

Oceano Dunes Air Quality Update

May 15, 2024



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Evolution of Dust Controls

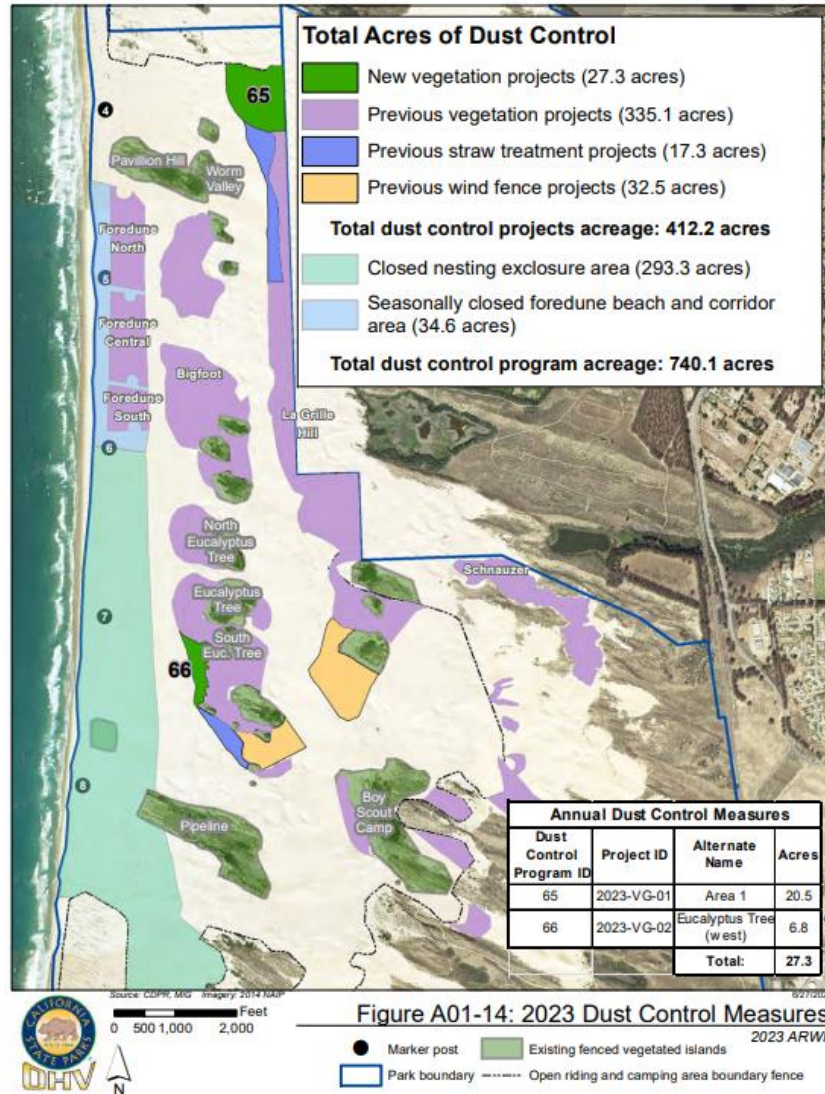
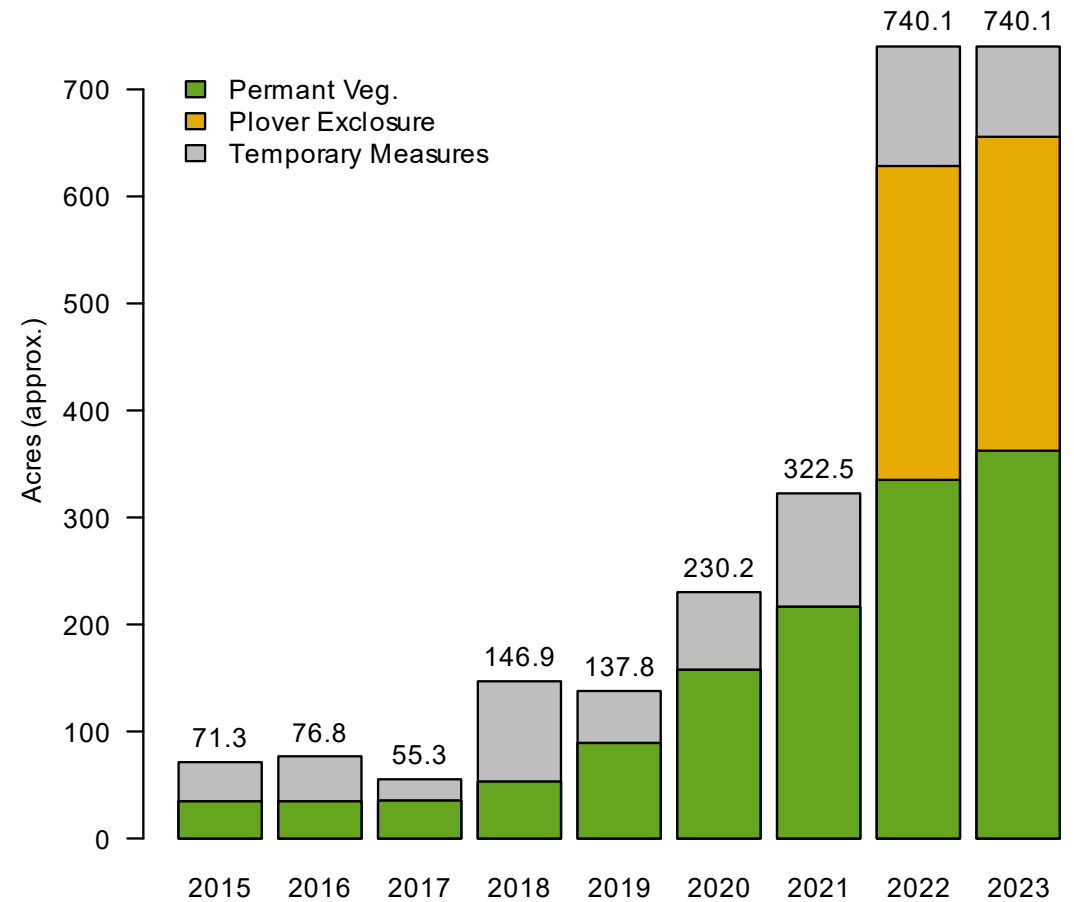


