

Part 3 of 3

OREGON
ENVIRONMENTAL QUALITY
COMMISSION MEETING
MATERIALS 12/04/2003



State of Oregon
**Department of
Environmental
Quality**

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State of Oregon
Department of Environmental Quality

Memorandum

Date: November 13, 2003
To: Environmental Quality Commission
From: Stephanie Hallock, Director *S. Hallock*
Subject: Agenda Item H, Action Item: Pollution Control Bonds
December 5, 2003 EQC Meeting

Proposed Action The Department of Environmental Quality (DEQ, Department) requests that the Environmental Quality Commission (EQC, Commission) adopt a resolution (Attachment A) authorizing the DEQ and the State Treasurer to issue and sell State of Oregon General Obligation Pollution Control Bonds, to be used to provide State Match for the Clean Water State Revolving Fund (SRF).

Reason for EQC Action Under ORS 286.033, state agency issuance of bonds requires a resolution of the agency's governing body. Following the Commission's resolution DEQ has the authority to issue Pollution Control Bonds, and to then use the Bond proceeds under ORS 468.195 to 468.260.

Background The Clean Water State Revolving Fund (SRF) loan program is managed by DEQ and offers below-market interest rate loans to public agencies for planning, design and construction of wastewater collection, treatment and disposal systems; non-point source water pollution control projects; and the development and implementation of management plans for federally designated estuaries.

From the 1990s to the present time, the SRF has been seed funded by federal capitalization grants matched by state contributions at the rate of one state dollar for every five federal dollars. Over the past decade, the state has achieved its match through issue of Pollution Control Bonds.

The Commission has previously authorized the issuance of Pollution Control Bonds for the purpose of the state match to the Federal SRF capitalization grant. The most recent approval was in May 2003, but this approval lapsed in July at the conclusion of the 2001-03 Biennium.

DEQ sold SRF match bonds in 1993, 1994, 1995, 1997 and 2000. Historically, the debt service on these bonds has been paid primarily from the General Fund. The 2003-05 Legislatively Approved Budget requires debt service for SRF match bonds to be paid from the interest earnings of the SRF

fund so that the SRF fund becomes self financing. The Environmental Protection Agency approved this self-financing approach on August 22, 2003.

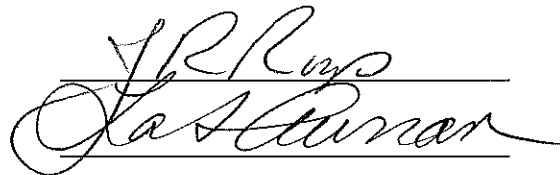
Under House Bill 3446, the 2003 Legislature provided Other Fund limitation for \$10 million of General Obligation Pollution Control Bonds. This amount will be sufficient to provide match for three \$15 million Federal SRF capitalization grants over the 2003-05 biennium.

- Key Issue** Approval of this bond issuance resolution will allow the Department to meet its match requirements for the 2003, 2004 and 2005 federal SRF capitalization grant and secure nearly \$15 million per year of federal grant funds for a total of about \$45 million of federal capitalization grants. To illustrate the impact of securing these grant funds, the \$45 million in federal grant monies equates to eight loans to communities with populations between 3,500 and 10,000.
- EQC Action Alternatives** DEQ could choose not to issue Bonds under the proposed Bond Issuance resolution and forego \$45 million of federal capitalization grants for the SRF. This alternative would reduce the level of support available for community wastewater improvement needs. DEQ does not recommend this alternative.
- Department Recommendation** The Department recommends that the Commission adopt the attached Resolution authorizing the Department and the State Treasurer to issue and sell not more than \$10 million in original principal amount of State of Oregon General Obligation Pollution Control Bonds to provide state match funding for the Department's Clean Water State Revolving Fund Program.
- Attachments**
- A. Form of Resolution
 - B. Listing of all Clean Water SRF Borrowers

Approved:

Section:

Division:



The image shows a handwritten signature in black ink, which appears to be "Jim Roys". The signature is written over a horizontal line. Below the line, the name "Islay Robertson" is written in a cursive script, also over a horizontal line.

Prepared By: Jim Roys and Islay Robertson

Phone: (503) 229-6817

**RESOLUTION AUTHORIZING
AND REQUESTING ISSUANCE OF BONDS**

Section 1. Findings. The Environmental Quality Commission of the State of Oregon finds:

- A. The Department of Environmental Quality (the "Department") may be empowered, by resolution of the Environmental Quality Commission, to authorize and request the issuance of general obligation pollution control bonds to fund the match for the Clean Water State Revolving Fund program;
- B. It is now desirable to authorize and request the issuance of general obligation pollution control bonds for this purpose.
- C. Oregon Revised Statutes, Section 286.031, provides that all bonds of the State of Oregon shall be issued by the State Treasurer.

Section 2. Resolutions. The Environmental Quality Commission of the State of Oregon hereby resolves:

- A. The State Treasurer of the State of Oregon is hereby authorized and requested to issue State of Oregon general obligation pollution control bonds ("Pollution Control Bonds") in amounts that the State Treasurer determines, after consultation with the Director of the Department or the Director's designee, will be sufficient to provide funding for the purposes described in Section 1.A of this resolution, and to pay costs associated with issuing the Pollution Control Bonds. The Pollution Control Bonds may be issued in one or more series at any time during the 2003-05 biennium, mature, bear interest, be subject to redemption, and otherwise be issued and sold upon the terms established by the State Treasurer after consultation with the Director of the Department or the Director's designee.
- B. The Department shall comply with all provisions of the Internal Revenue Code of 1986, as amended (the "Code") that are required for interest on tax-exempt Pollution Control Bonds to be excludable from gross income under the Code, and shall pay any rebates or penalties that may be due to the United States under Section 148 of the Code in connection with the Pollution Control Bonds. The Director of the Department or the Director's designee may, on behalf of the Department, enter into covenants for the benefit of the owners of Pollution Control Bonds to maintain the tax-exempt status of the Pollution Control Bonds.

Section 3. Other Action. The Director of the Department or the Director's designee may, on behalf of the Department, execute any agreements or certificates, and take any other action the Director or the Director's designee determines is desirable to issue and sell the Pollution Control Bonds and to provide funding for the purposes described in this resolution.

