

Appendix C

Updated Waiver Request
for 1-IN-6 Day PM_{2.5} Monitoring

UPDATED WAIVER REQUEST FOR 1-IN-6 DAY PM_{2.5} MONITORING IN 2018

The required number of PM_{2.5} monitoring sites and their sampling schedules are based in part on population of the Metropolitan Statistical Area (MSA) and on the magnitude of measured concentrations (Tables 1 and 2). 40 Code of Federal Regulations (CFR) Part 58.12(d)(1) requires manual PM_{2.5} monitors to operate on a 1-in-3 day schedule (minimally), unless a waiver for an alternate schedule has been approved. For sites with a collocated continuous monitor, U.S. EPA may approve a reduced 1-in-6 day schedule based on an assessment of factors including historical data, location of current design site, and regulatory needs. During 2017, three PM_{2.5} monitoring sites included in this CARB 2018 Annual Network Report have manual PM_{2.5} monitors operating on a 1-in-6 day schedule without a collocated continuous monitor (reporting data to AQS) and two PM_{2.5} monitoring sites have manual PM_{2.5} monitors operating on a 1-in-6 day schedule in parallel with a continuous monitor (Tables 3 and 4).

As part of on-going network reviews, CARB will continue to evaluate the monitoring frequency at all sites to ensure that they collect needed data in an effective and cost efficient manner.

Sites with a Collocated Monitor

PM_{2.5} concentrations at the two sites with a collocated continuous monitor are well below the federal PM_{2.5} standards. U.S. EPA approved 1-in-6 day monitoring for these sites on December 14, 2017.

As shown in Table 3, 2017 PM_{2.5} annual design values at the Colusa and Roseville sites are 7.6 and 7.4 µg/m³, respectively, with PM_{2.5} 24-hour design values of 24 and 19 µg/m³. The percent of these concentrations to the standards are low (Table 4) and are consistent with the historically low design values (and percentages) at both sites. The Colusa monitor was impacted by wildfires in September and October 2017. These impacts were enough to raise the PM_{2.5} 24-hour design value, but not to the extent of exceeding the standard.

Colusa operates outside an MSA while the Roseville site is part of the Sacramento-Roseville-Arden Arcade MSA. As noted in this Network Plan, the Sacramento-Roseville-Arden Arcade MSA has a minimum monitoring requirement of three sites but operates seven. The current PM_{2.5} design value site for the MSA is Del Paso (AQS ID 06-067-0006), in Sacramento County.

Sites without a Collocated Monitor

In addition to the two sites described above, CARB's annual network report includes three additional sites with a manual PM_{2.5} monitor operating on a 1-in-6 day schedule (Tables 3 and 4). CARB is requesting a waiver of the 1-in-3 day monitoring requirements for these sites based on historically low PM_{2.5} concentrations and regulatory needs.

As shown in Table 3, 2017 valid annual design values at these sites range from 4.3 to 7.5 $\mu\text{g}/\text{m}^3$, and their 24-hour design values range from 19 to 25 $\mu\text{g}/\text{m}^3$. The percent of these concentrations to the standards are low (Table 4) and are consistent with the historically low design values (and percentages) at the sites. The values for these sites are slightly higher than in previous years, due to impacts from wildfires in September and October 2017.

The Lakeport site operates in Lake County, outside an MSA. The $\text{PM}_{2.5}$ design value site for the local air district is the Lakeport monitor which recently moved from Lakeport Blvd (AQS ID 06-033-3001) to S. Main Street (AQS ID 06-033-3002). The design values for both of these sites are not considered valid, with 2017 an incomplete year; design values were calculated from combined data records. The Lakeport-S. Main monitor was impacted by smoke from wildfires in September and October 2017. Lakeport is not part of any $\text{PM}_{2.5}$ nonattainment areas for either of the $\text{PM}_{2.5}$ National Ambient Air Quality Standards (NAAQS). A waiver request for this site was sent directly by the Lake County Air Quality Management District to U.S. EPA on March 27, 2018 and U.S. EPA replied on April 26, 2018. Copies of these documents are included with this request.

The Redding site, in Shasta County, is part of the Redding MSA. As noted in this Network Plan, the Redding MSA has a minimum monitoring requirement of zero monitors but operates one. The current design value site for the Redding MSA is the Redding monitor (AQS ID 06-089-0004). The Redding MSA does not contain any areas in nonattainment of either of the $\text{PM}_{2.5}$ NAAQS.

