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HIGH WIND EXCEPTIONAL EVENT FUGITIVE DUST MITIGATION PLAN

For Imperial County

SUMMARY

In keeping with the Air District's mission to protect the public health and consistent with the principles of the Clean Air Act the Imperial County Air Pollution Control District has prepared a mitigation plan to help address historically documented and known seasonal high wind events

Imperial County Air Pollution Control District
Planning Division



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I INTRODUCTION

I.1 Purpose

In keeping with the United States Environmental Protection Agency's (US EPA) final rulemaking for the "Treatment of Data Influenced by Exceptional Events", published October 3, 2016, areas with "known seasonal" or "historically documented" exceptional events are required to develop and implement a Mitigation Plan, codified as Title 40 of the Code of Federal Regulations (CFR) section 51.930 (40 CFR 51.930)

When States request the exclusion of air quality data due to an exceptional event the States must take appropriate and reasonable actions to protect the public health from exceedances or violations of the National Ambient Air Quality Standards (NAAQS). At a minimum, a State must:

- Provide for prompt public notification whenever air quality concentrations exceed or are expected to exceed an applicable ambient air quality standard.
- Provide for public education concerning actions that individuals may take to reduce exposures to unhealthy levels of air quality during and following an exceptional event.
- Provide for the implementation of appropriate measures to protect public health from exceedances or violations of ambient air quality standards caused by exceptional events.

The Imperial County Air Pollution Control District (ICAPCD) has prepared this "High Wind Exceptional Event Fugitive Dust Mitigation Plan" for the Particulate Matter Less than 10 microns (PM₁₀) nonattainment area for Imperial County.

I.2 Exceptional Events Rule Revisions

The earliest guidance issued by the US EPA regarding the exclusion of ambient PM₁₀ air quality data known as the natural event policy occurred in May of 1996. The policy represented the US EPA's interpretation of the Clean Air Act Section 188(f) and Appendix K of 40 CFR, Part 50. Imperial County adopted its Natural Events Action Plan August 9, 2005.

As a response to stakeholder concerns on March 22, 2007, the US EPA adopted the “Treatment of Data Influenced by Exceptional Events Rule” (Exceptional Events Rule) to govern the review and handling of certain air quality monitoring data for which the normal planning and regulatory processes are not appropriate. Under the terms of the rule, the US EPA may exclude monitored exceedances of the NAAQS if a State adequately demonstrates that an exceptional event caused the exceedance. While the 2007 Exceptional Events Rule required States to take reasonable measures to mitigate the impacts of an exceptional event the rule did not require States to submit their identified measures to the US EPA or to notify the US EPA of the measures a State planned to take.

The 2007 and 2016 revised Exceptional Events Rule added sections 40 CFR §50.1(j)-(r) [Definitions], 50.14(a)-(c) and 51.930(a)-(b) to 40 CFR. These sections contain definitions, criteria for US EPA concurrence, procedural requirements and requirements for State demonstrations. The demonstration must satisfy all of the rule criteria for US EPA to concur with the requested exclusion of air quality data from regulatory decisions.

Title 40 CFR §50.14(c)(3)(iv) outlines the elements that a demonstration must include for air quality data to be excluded:

- “A narrative conceptual model that describes the event(s) causing the exceedance or violation and a discussion of how emissions from the event(s) led to the exceedance or violation at the affected monitor(s);”
- “A demonstration that the event affected air quality in such a way that there exists a clear causal relationship between the specific event and the monitored exceedance or violation;”
- “Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times” to support the requirement above;
- “A demonstration that the event was both not reasonably controllable and not reasonably preventable;” and
- “A demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event.”



Aside from the above, a State must demonstrate that it has met several procedural requirements during the demonstration process, including:

- 1 Submission to the Administrator of an Initial Notification of Potential Exceptional Event and flagging of the affected data in US EPA's Air Quality System (AQS) as described in 40 CFR §50.14(c)(2)(i),
- 2 Documentation of fulfillment of the public comment process described in 40 CFR §50.14(c)(3)(v), and
- 3 Implementation of any applicable mitigation requirements (Mitigation Plan) as described in 40 CFR §51.930.

I.3 Fugitive Dust – Particulate Matter Less than 10 Microns (PM₁₀)

PM₁₀ refers to particles with an aerodynamic diameter of 10 microns or smaller. For comparison, the diameter of a human hair is about 50 to 100 microns. Exposure to PM₁₀ aggravates a number of respiratory illnesses and may even cause early death in people with existing heart and lung disease. PM₁₀ includes the subgroup of finer particles with aerodynamic diameter of 2.5 microns and smaller (PM_{2.5}). These finer particles pose an increased health risk because they can deposit deep in the lung and contain substances that are particularly harmful to human health. PM is a mixture of substances that include elements such as carbon and metals; compounds such as nitrates, organic compounds, and sulfates; and complex mixtures such as diesel exhaust and dust. These substances may occur as solid particles or liquid droplets. Some particles emitted directly into the atmosphere include dust. Others, referred to as secondary particles, result from the transformation of gases into particles through physical and chemical processes in the atmosphere.

I.4 Geographical Description

According to the United States Census Bureau, Imperial County has a total area of 4,482 square miles, of which 4,177 square miles is land and 305 square miles is water. Much of Imperial County is below sea level and is part of the Colorado Desert an extension of the larger Sonoran Desert. Bordered by San Diego County to the west, Riverside County to the north, Arizona to the east and Mexico to the south, Imperial County is comprised of seven incorporated cities, including the unincorporated township of Niland that are surrounded by agricultural lands. Combined these cities and agricultural lands make up Imperial Valley (**Figure 1-1**).



Surrounding the Imperial Valley to the west, east, north and south are naturally open desert areas, the Salton Sea to the north, the Chocolate Mountains to the east, distinctive mountain ranges along the San Diego/Imperial County borderline, and to the south the metropolitan city of Mexicali, Mexico with a population over a million.

Several geological aspects from within and outside of Imperial County affect air quality. The region along the Chocolate Mountains within the eastern section of Imperial County is dominated by the transition of the tectonic plate boundary from rift to fault. The southernmost strands of the San Andreas Fault connect the northern-most extensions of the East Pacific rise. Consequently, the region is subject to earthquakes and the crust is being stretched, resulting in a sinking of the terrain over time.

