A fire used for social, cultural or other activities including, but not limited to, campfires, bonfires, ceremonial fires, handwarming fires, raku or pit pottery curing fires, or fires conducted as part of an unusual event such as fire walking provided only clean dry wood and fire starter is used, and the activity is not part of a business for gainful occupation.
(Adopted July 9, 2008)
- 5-300 **STANDARDS**
- 5-301 **Prohibition of Fires:** Except as provided in this regulation:
- 301.1 A person shall not ignite, cause to be ignited, permit to be ignited, or suffer, allow, or maintain any fires within the District.
 - 301.2 No burning shall take place within the District on other than a permissive burn day, or in excess of any acreage burning allocation or limitation.
 - 301.3 A person shall not violate any condition, requirement, or parameter stated in or imposed by a smoke management plan approved by the APCO, or any special condition or administrative requirement in this regulation.
(Amended 11/94; 3/6/02)

5-302 **Mandatory Curtailment for Recreational Fires:** No person shall ignite, cause to be ignited, permit to be ignited, or suffer, allow, or maintain any recreational fires during curtailment periods.
(Adopted July 9, 2008)

5-400 **ADMINISTRATIVE REQUIREMENTS**

- 5-401 **Allowable Fires:** The following fires may be allowed on permissive burn days:
- 401.1 **Disease and Pest:** Agricultural fires set for the purpose of disease and pest prevention. The fire must be set or allowed by the Agricultural Commissioner of the County in the performance of official duty. Prior reporting pursuant to Section 5-406 must be made to the APCO, by the person setting the fire.
(Amended 12/19/90; 11/2/94; 3/6/02)
 - 401.2 **Crop Replacement:** Agricultural fires set for the purpose of establishing an agricultural crop in a location that formerly contained another type of agricultural crop or on previously uncultivated land. The fire must be set or allowed by the public fire official having jurisdiction, in the performance of official duty, and must be necessary for the crop replacement to proceed. Fires are limited to a period beginning October 1 and ending April 30; however, upon the determination of the APCO that heavy winter rainfall has prevented such burning, the burn period may be extended to no later than June 30. Prior reporting pursuant to Section 5-406 must be made to the APCO by the person setting the fire.
(Amended 12/19/90; 11/2/94; 3/6/02)
 - 401.3 **Orchard Pruning and Attrition:** Agricultural fires set for the purpose of disposal of periodic prunings and attrition losses from fruit trees, nut trees, vineyards and cane fruits. Fires must be set or allowed by the public fire official having jurisdiction, in the performance of official duty, and must be necessary to maintain and continue the growing of the fruit trees, vineyards and cane fruits as a gainful occupation. Fires are limited to a period beginning November 1 and ending April 30; however, upon the determination of the APCO that heavy winter rainfall has prevented such burning, the burn period may be extended to no later than June 30. When pruning is performed between February 15 and April 30 for integrated pest management purposes, the following minimum drying time periods shall apply: trees and branches over six inches in diameter: 30 days; for grape vines and branches less than or equal to six inches in diameter: 15 days. Prior reporting pursuant to Section 5-406 must be made to the APCO by the person setting the fire.
(Amended 3/15/81; 12/19/90; 11/2/94; 3/6/02)
 - 401.4 **Double Cropping Stubble:** Agricultural fires set for the purpose of disposal of grain stubble from agricultural land from which both grain and vegetable crops are harvested during the same calendar year. Fires must be set or allowed by a public fire official having jurisdiction, in the performance of official duty, and must be necessary to remove the grain stubble and straw before a field vegetable crop can be planted. All material to be burned shall be free of visible surface moisture. No fires shall take place before 10:00 a.m. local time on any day. Fires are limited to a period beginning June 1 and ending August 31. Prior reporting pursuant to Section 5-406 must be made to the APCO by the person setting the fire.
(Amended 12/19/90; 11/2/94; 3/6/02)
 - 401.5 **Stubble:** Agricultural fires set for the purpose of disposal of stubble and straw. Fires must be set or allowed by a public fire official having jurisdiction, in the performance of official duty, and must be necessary to maintain and continue the growing of field crops as a gainful occupation. Fire ignition techniques shall be limited to backfiring, stripfiring, and 'X' or crossfiring unless an alternate technique is approved by the APCO in writing where a specific field condition is determined not to lend itself to these techniques in a given year. All material to be burned shall be free of visible surface moisture.

