

STAFF REPORT

AGENDA ITEM: San Luis Obispo South County Particulate Matter Study-San Luis Obispo Air Pollution Control District (SLOAPCD) (Phase 2 report)

STAFF: Phil Jenkins, OHMVR Division
Tim La Franchi, Counsel

DATE: April 29, 2010

Background: See the attached Staff Report from the February 25, 2010 meeting for prior history. Since the last staff report, the SLOAPCD released its Phase 2 report on fine (PM 2.5) and coarse (PM 10) particulates to evaluate the potential impacts from off-highway vehicle activities at the SVRA. The Phase 2 report methodology and conclusions were presented by the SLOAPCD staff and study team in both a public workshop on March 3 and an APCD Board of Directors' meeting on March 24, 2010.

Report: The Phase 2 report concludes that the wind erosion on the dunes at the riding area of the Oceano Dunes SVRA (SVRA) contributes 25% more particulate matter than the adjacent non-riding dune area that was used as a control site for the study comparison. The data is based on sand flux (movements) correlated to wind speed that demonstrate that the riding area generates sand erosion contributing to particulate emissions at a lower wind speed than at the non-riding area.

The APCD study team suggests the hypothesis that this result is due to the fact that motor vehicle recreation on the dunes disturbs the natural dune surface referred to as "dune crust" in the report and, thus, indirectly causes the sand to erode at lower wind speeds and release a greater quantity of particulates into the air than the undisturbed dune area tested. The report found no direct correlation between visitation at the SVRA and exceedences of the particulate ambient air quality standard established for the state by the California Air Resources Board. Some suggested mitigation measures include the installation of wind fencing and/or increasing vegetation at the dunes to slow the effects of wind erosion, though

the report makes no official recommendations in that regard nor any other regulatory recommendations.

The report is produced pursuant to the SLOAPCD's responsibility under state air quality law to identify air quality problems and take steps to mitigate them. Further steps are needed to determine if and what types of mitigation measures are needed and appropriate. The SLOAPCD staff has also made presentations to a group of Nipomo Mesa residents that may be affected by the particulate effects on respiratory health and the County Health Commission which notes that no health studies have been performed or data collected that would enable conclusions one way or the other regarding health effects to residents on the Nipomo Mesa.

A number of public comments were received by the APCD Board at its meeting, both for and against receiving the report, including a package of analysis and objections submitted by State Parks through the SVRA District Superintendent. State Parks' objections are based on observations that the report merely documents natural occurring windblown sand and does not contain sufficient data to conclude that the SVRA contributes to a higher level of particulate emissions than are otherwise naturally occurring.

In the limited time available to review the Phase 2 report between its release and the March 24 Board meeting, the report is believed by State Parks and its retained experts to be flawed in a number of ways, including: (1) that wind measurements were not taken consistently between the SVRA riding area and the non-disturbed dune control area, (2) conclusions are based on methodology from the Owens Lake area which is a completely different environment from the SVRA dune area, (3) data is limited to one 17-day intensive period and does not provide a sufficient time period for collecting sufficient data, (4) equipment problems and failures lead to quality control issues, (5) the report does not adequately address the natural geologic dune formation and the dynamics of wind flows and sand movement onshore in a dune environment, (6) only some, but not all of, the data underlying the report had been made available for outside analysis at the time of the meeting, and (7) incomplete and unclear explanation in the report of the data support and correlation between the three methods for collecting data for the report: wind speed and particulate measures, composition of the particulates, and the measurement of sand movement (sand flux).

Status:

Following the presentation, the APCD Board at their March 24 meeting voted to; accept the report recognizing that further action will/may require further analysis and study, requested the SLOAPCD staff to work with SVRA staff to explore possible mitigation measures, requested its counsel to provide an opinion on the APCD's legal authority and process, requested the APCD to make the study data available to the public, and to establish a regular agenda item for reporting progress to the Board. The next meeting of the Board is May 19, 2010 (the Board generally meets every two months.)

A team has been assigned by the Division, including outside experts in air quality and the geology of the dunes, to take steps to follow-up State Parks' objections as follows:

- Establish a wind measurement protocol to test the data conclusions in the report that lower wind speeds exist at the SVRA riding area than at the Phase 2 report undisturbed dune area.
- Obtain and evaluate the underlying data used to support the conclusions in the report.
- Participate fully in the APCD administrative process including regular attendance and comments at APCD Board meetings.

Commission action: For information only.