Figure A01-14: 2023 Dust Control Measures

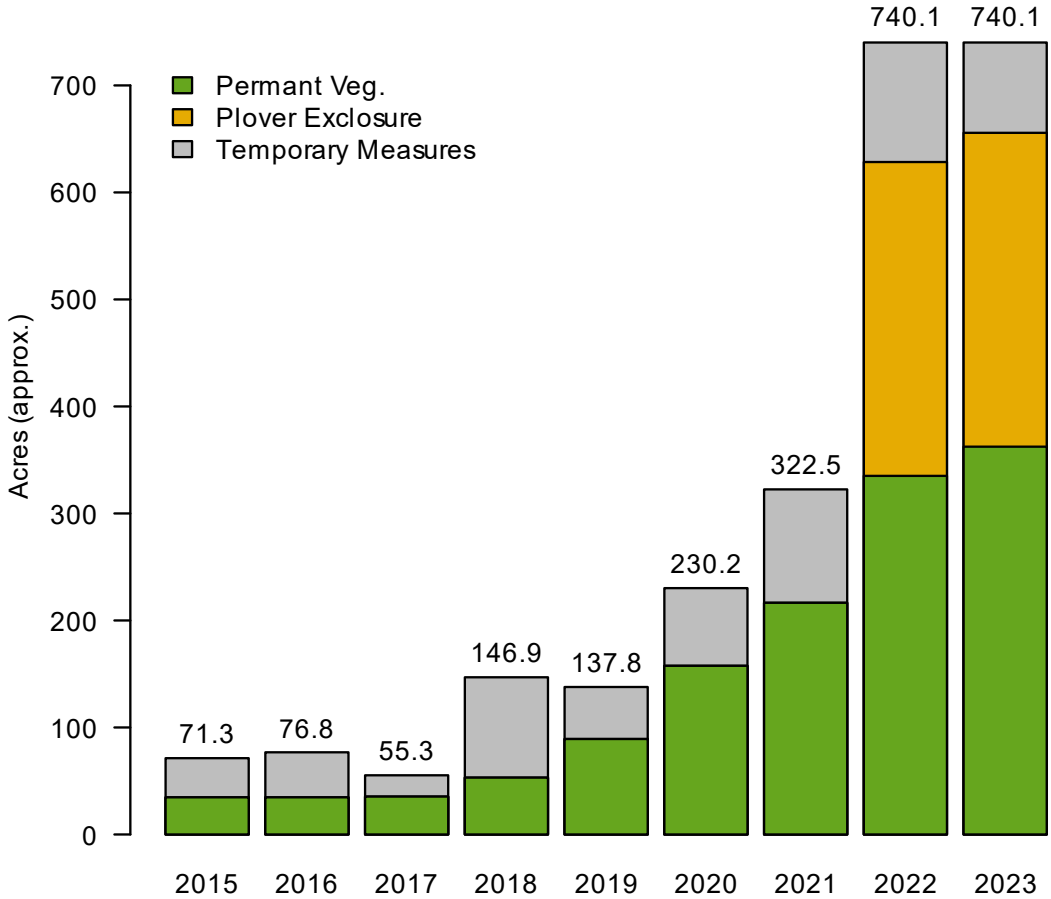
Acres of Dust Control Within the ODVRA (from 2023 ARWP)



