

Klamath Falls PM_{2.5} Maintenance Plan and Redesignation Request

May 23, 2024

Environmental Quality Commission

Air Quality Planning

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Oregon Department of Environmental Quality

DEQ Recommendations

DEQ recommends that the Environmental Quality Commission:

- Approve the rule revisions seen in Attachment A to re-designate the Klamath Falls airshed as attainment for the national air quality health standards for fine particles (PM_{2.5}); and include a 10-year maintenance plan to keep air quality within the PM_{2.5} health standards;
- Approve incorporating these rule amendments into the Oregon Clean Air Act State Implementation Plan under OAR 340-200-0040; and
- Direct DEQ to submit the Klamath Falls Re-designation Request, Maintenance Plan and amended rules to the U.S. Environmental Protection Agency for approval.

Overview

- 2006 24-hr PM_{2.5} NAAQS
- Klamath Falls and the nonattainment area
- PM_{2.5} in Klamath Falls
- Redesignation and maintenance plan
 - Monitoring data
 - Control measures
 - Contingency measures
- Process and timeline
- Recommendation

The EPA sets the standards for PM_{2.5}

- National Ambient Air Quality Standards (NAAQS)

- PM₁₀ PM_{2.5}
- carbon monoxide
- ozone
- nitrogen dioxide
- sulfur dioxide
- lead

National Ambient Air Quality Standards (NAAQS) for Particulate Matter (PM_{2.5})

Type	2006 Standard	2024 Standard
Daily	35 µg/m ³	35 µg/m ³
Annual	12 µg/m ³	9 µg/m ³



The 2006 standard is the one that we refer to in this rulemaking, maintenance plan and redesignation request.

What is particulate matter and what are the major sources?