The distinctive regions along the southeastern and southwestern portions of the San Diego/Imperial County borderline include the distinctive peninsular mountain ranges, which comprise the eastern two-thirds of San Diego County and are primarily undeveloped backcountry with a native plant community known as chaparral. The In-Ko-Pah Mountains and the Jacumba Mountains border Mexico and Imperial County and provide distinctive weathered dramatic piles of residual boulders. The Anza-Borrego Desert State Park contains characteristically erosive regions, such as sand dunes, that extend from the Santa Rosa Mountains into northern Baja California in Mexico. Some of the regions included within the Anza-Borrego Desert State Park are the Vallecito Mountains, the Carrizo Badlands and the Coyote Mountains. Much of the terrain is loose dirt, interspersed with sandstone and occasional quartz veins. In all, the Anza-Borrego Desert State Park lies in a unique geologic setting along the western margin of the Salton Trough. The area extends north from the Gulf of California (Baja California) to San Geronio Pass and from the eastern rim of the Peninsular Ranges eastward to the San Andreas Fault zone along the far side of the Coachella Valley.

These areas are sources of transported fugitive dust emissions into Imperial County when westerly winds funnel through the unique landforms causing in some cases wind tunnels that cause increase in wind speeds. During the monsoonal season, natural open desert areas to the east, southeast, and south of Imperial County are sources of transported fugitive dust emissions when thunderstorms cause outflows to blow winds across natural opens desert areas within Arizona and Mexico.

**FIGURE 1-1
IMPERIAL COUNTY**



Fig 1-1: Imperial County a Southern California border region, within far southeast California bordering Arizona and Mexico has a small most economically diverse region with a population of 174,528

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I.5 Meteorological Setting

Imperial County is part of the Colorado Desert, which is a subdivision of the larger Sonoran Desert (**Figure 1-2**) encompassing approximately 7 million acres (28,000 km²). The desert area encompasses Imperial County and includes parts of San Diego County, Riverside County, and a small part of San Bernardino County.

**FIGURE 1-2
 SONORAN DESERT REGION**

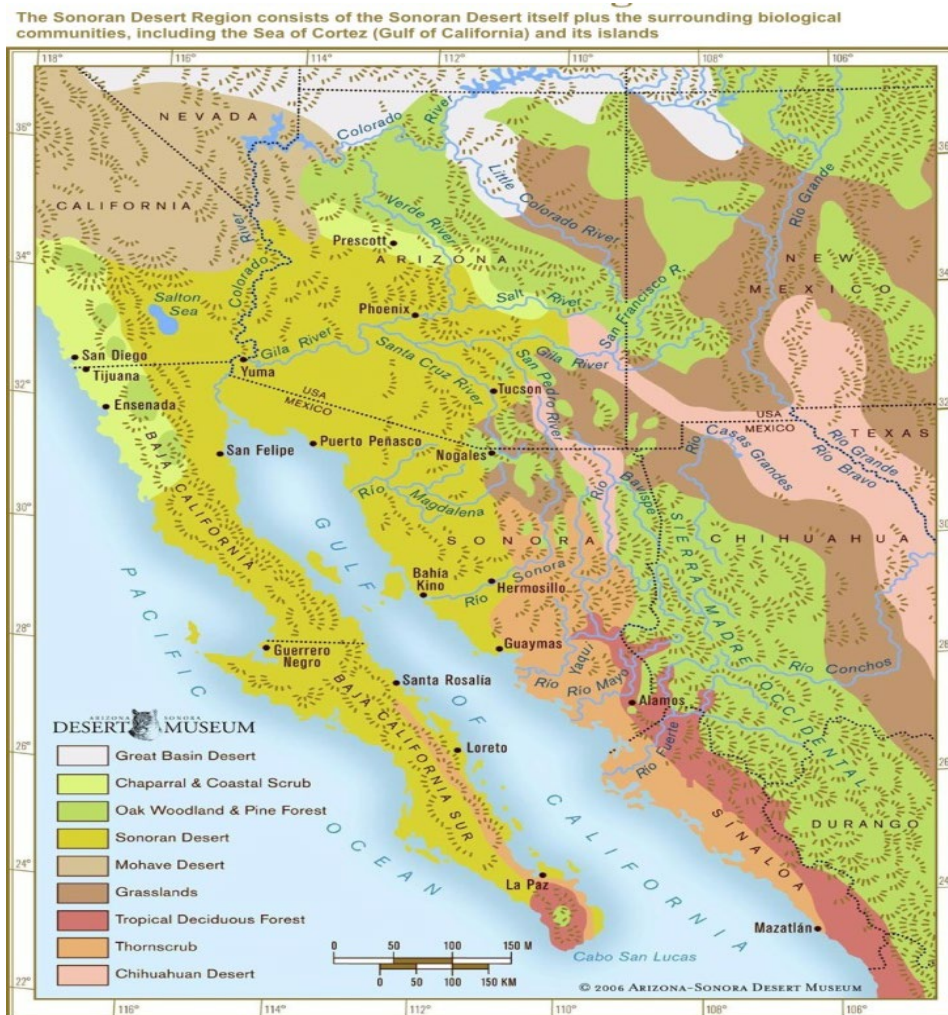


Fig 1-2: Depicts the magnitude of the region known as the Sonoran Desert. Source: Arizona-Sonora Desert Museum at <http://desertmuseum.org/center/map.php>

The Colorado Desert's climate distinguishes it from other deserts. The region experiences greater summer daytime temperatures than higher-elevation deserts and almost never experiences frost. In addition, the Colorado Desert experiences two rainy seasons per year (in the winter and late summer), especially toward the southern portion of the region



which includes a portion of San Diego County.

The west coast Peninsular Ranges, or other west ranges, of Southern California–northern Baja California, block most eastern Pacific coastal air and rains, producing an arid climate. Other short or longer-term weather events can move in from the Gulf of California to the south, and are often active in the summer monsoons. These include remnants of Pacific hurricanes, storms from the southern tropical jet stream, and the northern Inter Tropical Convergence Zone (ITCZ).

The combination of meteorology and topography create the ideal conditions for the transport and trapping of particulates. The bowl like topography, created by the below sea level elevation, allows the eroding mountain ranges and the expansive natural open desert areas within the counties of San Diego, Riverside, Arizona and Mexico to transport fugitive dust into Imperial County during windy days either from the west or from outflows created by thunderstorms from the south, and southeast.