Evolution of Dust Controls – Monitor Locations

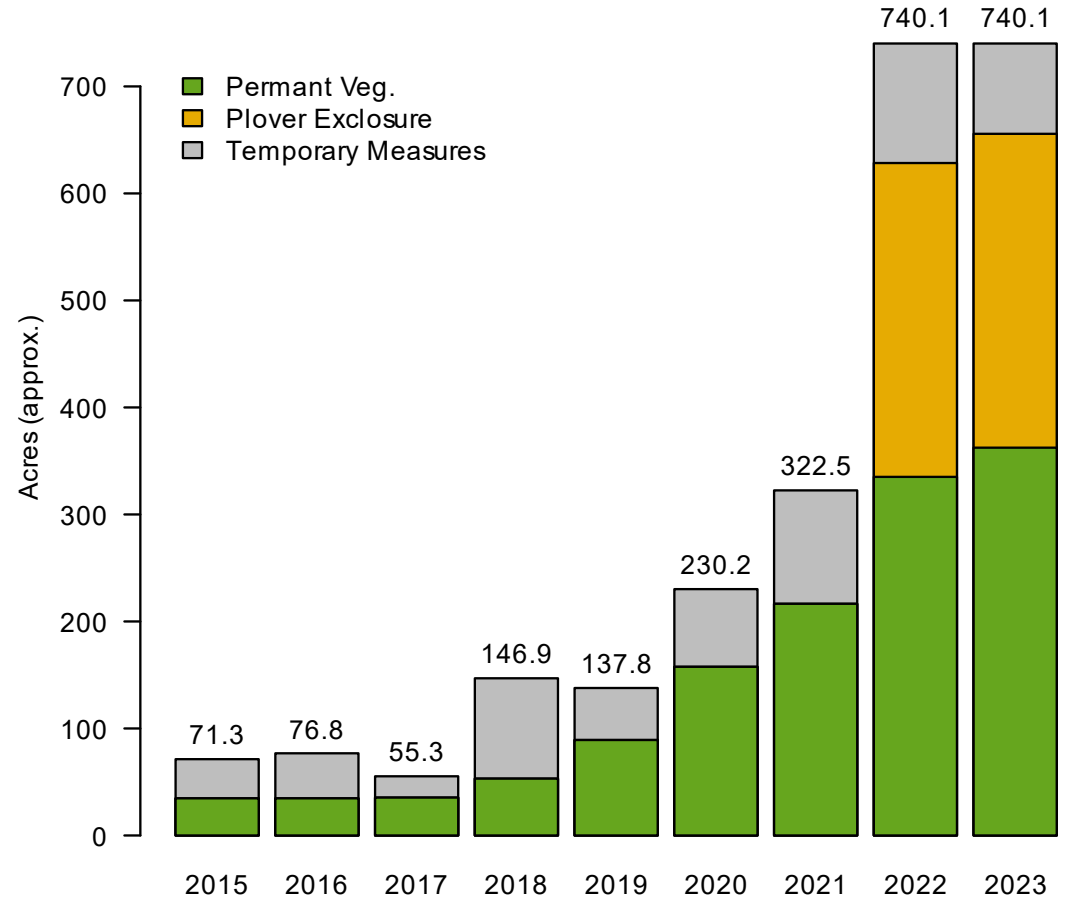
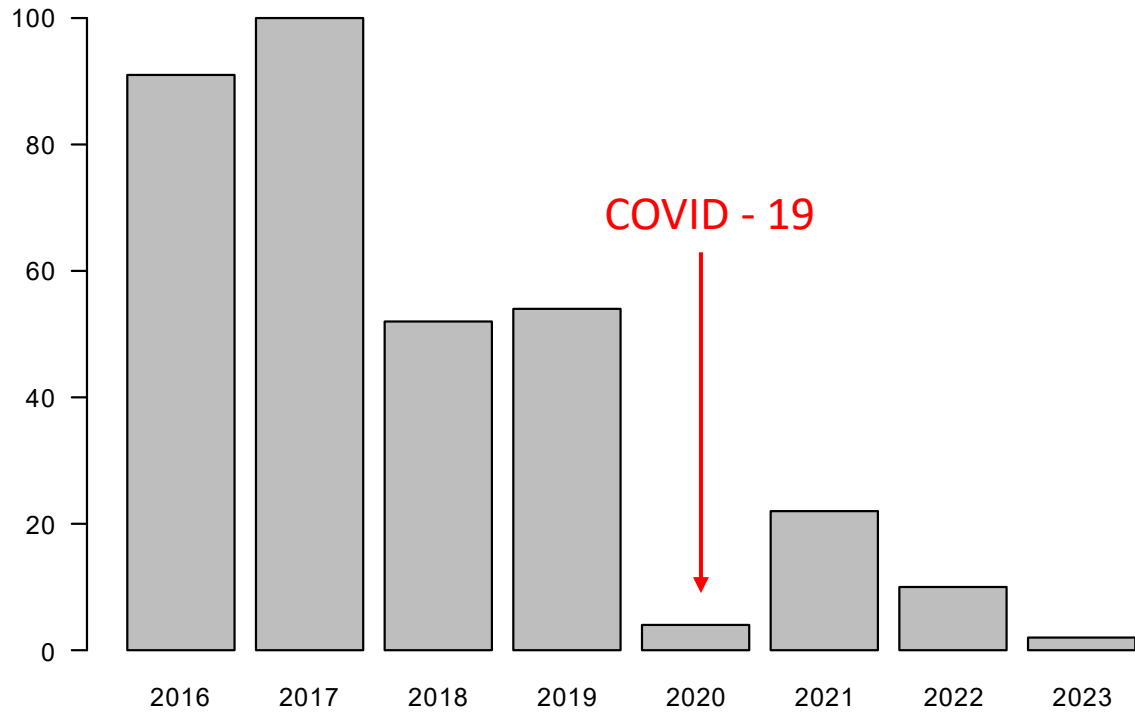


**Acres of Dust Control Within the ODVRA
(from 2023 ARWP)**



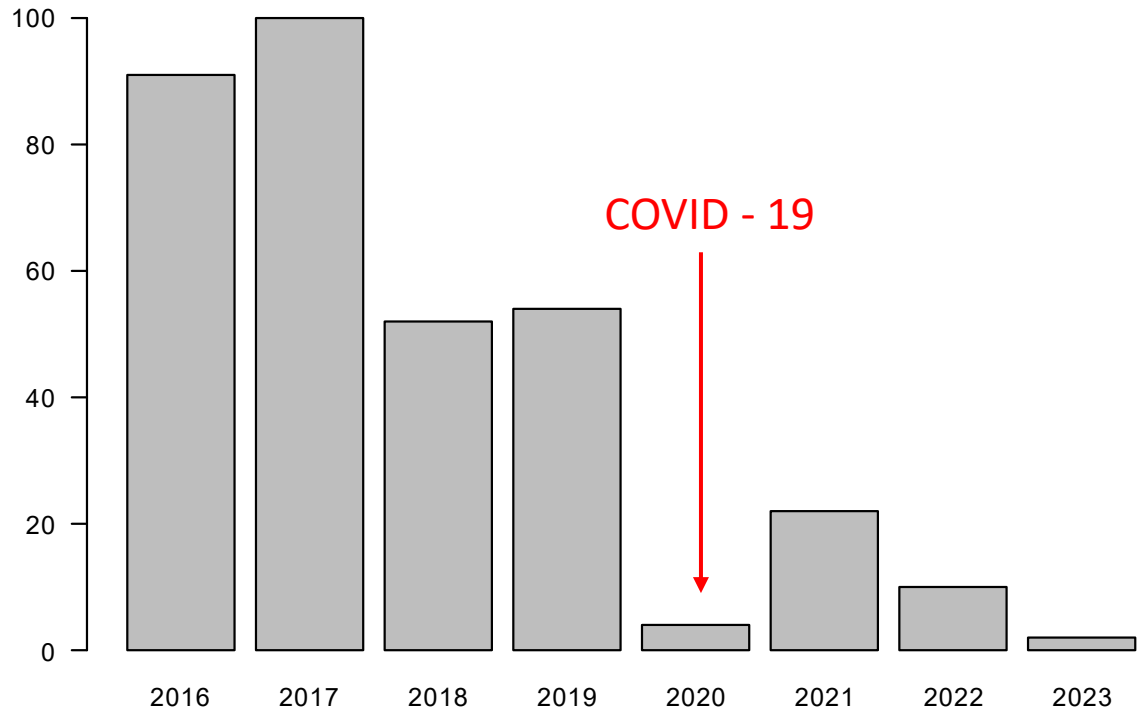
Air Quality Trends: Hours over 300 $\mu\text{g}/\text{m}^3$