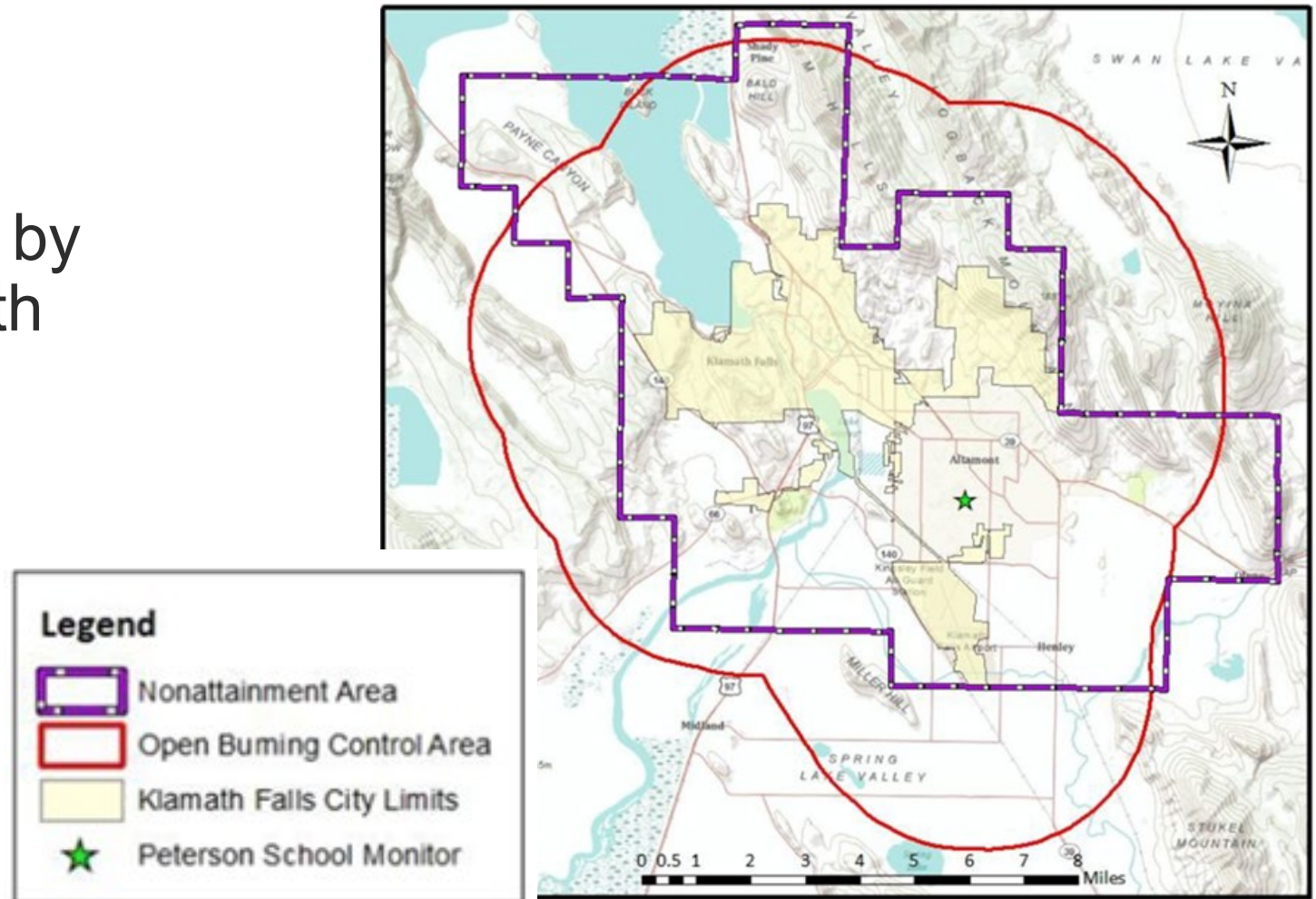


Typical major sources of PM_{2.5} pollution include wood burning, motor vehicles (particularly diesel vehicles), construction equipment, factories, power plants and wildfires.

Klamath Falls Nonattainment Area

Nonattainment area

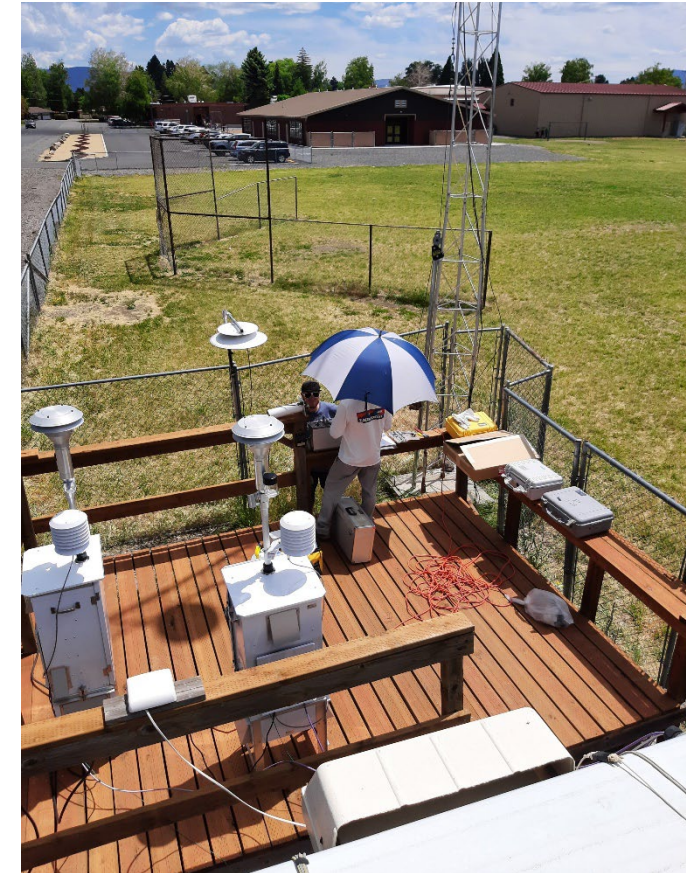
Area formally designated by EPA as non-compliant with the 2006 PM_{2.5} standard