1.6 Imperial County High Wind Event Meteorology

Analysis of high wind events, resulting in elevated PM₁₀ concentrations, in Imperial County during the fall, winter, and spring are often due to strong winds associated with low-pressure systems and cold fronts. During the summer monsoon season, elevated PM₁₀ concentrations are often due to wind flow aloft from the East or Southeast, known as the North American Monsoon (NAM)¹. The NAM occurs when there is a shift in wind patterns during the summer, which occurs as Mexico and the southwest United States warm under intense solar heating reversing airflow from dry land areas to moist ocean areas. Consequently, the prevailing winds start to flow from moist ocean areas into dry land areas.

Historical analysis have defined meteorological mechanisms that lead to high wind elevated PM₁₀ events in Imperial County and they include:

- **Type 1:** Pacific storms and frontal passages;
- **Type 2:** Strong pressure and surface pressure gradients;
- **Type 3:** Monsoonal Gulf Surges from Mexico; thunderstorm downburst, outflow winds and gust fronts from thunderstorms
- **Type 4:** Santa Ana wind events

¹ Wikipedia, [North American Monsoon](https://en.wikipedia.org/wiki/North_American_monsoon), Last revised October 7, 2022, https://en.wikipedia.org/wiki/North_American_monsoon

Type 1 events, the passage of storm systems, create strong winds through the mountain passes and desert slopes. As the frontal system passes, surface wind shifts causing increases in wind speeds. Although these storms often produce little to no precipitation winds blow along the desert slopes at much high speeds, such as 60 mph while winds on the desert floor reduce but remain elevated, such as 50 mph. The impressive dust plumes are typically captured by Satellite and can be seen traveling from the mountains beyond Imperial County. During these events, the National Weather Service (NWS) San Diego office often issues wind advisories for the San Diego Mountains and deserts, typically advising of reduced visibility due to blowing dust along Interstate 8, the Coachella Valley and other desert communities within the San Diego service area. The winds are associated with a dynamic, fast-moving winter, spring or fall storm. Cold fronts, dry or wet, often accompany the weather system.

Type 2 events occur far more frequently than other wind events. They are responsible for the majority of the exceptional event episodes in Imperial County. These wind events occur when a low-pressure system moves inland from the Pacific Ocean. This can be an upper level trough moving inland over central-southern California, or sliding down from the Pacific Northwest into the Great Basin and extending southward into southern California. In either occurrence, the surface gradient tightens, producing a strong onshore flow and generating strong gusty westerly winds across the deserts and mountains of southeastern California. In many instances, **Type 1** and **Type 2** meteorological conditions can combine causing very strong winds in Imperial County. Much like **Type 1** events, the NWS office in San Diego typically issues wind advisories for the San Diego Mountains and deserts.

Type 3 are strong easterly-to-southerly winds produced by thunderstorm outflows. Triggering these outflows are monsoonal air masses (Gulf Surge) that move northward out of Mexico. The warm, moist air from the Gulf of Mexico spills into the southwest United States and promotes instability in the atmosphere. This convective activity produces thunderstorms in the atmosphere, which generates strong winds from outflow boundaries (gust fronts). Fast-moving outflows can and do reach Imperial County when thunderstorms combine within Arizona or Northern Mexico. Thunderstorm complexes that occur during the NAM in the desert southwest can produce dust storms called "haboobs" that are so intense that they look like a wall of dust moving across the landscape.

Type 4 events are Santa Ana wind events. They are the least common. These events occur when high pressure and cold temperatures over the Great Basin create northerly or northeasterly winds. Typically, the stronger Santa Ana winds occur at higher elevations to the north of Imperial County. However, occasionally the dynamics of the strong northerly



winds race across the high desert (Mojave Desert) where blowsand is transported into the bowl-like depression of Imperial County elevating PM₁₀ levels. Type 3 events typically occur during November through January.

I.7 Imperial County PM₁₀ Fugitive Dust Rules

The US EPA issued its final ruling to the “Revisions to the National Ambient Air Quality Standards for Particulate Matter” on July 1, 1987. The final ruling took three decisive actions. First, it replaced Total Suspended Particulate Matter (TSP) as an indicator for particulate matter for the ambient standards with PM₁₀. Second, it replaced the 24-hour primary TSP standard with a 24-hour PM₁₀ standard of 150 micrograms per cubic meter (µg/m³) with no more than one expected exceedance per year. Third, the final ruling replaced the annual primary TSP standard with a PM₁₀ standard of 50 µg/m³. The ruling similarly announced new Federal Reference Methods for measuring PM₁₀ and issued Appendix J and Appendix K to Part 50 as guidance.

Upon enactment of the 1990 Clean Air Act (CAA) amendments, Imperial County was classified as “Moderate” nonattainment for the PM₁₀ NAAQS under the CAA sections 107(d)(4)(B) and 188(a). By November 15, 1991, such areas were required to develop and submit State Implementation Plan (SIP) revisions providing for, among other things, implementation of reasonably available control measures (RACM).

Partly to address the RACM requirement, ICAPCD adopted local Regulation VIII rules to control PM₁₀ from sources of fugitive dust on October 10, 1994, and revised them on November 25, 1996. US EPA did not act on these versions of the rules with respect to the federally enforceable SIP.

On August 11, 2004, US EPA reclassified Imperial County as a “Serious” nonattainment area for PM₁₀. As a result, CAA section 189(b)(1)(B) required all Best Available Control Measures (BACM) to be implemented in the area within four years of the effective date of the reclassification, i.e., by September 10, 2008.

On November 8, 2005, partly to address the BACM requirement, ICAPCD revised the Regulation VIII rules to strengthen fugitive dust requirements. On July 8, 2010, US EPA finalized a limited approval of the 2005 version of Regulation VIII, finding that the seven Regulation VIII rules largely fulfilled the relevant CAA requirements. Simultaneously, US EPA also finalized a limited disapproval of the rules, identifying specific deficiencies. Addressing these deficiencies would fully demonstrate compliance with CAA requirements regarding BACM and enforceability.



September 2010, ICAPCD and the California Department of Parks and Recreation (DPR) filed petitions with the Ninth Circuit Federal Court of Appeals for review of US EPA's limited disapproval of the rules. After hearing oral argument on February 15, 2012, the Ninth Circuit directed the parties to consider mediation before rendering a decision on the litigation. On July 27, 2012, ICAPCD, DPR and US EPA reached a settlement agreement on a resolution to the dispute, which included a set of specific revisions to Regulation VIII, adopted by ICAPCD on October 16, 2012 and approved by US EPA April 22, 2013.