Agenda Item H, Action Item Pollution Control Bonds

December 5, 2003 EQC Meeting

Attachment B

<i>LISTING OF ALL CWSRF BORROWERS as at 10/28/03</i>			
Borrower	Amount	Borrower	Amount
Arch Cape Sanitary District	303,000	City of Ontario	13,971,689
Bunker Hill Sanitary District	50,000	City of Oregon City	4,079,069
City of Albany	37,775,618	City of Portland BES	26,488,139
City of Arlington	25,000	City of Powers	20,000
City of Ashland	23,920,068	City of Prairie City	1,045,000
City of Astoria	2,760,000	City of Prineville	11,167,286
City of Aurora	84,018	City of Rainier	171,685
City of Bandon	3,071,607	City of Redmond	12,060,000
City of Boardman	18,500	City of Rockaway Beach	55,627
City of Brookings	13,100,000	City of Rogue River	79,300
City of Burns	2,100,000	City of Salem	6,300,000
City of Canby	127,700	City of Sandy	190,498
City of Canyonville	649,108	City of Sheridan	390,000
City of Carlton	235,900	City of Siletz	580,000
City of Cascade Locks	40,000	City of Sisters	42,080
City of Clatskanie	28,094	City of Springfield	3,961,787
City of Coburg	3,950,000	City of St. Helens	3,253,000
City of Condon	315,000	City of Stanfield	124,944
City of Coquille	1,632,600	City of Sweet Home	2,000,000
City of Corvallis	21,963,693	City of Tillamook	2,734,307
City of Cottage Grove	9,400,000	City of Toledo	49,646
City of Creswell	2,720,000	City of Turner	210,075
City of Dallas	14,880,000	City of Umatilla	4,685,000
City of Dayville	19,502	City of Unity	244,573
City of Dufur	495,318	City of Vale	1,167,557
City of Eagle Point	1,865,000	City of Veneta	1,033,420
City of Eugene	25,592,592	City of Vernonia	121,978
City of Florence	12,279,155	City of Waldport	2,215,606
City of Garibaldi	431,474	City of Warrenton	1,049,983
City of Gold Beach	137,669	City of Winston	6,816,235
City of Grants Pass	7,098,158	City of Woodburn	30,349,671
City of Gresham	42,359,498	City of Yamhill	34,000
City of Haines	100,000	Clackamas County Sewer District	3,578,125
City of Harrisburg	410,000	East Fork Irrigation District	2,000,000
City of Hines	1,025,349	Government Camp Sanitary District	3,500,000
City of Independence	3,224,015	Miles Crossing Sanitary Sewer District	360,000
City of Irrigon	3,420,000	Neskowin Regional Sanitary Authority	967,359
City of Joseph	60,501	Netarts-Oceanside Sanitary District	100,000
City of Klamath Falls	128,713	Or Water Wonderland II SD	89,500
City of La Grande	4,836,437	Port of Tillamook Bay	55,730
City of Lakeside	77,600	Redwood Sanitary Service District	5,962,050
City of Maywood Park	30,000	Rogue Valley Sewer Services	5,571,968
City of Merrill	7,000	Roseburg Urban Sanitary Authority	787,280
City of Monroe	28,320	Town of Lakeview	2,771,333
City of Monument	200,000	Tri City Sanitary District	539,427
City of Mt. Angel	583,042	Tri-City Service District	940,948
City of Myrtle Creek	8,797,397	Wedderburn Sanitary Dist	103,424
City of Newport	20,228,883		



State of Oregon
Department of
Environmental
Quality

**Umatilla Chemical Demilitarization Program
Status Update
Environmental Quality Commission
December 5, 2003
(Agenda Item I)**

Umatilla Chemical Demilitarization Program (CDP)

Permit Modification Requests:

“Taking Credit” for the Carbon Filters

On September 16, 2003 the Umatilla Chemical Agent Disposal Facility (UMCDF) submitted a Class 3 Permit Modification Request (PMR) to change the point of compliance for its air emissions from the inlet of the carbon filters to the exit of the carbon filters. The initial public comment period ran from September 16 through November 17 and on October 21, the Permittees held a public informational meeting. On November 5 the Department issued a Notice of Deficiency (NOD) to the Permittees and a response to the NOD was received on December 1. The Department received eight sets of comments from various stakeholders. In sum, four commenters (GASP, Sierra Club, Stuart Dick, and Stephen McFadden) objected to the proposed change and four commenters supported the change (Umatilla County, Confederated Tribes of the Umatilla Indian Reservation, City of Hermiston, and the Hermiston Development Corporation).

The Department will be preparing draft permit language, fact sheets, and a notice of public hearing in anticipation of conducting the second public comment period from mid-December until mid-February. This will allow oral public comments to be presented to the EQC at its regularly scheduled meeting on February 6, 2004. A public hearing will also be held by the Department (most likely in late January, 2004). The Department hopes to be able to provide its recommendation to the EQC in a time frame that would allow a decision on the PMR at the regularly scheduled EQC meeting on April 9, 2004.

Processing Leakers in the Unpack Area

On November 10, 2003 the Department denied UMCDF's PMR which proposed processing Enhanced On-Site Containers (EONCs)(the transport containers) and Spray Tank Overpacks containing leaking munitions and bulk items in the Container Handling Building Unpack Area. The Hazardous Waste Permit currently requires all EONCs and spray tank overpacks containing leaking munitions and bulk items to be processed through the Toxic Maintenance Area (TMA). UMCDF claimed that the proposed changes would provide operational flexibility to the facility and lessen operational delays associated with processing such materials in the TMA. The Department's review determined that the PMR was incomplete

and UMCDF failed to provide sufficient documentation to fully support the proposed changes.

Other PMRs Under Review

- PFS (Carbon Filtration System) Agent Monitors
This PMR establishes exactly how UMCDF will monitor for chemical agents in the PFS carbon beds and how much absorptive capacity remains before a carbon change-out is needed.
- UMCD Secondary Waste
This PMR incorporates the remaining Depot secondary waste streams into the UMCDF hazardous waste permit and establishes feed rates for each waste stream.
- BRA (Brine Reduction Area) Performance Test Plan
- LIC1 (Liquid Incinerator # 1) GB Agent Trial Burn Plan

Agent Operations Authorization Process/Time Frame

The Army has revised its anticipated schedule for the start of agent operations and now hopes to be prepared to begin agent destruction in early summer 2004. UMCDF plans to complete its Operational Readiness Review by the end of February. This would allow the Department to conduct its compliance assessment and initiate the public comment period in the spring. A special EQC meeting may need to be held in late April or early May in Hermiston to serve as a public hearing for the EQC to receive input regarding the authorization of agent operations.