After 0.15 inches or more rainfall, the material must pass the "crackle" test pursuant to Section 5-601 prior to burning. No fires shall take place before 10:00 a.m. local time on any day. Fires are limited to a period beginning September 1 and ending December 31. Outside of Sonoma County, no more than 100 acres of any property shall be burned in a single day. Within Sonoma County, no person shall conduct a burn without receiving an acreage burning allocation from the APCO and no more than 500 acres total of all properties shall be burned in a single day. In addition, no more than 100 acres of any property shall be burned in a single day. If by 12:00 p.m. local time the daily 500-acre burn acreage limitation has not been allocated, up to 200 acres of any property may be burned in a single day provided:

- a. the additional acreage burning allocation has been approved verbally by the APCO; and
- b. no more than two fields exceeding 100 acres total are burned simultaneously on the same property.

(Amended 12/19/90; 11/2/94; 3/6/02)

401.6 Hazardous Material: Any fires set for the purpose of the prevention or reduction of a fire hazard, including the disposal of dangerous materials. The fire must be set or allowed by any public fire official having jurisdiction, in the performance of official duty. The fire must, in the opinion of such officer, be necessary, and the fire hazard not able to be abated by any other means. However, these fires may also be conducted to dispose of materials generated to comply with an order or notice issued by a fire official pursuant to Section 4291 of the State Public Resources Code provided all of the following conditions are satisfied:

- a. only natural vegetation or other native growth may be burned;
- b. the amount of material to be burned shall be greater than 5 cubic yards cleared annually from a single property;
- c. the material is burned where it was grown without being moved to a different location unless approved by the APCO;
- d. the material is inaccessible for removal by vehicle and available alternatives to burning such as shredding, chipping, composting, disking, plowing, and harrowing are not feasible; and
- e. the material, if ignited accidentally, would result in a fire of such magnitude as to immediately threaten life or adjacent improved property or resources and require an excessive fire suppression effort.

No fires involving piled material shall be ignited or take place before 9:30 a.m. local time on any day. Prior reporting pursuant to Section 5-406 must be made to the APCO by the person setting the fire.

(Amended 12/19/90; 11/2/94; 3/6/02)

401.7 Fire Training: Fires set for the exclusive purpose of instruction of either public or industrial employees in fire fighting methods. The fire must be set or allowed by the public fire official having jurisdiction, in the performance of official duty, and must be, in his opinion, necessary. Notwithstanding contrary provisions of Section 5-111, a fire fighting agency may set one fire per quarter calendar year for the purpose of training volunteer or seasonal fire fighters. This may be done on other than a permissive burn day if the APCO is notified in writing or facsimile at least two weeks in advance. Fires may be conducted outside of the burn hour limits in subsections 5-111.1 and 111.2 if the APCO is notified in writing or facsimile at least seven calendar days in advance. Prior reporting pursuant to Section 5-406 must also be made to the APCO for other fire training by the person setting the fire.

(Amended 12/19/90; 11/2/94; 3/6/02)

401.8 Flood Debris: Agricultural fires set for the purpose of removing wood and vegetation debris deposited by floodwaters. The fire must be set or allowed by the public fire official having jurisdiction, in the performance of official duty, and must be necessary for the continuing or maintaining of agriculture as a gainful occupation. Fires are limited to a period beginning October 1

and ending May 31. Prior reporting pursuant to Section 5-406 must be made to the APCO by the person setting the fire.

(Amended 12/19/90; 11/2/94; 3/6/02)

401.9 Irrigation Ditches: Agricultural fires set for the purpose of controlling growth of vegetation in irrigation ditches and canals. The fire must be set or allowed by a public fire official having jurisdiction, in the performance of official duty, and must, in the opinion of such officer, be necessary to avoid interference with water flow or drainage into irrigated land. Prior reporting pursuant to Section 5-406 must be made to the APCO by the person setting the fire.

(Amended 12/19/90; 11/2/94; 3/6/02)

401.10 Flood Control: Fires set for the purpose of disposal of material which is lying or growing within natural channels or flood control channels. The fire must be set or allowed by a public official in charge of flood control activities. The fire must, in the opinion of such official, be a necessary incident to the clearing and maintenance of water courses and flood control channels for preventing or eliminating a flood hazard. Prior reporting pursuant to Section 5-406 must be made to the APCO by the person setting the fire.