II 40 CFR 51.930 MITIGATION OF EXCEPTIONAL EVENTS

Section 51.930(b)(2) refers to the minimum plan components that must be included within mitigation plans for areas identified with "historically documented" or "known seasonal" events. The US EPA identified the Imperial Valley PM₁₀ Nonattainment area as subject to the mitigation requirements. Following are the three minimum plan components described within 40 CFR 51.930(b)(2);

- II.1 Public notification to and education programs for affected or potentially affected communities. Such notification and education programs shall apply whenever air quality concentrations exceed or are expected to exceed a NAAQS with an averaging time that is less than or equal to 24-hours. [**40 CFR 51.930(b)(2)(i)**]

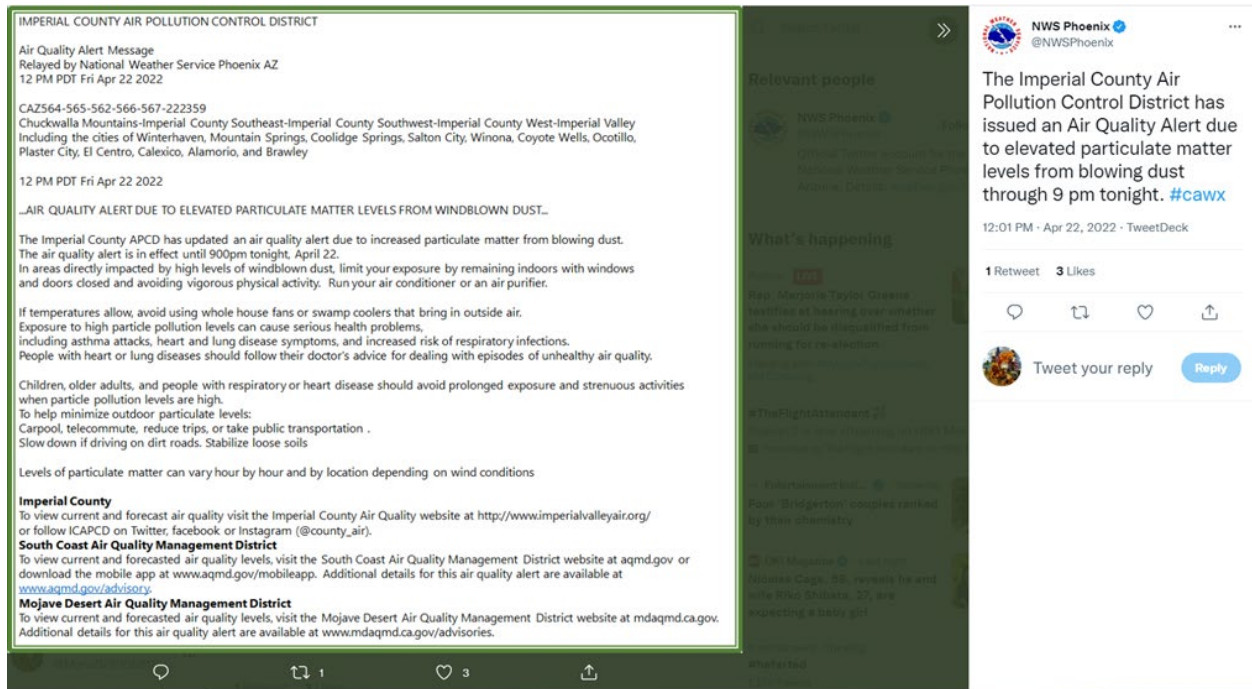
In keeping with the ICAPCD's commitment to protect the public health the ICAPCD is committed to providing daily real-time current air quality information, analysis and air quality programs to the public. While the ICAPCD continues to utilize standard outreach programs such as informative brochures, participation in community and school events, most recent developments in social media and web-based tools have created access to near instantaneous information for public use. Web-based information utilized by the ICAPCD includes the ICAPCD home page at www.co.imperial.ca.us, [Twitter](#), [Instagram](#), [Facebook](#), the air quality index alert page at www.imperialvalleyair.org, and as of 2022 the dissemination of air quality alerts by the [NWS in Phoenix](#).

Supporting the dissemination of air quality information is a robust near real-time air-monitoring network that supports the mapping of pollutants within the major cities within Imperial County. The data allows for analysis and forecasting of air quality concentrations for up to seven days helping the public, schools and industry to make informed decisions about their daily activities.

The social media outlets managed by the ICAPCD provide air quality advisories, curtailments and associated notices to help the public make informed decisions about their daily activities. Typically, the ICAPCD issues alerts or advisories as a forecast and as

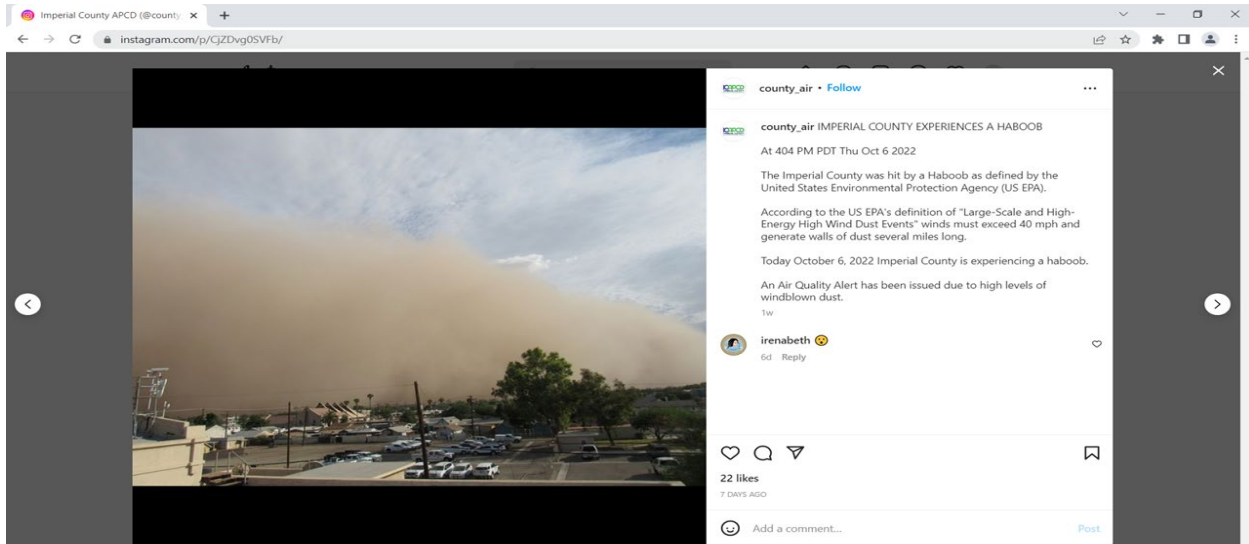
near real time as possible. To successfully issue these forecasts and/or real time events the ICAPCD worked closely with the NWS in Phoenix. As work with the NWS in Phoenix continued it became evident that there was deep interest in working collaboratively to establish an Air Quality Alert system that would disseminate through the NWS platform.