The Woodland site, in Yolo County, is part of the Sacramento-Roseville-Arden Arcade MSA. A non-FEM BAM is located at the Woodland site, but it does not currently report to AQS, although CARB is working with the district to submit this data. As noted in this Network Plan, the Sacramento-Roseville-Arden Arcade MSA has a minimum monitoring requirement of three sites but operates seven. The current design value site for the MSA is Del Paso (AQS ID 06-067-0006), in Sacramento County. The Sacramento $\text{PM}_{2.5}$ 24-hour NAAQS nonattainment area, which includes the Woodland monitoring site, was given a Clean Data Determination effective August 14, 2013. The MSA does not contain any areas in nonattainment for the $\text{PM}_{2.5}$ annual NAAQS.

While not required under 40 CFR Part 58 Appendix D due to population and particulate matter concentrations, CARB chose to deploy the sites which operate without a collocated monitor to improve spatial coverage throughout California. These sites also collect data for comparison to the State $\text{PM}_{2.5}$ Standard. These data, although collected on a 1-in-6 day schedule, accurately represent the air quality in these sparsely populated, low concentration areas.

Table 1. Minimum Number of Required PM_{2.5} Monitors*

MSA Population	Most recent 3-year design value > or = 85% of any PM _{2.5} NAAQS	Most recent 3-year design value < 85% of any PM _{2.5} NAAQS
> 1,000,000	3	2
500,000 – 1,000,000	2	1
50,000 – 500,000	1	0

*Table D-5 of Appendix D to Part 58 – PM_{2.5} Minimum Monitoring Requirements

Table 2. Populations Represented by 1-in-6 Day PM_{2.5} Sites

County	Site	AQS ID	MSA	2010 Population (2017 estimate)*
Colusa	Colusa	06-011-1002	Outside MSA	County: 21,419 (21,805)
Lake**	Lakeport-Lakeport Lakeport-S.Main	06-033-3001 06-033-3002	Outside MSA	County: 64,665 (64,246)
Placer	Roseville	06-061-0006	Sacramento-Roseville-Arden Arcade	MSA: 2,149,127 (2,324,884) County: 348,494 (386,166)
Shasta	Redding	06-089-0004	Redding	MSA and County: 177,223 (179,921)
Yolo	Woodland	06-113-1003	Sacramento-Roseville-Arden Arcade	MSA: 2,149,127 (2,324,884) County: 200,850 (219,116)

*2010 and 2017 county populations from U.S. Census Quickfacts; MSA populations from CARB 2018 Annual Network Plan.

** Lakeport site was moved from Lakeport Blvd to S. Main Street on July 1, 2017.

Table 3: 3-Year Design Values at Waiver-Requested PM_{2.5} Sites

Site	AQS ID	Collocated?	Annual DV (µg/m ³)					24-Hr DV (µg/m ³)				
			2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
Colusa	06-011-1002	Yes	7.1	7.2	7.6	7.3	7.6	24	21	22	19	24
Roseville	06-061-0006	Yes	7.5	7.3	7.9	7.6	7.4	19	18	20	20	19
Lakeport-Lakeport* Lakeport-S.Main*	06-033-3001 06-033-3002	No	3.7	4.0	4.0	3.6	4.3*	10	12	10	10	19*
Redding	06-089-0004	No	5.7	5.7	6.2	6.0	6.8	17	16	17	15	21
Woodland	06-113-1003	No**	7.2	6.6	7.0	6.9	7.5	21	16	19	16	25

* Lakeport site was moved from Lakeport Blvd to S. Main Street on July 1, 2017; design values based on combined data.

** Woodland site has a non-FEM BAM that does not report to AQS.

Table 4. Percent of Design Value to Standard at Waiver-Requested PM_{2.5} Sites

Site	AQS ID	Collocated?	Percent of Annual DV (%)					Percent of 24-Hr DV (%)				
			2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
Colusa	06-011-1002	Yes	59	60	63	61	63	69	60	63	54	69
Roseville	06-061-0006	Yes	63	61	65	63	62	54	51	57	57	54
Lakeport-Lakeport* Lakeport-S.Main*	06-033-3001 06-033-3002	No	31	33	33	30	36	29	34	29	28	54
Redding	06-089-0004	No	48	48	52	50	57	49	46	49	43	60
Woodland	06-113-1003	No**	60	55	58	58	63	60	46	54	46	71

* Lakeport site was moved from Lakeport Blvd to S. Main Street on July 1, 2017; 2017 percentage based on combined data.

** Woodland site has a non-FEM BAM that does not report to AQS.



LAKE COUNTY AIR QUALITY
MANAGEMENT DISTRICT
2617 South Main Street
Lakeport, CA 95453
Phone (707) 263-7000
Fax (707) 263-0421



Douglas G. Gearhart
Air Pollution Control Officer
doug@lcaqmd.net

Gwen Yoshimura
Air Quality Analysis Office
US EPA Region IX
75 Hawthorne Street
San Francisco, CA 94105

March 27, 2018

Subject: Lakeport PM10 and PM2.5 one in three day sampling schedule waivers.