Annual Hours at **CDF** with PM10 Over 300 $\mu\text{g}/\text{m}^3$

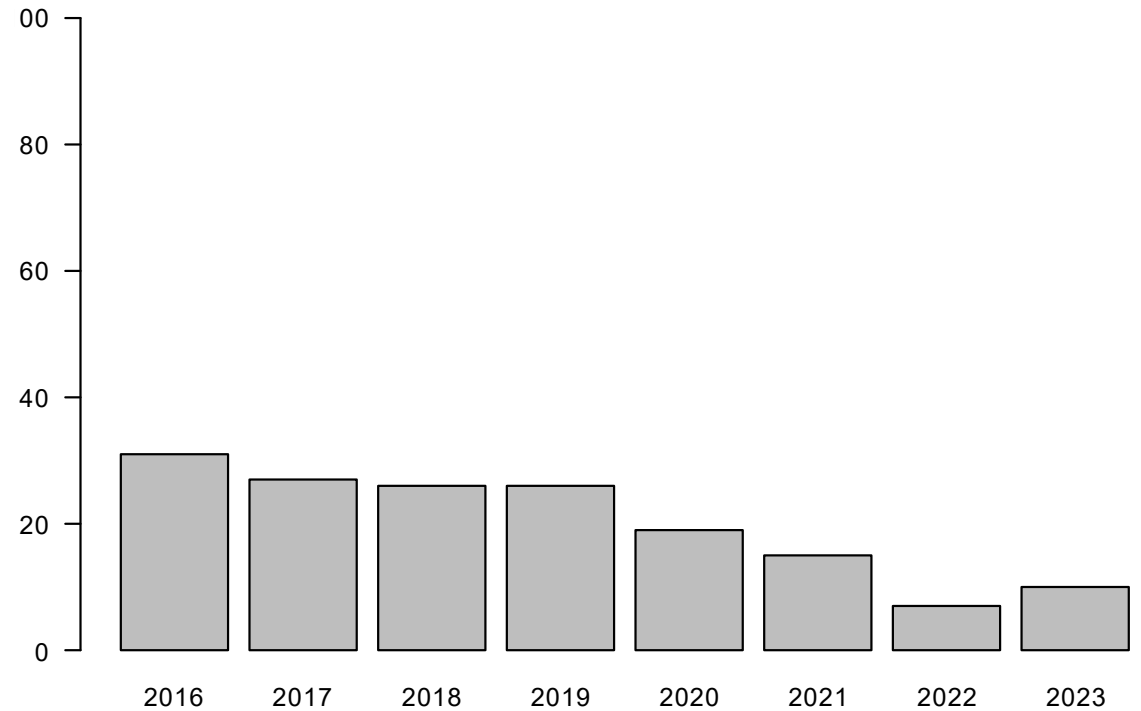


Air Quality Trends: Hours over 300 $\mu\text{g}/\text{m}^3$

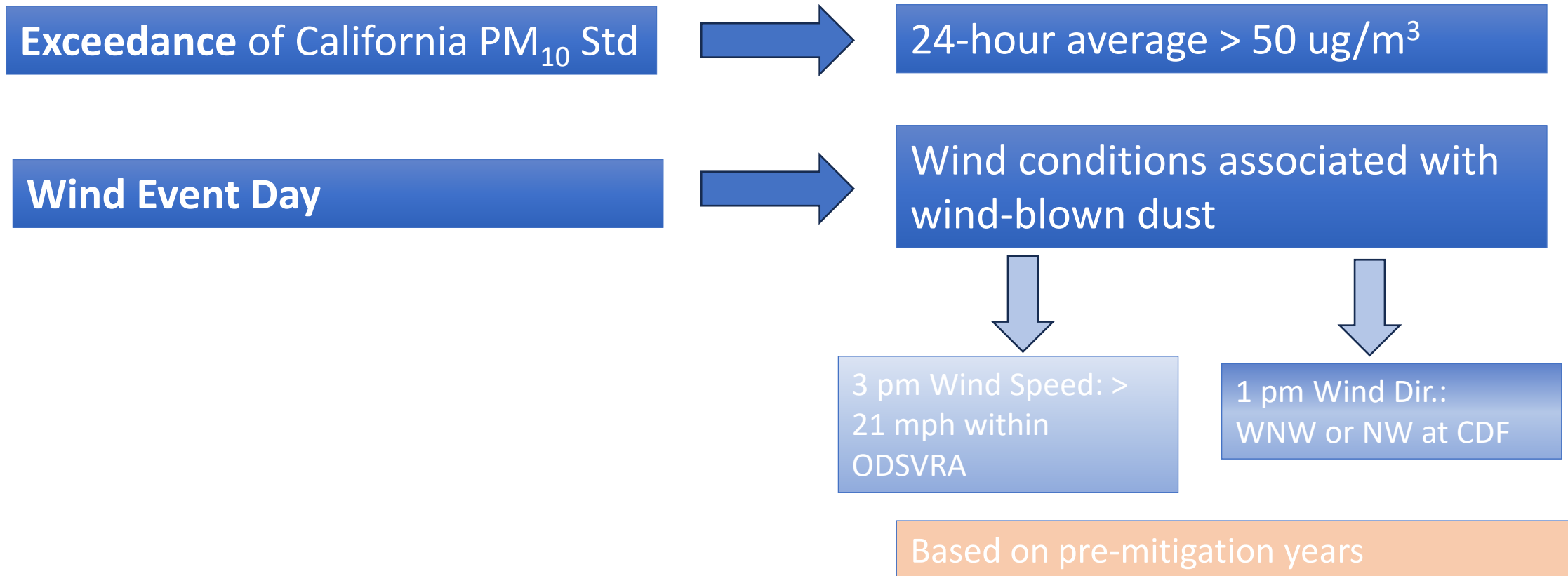
Annual Hours at **CDF** with PM10 Over 300 $\mu\text{g}/\text{m}^3$