**FIGURE 2-1
APRIL 22, 2022 AIR QUALITY ALERT**



The ICAPCD invested significant resources enhancing its air-monitoring network. With the completion of the enhancement the ICAPCD successfully installed cameras at all the ICAPCD managed air quality stations. These cameras allow the ICAPCD real time images of meteorological and human activities that may affect air quality. In all practical terms the ICAPCD uses these cameras as a support to collected air quality data, issued notices and compliance actions.

FIGURE 2-2 OCTOBER 6, 2022 HABOOB POSTING FOR IMPERIAL COUNTY



The determinations to issue air alerts through social media are assessed daily using collected data from air monitoring equipment, meteorological assessments by the NWS office in Phoenix and meteorological assessments from the NWS office in San Diego.

FIGURE 2-3 RETWEET BY ICAPCD A LARGE DUST STORM IN IMPERIAL COUNTY



At any given time of the day, the public may view any one of the eight cameras to view air quality conditions in El Centro, Brawley, Westmorland or Niland via the ICAPCD [website](#). The images refresh at 30 second intervals and provide a visual of the meteorological conditions as near real-time as possible.

Complimenting the social media outlets used by the ICAPCD is the air quality site at www.imperialvalleyair.org. Imperial Valley Air provides the air quality index information and related health information. Subscribers receive notifications, alerts and forecast information affecting air quality in Imperial County on any given day. Several products are available to the public and the ICAPCD via the site. For example, the site includes the mapping of near real-time pollutants as the Air Quality Index (AQI) as support for issued near real time air alerts, air quality summaries, short-term and long-term air quality forecasts all of which provide health impacts and meteorological information to the help the public make informed decisions regarding their daily activities.

New in 2022 is the launch of the Imperial County Air Quality Advisory system through our federal partners at the NWS office in Phoenix.

**FIGURE 2-4
ICAPCD ANNOUNCEMENT
NWS AIR QUALITY ADVISORIES FOR IMPERIAL COUNTY**

THE NATIONAL WEATHER SERVICE IS NOW PUBLISHING AIR QUALITY ADVISORIES FOR IMPERIAL COUNTY

For more info visit : www.weather.gov/psr/



This collaborative effort was accomplished over the span of two years work with the cooperation and input of the South Coast Air Quality Management District, the Mojave Air Quality District, San Diego Air Pollution Control District, the NWS offices in Oxnard, San Diego and Phoenix.

Transmitted warnings of current air pollution events occur via the all the managed media outlets by the ICAPCD. The released notifications reach not only the public but reach media such as the local radio stations and the Imperial Valley Press. Although the ICAPCD encourages the publication of the information as a "Public Service Announcement", these publications occur as a single notice once a day.

The pollutants that drive the notifications seasonally are Ozone, during the summer months June through September, PM_{2.5} during the winter months, December through February and PM₁₀ throughout the year as west winds blow, winter, spring and fall storms pass, and during the monsoonal period June through September. Preceding the natural events are wind and dust advisories while during the event, similar posted notifications advise the public of the potential for elevated concentrations at or above Unhealthy Levels for Sensitive Groups. The notices provide meteorological and concentration information with recommendations to the public about how to reduce exposure. An example of the issued alert by the ICAPCD when the AQI level for Unhealthy for Sensitive Groups reads:

People with respiratory or heart disease, the elderly, and children are the groups most at risk, especially when they are physically active. There is an increased likelihood of respiratory symptoms in sensitive individuals, and aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly. U.S. EPA cautions "people with heart or lung disease, older adults, and children should reduce prolonged or heavy exertion." 'Prolonged' generally means four or more hours with short rest periods. 'Heavy exertion' is that which would increase the resting breathing rate four fold or greater. You can reduce exposure to particulate material by: - Reducing the intensity and duration of your outdoor activities – Postponing outdoor activities to days when particulate levels are lower

An example of the issued forecast alert by the ICAPCD when forecast indicate that the AQI level for Unhealthy for Sensitive Groups is possible reads:

...AIR QUALITY ALERT DUE TO ELEVATED PARTICULATE MATTER LEVELS FROM WINDBLOWN DUST...

The Imperial County APCD has issued an air quality alert due to increased particulate matter from blowing dust. The air quality alert is in effect until 5am PDT Wednesday, April 20.

In areas directly impacted by high levels of windblown dust, limit your exposure by remaining indoors with windows and doors closed and avoiding vigorous physical activity. Run your air conditioner or



an air purifier. If temperatures allow, avoid using whole house fans or swamp coolers that bring in outside air.

Exposure to high particle pollution levels can cause serious health problems, including asthma attacks, heart and lung disease symptoms, and increased risk of respiratory infections. People with heart or lung diseases should follow their doctor's advice for dealing with episodes of unhealthy air quality. Children, older adults, and people with respiratory or heart disease should avoid prolonged exposure and strenuous activities when particle pollution levels are high.

To help minimize outdoor particulate levels:

- . Carpool, telecommute, reduce trips, or take public transportation
- . Slow down if driving on dirt roads
- . Stabilize loose soils

Levels of particulate matter can vary hour by hour and by location depending on wind conditions

II.2 Steps to identify, study and implement mitigating measures, including the four approaches listed below. [**40 CFR 51.930(b)(2)(ii)**]

- ❖ Measures to abate or minimize contributing controllable sources of identified pollutants. [**40 CFR 51.930(b)(2)(ii)(A)**]

The ICAPCD adopted a suite of rules, known as Regulation VIII, to address fugitive dust emissions within Imperial County. Regulation VIII consists of seven interrelated rules designed to limit emissions of PM₁₀ from anthropogenic fugitive dust sources in Imperial County.

Rule 800, General Requirements for Control of Fine Particulate Matter, provides definitions, a compliance schedule, exemptions and other requirements generally applicable to all seven rules. It requires the United States Bureau of Land Management (BLM), United States Border Patrol (BP) and DPR to submit dust control plans (DCP) to mitigate fugitive dust from areas and/or activities under their control. Appendices A and B within Rule 800 describe methods for determining compliance with opacity and surface stabilization requirements in Rules 801 through 806.