Dear Ms. Yoshimura :

As you know, the Lake County Air Quality Management District was granted a waiver from the one in three day sampling schedule for Lakeport PM2.5 monitoring Site ID #06-033-3001 on February 24, 2017.

Additionally, the Lakeport PM10 monitoring Site ID #06-033-3001 was also granted a waiver from the one in three day sampling schedule on February 2, 1998.

PM10 and 2.5 monitoring at Site ID# 06-033-3001 (Lakeport Blvd., Lakeport) concluded on June 30, 2017.

On July 1, 2017 the Lakeport PM10 and PM2.5 samplers were relocated to 2617 S. Main Street, Lakeport, CA 95453, at which time monitoring commenced and a new Site ID (06-033-3002) was assigned.

The purpose of this letter is to request the one in three day waivers be applied to the new Site ID 06-033-3002 location as specified above.

Please feel free to contact myself or Elizabeth Knight if you have any questions at 707-263-7000.

Sincerely,

Douglas Gearhart, APCO

From: Vallano, Dena <Vallano.Dena@epa.gov>
Sent: Thursday, April 26, 2018 8:25 AM
To: dougg <dougg@lcaqmd.net>; elizabethk <elizabethk@lcaqmd.net>; McStocker, Andrea@ARB <Andrea.McStocker@arb.ca.gov>
Cc: YOSHIMURA, GWEN <Yoshimura.Gwen@epa.gov>; Flagg, MichaelA <Flagg.MichaelA@epa.gov>; Clover, Fletcher <Clover.Fletcher@epa.gov>; Sweigert, Gayle@ARB <gayle.sweigert@arb.ca.gov>; Tasat, Webster@ARB <webster.tasat@arb.ca.gov>; Yoon, Sunghoon@ARB <Sunghoon.Yoon@arb.ca.gov>
Subject: Lake County PM Sampling Frequency Waiver Request Response

Doug,

We have reviewed Lake County AQMD's March 27, 2018 letter requesting 1-in-3 day sampling waivers for the PM₁₀ and PM_{2.5} SLAMs monitors at the Lakeport Main Street site (AQS ID: 06-033-3002). For the PM₁₀ monitor, there is currently no waiver provision for PM₁₀ sampling frequency schedules in the CFR. Based on the 2016 PM₁₀ design concentration of 19 µg/m³, a 1:6 day operating schedule is appropriate at this site. Lake County and ARB should assess the 2017 PM₁₀ design concentration in the upcoming ARB Annual Network Plan to determine if the sampling frequency at the site continues to be appropriate and is in accordance with the criteria in 40 CFR 58.12. The current sampling frequency of each PM₁₀ monitor should also be included in the detailed site information section of the Annual Network Plan as well as the required sampling frequencies including and excluding flagged exceptional event data as appropriate. I have included an attachment that clarifies how and when to determine the appropriate sampling frequency for PM₁₀ samplers required by 40 CFR 58.12(e).

For the PM_{2.5} monitor, the waiver request approval for the Lakeport Boulevard site (AQS ID: 06-033-3001) in our response letter to ARB's 2017 Annual Network Plan will continue to apply and we will assess the waiver request renewal for the new Lakeport Main Street site in the upcoming ARB Annual Network Plan. Lake County and ARB should assess the past three years of PM_{2.5} concentration and design value data using the combined data record from the original and new Lakeport sites in their upcoming Annual Network Plan to determine if the sampling frequency at the current site continues to be appropriate and is in accordance with the criteria in 40 CFR 58.12. The current sampling frequency of each PM_{2.5} monitor should be included in the detailed site information section of the Annual Network Plan as well as required sampling frequencies including and excluding flagged exceptional event data as appropriate.

ARB should include your March 27 request letter and this email, along with any relevant updated monitor and site information, in the next ARB Annual Network Plan. Any monitor sampling frequency changes should also be updated in the EPA's AQS database.

Thank you for your timely communication regarding the PM sampling frequencies at the new Lakeport site and please let me know if you have any questions.

Best regards,
Dena

Dena Vallano, PhD
U.S. EPA, Region 9
Air Quality Analysis Office
Phone: 415.972.3134
Email: vallano.dena@epa.gov

mailing address:
U.S. Environmental Protection Agency
Air Quality Analysis Office (AIR-7)
75 Hawthorne Street
San Francisco, CA 94105