(Amended 12/19/90; 11/2/94)

401.11 Range Management: Fires set for the purpose of range management and grazing. The fire must be set or allowed by the State Director of Forestry, or public fire official having jurisdiction, in the performance of official duty, and must be necessary to maintain and continue the grazing of animals as a gainful occupation. Brush to be burned shall be treated at least six months prior to burn if determined to be technically feasible by the State Director of Forestry or public fire official. Unwanted trees over 6 inches in diameter shall be felled prior to burn and dried for a minimum of six months. Feasibility shall be subject to the approval of the APCO. Subsections 5-111.1 and 5-111.6 may be waived by the State Director of Forestry or fire official when determined necessary in the public interest. Fires are limited to a period beginning July 1 and ending April 30. Prior reporting pursuant to Section 5-406 must be made to the APCO by the person setting the fire.

(Amended 12/19/90; 11/2/94; 3/6/02)

401.12 Forest Management: Fires set for the purpose of removing forest debris and for forest management. The fire must be set or allowed by a public fire official having jurisdiction, in the performance of official duty, and must, in his opinion, be necessary. Subsections 5-111.1 and 5-111.6 may be waived by the fire official when deemed necessary in the public interest. All materials shall be piled or windrowed unless deemed poor practice by the fire official. Fires are limited to a period beginning November 1 and ending April 30. Prior reporting pursuant to Section 5-406 must be made to the APCO by the person setting the fire.

(Amended 12/19/90; 11/2/94; 3/6/02)

401.13 Marsh Management: Fires set for the purpose of improvement of marshland for wildlife habitat. The fire must be declared necessary by the California Department of Fish and Game. No such fire may be allowed on a given piece of land more than once in any 2 year period. The California Department of Fish and Game shall provide the APCO such information as may be deemed necessary by the APCO to verify the necessity of each burn and land area burning frequencies. Any person seeking to set fires under this provision shall also comply with the requirements of Section 5-410 and receive written APCO approval of the smoke management plan prior to any burn. No fires shall take place before 10:00 a.m. or after 3:00 p.m. local time, nor shall any existing burning be allowed to continue after 3:00 p.m. local time on any day. Fires are limited to a Spring burning period beginning February 1 and ending March 31, and a Fall burning period beginning September 1 and ending October 15; however, upon the determination of the APCO in consultation with the California Department of Fish and Game and the Solano County Mosquito Abatement District, that heavy winter rainfall has prevented such burning, the burn period beginning February 1 and ending March 31 may be extended to no later than June 30. Outside of the

Suisun Resource Conservation District (SRCD), no person shall conduct a burn without receiving an acreage burning allocation from the APCO and no more than 100 acres of any property shall be burned in a single day. For fires conducted within the boundaries of the SRCD:

- a. no person shall conduct a burn without receiving an acreage burning allocation from the APCO;
- b. total daily acreage to be burned shall be determined by the APCO, but in no case shall the total acreage burning allocation exceed 300 acres/day during the Fall burning period and 600 acres/day during the Spring burning period. In addition, no more than 100 acres of any property and no more than 100 acres of all properties designated by the same SRCD hundred-series ownerships shall be burned in a single day during the Fall or Spring burning period.

(Amended 3/15/81; 5/20/81; 8/3/83; 11/2/94; 3/6/02)

401.14 **Contraband:** Fires set for the purpose of disposing of contraband. The fire must be set or allowed by any peace officer or public fire official, in the performance of official duty. The fire must, in the opinion of such officer, be necessary and the material not be able to be disposed of by any other means. Prior reporting must be made to the APCO by the person setting the fire pursuant to Section 5-406.

(Adopted 12/19/90; Amended 11/2/94)

401.15 **Wildland Vegetation Management:** Prescribed burning by a state or federal agency, or through a cooperative agreement or contract involving the state or federal agency, conducted on land predominately covered with chaparral, trees, grass, coastal scrub, or standing brush. Any person seeking to set fires under this provision shall comply with the requirements of Section 5-408 and receive written approval of the smoke management plan by the APCO prior to any burn. Until June 1, 2002, this fire may be conducted on other than a permissive burn day, as defined in Section 5-206, if approved by the APCO pursuant to subsection 5-408.2. Effective June 1, 2002, fires may not be conducted on other than a permissive burn day.

(Adopted November 2, 1994)

401.16 **Filmmaking:** Fires set as part of commercial film or video production activities for motion pictures and television. The fire shall be set or allowed by the public fire official having jurisdiction, in the performance of official duty. Any person seeking to set fires under this provision shall comply with the requirements of Section 5-409 and receive APCO approval in writing at least 10 working days prior to the burn. This fire may be done on other than a permissive burn day, as defined in Section 5-206, if approved by the APCO pursuant to subsection 5-409.2.