Umatilla Chemical Depot (UMCD) Storage Permit:

The public comment period for the UMCD Draft Storage Permit ended on October 15, 2003. Several sets of comments were received and the Department is currently reviewing the comments and preparing a responsiveness summary in anticipation of reaching a decision on the permit in early 2004.

Closure Plan for Building 659 (Mustard Shed) at UMCD:

A public hearing on the closure plan for Building 659, the former "mustard shed" at UMCD previously used for storage of one-ton containers of mustard agent, was held on October 15, 2003. The public comment period ended on October 20, 2003 and no comments were received. The Department issued its approval of the closure plan on December 3.

Surrogate Trial Burn (STB) Status

Deactivation Furnace System

The STB for the Deactivation Furnace System (DFS) was completed on October 13, 2003. The results were a mixture of good news and disappointing news. With regard to the organic compounds that serve as surrogates for chemical agent, UMCDF had no detectable levels of these surrogates in the samples of their emissions. Therefore, it appears that UMCDF achieved the surrogate destruction and removal efficiency requirements for the Low Temperature Test runs.

The preliminary data for the metals emissions were a different situation. UMCDF spiked metals and conducted three different sets of high temperature tests.

- With the carbon filters off-line and a metal spiking rate intended to be representative of a 2 rocket/hour feedrate, the results were in compliance with the federal Maximum Achievable Control Technology (MACT) standards, but hazardous waste (HW) permit limits were exceeded for 3 of the 10 metals sampled.
- With the carbon filters off-line and a metal spiking rate intended to be representative of a 7.5 rocket/hour feedrate, the results exceeded one of the MACT standards and exceeded HW permit limits for four metals.
- With the carbon filters on-line and a metal spiking rate intended to be representative of a feedrate of approximately 40 drained rockets/hour or 24 undrained rockets/hour, the results were in compliance with all HW permit limits and MACT standards and data from all metals were well below the permitted limits.

Final data will be provided to the Department in the Surrogate Trial Burn Report, expected in the next few days. UMCDF has inspected the furnace and the pollution abatement system on the DFS, but has not apparently found anything conclusive that would explain the higher than expected emissions of the four metals. The results of their investigation will be included in the trial burn report and the Department will be reviewing them very closely.

Metal Parts Furnace (MPF)

UMCDF plans to begin the STB for the Metal Parts Furnace in the next two weeks, conducting a set of high temperature test runs from December 19 through December 22. The site expects to resume the STB runs on December 29 and conclude them by January 5.

Liquid Incinerator 2 (LIC2)

UMCDF plans to conduct the STB for the LIC2 in early 2004.

Brine Reduction Area (BRA)

UMCDF hopes to begin shakedown of the BRA in January 2004. The Department is reviewing a PMR that is needed. The BRA Performance Test is currently planned for Spring 2004.

Other Topics of interest

Legal Proceedings

In the GASP III trial, the hearing for oral arguments on the Petitioner's Motion for Sanctions against the U.S. Department of Justice attorney has been postponed until January. The briefing schedule for written closing arguments has been tolled until Judge Marcus rules on the Motion for Sanctions. Therefore, the time frame for a decision in the GASP litigation remains uncertain, but is unlikely before late spring or early summer 2004.

Health Risk Assessment Work Plan

The Public Review Draft of the Post Trial Burn Risk Assessment Work Plan was issued for public comment on October 17, 2003. A public meeting and hearing were held in Hermiston

on November 19 and the comment period closed on December 1. The Department received four sets of comments and will be working with the Technical Workgroup to resolve the comments and finalize the Work Plan by February, 2004.

Status of other Chemical Demilitarization Sites

The Tooele Chemical Agent Disposal Facility (**TOCDF**) in Utah has completed its destruction of all VX rockets.

The Anniston Chemical Agent Disposal Facility (**ANCDF**) in Alabama has processed more than 10,000 GB rockets and has recently completed its GB Agent Trial Burn for the liquid incinerator and the deactivation furnace system.

The Pine Bluff Chemical Agent Disposal Facility (**PBCDF**) in Arkansas recently completed the surrogate trial burn for their deactivation furnace system.

new

The Aberdeen Chemical Agent Disposal Facility (**ABCDF**) in Maryland continues to have operational problems that have repeatedly shut down the process, significantly decreasing the expected production rates.

new

The Newport Chemical Agent Disposal Facility (**NECDF**) in Indiana has canceled its contract with the Perma-Fix facility near Dayton, Ohio for treatment of hydrolysate from neutralization of chemical agent at NECDF. Due to concerns regarding the treatment process, the Montgomery County Ohio wastewater treatment plant would not grant Perma-Fix a permit to discharge wastewater from treatment of chemical agent hydrolysate. It appears NECDF will build a tank farm to store the hydrolysate until a viable means of processing it is available.


new

The Pueblo Chemical Agent Disposal Facility (**PUCDF**) in Colorado is a neutralization facility being designed by Bechtel. The Colorado Department of Public Health and the Environment (CDPHE) will utilize an RD&D (research, development, and demonstration) permit process for PUCDF, prior to making a decision upon issuing a final hazardous waste storage and treatment permit.

The Blue Grass Chemical Agent Disposal Facility (**BGCDF**) in Kentucky is approximately two months behind PUCDF and will likely utilize an RD&D permit process as well.

State of Oregon
Department of Environmental Quality

Memorandum

Date: November 13, 2003
To: Environmental Quality Commission
From: Stephanie Hallock, Director 
Subject: Agenda Item J, Rule Adoption: Oregon Regional Haze Section 309
Implementation Plan.
December 5, 2003 EQC Meeting

Department Recommendation The Department recommends that the Environmental Quality Commission (EQC, Commission) adopt the proposed Oregon Regional Haze Implementation Plan as presented in Attachment A, as a revision to the State Implementation Plan (SIP), OAR 340-200-0400.

Need for Rulemaking Good visibility is essential to the enjoyment of national parks and scenic areas. Regional haze is air pollution that is transported long distances and reduces the visibility in these areas. Across the country, regional haze has decreased visibility from 140 miles to 35-90 miles in the West, and from 90 miles to 15-25 miles in the East. The source of this haze is a combination of industry, motor vehicles, agricultural and forestry burning, and windblown dust from roads and farming practices.

