

August 27, 2026

**Memo: SAG comments on "2026ARWP\_APCD Draft\_2026-815\_Reduced"**

**From:** Scientific Advisory Group

**To:** Karl Tupper, San Luis Obispo Air Control District

**Cc:** Sarah Miggins, California Department of Parks and Recreation  
Jon O'Brien, California Department of Parks and Recreation  
Ronnie Glick, California Department of Parks and Recreation

The Scientific Advisory Group (SAG) received a copy of the 2026 Annual Report and Work Plan (ARWP) that was submitted to the San Luis Obispo Air Pollution Control District (APCD) by the California Department of Parks and Recreation (CDPR) on August 13, 2026. The CDPR requested a 2-week extension, which was approved by the APCD, as required under the terms of the Stipulated Order of Abatement (SOA). Members of SAG had the opportunity to review the document, and herewith we provide our review.

**Summary Statement**

Overall, the SAG finds the 2026 ARWP to be well-written, informative, and comprehensive. The organization of the report is the same as in prior years, thereby providing continuity in terms of section headings and content narrative. The 2026 ARWP includes major sections that: (a) report on a range of activities undertaken by the CDPR in the previous work year (August 1, 2025 through July 31, 2026) designed to control dust emissions from the ODSVRA and to mitigate the PM<sub>10</sub> impact at downwind measuring stations; (b) describe the activities that are planned to be undertaken in the upcoming year (August 1, 2026 through July 31, 2027); and (c) provide information on budgetary considerations and implementation scheduling. The main document makes reference to, and is supported by, a large number of supplementary documents, which are provided as attachments in a separate PDF.

SAG members found relatively few areas for improvement in this document, but identified several sections where editorial attention is needed or where minor corrections are required. The document indicates that compliance with the SOA has been achieved, as was the case in past years, despite many important changes to the modeling framework. This is an encouraging result; the SAG believes that the APCO will reach the same conclusion.

**Assorted Comments**

Page VII; Acronyms. Insert "NFRA" and include description. Insert "ST125" and include description. These terms first appear on Page 2-9 and are used on page 2-18, and at this point in the report, they should be defined in a bit more detail rather than simply listing them (seven lines

down). NFRA isn't actually discussed until page 2-21 (Section 2.2.1.1), and some of this narrative could be cut-and-pasted to earlier in the report.

Page 2-1; Figure 2-1. The label for "7.5 Reveg" sits directly on top of the polygon, and it is not apparent what the label refers to. Perhaps shift the label to the right of the polygon.

Page 2-6; Table 2-1. Clarify what is meant by the number of projects (superscript A). The table lists 3 foredune projects, but there is only one Foredune Restoration Area.

Page 2-9; Section 2.2.1. Three instances of 'PM10' appear in the first paragraph and once in the next paragraph...these should all be 'PM<sub>10</sub>' with subscript. Have editor check entire document.

Page 2-16; Figures 2-7 and 2.8 are not the most recent versions. Please update according to DRI report (August 10).

Page 2-17; Figure 2-9 is not the most recent version. Please update according to DRI report. Note the subscript at the end of the figure caption should be '10' not '1o'.

Page 2-20; first paragraph. The term 'sand highway' is used and appears in quotes, but it was used first on page 2-19 and not placed in quotation marks.

Page 2-22; Figure 2-12 is not the most recent version. Please update according to DRI report.

Page-34; Figures 2-18 to 2-20. Color contrasts are blurry and difficult to differentiate.

Page 2-38; Figure 2-22. The top of the figure has contradictory information (x100 vs x1000). Note that 'x100' also appears on page iii in the List of Tables (may need to change).

Page 2-38; Figure 2-22. This is a table not a figure. The same is true for Figure 2-23 on page 2-40. This will require changing the subsequent numbering of all tables and figures beyond this point, and then searching the text for references to those tables and figures.

Page 2-40; Figure 2-23. This is also a table not a figure. The numbers are too small to read—reorganize to make legible. Needs a better description of the units used. The text indicates that TRI has units of m, whereas the caption reports values in TRI m<sup>-2</sup> (which is a bit confusing, and should likely be "m m<sup>-2</sup>"), as well as normalized values (which presumably have no units attached).

Page 2-41; Figures 2-24 and 2-25. Include units of measure in the captions or on the color bar.

Page 2-45: Section 2.2.4. Provide location of 'reference site' that has been closed for at least 20 years and the rationale for selecting it. List the species present, particularly non-native species at TP6 and in the backdune area (even though they are listed in Attachment 6). Consider using the common name for ice plant and sea rocket rather than just the scientific names.

Page 2-58; Insert a period between 'made' and 'Refer', as below:

**Parameterizing of Vegetated Grid Cells:** For previous ARWPs, any vegetated grid cell with greater than 50% plant cover was considered to be “non-emissive” and assigned an emissivity of zero. For 2026, several changes to the treatment of vegetated grid cells were made. Refer to Attachment 08 for detailed information on the parameterizing of vegetated grid cells in the DRI model.

