

FAQs

What is the Stipulated Order of Abatement and what does it mean for Oceano Dunes State Vehicular Recreation Area (SVRA)?

The Stipulated Order of Abatement (SOA) is an agreement between the California Department of Parks and Recreation (State Parks) and San Luis Obispo County Air Pollution Control District that was adopted in 2018 and amended in 2019. As part of the SOA, State Parks has committed to reducing particulate matter downwind of the SVRA. The SOA is a legal agreement that requires State Parks to meet specific air quality targets to maintain off-highway vehicle use on the SVRA and can be viewed here:

<https://ohv.parks.ca.gov/pages/1140/files/07-28-2021-5C-Stipulated%20Order%20of%20Abatement.pdf>.

Why are there dust concerns?

High levels of particulate matter have been measured downwind of Oceano Dunes SVRA. Increased levels of particulate matter contribute to poor air quality. Elevated particulate matter levels can have negative health impacts according to the California Air Resources Board (CARB), and the U.S. Environmental Protection Agency.

What is causing the dust?

Active dune systems, such as those found in Oceano Dunes SVRA, can be naturally dusty environments. When wind blows, sand particles creep and bounce across the dune surface through a process called saltation. The impacts of saltating particles cause emission of particulate matter into the air.

Is the dust generated from the dunes natural?

Yes, dust is generated naturally from sand dunes, however, current research suggests that historic and current park use can contribute to dust generation.

What areas of the park are contributing to the dust?

State Parks continues to work with researchers to better understand dust emissivity at Oceano Dunes SVRA. Emissivity measurements have been taken at the park since 2013 using an instrument called a PI-SWERL (Portable In-Situ Wind Erosion Lab). This instrument allows researchers to test the emissivity of different areas under controlled conditions. These measurements identify the areas of the park that have elevated dust emission levels. This data is incorporated into a computer model which helps State Parks better identify areas to target for dust mitigation.

What are the components of the particulate matter at Oceano Dunes SVRA?

State Parks, the San Luis Obispo County Air Pollution Control District, CARB, and other researchers are studying the components of particulate matter, or dust, downwind of Oceano Dunes SVRA. Recent research found that the particulate matter comprises mineral dust, sea salt, inorganic aerosols, carbon, water vapor, and other elements. Understanding the physical components of the particulate matter will help to better understand the science around dust at Oceano Dunes SVRA.

Why is there less riding available on the dunes?

Oceano Dunes SVRA is implementing dune restoration and stabilization projects to improve air quality downwind of the SVRA. As such, emissive areas of the dunes are identified, planted with native dune vegetation, and fenced to protect the plants.

What is the difference between dust, fine particulates, and particulate matter 10?

When discussing air quality, these terms are often used interchangeably but they are different, and this difference can be important. State and federal air quality regulations are specific to fine particulate matter which is defined as particles with a diameter less than 10 microns, or about 1/5 the diameter of a human hair, also known as PM 10. These fine particles bypass natural defenses, get deep into our lungs, and can cause long term respiratory damage. State Parks uses the more generic term of dust when discussing air quality at Oceano Dunes SVRA but are specifically addressing the fine particulate materials (PM 10 or smaller particles) that are covered under state and federal air quality regulations.

What is State Parks doing to reduce dust emissions at Oceano Dunes SVRA?

Oceano Dunes SVRA has installed various dust mitigation projects that involve planting native dune vegetation, installing wind fencing, and placing straw bales across the dune surface. These projects help stabilize the dunes, reducing the amount of sand saltation and particulate matter emissions into the air. Project locations are determined using a computer model and air quality measurements in the field, in collaboration with the Science Advisory Group.

Are the dust control projects effective at reducing dust?

Recent field measured data and computer modeled values from State Parks suggest dust control projects are successfully reducing emissions from the dunes.

Who is the Science Advisory Group and how are they involved?

The Science Advisory Group was formed as part of the SOA and consists of an international group of Earth and atmospheric experts who serve in an advisory capacity to help guide efforts to reduce emissions from the dunes.

What can the public do to help?

- Plan your visit and find out about any restrictions.
- Observe all park signage, respect fences and closed areas. These closed, vegetated areas are the primary means by which the park can reduce dust emissions.
- Understand the importance of the air quality program and how it helps protect riding and recreational opportunities at Oceano Dunes SVRA.