Klamath Falls



Photo source: Discover Klamath Visitor and Convention Bureau



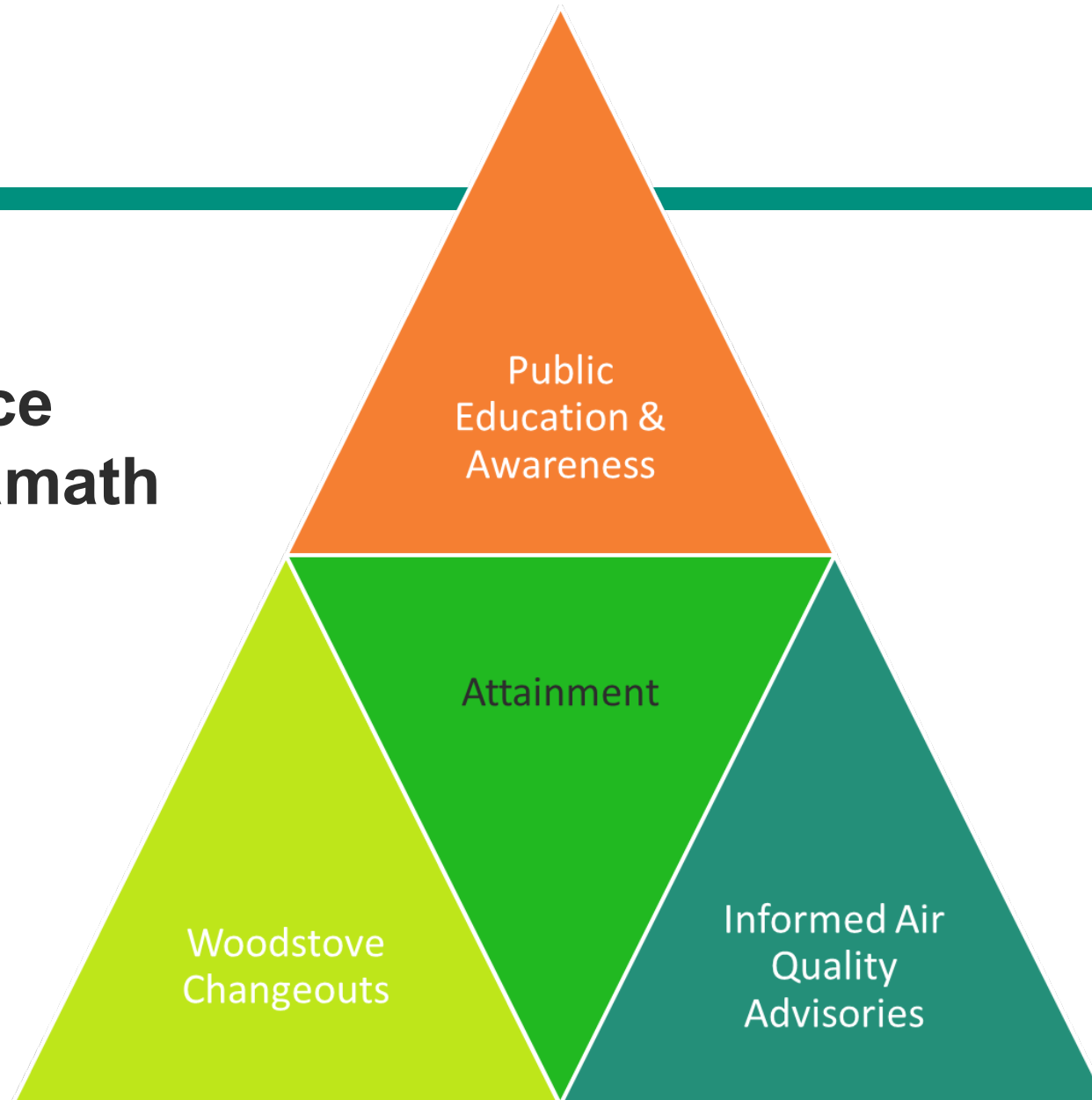
Klamath Falls and compliance with the PM standards

Klamath Falls was in violation of the 2006 24-hr particulate matter standard



- **2012**: Attainment Plan developed
- **2014**: Monitoring data started to indicate compliance with standard
- Issues with monitors delayed development of dataset to support attainment

