



State of Oregon Department of Environmental Quality

Location Selection and Rationale for the 30 New Particulate Monitoring Sites

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Air Quality Monitoring Section

In 2017 the Oregon Legislature approved funding for the Oregon Department of Environmental Quality to install and operate 30 new air quality, particulate monitoring sites around the state. These monitors will enhance DEQ's current network of approximately 40 particulate monitoring sites in Oregon. This memo provides the rationale DEQ is using to select the locations for these additional monitors, and a list of the locations relative to current monitoring sites.

Background

The rationale for choosing new particulate monitors starts with understanding the objective for monitoring. These monitors will be placed to fill air quality information voids in larger communities and in small populated areas with no information. The Portland metropolitan area currently has four particulate monitors, and with roughly half of the state's population this is not an adequate number of monitors. The Salem metropolitan area has only one monitor for approximately 400,000 people and this also is not adequate. In comparison, the Eugene/Springfield area which is roughly the same size as Salem, has four Lane Regional Air Pollution Authority operated monitors. Other areas such as Redmond and Coos Bay have populations of around 25,000 and have no monitors.

Location Selection for Particulate Monitoring Sites

To fill in these data gaps, DEQ asked DEQ regional offices and county health agencies to give input on where DEQ should place additional monitors. DEQ also worked with modelers and emission inventory staff to identify locations for placing monitors where wood stove surveys have shown high levels of use.

In addition, DEQ has been researching new particulate sensor technology and is developing monitoring equipment that can be deployed at locations around the state easier and at lower cost than current monitoring equipment.

A list of new monitoring sites is in the table below along with existing sites for comparison. Comments in the table provide some additional information on location selection. As DEQ moves forward with implementation, new information may result in changes to the proposed locations.

Incorporated City/Town	# of new sites	Total Sites	Comments
NWR			
Portland	6	7	Sellwood/Woodstock, Cully-Parkrose, St. Johns, Portland (Northwest, Southwest, North)
Gresham	1	1	Replace current one year air toxics neph.
Tigard	1	1	Southwest metro area
West Lynn	1	1	Populated area representing west side of Willamette river including Lake Oswego
Gladstone	1	1	Between Milwaukie and Oregon City.
Forest Grove	1	1	Far west end of metro Area, likely woodstoves and slash burning
Estacada	1	1	Rural west cascade town
Hillsboro	0	1	
Beaverton	0	1	
Total	12	15	
WR			
Newberg	1	1	Already monitored in McMinnville and found low values so this is next in Yamhill County
Woodburn	1	1	Environmental justice community and fairly large population
Salem/Keizer	3	4	Southwest and Southeast Keizer
Roseburg Area	1	2	Roseburg area is spread-out with complex terrain; current Roseburg monitor is in city not neighborhoods.
Grants Pass	0	1	
Central Point	1	1	Title V and area sources. Environmental justice area. Requested by County Commissioner in the past
Medford	0	1	
Ashland	0	1	
Shady Cove	0	1	USFS/BLM funded
North Bend	1	1	Coquille tribe will partner with us, will represent Coos Bay
Brookings	1	1	Curry County requested one and will partner. Large senior population.

