

CHAPTER 10

Glossary, Acronyms and Measurement Units

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10.1 GLOSSARY

airshed	A geographical area that, because of topography, meteorology, and climate, shares the same air.
attainment demonstration synonym: demonstration of attainment	Analysis in a SIP showing that a specified control strategy will result in meeting air quality goals.
background PM ₁₀ concentration	Shall mean the concentration of PM ₁₀ caused by sources other than from wind blown dust emanating from the Owens Lake bed. For the purpose of modeling air quality impacts, the background concentration is assumed to be 20µg/m ³ (micrograms per cubic meter) during every hour at all receptor locations. The monitored and modeled PM ₁₀ emissions from the Keeler dunes, which are located off the lake bed are treated as a separate dust source area and are not included in the background concentration.
Best Available Control Measures acronym: BACM	Shall have the same definition as in the federal Clean Air Act. Approved BACM in the 2003 SIP was associated with PM ₁₀ emission reductions of at least 99 percent and includes Managed Vegetation, Shallow Flood, and Gravel Blanket (cover).
Board	The Governing Board of the Great Basin Unified Air Pollution Control District.
CALPUFF	A multi-layer, multi-species non-steady-state puff dispersion model that simulates the effects of time- and space-varying meteorological conditions on pollution transport, transformation and removal.
Cause an exceedance	Shall mean that PM ₁₀ emissions from a particulate matter source or source area is associated with a modeled or monitored PM ₁₀ impact at, or above, a shoreline receptor of greater than 130 µg/m ³ for a 24-hour average, not including a background concentration.
City	The City of Los Angeles, including its Department of Water and Power.

contingency measures	Shall mean dust control measures or modifications to the dust control measures that can be implemented to mitigate dust source areas that cause or contribute to an exceedance of the federal standard at the historic shoreline in the event that a previously approved control strategy was found to be insufficient.
Contribute to an exceedance	Shall mean that PM ₁₀ emissions from a particulate matter source or source area, when combined with other particulate matter source(s) or source area(s), is associated with a modeled or monitored PM ₁₀ impact at or above a shoreline receptor of greater than 130 µg/m ³ for a 24-hour average, not including a background concentration. In cases of two or more PM ₁₀ sources contributing to an exceedance, PM ₁₀ emissions from one or more of the sources may be controlled in order to reduce combined impacts to a concentration below 130 µg/m ³ .
control area	Shall mean an area on the lake bed for which dust control is required. Also referred to as dust control area.
control efficiency	Shall mean the relative reduction or percent reduction in PM ₁₀ emissions resulting from the implementation of a control measure compared to the uncontrolled emissions.
control measures	Shall mean measures effective in reducing the PM ₁₀ emissions from the lake bed surface over which they are implemented. Control measures may also refer to methods used to reduce PM ₁₀ emissions from non-lake bed sources, such as windblown dust from the Keeler dunes or other sources of PM ₁₀ .
control strategy	Prescription of dust control measures (consisting of performance specifications) and delineated control area for which attainment was demonstrated in a SIP.
Cox Sand Catcher	A sand flux measuring device developed by Bill Cox of the GBUAPCD.
District	The Great Basin Unified Air Pollution Control District (aka GBUAPCD)
dust control area acronym: DCA	Any area on which dust control measures have been constructed or are slated for construction. See dust control measure.
dust control measure acronym: DCM	Shall mean measures designed to suppress sand motion and reduce dust emissions from the Owens Lake bed.

Dust ID Field Manual	Refers to the <i>Owens Lake Dust Source Identification Program Field Manual</i> , draft version (January 24, 2007), which includes the monitoring, modeling and analysis procedures for the Dust ID Program. The Dust ID Field Manual is also referred to as the <i>2008 Owens Lake Dust Source Identification Program Protocol</i> in the proposed Board Order for the 2008 SIP, which will become the new title upon approval of the 2008 SIP and Board Order.
Dust ID Model	Shall mean a computer-based air quality modeling approach developed as part of the 2003 SIP to identify emissive areas on the Owens Lake bed and to estimate the resulting PM ₁₀ concentrations at the shoreline. See also “Dust ID Program.”
Dust ID Program	Shall mean a long-term monitoring and modeling program that is used to identify dust source areas at Owens Lake that cause or contribute to exceedances and violations of the federal PM ₁₀ standard. The current protocol for conducting the Dust ID Program is included in the 2003 SIP (Exhibit 2— Attachment 4). See also “Dust ID Model” and “Dust ID Field Manual.”
efflorescence	Efflorescence occurs when subsurface moisture is drawn upward through capillary action, carrying dissolved salts with it. As moisture evaporates, the salts are left at the surface in fine powdery deposits that can be lifted by turbulent winds. Powdery efflorescent salt surfaces have a very high PM ₁₀ content.
emissive area	An area on the Owens Lake playa that produces dust emissions. This determination can be based on a combination of calculated sand fluxes, visible dust plume observations, and visible surface erosion after dust storm events. Rectangular approximations of emissive areas are called source areas in the Dust ID Model. See source areas.
emission rate	In general, emission rate refers to the mass of pollutants emitted from a source over a given time. Following the methodology used for the Dust ID Program, the PM ₁₀ emission rate is expressed as the mass of PM ₁₀ emitted per unit area per unit time. It is the product of the (horizontal) sand flux, an initial estimate of the emission rate, and a K-factor. PM ₁₀ emission rates are a required input to the Dust ID Model.