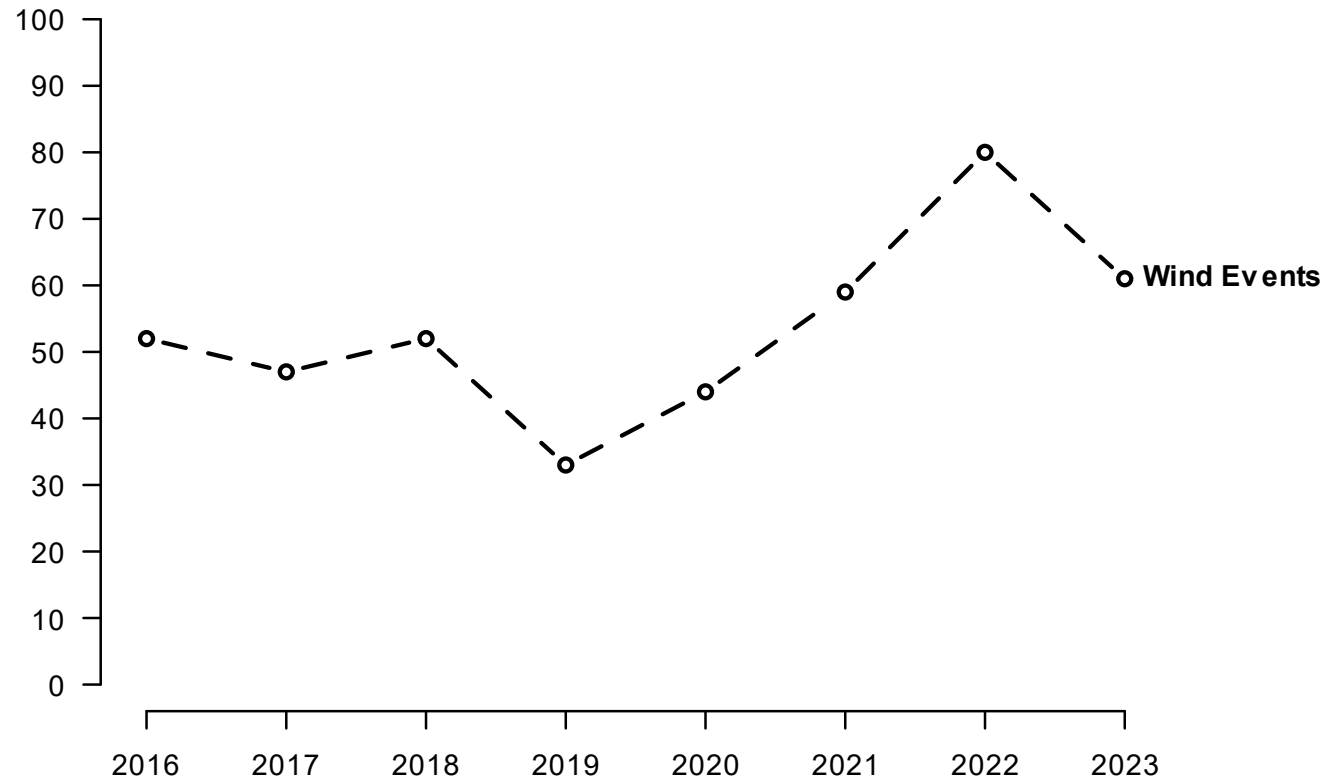
Annual Hours at **Mesa 2** with PM10 Over 300 $\mu\text{g}/\text{m}^3$