The federal Clean Air Act contains requirements to protect and improve visibility in national parks and wilderness areas in the country. In 1977 Congress designated certain national parks and wilderness areas as "Class I areas," where visibility was identified as an important value. Currently there are 156 Class I areas in the country. Oregon has 12 Class I areas, including Crater Lake National Park and 11 wilderness areas.

To address the problem of regional haze, the Environmental Protection Agency (EPA) adopted the Regional Haze Rule in 1999. This rule is intended to improve visibility in all Class I areas, including Oregon, over the next 60 years. It focuses on improving Class I area visibility on the haziest days (the worst 20%) and ensuring no degradation on the clearest days (the best 20%). For the first time, states will be required to work together to improve visibility through interstate planning and implementation of regional strategies. States must revise their State Implementation Plans (SIP) as part of this process.

Oregon has the opportunity to choose between two options for implementing this rule. The first option is available only to nine Western states: Arizona, New Mexico, Colorado, Utah, Wyoming, Idaho, Oregon, Nevada and California. These states were part of a four-year regional haze study conducted by the Grand Canyon Visibility Transport Commission (GCVTC). In 1996 the GCVTC concluded this study, and recommended a comprehensive set of strategies to improve regional haze in the Grand Canyon and surrounding Class I areas of the Colorado Plateau. These strategies went through an extensive stakeholder-consensus process, and were later incorporated into **Section 309** of the Regional Haze Rule by EPA. The nine states have the option of adopting these strategies, which would apply until 2018. Under Section 309, the first required SIP submittal is December 31, 2003. This SIP implements the GCVTC strategies for protecting the 16 Class I areas of the Colorado Plateau. A second SIP, due in 2008, gives Section 309 states five years to develop an effective plan to protect the remaining Western Class I areas, using the GCVTC strategies, and additional strategies if necessary.

The second option, **Section 308** of the Regional Haze Rule, takes a more "command and control" approach similar to other federal air pollution regulations. Section 308 applies to all states across the country (except the nine Western states that may use Section 309 until 2018). States must develop regional haze strategies through interstate or regional partnerships, and demonstrate that these strategies will make "reasonable progress" in improving the worst 20% visibility days and protecting the best 20% visibility days for all Class I areas inside the state, and in neighboring states, until the year 2064. Timing of the first SIP submittal is linked to EPA's designations of "attainment and nonattainment" for the new fine particulate air quality standard. For Oregon, which expects to be designated attainment, the first SIP could be due 2005-2006.

Overall, Section 308 requires states to develop new regional haze strategies, and make a reasonable progress demonstration. In comparison, Section 309 allows eligible states such as Oregon the opportunity to use *pre-identified and comprehensive strategies* to meet the Regional Haze Rule out to the year 2018. After that date, Section 308 applies. It should be noted that Section 309 does not require a reasonable progress demonstration, as the GCVTC strategies have been determined to make reasonable progress for the Class I areas on the Colorado Plateau out to the year 2018.

Another significant difference between Section 308 and 309 is the requirement for BART (Best Available Retrofit Technology). EPA first adopted BART in 1980 to address rare instances where visibility impairment in a Class I area is directly attributable to a nearby existing stationary source or sources. BART applies only to certain large sources (with a potential to emit over 250 tons per year of any air pollutant) that began operating before national rules were adopted in 1977 to prevent new stationary sources from causing visibility impairment. When developing the regional haze rule, EPA determined that these large sources as a group contribute cumulatively to regional haze, and therefore should be subject to BART, or an alternative that is equal to BART, as described below. Oregon has about 11 sources that are affected by this requirement, including the PGE coal-fired power plant in Boardman.

Section 308 requires states to identify sources subject to BART, estimate the expected visibility improvements, and conduct an analysis to determine BART for each source. Section 309 takes an alternative approach of setting voluntary sulfur dioxide (SO₂) emission reductions, known as "SO₂ milestones." These annual milestones represent a declining regional cap on SO₂ emissions from 2003 to 2018 that is better than BART. These milestones were calculated by estimating the emission reductions that would occur if BART were applied, as well as reductions expected under various Clean Air Act requirements, shutdowns, modernization, and technology improvements. Compliance with the regional SO₂ milestones is determined by totaling annual SO₂ emissions from large stationary sources in each 309 state and comparing to an annual SO₂ milestone. If the milestone is exceeded, a mandatory emissions trading program goes into effect.

It should be noted that under Section 308, BART potentially applies to *any air pollutant that impairs visibility*, whereas Section 309 applies primarily to SO₂ (i.e., the SO₂ milestones). This is because under the GCVTC study, SO₂ emissions from large stationary sources were found to be the primary contributor to regional haze in the 16 Class I areas of the Colorado Plateau. This distinction only applies to the first SIP due in 2003 under Section 309. For the second SIP in 2008, states that follow Section 309 will need to determine the contribution of large stationary sources to regional haze in their own Class I areas (and neighboring states), in much the same manner as Section 308. However, the SO₂ milestones are expected to improve regional haze in Class I areas across the West, not just in the Colorado

Plateau, making it unlikely that BART will be needed in 2008 for SO₂ sources in 309 states.

The significant differences between Section 308 and Section 309 are summarized below:

Section 308

- Applies nationally.
- Regional haze strategies unknown – will need to be developed “from scratch” through interstate or regional partnerships.
- “Reasonable progress” must be demonstrated periodically out to 2064. This will determine the stringency of the regional haze strategies.
- Certain industries subject to “Best Available Retrofit Technology” (BART). Applies to sources built 1962-1977, with potential to emit over 250 tons/year of any pollutant (SO₂, NO_x, PM and VOC).
- Regional Haze SIP due date expected to be 2005-2006. Has to address all Class I areas in Oregon (and neighboring states, if affected by Oregon emissions).

Section 309

- An option for 9 Western states, including Oregon.
- Regional haze strategies known - already identified by the GCVTC. Went through an extensive four-year stakeholder consensus process. Although originally developed for 16 Colorado Plateau Class I areas, strategies can be applied to other Class I areas.
- Adopting the GCVTC strategies meets the reasonable progress requirement (for the 16 Class I areas) out to 2018. After this date Section 308 applies.
- Alternative to BART through voluntary SO₂ emission reductions, with backup trading program if “SO₂ milestones” not achieved.
- 1st Regional Haze SIP due December 31, 2003 to address Colorado Plateau 16 Class I areas. 2nd SIP due December 31, 2008 to address other Class I areas, including those in Oregon.

