

APPENDIX J: AIR QUALITY

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PAST CONDITION

Fires significantly affected air quality in the past. Large fires produced high density, large-scale smoke events. Regular burning by Native Americans produced smoke, primarily in late fall. However, smoke from fires was the only air pollutant source. Historical records show that smoke events, which limited visibility and would today be considered health risks, were common occurrences.

CURRENT CONDITION

Large fires still occur, but much less frequently. Slash burning and grass field burning are reduced from the higher levels of the 1980s, since regulations to protect air quality were implemented. Prescribed fire smoke is primarily restricted to conditions where smoke is vented away from settled areas. The portion of air pollution attributed to fires is much reduced in the period since fire suppression and smoke management began.

The Clean Air Act directs federal agencies to comply with state and local regulations designed to prevent and control air pollution. The State of Oregon has been delegated authority for attainment of standards set by the Clean Air Act. To do this, the state developed the Oregon Smoke Management Plan.

The Oregon Smoke Management Plan and Oregon Visibility SIP (State Implementation Plan) have a number of requirements in order to meet Clean Air Act standards, reduce the amount of smoke produced and reduce smoke's impacts on designated areas and wilderness areas. They also require or encourage a variety of measures to reduce smoke emissions to meet federal Prevention of Significant Deterioration (PSD) regulations.

The Environmental Protection Agency (EPA) set clean Air Act standards for allowable levels of particulates. They are called the National Ambient Air Quality Standards (NAAQS). Smoke from burning forest slash contains two kinds of particles regulated by NAAQS standards: PM-10 (Particulate Matter <10 micron size) and PM-2.5 (Particulate Matter <2.5 micron size). These standards are for designated urban areas such as Eugene-Springfield, Willamette Valley, Bend/Redmond, and Wilderness areas.

The Oregon Smoke Management Plan encourages burning in the spring when fuel moistures are higher. This reduces the amount of smoke

produced. Also, forests managers are encouraged to use alternatives to broadcast burning whenever possible. The Oregon Visibility SIP limits burning from July 1 to September 15 in smoke sensitive areas, to ensure that visibility will be protected during the summer recreational season. Current National Wildland Fire Policy and congressional support for an increased program of prescribed fire on federal lands could greatly increase emissions.

DESIRED FUTURE CONDITION

As the area of managed low intensity fires increases, the amount of smoke produced in wildfire events decreases. Typically, large wildfires burn more forest fuels, burn longer and the large volume of smoke drifts where it will. Prescribed fires are of limited size, burning under conditions that limit the amount of smoke produced and the direction of smoke drift. Achieving the hazard reduction goals of the fuels management strategy would increase the number of times that particulate matter reaches air quality threshold levels. The real effectiveness of an increased fuel treatment program may not be apparent for 20 to 40 years. Increased use of prescribed fire will eventually increase land managers' abilities to manage smoke.