Rule 801, Construction and Earthmoving Activities, establishes a 20% opacity limit and control requirements for construction and earthmoving activities. Affected sources must submit a DCP and comply with other portions of Regulation VIII regarding bulk materials, carry-out and track-out, and paved and unpaved roads. The rule exempts single family homes and waives the 20% opacity limit in winds over 25 mph under certain conditions.

Rule 802, Bulk Materials, establishes a 20% opacity limit and other requirements to control dust from bulk material handling, storage, transport and hauling.



Rule 803, Carry-Out and Track-Out, establishes requirements to prevent and clean-up mud and dirt transported onto paved roads from unpaved roads and areas.

Rule 804, Open Areas, establishes a 20% opacity limit and requires land owners to prevent vehicular trespass and stabilize disturbed soil on open areas larger than 0.5 acres in urban areas, and larger than three acres in rural areas. Agricultural operations are exempted.

Rule 805, Paved and Unpaved Roads, establishes a 20% opacity limit and control requirements for unpaved haul and access roads, canal roads and traffic areas that meet certain size or traffic thresholds. It also prohibits construction of new unpaved roads in certain circumstances. Single-family residences and agricultural operations are exempted.

Rule 806, Conservation Management Practices, requires agricultural operation sites greater than 40 acres to implement at least one conservation management practice (CMP) for each of several activities that often generates dust at agricultural operations. In addition, agricultural operation sites must prepare a CMP plan describing how they comply with Rule 806, and must make the CMP plan available to the ICAPCD upon request.

Additional measures include the adoption of a Smoke Management Plan (SMP), and the identification of additional mitigation measures or conditions imposed through the California Environmental Quality Act (CEQA) process.

SMP Summary

There are 35 Air Pollution Control Districts or Air Quality Management Districts in California, which are required to implement a district-wide smoke management program. The regulatory basis for California's Smoke Management Program, codified under Title 17 of the California Code of Regulations is the "Smoke Management Guidelines for Agricultural and Prescribed Burning" (Guidelines). California's 1987 Guidelines revised to improve interagency coordination, to avoid smoke episodes, and to provide continued public safety provided adequate opportunity for necessary open burning. Approval of the revisions to the 1987 Guidelines occurred March 14, 2001. All air districts, with the exception of the San Joaquin Valley Air Pollution Control District (SJAPCD) were required to update their existing rules and Smoke Management Plans to conform to the most recent update to the Guidelines.

Section 80150 of Title 17 specifies the special requirements for open burning in agricultural operations, the growing of crops and the raising of fowl or animals. This section specifically requires the ICAPCD to have rules and regulations that require permits that contain requirements that minimize smoke impacts from agricultural burning.



On a daily basis, the ICAPCD reviews surface meteorological reports from various airport agencies, the NWS, State fire agencies and CARB to help determine whether the day is a burn day. In order to assure minimal to no smoke affects, thus safeguarding the public health, the ICAPCD allocates field burns using a four-quadrant map of Imperial County. Finally, all permit holders are required to notice and advise members of the public of a potential burn also known as the Good Neighbor Policy.

A summary of the review process of development projects under the CEQA process. When new development, either commercial or residential intend to build the ICAPCD reviews potential impacts to air quality during the construction and operational phases of the projects. Determinations of potential significance, such as project-level emissions contributing to an exceedance and/or potentially causing an exceedance the ICAPCD requires mitigation measures or the imposition of conditions to the planning permit process that reduce or mitigate the excess emissions. For example, while solar farms have little to no direct long-term impact upon air quality on a project level analysis, cumulative impacts of PM₁₀ may be significant. Therefore, all solar farms are required to develop and implement an Operational Dust Control Plan (ODCP) addressing actual, future and potential future sources of PM₁₀ during the life of the project. There must be an approved and submitted ODCP's subject to annual review on file in order for these solar facilities to receive their Certificate of Occupancy.

- ❖ Methods to minimize public exposure to high concentrations of identified pollutants. **[40 CFR 51.930(b)(2)(ii)(B)]**

The ICAPCD employs near real-time notifications through all available social and radio media when air quality concentrations exceed or are expected to exceed a NAAQS with an averaging time that is less than or equal to 24-hours. As described above the social media outlets utilized by the ICAPCD include the ICAPCD home page at www.co.imperial.ca.us, [Twitter](#), [Instagram](#), [Facebook](#), the air quality index alert page at www.imperialvalleyair.org, and as of 2022 the dissemination of air quality alerts by the [NWS in Phoenix](#).

Local radio and newspapers pick up posted and released notices from the social media outlets providing local "Public Service Announcements." In addition, the public may opt to utilize smartphone applications, e-mails or text messaging to receive notifications, alerts or any other educational material. The types of information provided by the ICAPCD include:



- » Dissemination of near real-time air quality information including pollutant concentration levels and meteorology
- » Daily forecast air quality for short term and long term planning
- » Public notifications, advisories, alerts and warnings
- » Public education

Utilizing a variety of brochures, flyers, leaflets, pencil and pen products and other gift type items the ICAPCD continues to provide information and education through participation in school career day for schools, Asthma Coalition programs, the Public Health sponsored “Children’s Fair” as well as other environmental group gatherings. In addition, for 2022, the ICAPCD has commenced with the planning and funding of a new campaign targeting motor vehicle, both onroad and offroad, speed. Collaboration community stakeholders, federal and state agencies will commence during the fall of 2022.

- ❖ Processes to collect and maintain data pertinent to the event.
[40 CFR 51.930(b)(2)(ii)(C)]

There are five State and Local Air Monitoring Stations (SLAMS) located in Imperial County. SLAMS sites are regulatory air quality and meteorological monitoring stations maintained and operated as part of the overall air-monitoring network for the State of California. Of the five SLAMS within Imperial County, four stations measure both meteorological and air quality data. These SLAMS are located in Calexico, El Centro, Westmorland, and Niland; the station located in Brawley only measures air quality. All five monitoring sites utilize a Federal Equivalent Method Beta Attenuation Monitor (BAM) 1020 to measure PM₁₀. Other regulatory sites utilized by the ICAPCD include sites within Riverside County and Yuma County.

All collected data undergoes quality assurance and quality control (QA/QC) procedures to assure the most representative data point at any given hour. The US EPA’s AQS maintains all regulatory significant data while the California Air Resources Board (CARB) maintains near real-time data as well as regulatory significant data that is easily accessible to any member of the public, educational institution or industry. Finally, the AQI website for Imperial County, www.imperialvalleyair.org utilizes near real-time data from the AirNow website.