(Adopted November 2, 1994)

401.17 **Public Exhibition:** Fires set as part of a planned civic event designed to educate or otherwise benefit the public. The fire shall be set or allowed by the public fire official having jurisdiction, in the performance of official duty. Any person seeking to set fires under this provision shall comply with the requirements of Section 5-409 and receive APCO approval in writing at least 10-working days prior to the burn. This fire may be conducted on other than a permissive burn day, as defined in Section 5-206, if approved by the APCO pursuant to subsection 5-409.2.

(Adopted 11/2/94; Amended 3/6/02)

5-402 **Deleted November 2, 1994**

5-403 **Agricultural Land Use:** Debris from land clearing shall not qualify under subsections 5-401.1, 5-401.2, 5-401.3, 5-401.4 or 5-401.5 unless applicant certifies, under penalty of perjury, that said land is to remain in agricultural use for a gainful occupation for a period of one year subsequent to the burning, and that applicant has not caused or contributed to the need for the burning of the material for any reason other than the promotion of agricultural use of the land for a gainful occupation. However, the County Agricultural Commissioner may waive this Section by certifying that burning of the material under subsection 5-401.1 is, in his opinion, the only safe

method of disposal. Failure to comply with the conditions of this Section shall be considered a violation of this Regulation. Each pile burned in violation shall be cited as a separate offense.

(Amended 11/2/94; 3/6/02)

5-404 Emergency Waivers: A public officer authorized under subsections 5-401.1, 5-401.6 and 5-401.10 to grant permission for open burning may grant waivers from subsections 5-111.1 through 5-111.9 when, in his judgment, such emergency or summary action is necessary for the public safety. When such action is taken, the authorizing authority shall certify the following in a written report submitted to the APCO within 10 calendar days following the completion of burning: a description and quantity of the material burned and an explanation of the reasons for granting the permission.

(Amended 11/2/94; 3/6/02)

5-405 Deleted March 6, 2002

5-406 Prior District Notification; Disease and Pest, Crop Replacement, Orchard Pruning and Attrition, Double Cropping Stubble, Forest Management, Flood Debris, Fire Training, Flood Control, Irrigation Ditches, Range Management, Hazardous Material, and Contraband: The person setting the fire shall provide electronic, typewritten, legibly handwritten, or computer printed notification to the District prior to the burn on a District-approved form or facsimile thereof. If notification is submitted by mail, the document must be postmarked at least 5 calendar days prior to the burn. The notification form must be completely filled out with accurate information to satisfy this requirement. For structural fire training, written notification shall also be made to the APCO at least 10 working days prior to the burn pursuant to the requirements of Regulation 11-2-401.3 (Asbestos Demolition, Renovation and Manufacturing).

(Adopted 12/19/90; Amended 11/2/94; 3/6/02)

5-407 Deleted November 2, 1994

5-408 Wildland Vegetation Management Burn Requirements: Any person who seeks to conduct or conducts prescribed burning pursuant to subsection 5-401.15 shall comply with the following requirements:

408.1 Submit a smoke management plan to the APCO for review at least 30 calendar days prior to the proposed burning that is consistent with the most current USEPA guidance on wildland and prescribed fires (*Interim Air Quality Policy on Wildland and Prescribed Fires*, USEPA 1998, or any subsequent document that supersedes this document), and provides the following information:

- a. location and specific objectives of each proposed burn;
- b. acreage, tonnage, type, and arrangement of vegetation to be burned;
- c. directions and distances to nearby sensitive receptor areas;
- d. fuel condition, combustion and meteorological prescription elements for the project;
- e. projected burn schedule and expected duration of project ignition, combustion, and burn down (hours or days);
- f. specifications for monitoring and of verifying critical parameters including meteorological conditions and smoke behavior before and during the burn;
- g. specifications for disseminating project information to public;
- h. contingency actions that will be taken during the burn to reduce exposure if smoke intrusions impact any sensitive receptor area;
- i. certification by a qualified professional resource ecologist, biologist, or forester that the proposed burning is necessary to achieve the specific management objective(s) of the plan;
- j. a copy of the environmental impact analysis prepared for the plan that includes an evaluation of alternatives to burning, if such an analysis was required by state or federal law or statute;
- k. project fuel loading estimate (tons vegetation/acre) by vegetation type(s) and a description of the calculation method; and

- I. particulate matter emissions estimate including referenced emission factor(s) and a description of the calculation method used.
- 408.2 Until June 1, 2002, permission to burn on other than a permissive burn day shall be governed by the 48-hour forecast issued by the APCO. Effective June 1, 2002, permission to burn shall be governed by the acreage burning allocation issued by the APCO.
- 408.3 Until June 1, 2002, prior to ignition, notify the APCO on the day of each burn. Effective June 1, 2002, receive an acreage burning allocation from the APCO prior to ignition.
- 408.4 For each day on which burning occurs, report the total acreage and tonnage of vegetation actually burned to the APCO by telephone no later than 12:00 p.m. local time the following day.
- 408.5 Within 30 calendar days following completion of the burn project, provide a written post-burn evaluation to the APCO that addresses whether the project objectives were met and describes actual smoke behavior.