Strategies to meet attainment and reduce PM_{2.5} pollution in Klamath Falls



Redesignation

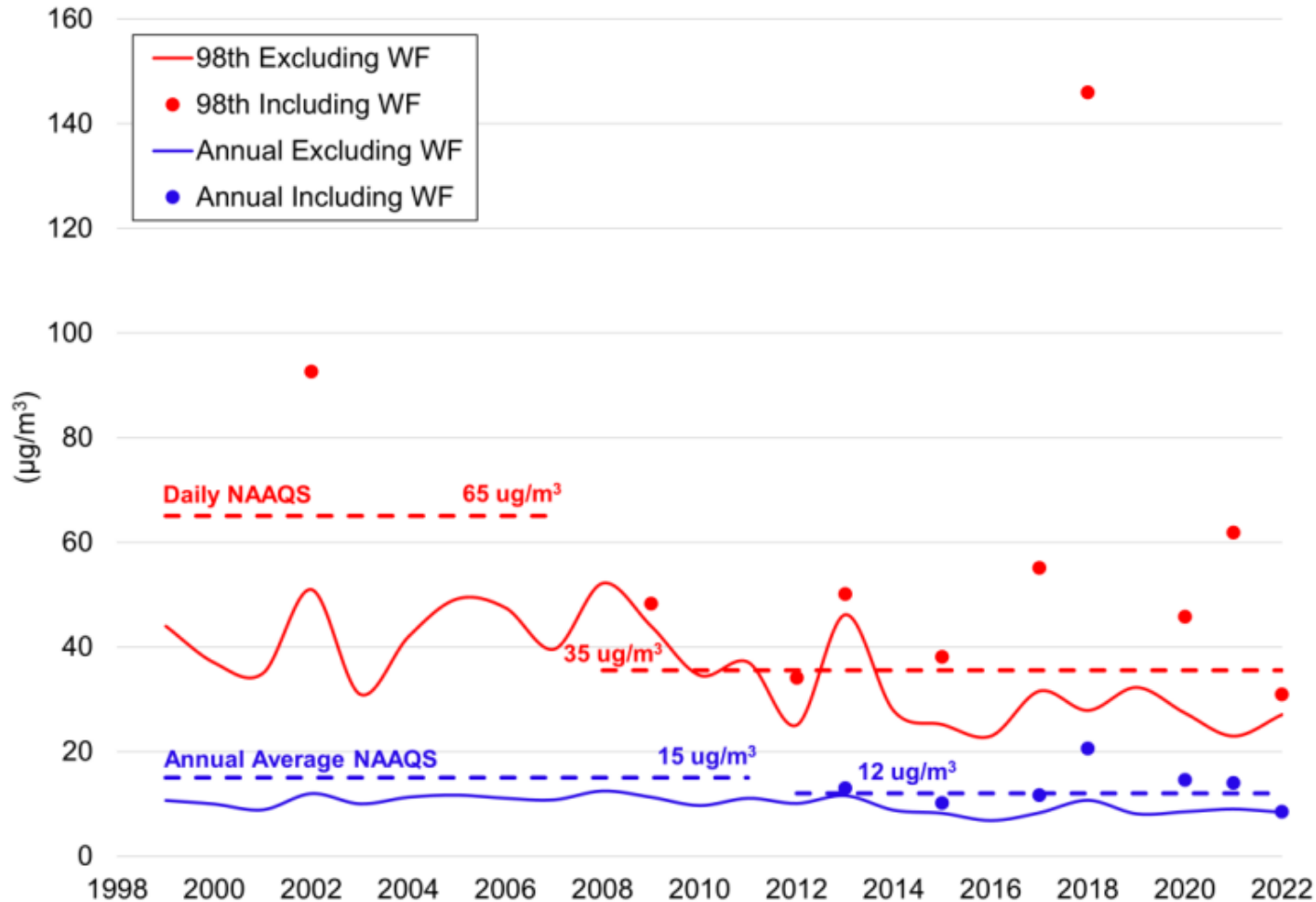
The Federal Clean Air Act outlines the requirements a plan must include to redesignate to attainment:

- **Monitoring data demonstrate compliance** with the 24-hour PM_{2.5} standard
- There are **permanent and enforceable reductions in emissions**
- The **request has a fully approved implementation plan**
- **SIP requirements of Clean Air Act are met**
- **There is an approved maintenance plan** that ensures attainment of the standard/s for at least ten years after redesignation

What is in a maintenance plan?

- **Monitoring Data**
 - Showing that the area continues to maintain attainment for 10 years
- **Emissions Inventory**
 - Details the emission sources for the area now and in the future
- **Control Measures**
 - Lists the enforceable policies in place to achieve the standard
- **Contingency Measures**
 - Actions to be taken if the area exceeds the standard in the future

Monitoring Data from Klamath Falls



Data suggest compliance with the daily (24-hour) since 2014.