In addition to the regulatory monitors, the ICAPCD utilizes non-regulatory PM₁₀ sites located around the Salton Sea when analyzing the potential and source of natural events. **Figure 2-1** is a graphical illustration of the sites utilized by the ICAPCD when analyzing the source of a natural event or when analyzing the potential impact resulting from a natural event.

Archived data, including ambient data, meteorological data, images, advisories, and pertinent notices within the ICAPCD central server is backup twice daily. All events are filed by the date of the event.

**FIGURE 2-5
MONITORING SITES IN AND AROUND IMPERIAL COUNTY**



Fig 2-5: Depicts a select group of PM₁₀ monitoring sites in Imperial County, eastern Riverside County, and southwestern Arizona (Yuma County). Generated through Google Earth

- ❖ Mechanisms to consult with other air quality managers in the affected area regarding the appropriate responses to abate and minimize impacts.
[40 CFR 51.930(b)(2)(ii)(D)]

The desert southwest, which includes other planning partners and air districts such as the Arizona Department of Environmental Quality, the South Coast Air Quality Management District and the San Diego Air Pollution Control District all, implement programs that help protect the public from exposure to high concentrations of particulate matter. ICAPCD



staff maintains a subscription to notifications and bulletins from surrounding air agencies, the NWS, Weather Underground and in Mexico, the Servicio Meteorológico Nacional. ICAPCD routinely visits the National Oceanic and Atmospheric Administration (NOAA) for supporting information and evidence of the occurrence or of the potential of an occurrence of a natural event. ICAPCD staff routinely maintains contact and shares information with other air agencies, identified above, the CARB and US EPA.

II.3 Provisions for periodic review and evaluation of the Mitigation Plan and its implementation and effectiveness by the State and all interested stakeholders.
[40 CFR 51.930(b)(2)(iii)]

Although the ICAPCD will post the final Mitigation Plan for a 30-day public review, the Mitigation Plan will remain permanently online and will be accessible to the public. The ICAPCD intends to explain and address any comments submitted during the 30-day public review process. Upon submitting the final Mitigation Plan, explanations as to why the air district made or did not make changes to the Mitigation Plan will be included along with the submitted comments. After the submittal of the final Mitigation Plan, the ICAPCD intends to review and evaluate the Mitigation Plan every three years. The ICAPCD will maintain periodic communications with air quality officials and the public to provide an ongoing evaluation of the effectiveness of the Mitigation Plan over a three-year period.

❖ With the submission of the initial Mitigation Plan according to the requirements in paragraph (b)(3) of this section that contains the elements in paragraph (b)(2) of this section, the State must: **[40 CFR 51.930(b)(2)(iii)(A)]**

1 Document that a draft version of the mitigation plan was available for public comment for a minimum of 30 days:

The ICAPCD published its Notice of Availability of the Draft High Wind Exceptional Event Fugitive Dust Mitigation Plan in the Imperial Valley press and on its webpage on August 18, 2018. The public comment period ended September 17, 2018. **Figure 2-2** is a copy of the affidavit attesting to the publication.



FIGURE 2-6
IMPERIAL VALLEY PRESS AFFIDAVIT

PENDING AFFIDAVIT CLOSING COMMENT DATE NOVEMBER 21, 2022

Fig 2-6: Is a copy of the Imperial Valley Press Affidavit attesting to the 30-day publication of the Updated Draft High Wind Exceptional Event Fugitive Dust Mitigation Plan

- 2 Submit the public comments it received along with its mitigation plan to the Administrator; and

Following the comment period, the ICAPCD received no comments from the public.

- 3 In its submission to the Administrator, for each public comment received, explain the changes made to the Mitigation Plan or explain why the State did not make any changes to the Mitigation Plan.

Following the comment period, the ICAPCD received no public comments. Changes to the document reflected administrative corrections.

- ❖ The State shall specify in its Mitigation Plan the periodic review and evaluation process that it intends to follow for reviews following the initial review identified in paragraph (b)(2)(iii)(A) [**40 CFR 51.930(b)(2)(iii)(B)**]

In order to provide the best opportunity for the public, stakeholders and other government agencies to comment on the Final Mitigation Plan the ICAPCD will permanently post the plan online soliciting feedback. Information regarding the review and evaluation will be explained and indicate the three year evaluation process. In the event that PM₁₀ rulemaking occurs within the three-year period, updates to the Mitigation Plan will be in accordance with rule revisions. CARB and US EPA shall receive revised copies of the Mitigation Plan.

III Submission of Mitigation Plans [40 CFR 51.930(b)(3)]

All states subject to the provisions of paragraph (b)....shall, after notice and opportunity for public comment identified in paragraph (b)(2)(iii)(A)..., submit a Mitigation Plan to the Administrator for review and verification of the plan components identified in paragraph (b)(2)....[**40 CFR 51.930(b)(3)**]



- ❖ States shall submit their mitigation plans within 2 years of being notified that they are subject to the provisions of paragraph (b) of 40 CFR 51.930. [**40 CFR 51.930(b)(3)(i)**]

The final rule effective date of September 30, 2016 requires the ICAPCD to submit to the US EPA Administrator a final Mitigation Plan by September 30, 2018. The final Mitigation Plan submitted to CARB on September 21, 2018 should be forwarded to the US EPA Administrator by September 30, 2018, which falls within the 2 year required period.



Exceptional Events Mitigation Plan Checklist

*Area Subject to Mitigation Requirements in 40 CFR 51.930: **The Imperial Valley PM₁₀ Nonattainment Planning Area***

*Applicable Pollutant and Event Type: **Particulate Matter Less than 10 Microns (PM₁₀)***

*Date of Mitigation Document: **September 17, 2018***

Element Addressed	Plan Page Number	40 CFR 51.930 Mitigation of Exceptional Events Regulatory Citation	User Notes	EPA Review Notes
		51.930(a)	A State requesting to exclude air quality data due to exceptional events must take appropriate and reasonable actions to protect public health from exceedances or violations of the NAAQS. At a minimum, the State must:	The air agency responsibilities described in 51.930(a)(1) – (a)(3) are functionally fulfilled by the mitigation plan requirements and components specified under 51.930(b)(2).
		51.930(a)(1)	Provide for prompt public notification whenever air quality concentrations exceed or are expected to exceed an applicable ambient air quality standard;	See above – 51.930(a).
		51.930(a)(2)	Provide for public education concerning actions that individuals may take to reduce exposures to unhealthy levels of air quality during and following an exceptional event; and	See above – 51.930(a).
		51.930(a)(3)	Provide for the implementation of appropriate measures to protect public health from exceedances or violations of ambient air quality standards caused by exceptional events.	See above – 51.930(a).
		51.930(b)	Development of mitigation plans for areas with historically documented or known seasonal events.	EPA responsibility.