Air Quality Trends: Exceedances & Wind Events

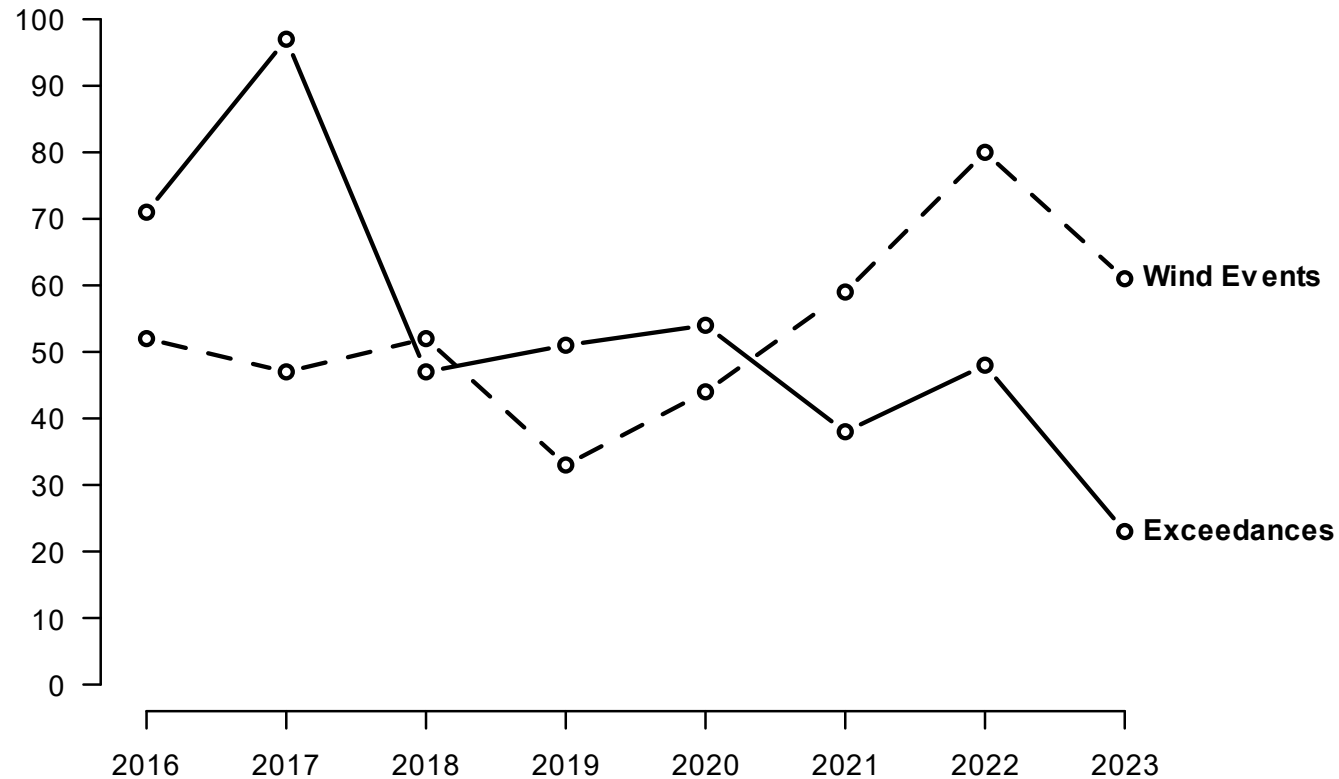


Air Quality Trends: Exceedances & Wind Events



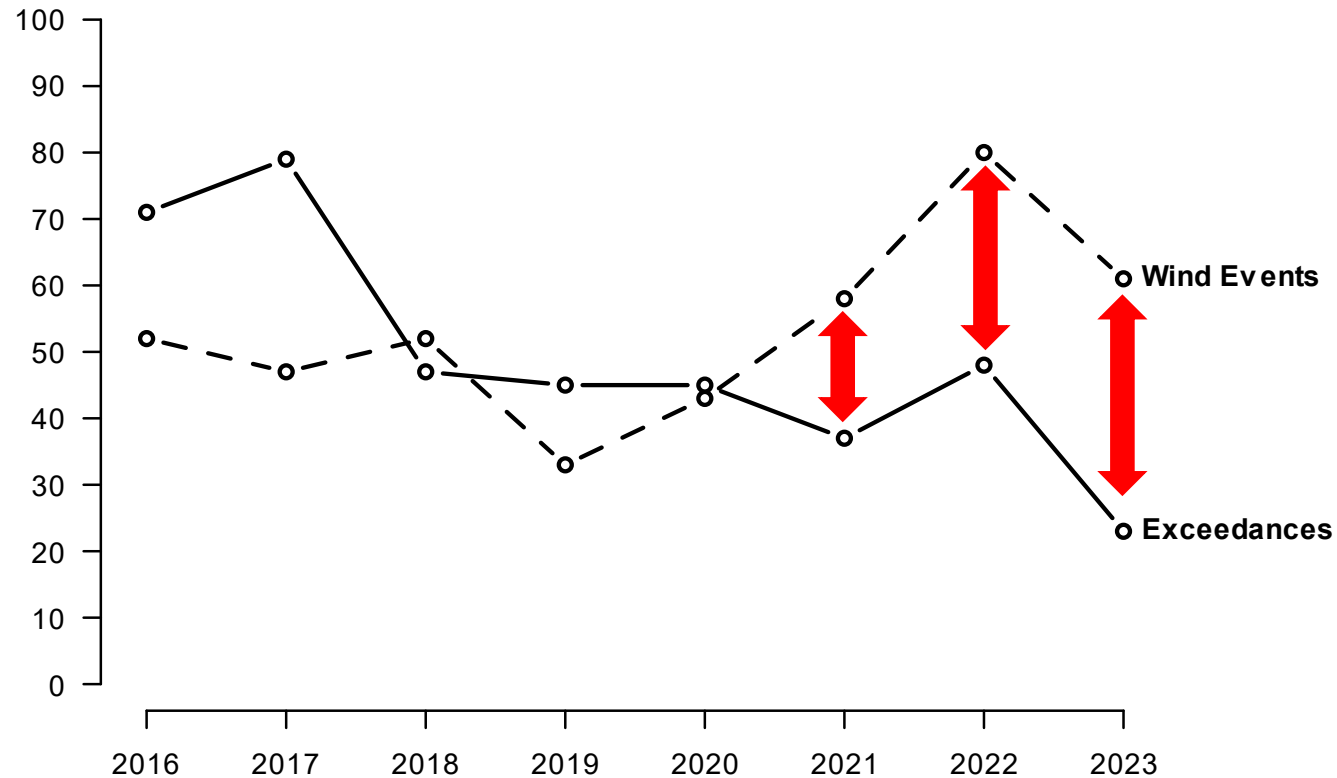
Air Quality Trends: Exceedances & Wind Events