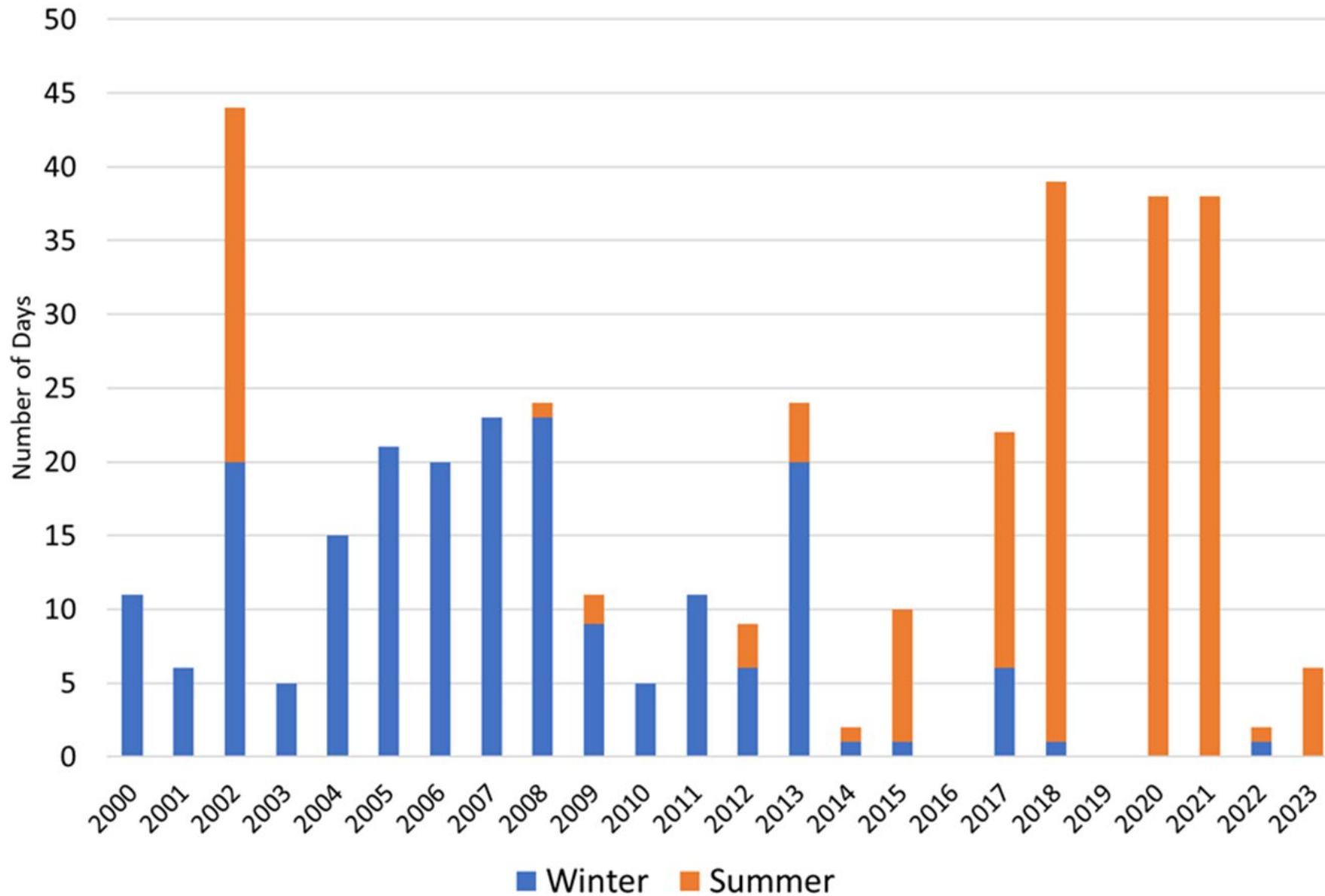
Wildfire data can be excluded from calculation of design values with EPA's exceptional events process.