<p>exceedance of the federal standard</p> <p>synonym: exceedance</p>	<p>Shall mean any single-day PM₁₀ concentration that is monitored or modeled to be above 150 µg/m³ (24-hour average from midnight to midnight) at any location at or above the historic shoreline.</p>
<p>historic shoreline</p> <p>synonym: shoreline</p>	<p>Shall mean the elevation contour line of 3,600 feet above mean sea level at Owens Lake, California.</p>
<p>K-factor (K_f)</p>	<p>An empirical ratio of the vertical PM₁₀ emission flux to the horizontal sand flux at 15 cm above ground surface, as described in the Dust ID Protocol.</p>
<p>lake bed</p> <p>synonyms: Owens Lake bed, playa</p>	<p>Shall mean the exposed surface within and below the historic shoreline.</p>
<p>Managed Vegetation</p>	<p>Is a Dust Control Measure consisting of lake bed surfaces planted with protective vegetation. One of three approved dust control measures in the 2003 SIP. It is applied in a farm-like area of the playa where the barren playa is planted with native vegetation (saltgrass). The vegetation controls dust emissions by reducing the wind speed at the surface, sequestering mobile sand, and by holding the soil materials in place with their root systems.</p>
<p>may not lawfully be included in the SIP</p>	<p>Shall mean that inclusion of the provision in question in the revisions to the 2003 SIP has been determined by binding judicial order to be unlawful.</p>
<p>MCDE-BACM</p>	<p>Shall mean Dust Control Measures that achieve Minimum Dust Control Efficiency and are found to be appropriate for the area of application.</p>
<p>Minimum Dust Control Efficiency</p> <p>acronym: MDCE</p>	<p>Shall mean the lowest dust control efficiency, as determined by the Dust ID model, in the Supplemental Dust Control Area necessary to meet the federal standard at the historic shoreline.</p>
<p>Moat & Row</p>	<p>Shall mean a Dust Control Measure consisting of arrays of sand breaks that arrest sand motion.</p>
<p>non-attainment area</p>	<p>An area that has not met state and USEPA air quality requirements.</p>

particulate matter Acronym: PM ₁₀	Shall mean atmospheric particulate matter less than 10 micrometers in nominal aerodynamic diameter.
PM ₁₀ monitor	Shall mean an instrument used to detect the concentrations of PM ₁₀ in the air.
proposed project	The sum of those activities that are proposed to be adopted by the Great Basin Unified Air Pollution Control District in the PM ₁₀ State Implementation Plan for the Owens Valley Planning Area and implemented to reduce fugitive PM ₁₀ emissions from the Owens Lake playa to meet the National Ambient Air Quality Standards for particulate matter smaller than 10 microns (PM ₁₀); this would include all actions, whether undertaken on or off the playa.
sand flux monitor	Shall mean a device used to measure the amount and/or rate of moving or saltating sand and sand-sized particles caused by wind erosion.
Sensit™	An electronic time-resolved sand flux monitoring device.
Shallow Flooding	Is a Dust Control Measure consisting of lake bed areas wetted to a specified proportion of surface coverage.
2003 SIP synonym: 2003 Owens Valley PM ₁₀ State Implementation Plan	Shall mean the Owens Valley PM ₁₀ Planning Area Demonstration of Attainment State Implementation Plan 2003 Revision — Adopted November 13, 2003.
SIP EIR	The Final Environmental Impact Report and any Negative Declarations, EIR addendums and/or supplements that were written to accompany and support the State Implementation Plan as required by the California Environmental Quality Act (CEQA).
source area	Spatial approximation (usually rectangular) of an emissive area that is input to the Dust ID model. See emissive area.
source delineation synonym: source delineation survey	A combination of methods to define the boundaries of a source area. Methods may consist of GPS survey, dust observation mapping, review of time-lapse video, and surface inspections.