Page 2-58; Third bullet point. Add ‘the’ as follows: “...emissivity power relation based on the management zone it...”

Page 2-59; fourth line down. “Vis” should be “VIs”

Page 2-60; Second bullet point. “Vis” should be “VIs”

Page 2-60; Footnote makes reference to Attachment 07, but it should be 08.

Page 2-60; Last paragraph. Recommend re-phrasing this paragraph as follows:

In addition to the above changes, in reviewing past exercises, it was noted that two areas in the eastern portion of the Dune Preserve and the eastern portion of Oso Flaco had been mapped as bare sand in the 1939 vegetation mask. The pre-disturbance model was updated to reflect changes in vegetation coverage and areas with bare sand. This resulted in approximately 100 grid cells within the DRI model changing from emissive to non-emissive in the pre-disturbance scenario, as highlighted in Figure 2-35.

Page 2-61; Table 2-6. Caption needs a space between ‘of’ and ‘2026’. The area of the FRA is listed in this table as 49.1 acres whereas it is typically described as only 48 acres. The discrepancy deserves a footnote explanation (likely having to do with how model grid cells are superimposed on the actual footprint of the FRA as determined by GPS and fence lines). The same comment may apply to the PE and SE.

Page 2-66; Dust Mitigation Treatments. The sentence “Nearly 90% of this managed land is located inside the ODSVRA open riding and camping area, as defined by the 2013 open riding and camping area boundary,” is factually correct but somewhat misleading. Approximately 300 acres of the managed land is in the Plover Enclosure, which is not a dust mitigation treatment (it was excluded due to management reasons for which dust mitigation was not the primary concern as stated explicitly earlier in the document). Recommend rephrasing this paragraph to be more transparent about how much acreage was removed from the riding area due explicitly to dust management objectives, and pointing the reader to Figure 2-37.

Page 2-68; Section 2.3.3.2. It would be useful to include a sub-section on progress in the FRA as a dust-mitigation indicator, as well as cross-referencing the information in Section 2.2.3.1.

Page 3-4. Section 3.3.1. It needs to be clarified that the data collected in the park is the basis for the report on the ODSVRA Meteorological and PM<sub>10</sub> Monitoring Network produced annually by

DRI. The Increments of Progress report is a separate document that uses wind speed data from S1 and PM<sub>10</sub> data from CDF and Mesa2. Perhaps the latter deserves its own sub-section.

Page 3-6; Footnote 51. The text indicates that the SAG was consulted about modifying the protocols for the line-intercept transect sampling and references Attachment 09. The SAG is not involved in the line-intercept transect sampling, which is conducted entirely by CDPR staff. The reference to Attachment 09 is misplaced.

Page 3-6. Section 3.4.2. The language here (and in Section 2.4.4) suggests that the public relations campaign continues to be active, although no specific evidence is provided to support the claim. Most elements of the public outreach campaign have not changed in many years. As an example, the website link for ODSVRA's Particulate Matter page contains information that has not been updated since 2019. There is a link to the S1 Tower data, but the available files cover only the period from June 2010 to June 2017.

Page 3-7; Adaptive Management. This section continues to improve, but it remains vague as regards how Parks uses adaptive management as a long-term strategy for improving the state of air quality while also remaining true to its mandate. One area of concern regards the future of the Plover Exclosure. In at least two places in this ARWP there is reference to State Parks undertaking preliminary planning activities to reopen a portion of the Plover Exclosure to seasonal recreational activities. This is clearly a management prerogative, and there could be some beneficial outcomes as regards nesting/rearing habitat as well as with OHV ridership satisfaction. However, there will also be implications for dust emissions (and SOA compliance), and this will require extensive consultation and complex modeling. It seems that some mention of these trade-offs could appear in this Adaptive Management section so as to inform the public about the decision-making metrics involved.

Page 3-8; top of page. Consider referencing the paper by Meija et al. (2026), which describes improvements in air quality due to dust mitigation efforts using machine-learning methods.

Page 4-1; Budgetary Considerations. The introductory paragraph indicates that the Work Plan described in Chapter 3 has a budget of \$2,751,190 whereas Table 4.1 lists a total budget of \$2,805,933. Which is correct (or what explains the discrepancy)?

### **Concluding Comments**

Overall, the DRAFT 2026 ARWP has some very positive elements that SAG members commended. Progress made to date in mitigating dust emissions from the ODSVRA have proven very successful and there are plans for supplemental plantings that will hopefully lead to better vegetation coverage in treatment areas. The fact that there is compliance with the SOA is a very rewarding outcome to the extensive efforts by CDPR and APCD in dealing with a very challenging dust mitigation issue within the ODSVRA.

Respectfully,

The Scientific Advisory Group

Bernard Bauer (Chair), Jack Gillies, Jenny Hand, Leah Mathews, Ian Walker