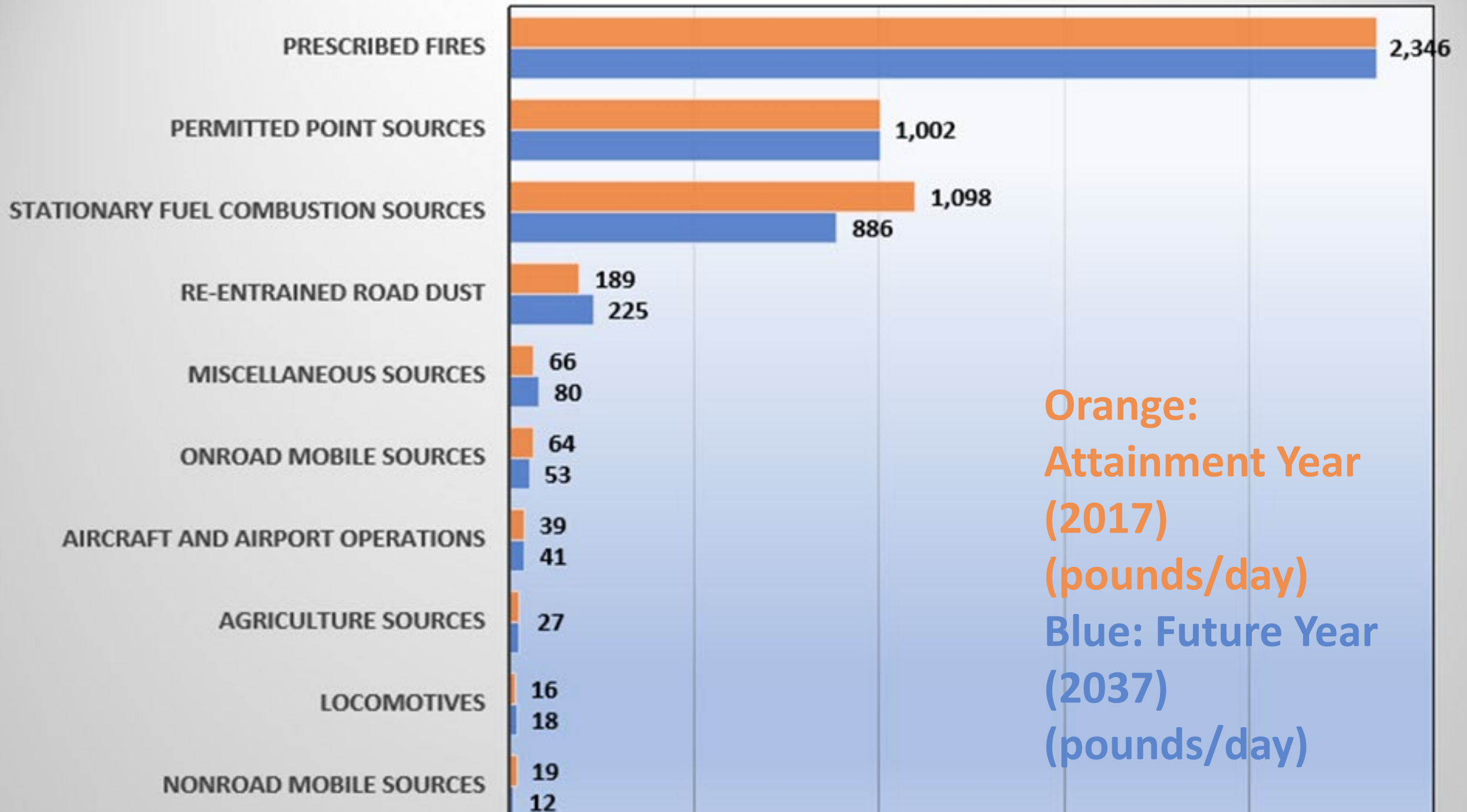
PM2.5 Daily Design Values with Exceptional Events and Wildfire Data Removed