Before making a decision on which option to follow for Oregon, DEQ sought feedback on these options through an extensive stakeholder and public outreach effort. DEQ held several informational public meetings

around the state, and met individually with stakeholders to explain the potential impact of Section 308 and 309. See **Stakeholder Involvement** for further information.

Based on feedback from this outreach effort and DEQ's evaluation of the options, a decision was made to propose a Section 309 plan.

Effect of Rule

The proposed Oregon Regional Haze Section 309 Implementation Plan contains strategies that apply to air pollution sources such as industrial facilities, motor vehicles, and forestry/agricultural burning. This plan is the first SIP required under Section 309, and must address the 16 Class I areas of the Colorado Plateau. This plan does not address Oregon's Class I areas, as this SIP is not required until 2008. This allows five years to evaluate of GCVTC strategies to determine how well they will work in Oregon.

Given the distance to the 16 Class I areas in the Colorado Plateau, Oregon sources have a relatively small effect on visibility. The proposed plan relies on existing measures already in place in Oregon, and will therefore have little effect on Oregon sources.

The strategies in the proposed plan (Attachment A) will mostly require emissions inventory and tracking work by DEQ. These strategies are listed below.

1. Clean Air Corridor Strategy (page 10). Requires emissions tracking of point, mobile and area sources in the portion of the state identified as a "clean air corridor" (most of central and eastern Oregon). This region contributes to the best 20% visibility days in the Colorado Plateau 16 Class I areas. Some emissions growth is expected and is accounted for in this strategy, so no new emission control strategies are anticipated.
2. Stationary Source Strategy (page 14). Involves tracking SO₂ emissions from major industrial sources to determine compliance with the regional SO₂ milestones (see page 3). If the SO₂ milestones are exceeded, an emissions trading program is triggered and SO₂ allocations would be issued. See description below of the two proposed stationary source support rules associated with this strategy.
3. Mobile Source Strategy (page 51). Relies on existing federal fuel and engine standards to reduce mobile source emissions, and tracking the continuing emission reductions.

4. Fire Program Strategy (page 54). For large fire sources in Oregon, requires tracking fire emissions, as well as pursuing alternatives to burning where feasible, smoke management controls, and documenting the use of emission reduction techniques. This strategy relies upon the existing smoke management programs in Oregon for forestry and agricultural burning to meet these requirements.
5. Assessment of Emissions from Paved and Unpaved Road Dust (page 57). Requires tracking of road dust emissions in Oregon.
6. Pollution Prevention Strategy (page 59). Requires a status report on all pollution prevention programs in the state that promote renewable energy and energy efficiency, and assess if these programs are achieving goals established by the GCVTC. A report was prepared with assistance from the Oregon Department of Energy, and is included in the plan. The existing pollution prevention programs in the state will be relied on meet the objectives of this strategy.

Much of this emission inventory and tracking is already being conducted by DEQ under the Consolidated Emission Reporting Rule, which is a federal requirement. There will be some minor new workload associated with compiling fire and road dust emissions, and tracking emissions within the clean air corridor. DEQ believes it can accommodate this workload with existing staff and resources.

Also included in this Plan are two proposed supporting rules associated with the Stationary Source Strategy (#2 above). These rules can be found in **Appendix D8-3** of Attachment A.

The first rule (OAR 340-214-0400 through OAR 340-214-0430) lists the reporting requirements for large stationary SO₂ sources, and indicates the reporting will be used to determine compliance with the SO₂ milestones. Affected sources are already required by permit to submit annual reports, so this rule does not propose any new reporting requirements. The second rule (OAR 340-228-0400 through OAR 340-228-0530) is the emissions trading program that will go into effect if the SO₂ milestones are exceeded. Under this program, SO₂ allocations would be issued to stationary sources that emit SO₂ over 100 tons per year, with five years to comply. These sources would also be subject to new monitoring and reporting requirements. (Note: enforcement provisions related to this trading program will be added to OAR 340 Division 12, scheduled for adoption in early 2004.)

DEQ does not expect the trading program will be triggered at any time during the 2003-2018 period. Most of the reductions in the SO₂ milestones are not scheduled to occur until the later years. Regional SO₂ emissions have been declining steadily since 1990 and are projected to continue to decline. Current regional SO₂ emissions are already down to a level equal to the 2013 milestone. The Regional Haze Rule requires that the elements of the backup trading program be included in the SIP, even if triggering the program is not expected.

- Commission Authority** The Commission has authority to take this action under ORS 468.015, 468.020, 468.035, and 468A.035.
- Stakeholder Involvement** From February to April of this year, the Department held extensive stakeholder and public outreach on the Regional Haze Rule. Informational meetings were held in Portland, Springfield, Medford, Bend and Pendleton, where feedback was requested on the Section 308 and 309 options. DEQ also met individually with stakeholders to explain the potential impact of Section 308 and 309 and seek feedback. These meetings included stakeholders such as Oregon Associated Industries, Northwest Pulp and Paper Association, Oregon Business Association, US Forest Service, Oregon Department of Forestry, Oregon Department of Agriculture, Oregon Seed Council, Oregon Farm Bureau, and Oregon Wheat Growers League. Overall, the feedback from stakeholders and the public was strongly in favor of Section 309.
- Public Comment** The public comment period extends from October 19, 2003 to November 21, 2003, and includes public hearings in Portland and Bend on November 19th, and Medford and Pendleton on November 20th.

As mentioned above, the timetable in Section 309 has a deadline of December 31, 2003 to submit the first plan to EPA. Failure to meet this deadline would require Oregon to follow Section 308. This has caused the Department to expedite this rulemaking by shortening the time between the end of the public comment period on November 21st and final action by the EQC.

The result is that the public hearing report and Department's response to public comments are not included in this final rulemaking package, but instead will be sent separately along with any rulemaking changes made in

response to comments. This information will arrive approximately one week prior to the December 5th EQC meeting.

Key Issues The only issue involved in this rulemaking was the decision between Section 308 and Section 309. This was resolved through the stakeholder and public outreach efforts described above.

Next Steps If the Commission adopts the proposed Regional Haze Plan, the Department will submit it to EPA prior to the December 31, 2003 deadline specified in the rule.