Wind Events and PM10 Exceedances at CDF

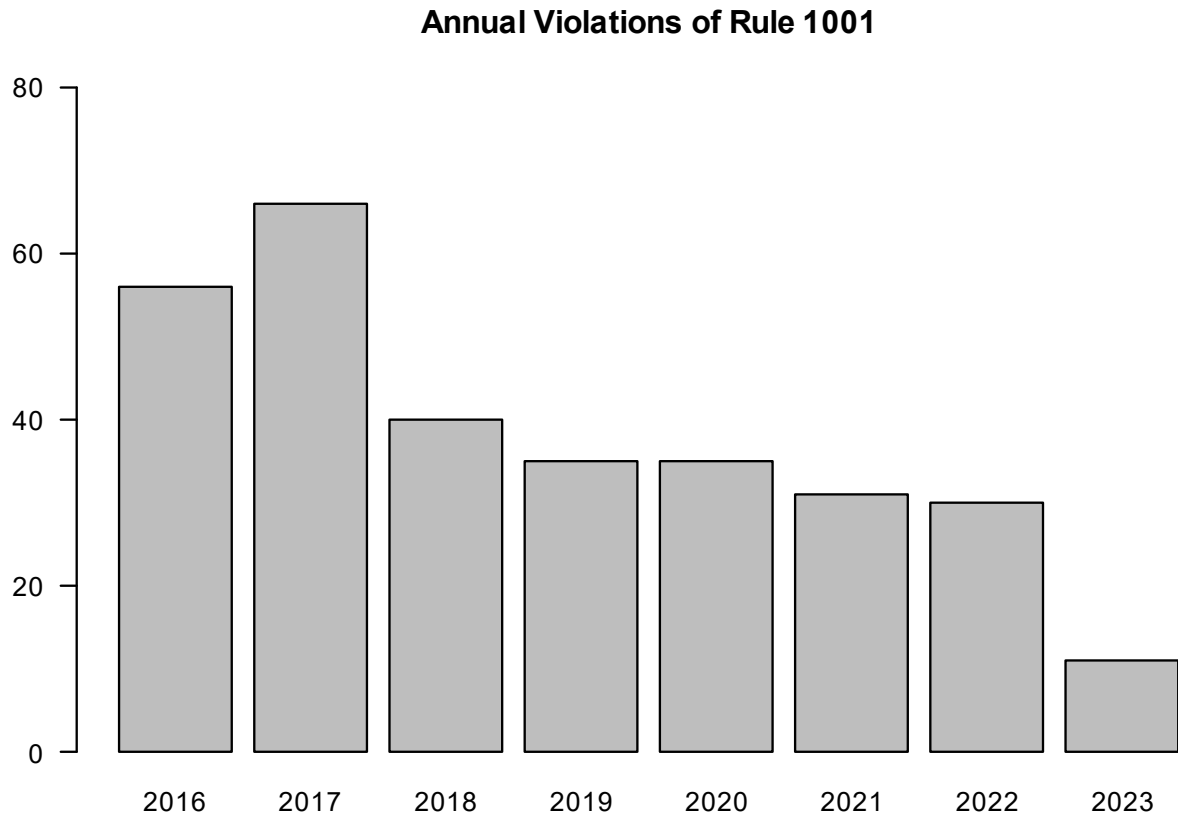


Air Quality Trends: Exceedances & Wind Events

Wind Events and PM10 Exceedances at CDF
Wildfire & SJV Dust Omitted



Air Quality Trends: Rule 1001



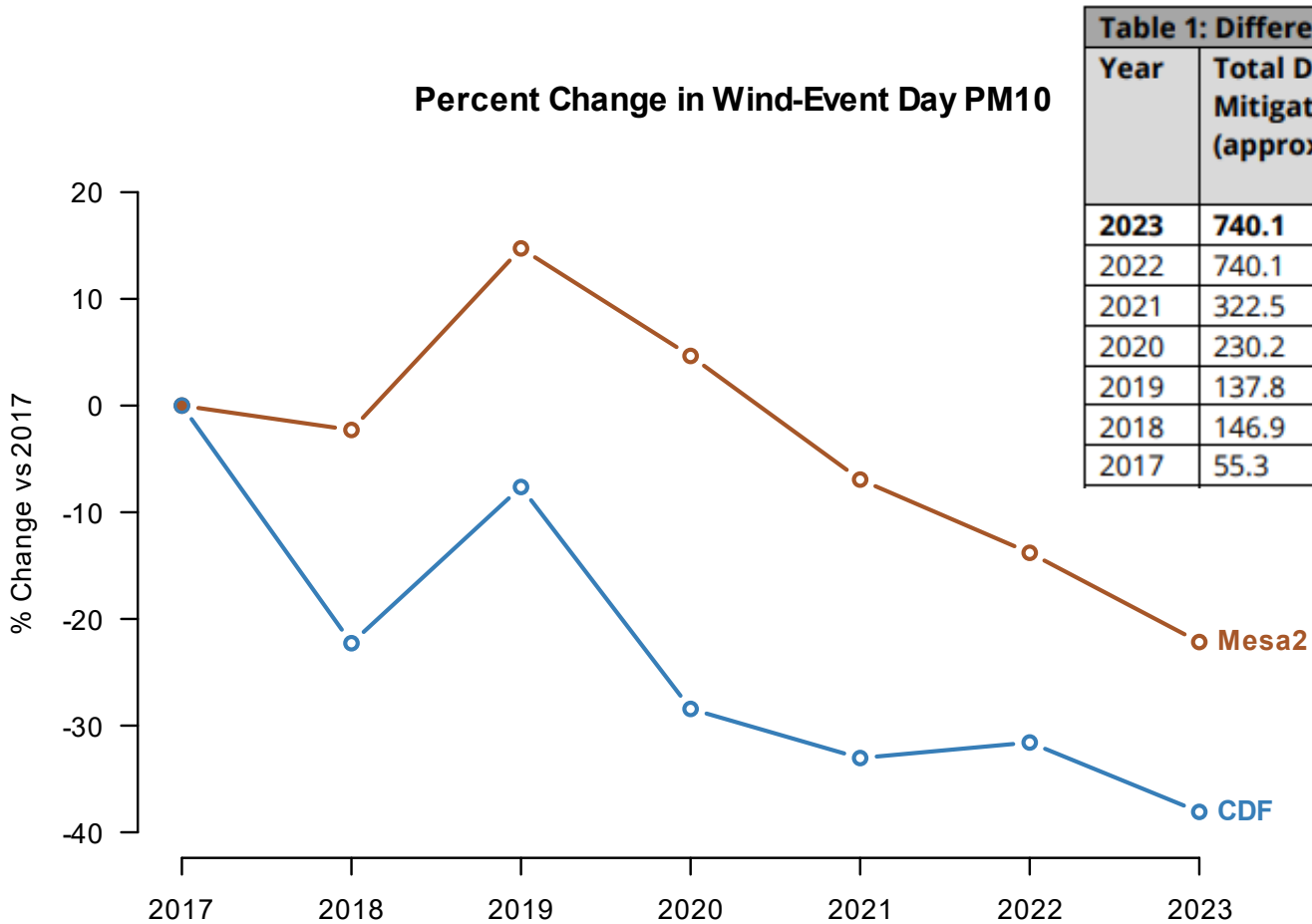
- Compare:
 - CDF (downwind of riding)
 - Oso Flaco (downwind of non-riding)