Element Addressed	Plan Page Number	40 CFR 51.930 Mitigation of Exceptional Events Regulatory Citation		User Notes	EPA Review Notes
		51.930(b)(1)	<i>Generally.</i> All States having areas with historically documented or known seasonal events shall be required to develop a mitigation plan with the components identified in 51.930(b)(2) and submit such plan to the Administrator according to the requirements in 51.930(b)(3).	EPA responsibility (identification of areas).	
		51.930(b)(1)(i)	For purposes of the requirements set forth in 51.930, historically documented or known seasonal events shall include those events of the same type and pollutant that recur in a 3-year period and meet any of the following:	EPA responsibility.	
		51.930(b)(1)(i)(A)	Three events or event seasons for which a State submits a demonstration under the provisions of 40 CFR 50.14 in a 3-year period; or	EPA responsibility.	
		51.930(b)(1)(i)(B)	Three events or event seasons that are the subject of an initial notification of a potential exceptional event as defined in 40 CFR 50.14(c)(2) in a 3-year period regardless of whether the State submits a demonstration under the provisions of 40 CFR 50.14.	EPA responsibility.	
		51.930(b)(1)(ii)	The Administrator will provide written notification to States that they are subject to the requirements in 51.930(b) when the Administrator becomes aware of applicability.	EPA responsibility.	
	10	51.930(b)(2)	<i>Plan components.</i> At a minimum, each mitigation plan...shall contain provisions for the following:	State/local/tribal air agency responsibility.	



Element Addressed	Plan Page Number	40 CFR 51.930 Mitigation of Exceptional Events Regulatory Citation		User Notes	EPA Review Notes
	10	51.930(b)(2)(i)	Public notification to and education programs for affected or potentially affected communities. Such notification and education programs shall apply whenever air quality concentrations exceed or are expected to exceed a NAAQS with an averaging time that is less than or equal to 24-hours.	State/local/tribal air agency responsibility.	
	12	51.930(b)(2)(ii)	Steps to identify, study and implement mitigating measures, including approaches to address each of the following:	State/local/tribal air agency responsibility.	
	12	51.930(b)(2)(ii)(A)	Measures to abate or minimize contributing controllable sources of identified pollutants.	State/local/tribal air agency responsibility.	
	14	51.930(b)(2)(ii)(B)	Methods to minimize public exposure to high concentrations of identified pollutants.	State/local/tribal air agency responsibility.	
	15	51.930(b)(2)(ii)(C)	Processes to collect and maintain data pertinent to the event.	State/local/tribal air agency responsibility.	
	16	51.930(b)(2)(ii)(D)	Mechanisms to consult with other air quality managers in the affected area regarding the appropriate responses to abate and minimize impacts.	State/local/tribal air agency responsibility.	
	17	51.930(b)(2)(iii)	Provisions for periodic review and evaluation of the mitigation plan and its implementation and effectiveness by the State & interested stakeholders.	State/local/tribal air agency responsibility.	
	17	51.930(b)(2)(iii)(A)	With the submission of the initial mitigation plan according to the requirements in 51.930(b)(3) that contains the elements in 51.930(b)(2), the State must:	State/local/tribal air agency responsibility.	



Element Addressed	Plan Page Number	40 CFR 51.930 Mitigation of Exceptional Events Regulatory Citation		User Notes	EPA Review Notes
	17	51.930(b)(2)(iii)(A)(7)	Document that a draft version of the mitigation plan was available for public comment for a minimum of 30 days;	State/local/tribal air agency responsibility.	
	18	51.930(b)(2)(iii)(A)(2)	Submit the public comments received along with its mitigation plan to the Administrator; and	State/local/tribal air agency responsibility.	
	19	51.930(b)(2)(iii)(A)(3)	In its submission to the Administrator, for each public comment received, explain the changes made to the mitigation plan or explain why the State did not make any changes to the mitigation plan.	State/local/tribal air agency responsibility.	
	19	51.930(b)(2)(iii)(B)	The State shall specify in its mitigation plan the periodic review and evaluation process that it intends to follow for reviews following the initial review identified in 51.930(b)(2)(iii)(A).	State/local/tribal air agency responsibility.	
	19	51.930(b)(3)	<i>Submission of mitigation plans.</i> All States subject to the provisions of 51.930(b) shall, after notice and opportunity for public comment identified in 51.930(b)(2)(iii)(A), submit a mitigation plan to the Administrator for review and verification of the plan components identified in 51.930(b)(2).	This provision is also described in section 51.930(b)(2)(iii)(A)(1).	
	19	51.930(b)(3)(i)	States shall submit their mitigation plans within 2 years of being notified they are subject to 51.930(b).	State/local/tribal air agency responsibility.	
		51.930(b)(3)(ii)	The Administrator shall review each mitigation plan developed according to the requirements in paragraph (b)(2) of this section and shall notify the submitting State upon completion of such review.	EPA responsibility.	



Element Addressed	Plan Page Number	40 CFR 51.930 Mitigation of Exceptional Events Regulatory Citation		User Notes	EPA Review Notes
		50.14(b)(9)	Mitigation plans.	EPA responsibility.	
		50.14(b)(9)(i)	Except as provided for in 50.14(b)(9)(ii), where a State is subject to the requirements of 40 CFR 51.930(b), the Administrator shall not place a concurrence flag in the appropriate field for the data record in the AQS database, as specified in 50.14(c)(2)(ii), if the data are of the type and pollutant that are the focus of the mitigation plan until the State fulfills its obligations under the requirements of 40 CFR 51.930(b). The Administrator may nonconcur or defer action on such a demonstration.	EPA responsibility.	
		50.14(b)(9)(ii)	The prohibition on placing a concurrence flag in the appropriate field for the data record in the AQS database by the Administrator stated in 50.14(b)(9)(i) does not apply to data that are included in an exceptional events demonstration that is:	EPA responsibility.	
		50.14(b)(9)(ii)(A)	Submitted in accordance with 50.14(c)(3) that is also of the type and pollutant that is the focus of the mitigation plan; and	EPA responsibility.	
	19	50.14(b)(9)(ii)(B)	Submitted within 2-year period allowed for mitigation plan development specified in 51.930(b)(3).	This provision is also described in section 51.930(b)(3)(i).	