Attachments

- A. Proposed Regional Haze Implementation Plan
- B. Relationship to Federal Requirements Questions
- C. Statement of Need and Fiscal and Economic Impact
- D. Land Use Evaluation Statement

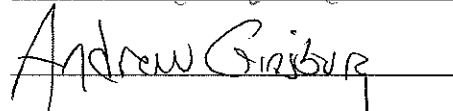
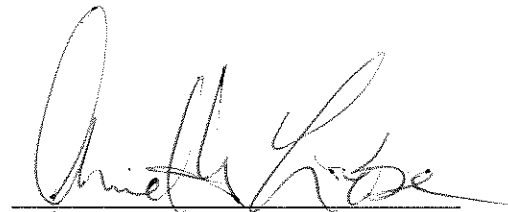
Available Upon Request

- 1. Cover Memorandum from Public Notice
- 2. Implementation Plan
- 3. Legal Notice of Hearing

Approved:

Section:

Division:



Report Prepared By: Brian Finneran
Phone: (503) 229-6278

Proposed Rulemaking

**For adoption by the Environmental Quality Commission
December 5, 2003**

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

**A Plan for Implementing
Section §309 (40 CFR 51.309)
of the Regional Haze Rule**

Section 5.5 of the State Implementation Plan

State of Oregon
Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204-1390

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- Appendix D8-3 Proposed Administrative Rules for the Stationary Source Strategy
- Appendix D8-4 Mobile Source Strategy Support Material
- Appendix D8-5 Fire Source Strategy Support Analysis
- Appendix D8-6 Pollution Prevention Strategy Support Analysis
- Appendix D8-7 Progress Report on Implementation of Additional Recommendations of the Grand Canyon Visibility Transport Commission, Oregon Department of Environmental Quality
- Appendix D8-8 Projection of Visibility Improvement Support Documentation
- Appendix D8-9 State of Oregon Clean Air Act Implementation Plan (rule citation)

Oregon Section 309 Reference Materials - Applicable Western Regional Air Partnership (WRAP) Reports and Documents

Available on CD-ROM, or at the WRAP website: <http://www.wrapair.org/309/index.htm>

1. The WRAP TSD Report - *Regional Technical Support Document for the Requirements of §309 of the Regional Haze Rule*, prepared for WRAP Technical Oversight Committee, August 2003.
2. *Clean Air Corridors: Framework for Identifying Regions that Influence Clean Air on the Colorado Plateau*, Meteorology Subcommittee of the Grand Canyon Visibility Transport Commission; Western Governors' Association: Denver, CO, July 1995.
3. *Year 2000 Point Source SO₂ Emissions Analysis - 9 State Western Region Report*, Pechan and Associates, prepared for the WRAP Market Trading Forum, May 2002.
4. *An Assessment of Critical Mass for the Regional SO₂ Trading Program*, ICF Consulting Group, September 27, 2002.
5. *Recommendations for Making Attribution Determinations in the Context of Reasonably Attributable BART*, WESTAR RA BART Phase II Working Group, May 2003.
6. *Stationary Source NO_x and PM Emissions in the WRAP Region: An Initial Assessment of Emissions, Controls, and Air Quality Impacts*, Western Governors Association, May 30, 2003.
7. *Western Backstop (WEB) Emissions and Allowance Tracking System (EATS) Analysis*, Perrin Quarles Associates, Inc., prepared for the WRAP Market Trading Forum, July 31, 2003.
8. *Market Trading Forum Non-Utility Sector Allocation Final Report from the Allocations Working Group*, by E.H. Pechan, November 2002.
9. Proposed EPA rule to revise Section 309 Mobile Source Provisions - *Revisions to the Regional Haze Rule To Correct Mobile Source Provisions in Optional Program for Nine*

- Western States and Eligible Indian Tribes Within That Geographic Area*, 68 Federal Register 39888, July 3, 2003.
10. *Assessing Status of Incorporating Smoke Effects into Fire Planning and Operations*, WRAP Fire Emissions Joint Forum, August 29, 2002.
 11. *WRAP Policy on Fire Tracking Systems*, WRAP Fire Emissions Joint Forum, April 2, 2003.
 12. *Non-Burning Alternatives for Vegetation and Fuel Management on Wildlands*, WRAP Fire Emissions Joint Forum, November 2003.
 13. *Non-Burning Management Alternatives on Agricultural Lands in the Western United States*, WRAP Fire Emissions Joint Forum, May 15, 2002.
 14. *WRAP Policy on Enhanced Smoke Management Programs for Visibility*, WRAP Fire Emissions Joint Forum, November 12, 2002.
 15. *WRAP Policy on Annual Emission Goals for Fire*, WRAP Fire Emissions Joint Forum, April 2, 2003.
 16. *Methodology for Estimating Fugitive Windblown and Mechanically Resuspended Road Dust Emissions Applicable for Regional Scale Air Quality Modeling*, Countess Environmental, for WRAP Research and Development Forum, April 2001.
 17. *WRAP Policy on Renewable Energy and Energy Efficiency As Pollution Prevention Strategies For Regional Haze*, WRAP Air Pollution Prevention Forum, April 2003.
 18. *Economic Assessment of Implementing the 10/20 Goals and Energy Efficiency Recommendations*, WRAP Air Pollution Prevention Forum, October 2002.

Other Reference

1. Grand Canyon Visibility Transport Commission Final Report - *Recommendations for Improving Western Vistas*, June 1996.
2. EPA's Regional Haze Rule and Preamble - *Regional Haze Regulations* (64 Federal Register 35714), July 1, 1999.
3. Revision to Section 309 Incorporating the Annex - *Revisions to Regional Haze Rule To Incorporate Sulfur Dioxide Milestones and Backstop Emissions Trading Program for Nine Western States and Eligible Indian Tribes Within That Geographic Area* (68 Federal Register 33764), June 5, 2003.

5.5.0 ACKNOWLEDGEMENTS AND SUMMARY

5.5.0.1 Acknowledgements

Major assistance in preparing this implementation plan was provided by the Western Regional Air Partnership (WRAP) and its forums and committees, who provided Oregon and other western states with much of the policy and technical support information needed to meet the requirements of Section 309 of the Regional Haze Rule. Special thanks to the following staff:

- Pat Cummins, WRAP Co-Director
- Tom Moore, TOC Staff Support/Technical Coordinator
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5.5.0.2 Executive Summary

This document comprises the State of Oregon's State Implementation Plan submittal to EPA under Section 309 of the Regional Haze Rule (40 CFR 51.309). Adoption of the Oregon Section 309 Regional Haze Plan amends the State of Oregon Clean Air Act Implementation Plan, OAR 340-200-0040. See Appendix D8-9 for the complete citation of this rule.

