



DEPARTMENT OF PARKS AND RECREATION

Off-Highway Motor Vehicle Recreation Division
1725 23rd Street, Suite 200
Sacramento, California 95816
Telephone: (916) 324-5801 • Fax: (916) 324-0271

Armando Quintero, *Director*

**OHMVR COMMISSION MEETING
Sacramento, CA (Virtual)**

7/28/21

STAFF REPORT: Oceano Dunes SVRA Dust Update
STAFF: Jon O'Brien, Environmental Program Manager
SUBJECT: ODSVRA Stipulated Order of Abatement and Dust Update

Summary

The California Department of Parks and Recreation (DPR) entered into a Stipulated Order of Abatement (SOA, attachment 1) with the San Luis Obispo County Air Pollution Control District (APCD) in April 2018 with a goal of improving regional air quality. The SOA was amended in the fall of 2019. DPR is currently finishing the second year of the SOA and is working on the 2021 Annual Report and Work Plan (ARWP).

Discussion

Background: Oceano Dunes SVRA (ODSVRA) is located just south of the town of San Luis Obispo on the central coast of California. The SVRA is specifically located within the much larger Guadalupe-Nipomo dune system that stretches from southern San Luis Obispo County to northern Santa Barbara County. This dune system is characterized by high winds and dusty conditions. California State Parks has been working with the APCD on regional air quality issues since 2011, entering into the SOA in 2018. The SOA was amended in 2019.

The SOA outlines three air quality objectives, 'to achieve state and federal ambient air quality standards...[and] establishing an initial target of reducing the maximum 24-hour PM-10 baseline emissions by fifty percent...' (Sections 2(b and c)). For the latter air quality objective, the SOA requires the use of air quality modeling to determine progress toward the initial target.

As part of the SOA, DPR produced a four year dust plan, or Particulate Matter Reduction Plan (PMRP, www.slocleanair.org/air-quality/oceano-dunes-efforts.php). The

PMRP outlines a dust control plan for ODSVRA. The California Coastal Commission permitted this plan under Coastal Development Permit 3-12-050.

The SOA also established a Scientific Advisory Group (SAG), a seven-member panel of technical advisors to “evaluate, assess, and provide recommendations on the mitigation of windblown PM10 emissions” from Oceano Dunes.

In the fall of 2018, DPR began implementation of substantial dust control measures aimed at achieving the targets of the SOA. The projects included the 48-acre foredune, in addition to dust mitigation measures in the backdunes. These projects range from planting native dune vegetation, to wind fencing, to spreading straw to reduce sand movement. As per early 2020, 230.9 acres of dust control projects had been installed.

Update: DPR installed approximately 90 acres of new dust control projects at ODSVRA in the spring of 2021, as per the 2020 Oceano Dust Annual Report and Work Plan outlined in Section 4 of the SOA. DPR was able to amend the 2017 Dust Coastal Development Permit on April 15, 2021 to install the new projects. The projects were initially fenced in March of 2021 under a Superintendent’s Order.

Of the 90 acres of new projects, approximately 66 acres were inside the riding area and 24 acres were outside of the riding area. The new projects consisted of various dust mitigation measures including wind fencing, seeding, and blowing straw on the dune surface (see attachment 2).

In all, DPR has installed approximately 323 acres of dust control treatments from 2017 through the spring of 2021. This has resulted in a 22% reduction in mass emission out of the 50% mass emission reduction requirement outlined in the SOA.

DPR is currently working with the SAG on the 2021 Annual Report and Work Plan. This plan identifies projects and work to be completed in the 2022 field season. As per the PMRP, DPR is planning to install up to 90 acres of new dust control projects in the spring of 2022. A draft of the 2021 ARWP was submitted to the SAG on July 1, 2021, and an updated version is due to the APCD on August 1, 2021. A final version must be completed by October 1, 2021.

As per a previous update, the current model does not include any secondary or downwind dust mitigating benefits of implemented dust control projects. DPR continues to work with DRI on the Computational Fluid Dynamics model to quantify those benefits (see attachment 3). Initial results are expected by September 2021.

DPR is currently working with the Scientific Advisory Group reviewing the 50% mass emission reduction requirement, as per Section 2(d) of the original SOA. DPR, the SAG and the APCD have acknowledged that the 50% mass emission reduction may not be achievable due to the high wind conditions of the region, along with the size of the active dune sheet. DPR and the SAG have requested that the Desert Research Institute (DRI) pursue additional modeling towards the goal of revising the mass emission requirement of the SOA. An initial draft of any potential SOA revision is

expected in the late summer/fall of 2021. Revising the requirements of the SOA would require approval from the APCD Hearing Board.

DPR requested that DRI analyze the available data to determine any progress that has been made towards regional air quality improvements in south San Luis Obispo County. This report is titled 'Increments of Progress Towards Air Quality Objectives' and will be presented in full by DRI at a future Commission meeting. Results indicate that measured and modeled PM-10 concentrations have been reduced by 45% at the CalFire (CDF) air monitoring. Note that this 45% value represents PM-10 concentrations, not mass emissions as per the SOA. The results demonstrate that the dust control efforts have resulted in improved regional air quality downwind of ODSVRA.

To clarify the components of PM-10 at ODSVRA, the Scripps Institute of Oceanography, working with the California Geological Survey, completed their field season in May of 2021. Samples are also being collected by the APCD, with the California Air Resources Board.

In addition, DPR requested that DRI analyze seven years of emissivity data, along with four years of air quality and meteorological data, to address the question as to the 'delta', or difference, between emissions in the riding area versus the non-riding area at ODSVRA. That report is currently under internal review.

Commission Action

For information only

Attachments

1. Original Stipulated Order of Abatement
2. Map of 2020 Annual Report and Work Plan new projects
3. Evaluating Secondary Effects of Dust Controls on Emissions and Air Quality using Computational Fluid Dynamic Modeling