Effective June 1, 2002, any fire official seeking to conduct prescribed burning in a geographical area considered for a potential naturally-ignited wildland fire managed for resource benefits that is expected to exceed 10 acres in size shall annually register each burn project in writing with the APCO by December 31 each year, with updates as they occur. Once a decision is made to manage the fire for resource benefits, the fire official shall provide a smoke management plan for the burn project to the APCO, upon request.

(Adopted 11/2/94; Amended 3/6/02)

5-409 Filmmaking and Public Exhibition Burn Petitions: Any person seeking to conduct a fire pursuant to subsection 5-401.16 or 401.17 shall comply with the following requirements:

- 409.1 Submit an open burning petition to the APCO that provides the following information, as applicable:
 - a. date(s) and specific location(s) of each proposed burn;
 - b. type and quantity (tonnage, acreage, or volume) of each material to be burned;
 - c. the projected fuel use rate in BTU per hour, if known, calculated using the higher heating value of each fuel; and
 - d. the burn duration.
- 409.2 Permission to burn on other than a permissive burn day shall be subject to written approval of the open burning petition by the APCO.
- 409.3 Prior to ignition, notify the APCO on the day of each burn.
- 409.4 If the APCO grants written approval, such approval shall be available at the burn location for inspection by the APCO, upon request.

(Adopted 11/2/94; Amended 3/6/02)

5-410 Marsh Management Burn Requirements: Effective June 1, 2002, any person who seeks to conduct or conducts a fire pursuant to Subsection 5-401.13 shall:

- 410.1 In order to receive an acreage burning allocation, at least 30 calendar days prior to the proposed burning, submit a smoke management plan to the APCO for review using a District-approved form;
- 410.2 In securing the written necessity statement required by California Health and Safety Code Section 41861, submit to the California Department of Fish and Game (DFG) and the APCO information that (1) identifies the non-burning alternatives considered by the property owner(s) given the recommendations or needed improvements described in existing Individual Ownership Management Plans, updated Individual Ownership Adaptive Management Habitat Plans, Wildlife Management Plans or other resource management plans as applicable; and (2) explains why water management practices and non-burn vegetation management practices cannot currently achieve the management objective(s) of the proposed fire and the property. Where DFG is conducting a burn on state lands, this information shall be submitted by DFG to the APCO prior to the proposed burning;
- 410.3 Prior to the proposed burning, submit the written statement required by Health and Safety Code Section 41861 to the APCO;

410.4 For each day on which burning occurs, report the total acreage of vegetation actually burned to the APCO by telephone no later than 12:00 p.m. local time the following day.

(Adopted March 6, 2002)

5-500 MONITORING AND RECORDS

5-501 Open Burning Records: Effective June 1, 2002, any person subject to Section 5-408 or 5-410 shall comply with the following requirements:

501.1 The person who conducts the fire shall maintain records on a daily basis that document and verify the actual acreage burned. Such documentation shall include the following information:

- a. date and location of burn
- b. a description of the method(s) or technique(s) used to verify the actual acreage burned
- c. data collected that supports the burn acreage determination, and
- d. type of vegetation and acreage actually burned.

501.2 Such records shall be retained for twelve months and made available to the APCO, upon request.

(Adopted 12/19/90; Amended 11/2/94; 3/6/02)

5-600 MANUAL OF PROCEDURES

5-601 Appraisal of Field Crop Fuel Moisture; The "Crackle" Test: Any person who wants to conduct an evaluation of fuel moisture in field crop stubble or straw remaining after harvest pursuant to subsection 5-401.5 shall satisfy the following criteria prior to burning:

601.1 Sampling: To ensure representative sampling, sample in accordance with the following requirements:

- a. obtain samples from several different areas of the field
- b. select some samples from underneath the straw mat including the bottom layer
- c. a handful of sample material is considered a sufficient size to test.

601.2 Evaluation: The field is considered dry enough to burn, or passes the "crackle" test when:

- a. each sample is tested just prior to burning
- b. each sample tested makes an audible "crackle" when it is bent sharply.
- c. If the sample does not pass the test, then the area from which the sample was selected cannot be burned until such material is considered dry enough to burn.

(Adopted November 2, 1994)