Section 5.5.1 provides introductory and background information. Section 5.5.2 includes the strategies and elements as required under Section 309. Appendices at the end of this document provide additional information related to the strategies, including citations of two new Oregon administrative rules related to the stationary source strategy (see Appendix D8-3).

The following table summarizes each strategy and element contained in the Oregon plan.

Table 5.5.0-1: Summary of Oregon Regional Haze Implementation Plan

SIP Strategy/Element	Description
Projection of Visibility Improvement	Projected visibility improvement for each of the 16 Class I areas on the Colorado Plateau based on regional application of 309 regional haze control strategies.
Clean Air Corridors	The "CAC" is an area that provides clean air to the 16 Class I

	areas of the Colorado Plateau. The CAC includes the most of Oregon east of the Cascade Mountain Range. No significant emission growth is expected within the CAC. Commitment to conduct comprehensive emissions tracking to verify this, in order to protect visibility on the “clean days” in the 16 Class I areas.
Stationary Sources	Identifies 25% decrease in regional sulfur dioxide emissions from 1990-2000; additional reductions or “SO ₂ Milestones” for the 2003-2018 period; backstop market cap and trade program for major SO ₂ sources if milestones are not met; assessment of need for similar strategy for NO _x and PM milestones.
Mobile Sources	National programs for vehicle emissions and fuel standards indicate continuous decrease in mobile source emissions in Oregon and in the West for the 2003-2018 period, and support visibility improvement.
Fire Programs	Focus on tracking emissions from agricultural and forest burning, plan for overcoming barriers to the use of non-burning alternatives, documentation that Oregon smoke management programs meet the WRAP <i>Enhanced Smoke Management Programs for Visibility Policy</i> , and establishment of annual emission goals for fire.
Paved & Unpaved Road Dust	Road dust emissions were evaluated and not found to be a significant regional contributor to visibility impairment within the Colorado Plateau 16 Class I areas. Commitment to track road dust emissions to verify this.
Pollution Prevention	Comprehensive review of pollution prevention programs currently in place in Oregon related to renewable energy and energy efficiency. Projections of emission reductions and visibility improvements. Estimate of Oregon contribution to achieving the renewable energy goal recommended by the Grand Canyon Visibility Transport Commission (GCVTC).
Additional GCVTC Recommendations	Review of additional GCVTC recommendations made. None found to be practicable for implementing in Oregon at this time.
Periodic SIP Revisions	Oregon will submit revisions to this SIP every five years as required by the Regional Haze Rule.
State Planning & Interstate Coordination	Oregon has participated in the Western Regional Air Partnership and will continue to participate in the WRAP.
Geographic Enhancement	Oregon will pursue a Memorandum of Agreement with the USDA Forest Service to address reasonably attributable visibility impairment from stationary sources.
Additional Class I Areas	Declaration that Oregon will follow Section 309 to address additional Class I areas, including the 12 in Oregon, in the next regional haze SIP due in 2008.

Supporting this implementation plan revision and associated appendices is the *Regional Technical Support Document (TSD)* developed by the WRAP that contains the findings from the technical analyses and reports conducted by the various WRAP forums and committees related to Section 309. This is referred as the “WRAP TSD report” throughout this plan. In addition there are numerous other 309 reference materials cited in this plan. The TSD report and other reference materials are listed at the front of this implementation plan as “Oregon Section 309 Reference Materials - Applicable Western Regional Air Partnership (WRAP) Reports and Documents.” These reference materials are available on CD-ROM or at the WRAP website at <http://www.wrapair.org/309/index.htm>.

5.5.1 INTRODUCTION

5.5.1.1 Visibility and the Regional Haze Rule

Good visibility is essential to the enjoyment of national parks and scenic areas. Across the country, regional haze has decreased the visual range from 140 miles to 35-90 miles in the West, and from 90 miles to 15-25 miles in the East. Regional haze is air pollution that is transported long distances, causing reduced visibility in national parks and wilderness areas. This haze is composed of small particles that absorb and scatter light, affecting the clarity and color of what we see. The pollutants that create this haze are sulfates, nitrates, organic carbon, elemental carbon, and soil dust. Human-caused haze sources include industry, motor vehicles, agricultural and forestry burning, and windblown dust from roads and farming practices.

There are 156 national parks and wilderness areas that have been designated by Congress as "mandatory federal Class I areas" (referred to herein as Class I areas). The Clean Air Act contains a national goal of reducing man-made visibility impairment in all Class I areas. To meet this goal, the Environmental Protection Agency (EPA) adopted the Regional Haze Rules in July 1999. These rules complement and are in addition to "Phase I" visibility rules adopted by EPA in 1980. The Department developed the Oregon Visibility Protection Plan in 1986, in response to EPA's Phase I rules. This is described further in Section 5.5.1.4.

5.5.1.2 Oregon Class I areas

Oregon has 12 Class I areas, including Crater Lake National Park and 11 wilderness areas. These areas are listed below. These lands were designated as mandatory federal Class I Areas in 1977. At that time, Congress designated all wilderness areas over 5,000 acres and all national parks over 6,000 acres as mandatory federal Class I areas, subject to the visibility protection requirements in the Clean Air Act.

Oregon Class I Areas

<u>Class I Area</u>	<u>Acreage</u>
1. Crater Lake	183,315
2. Diamond Peak Wilderness	52,337
3. Eagle Cap Wilderness	360,275
4. Gearhart Mtn. Wilderness	22,809
5. Hells Canyon Wilderness	131,033
6. Mountain Lakes Wilderness	23,071
7. Mt. Hood Wilderness	47,160
8. Mt. Jefferson Wilderness.	107,008
9. Mt. Washington Wilderness	52,516
10. Strawberry Mtn. Wilderness	69,350
11. Three Sisters Wilderness	285,202
12. Kalmiopsis Wilderness	179,700

5.5.1.3 What is Section 309?

The goal of the Regional Haze Rule is to eliminate human-caused visibility impairment in Class I areas across the country. It contains strategies to improve visibility over the next 60 years, and requires states to adopt implementation plans.