- Exceedance:
 - CDF > 55 $\mu\text{g}/\text{m}^3$ and
 - CDF > 20% above Oso Flaco

Air Quality Trends: Difference-in-Differences

- Focus only on wind-event days
- Remove Wildfire and SJV dust days
- Look at ratio of CDF (or Mesa2) to Oso Flaco
 - Implicitly controls for wind, non-ODSRVA impacts
- How does ratio change from year to year?
 - 2017 as baseline year
- See Annual Air Quality Report for details (on District website)
 - “Diff-in-diff” refers to type of statistical analysis

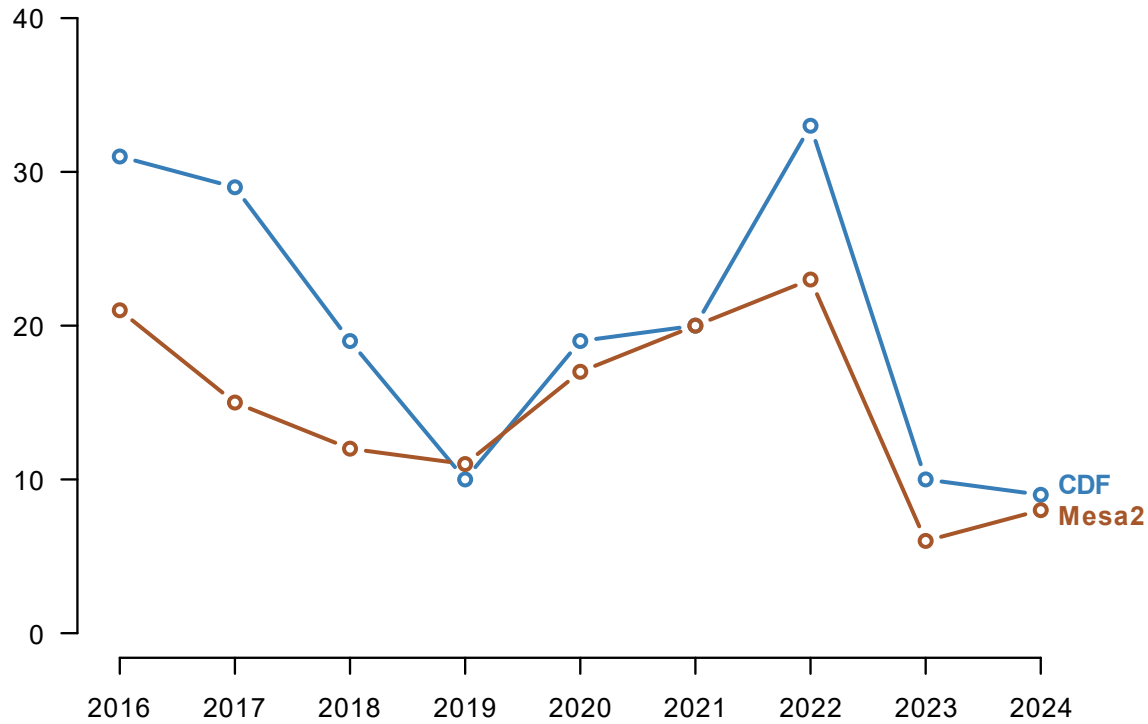
Air Quality Trends: Difference-in-Differences



Year	Total Dust Mitigation Extent (approx. acres)	Change, vs 2017 baseline, in Event-Day PM ₁₀ Ratio			
		CDF vs Oso Flaco		Mesa2 vs Oso Flaco	
		Percent Change	95% Confidence Interval	Percent Change	95% Confidence Interval
2023	740.1	- 38.1 %	-24.9% to -48.9%	- 22.2%	-6.8% to -35.0%
2022	740.1	- 31.6%	-18.5% to -42.6%	- 13.8%	+1.4% to -26.7%
2021	322.5	- 33.5%	-16.1% to -47.3%	- 7.0%	+11.8% to -22.6%
2020	230.2	- 28.4%	-13.9% to -40.4%	+ 4.6%	+25.4% to -12.9%
2019	137.8	- 7.6%	+23.2% to -30.7%	+ 14.9%	+41.4% to -6.7%
2018	146.9	- 22.4%	-7.4% to -34.9%	- 2.3%	+14.3% to -16.4%
2017	55.3	0 %	n. a.	0 %	n. a.

Air Quality Trends: 2024 so far

Year-to-Date Exceedances
Jan 1 - May 14



Conclusions

- Multiple metrics all show continued improvement in air quality downwind of ODSVRA
- CDF more so than Mesa2
- Even as mitigation footprint remains constant
- 2024 looking good so far