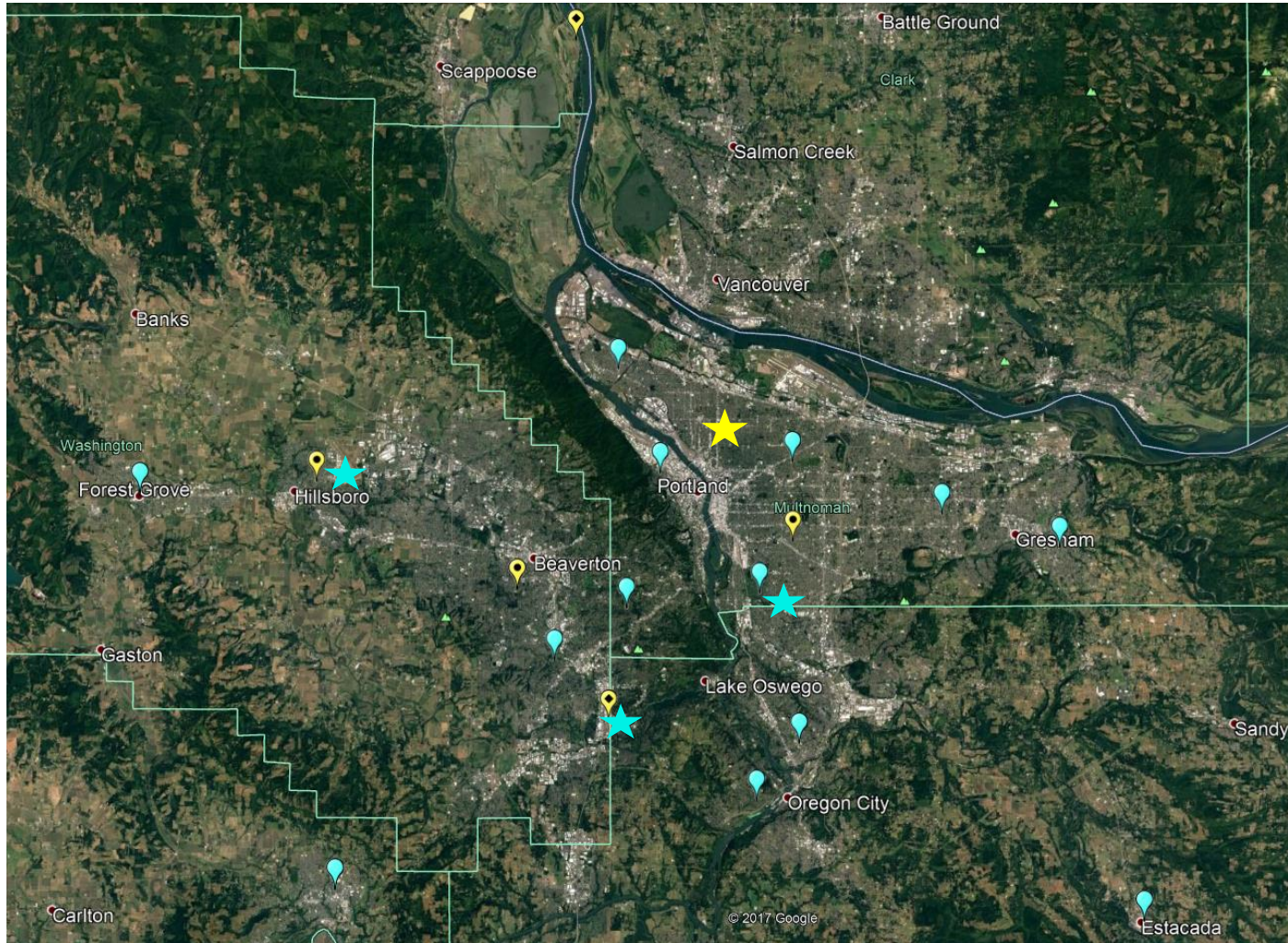
Applegate Villy	0	1	USFS/BLM funded
Cave Junction	0	1	USFS/BLM funded
Total	9	17	

Incorporated City/Town	# of new sites	Total Sites	Comments
ER			
Cascade Locks	1	1	Bonneville Power wants to partner to put one here
Hood River	1	1	ER recommended. Likely a lot of smoke from ag and forest fires. Away from river.
The Dalles	0	1	EPA Funded
Hermiston	1	1	ER recommended, past monitor
Pendleton	0	1	EPA Funded
La Grande	0	1	EPA Funded
Enterprise	0	1	USFS/BLM funded
Baker City	0	1	USFS/BLM funded
Ontario	1	1	Eastern Region recommended. Maybe Idaho DEQ will partner with us to operate.
Madras	1	1	Eastern Region recommended
Redmond	1	1	Eastern Region recommended
Prineville	0	1	EPA Funded
Sisters	0	1	USFS/BLM funded
Bend	2	3	More sites in Bend to measure neighborhood sprawl away from city center
La Pine	1	1	Eastern Region and USFS recommended
Klamath Falls	0	1	EPA Funded
Lakeview	0	1	EPA Funded
Burns	0	1	EPA Funded
John Day	0	1	USFS/BLM funded
Total	9	21	

Note: DEQ's Eastern Region and Klamath County Health requested that we place a monitor in Chiloquin (north of Klamath Falls) for forest fire monitoring. We have separate portable forest fire smoke monitors that we can place in Chiloquin during the summer.

Maps: See the maps below for a visual of where current air toxics and Air Quality Index PM2.5 monitors are and where future monitors in the table above are proposed to go.

Portland metro:



Key:
Yellow – Existing monitors, Blue – New Monitors, Star – Air Toxics