Year	98th %tile	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005	2004-2006	2005-2007	2006-2008	2007-2009	2008-2010	2009-2011	2010-2012	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2017-2019	2018-2020	2019-2021	2020-2022	2021-2023
1999	44.1	39																						
2000	37.3																							
2001	35.1		41																					
2002	51.1	WF		39																				
2003	30.6				41																			
2004	42.0					41																		
2005	49.2						46																	
2006	47.5							45																
2007	39.6								46															
2008	52.2									45														
2009	44.0										44													
2010	34.6											39												
2011	37.1												33											
2012	25.9	EE												36										
2013	46.2	EE													34									
2014	29.6															35								
2015	29.5	EE															27							
2016	23.0																	32						
2017	44.7	EE																	28					
2018	27.9	WF																		35				
2019	32.3	WF																			37			
2020	49.3	WF																				39		
2021	36.4	EE																					37	
2022	26.0	WF																						29
2023	25.6	WF																						

Gray - Meets old NAAQS
 Green - Meets NAAQS
 Red - Does not meet NAAQS

Klamath Falls AQI days over 100





Orange:
 Attainment Year
 (2017)
 (pounds/day)
 Blue: Future Year
 (2037)
 (pounds/day)

Control Measures

Residential Wood Combustion

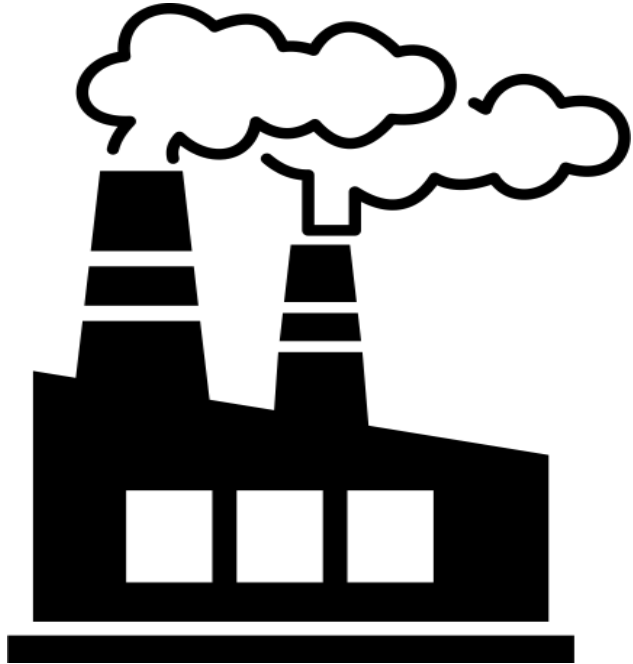


Photo source: KDVR.com

- County Clean Air Ordinance
- Woodstove changeout program
- Heat Smart
- Improved building codes
- Public education

Control Measures

Industrial Source Requirements



- Reasonably Available Control Technology (RACT)
- Maximum Achievable Control Technology (MACT) for particleboard/hardboard facilities
- Offset requirements







Control Measures

Mobile/Area Sources



- State low emission vehicles program
- Fuel economy
- Diesel retrofits
- Road paving
- Highway road sanding practices

Contingency Provisions

-  Development of Best Management Practices for industrial sources of PM_{2.5} with Title V permits to be implemented on non-wildfire related predicted No-Burn/Red Days when and if the Klamath Falls Contingency Plan goes into effect;
-  Development of updated RACT measures for industrial sources with the capacity to emit more than 50 pounds per day of PM_{2.5};
-  Continuing to fund wood stove changeouts within the Klamath Falls nonattainment area;
-  Use of application process for debris burning or agricultural burning to spread out burning and limit exceedances;
-  Development of a street sweeping plan with local highway districts and the Oregon Department of Transportation to prioritize the reduction of fugitive road dust, and
-  Additional street paving projects.

Public Process

- Klamath Falls Air Quality Committee meetings and maintenance plan development
- Coordination on development with EPA
- Public comment
- Public hearing
- Response to comments



Proposed Motion Language

"I move that the Environmental Quality Commission:

- Approve the rule revisions seen in Attachment A to re-designate the Klamath Falls airshed as attainment for the national air quality health standards for fine particles ($PM_{2.5}$); and include a 10-year maintenance plan to keep air quality within the $PM_{2.5}$ health standards;*
- Approve incorporating these rule amendments into the Oregon Clean Air Act State Implementation Plan under OAR 340-200-0040; and*
- Direct DEQ to submit the Klamath Falls Re-designation Request, Maintenance Plan and amended rules to the U.S. Environmental Protection Agency for approval."*

Thank you

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