Supplemental Control Requirements acronym: SCR	Shall mean Dust Control Measures required by the District on areas outside of the DCA or in areas within the DCA that need additional controls that cause or contribute to an exceedance of the federal PM ₁₀ standard at the historic shoreline of Owens Lake.
2006 Settlement Agreement Reference: GBUAPCD, 2006b	Settlement Agreement between the District and the City to resolve the City's challenge to the District's Supplemental Control Requirement determination issued on December 21, 2005 and modified on April 4, 2006, GBUAPCD, Bishop, California, December 4, 2006.

10.2 ACRONYMS

ADT	Average daily traffic
AIRS	US Environmental Protection Agency's Aerometric Information and Retrieval System
AMSL	Above mean sea level
AP-42	USEPA publication: Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I
APCO	Air Pollution Control Officer
ATV	All-Terrain Vehicle
A&WMA	Air & Waste Management Association
BACM	Best Available Control Measures
BACT	Best Available Control Technology
BLM	U.S. Department of Interior, Bureau of Land Management
CAAA	Federal Clean Air Act Amendments of 1990
CALMET	A diagnostic 3-dimensional meteorological model.
CALPUFF	See Glossary.
CalTrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board

CASAC	Clean Air Scientific Advisory Committee
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH&SC	California Health & Safety Code
CSLC	California State Lands Commission
CSC	Cox Sand Catcher
DCA	Dust Control Area
DCM	Dust control measure
dS	decisiemens
EIR	Environmental Impact Report
EQPM	Reference Particulate Sampler
FEIR	Final Environmental Impact Report
FTEE	Full-time equivalent employee
GBUAPCD	Great Basin Unified Air Pollution Control District (a.k.a. District)
GIS	Geographic Information System
GPS	Global Positioning System
KE	Kinetic energy
LADWP	Los Angeles Department of Water and Power (a.k.a. City)
MDCE	Minimum Dust Control Efficiency
MSM	Most Stringent Measures
NAAQS	National ambient air quality standards
NEAP	Natural Event Action Plans
NEPA	National Environmental Policy Act
NOAA	National Oceanographic and Atmospheric Administration
NSPS	New Source Performance Standard
OEHHA	Office of Environmental Health Hazard Assessment

OLSAC	Owens Lake Soda Ash Company
OVPA	Owens Valley PM ₁₀ Planning Area
PC	Particle count
PM ₁₀	Particulate Matter less than 10 microns nominal aerodynamic diameter
PSD	Prevention of Significant Deterioration
R.	Range
RASS	Radio Acoustic Sounding System
RFPS	Reference Particulate Sampler
RSIP	This 2003 Revised State Implementation Plan
SCR	Supplemental Control Requirements of the 2003 SIP
SDCA	Supplemental Dust Control Area
SFM	Sand flux monitor
SIP	State Implementation Plan
SSI	Size Selective Inlet
T.	Township
T/d	U.S. short tons per day
TEOM	Tapered Element Oscillating Microbalance, continuously measures ambient PM10
TSP	Total suspended particulates
UCD	University of California at Davis
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
VMT	Vehicle miles traveled

10.3 MEASUREMENT UNITS

ac	acre, 640 acres = 1 square mile
ac-ft	acre-feet, 1 ac-ft = 325,851 gallons = 43,560 cubic feet (1 ac-ft will cover a 1 acre area 1 foot deep with water.)
°C	degrees Celsius
cm	centimeter, 1 centimeter = 1/100 meter
d	day
°F	degrees Fahrenheit
dS/m	decisiemens per meter (a measure of electrical conductivity, used as an indication of salinity)
ft	feet, 1 foot = 0.3048 meters
g	grams, 1,000 grams = 1 kilogram
in	inches, 1 inch = 2.54 centimeters
kg	kilogram, 1 kilogram = 2.2046 pounds
km	kilometer, 1 kilometer = 1000 meters
km ²	square kilometer
m	meters, 1 meter = 3.28 feet
m/s	meters per second, 1 meter per second = 2.237 miles per hour
mg	milligrams, 1 mg = 0.001 gram
mi	mile, 1 mile = 5280 feet
mi ²	square mile
mph	miles per hour, 1 mile per hour = 0.447 meters per second
ppm	parts per million
s	second
ton	US short ton, 1 ton = 2,000 pounds weight = 907.2 kilograms
'	feet
”	inches
µg	microgram, 1 microgram = 10 ⁻⁶ grams
µg/m ³	micrograms per cubic meter
µm	micron, 1 micron = 10 ⁻⁶ meters
yr	year

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