The Regional Haze Rule provides two paths for developing and adopting regional haze implementation plans. One is "Section 308" (40 CFR 51.308), and requires most states to develop long-term strategies out to the year 2064. These strategies must be shown to make "reasonable progress" in improving visibility in Class I areas inside the state and in neighboring jurisdictions. The other is "Section 309" (40 CFR 51.309), and is an option for nine western states - Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, and Wyoming. These states can choose to follow Section 309 and adopt regional haze strategies for the period of 2003 to 2018. The regional haze strategies are based on recommendations from the Grand Canyon Visibility Transport Commission (GCVTC) for protecting the 16 Class I areas in the Colorado Plateau area (see map in Figure 5.5.1-1). Adopting these strategies constitutes reasonable progress until 2018. After 2018, Section 308 applies to all states.

The State of Oregon is following Section 309, along with four other states (Arizona, New Mexico, Utah and Wyoming). Under Section 309, the first regional haze plan (this document) needs to address only the 16 Class I areas of the Colorado Plateau. A second plan submittal, required in 2008, needs to address the "other" Class I areas. Oregon's 12 Class I areas will be addressed in the second regional haze plan. In developing the second plan, the Department will be evaluating the effectiveness of the 309 regional haze strategies contained in this plan, and other strategies developed by states pursuing Section 308, in making an assessment of applicable strategies for Oregon's Class I areas.

Additional information on the Regional Haze Rule can be found on the Department's website, at <http://www.deq.state.or.us/aq/regionalhaze/index.htm>.

5.5.1.4 Background on the Regional Haze Rule

1. The 1977 Clean Air Act Amendments

In 1977, Congress amended the Clean Air Act to include provisions to protect the scenic vistas of the nation's national parks and wilderness areas. In these amendments, Congress declared as a national visibility goal:

The prevention of any future, and the remedying of any existing impairment of visibility in mandatory class I Federal areas which impairment results from man-made air pollution. Section 169A.

To address this goal, the EPA developed regulations to reduce the impact of large industrial sources on nearby Class I areas. It was recognized at the time that regional haze, which comes from a wide variety of sources that may be located far from a Class I area, was also a part of the

visibility problem. However, monitoring networks and visibility models were not yet developed to the degree necessary to understand the causes of regional haze.

2. Phase I Visibility Rules – the Oregon Visibility Protection Plan

In 1980, EPA adopted regulations to address “reasonably attributable visibility impairment”, or visibility impairment caused by one or a small group of man-made sources generally located in close proximity to a specific Class I area. These became known as EPA’s “Phase I” visibility rules. At that time, EPA deferred writing rules to address regional haze, because they lacked the monitoring, modeling and scientific information needed to understand the nature of long-range transport and formation of regional haze. EPA adopted “Phase II” rules on regional haze in July 1999 (see further background information below).

In response to EPA’s Phase I visibility rules, the Department adopted the Oregon Visibility Protection Plan in October 1986. This visibility plan contains short and long-term strategies for making reasonable progress toward the national goal, related to addressing reasonably attributable impairment in the state’s Class I areas through visibility monitoring and control strategies. This includes evaluate visibility impacts of new or modified major stationary sources, and if necessary, applying Best Available Retrofit Technology (BART) to existing stationary sources if certified by the Federal Land Manager as causing reasonably attributable visibility impairment. This plan includes (a) the mitigation of visibility impairment within the Mt. Hood and Central Oregon Cascade wilderness areas through short and long-term control strategies for forest prescribed burning and Willamette Valley agricultural field burning, and (b) mitigation of impairment in the Eagle Cap Wilderness and Central Oregon Cascades resulting from agricultural field burning. Visibility protection for all of Oregon’s Class I areas is administered under the provisions of numerous regulations including the Prevention of Significant Deterioration, New Source Review rules and the USDA Forest Service forest planning process.

3. The 1990 Clean Air Act Amendments

Although the 1980 regulation addressed reasonably attributable visibility impairment from specific sources, it did not adequately address visibility impairment from large collections of sources whose emissions are mixed and transported over long distances. In the 1990 amendments to the Clean Air Act, Congress established the requirements to address regional haze. They gave EPA the authority to establish visibility transport commissions and promulgate regulations to address regional haze. The 1990 amendments also established a visibility transport commission to investigate and report on regional haze visibility impairment in the Grand Canyon National Park and nearby Class I areas.

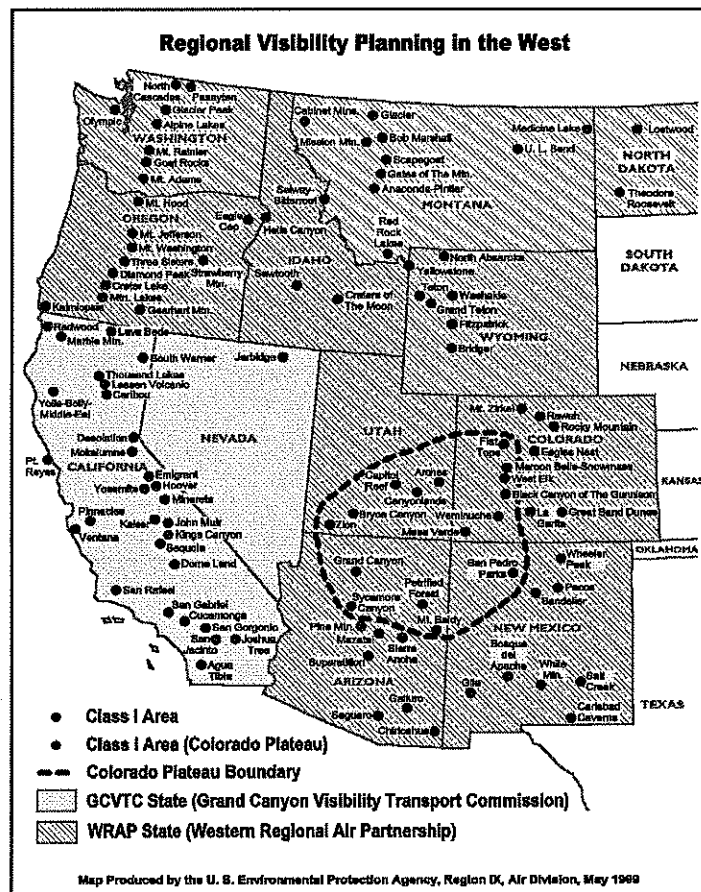
4. Grand Canyon Visibility Transport Commission

The 1990 Clean Air Act Amendments created the Grand Canyon Visibility Transport Commission (GCVTC). The GCVTC was given the charge to assess the currently available scientific information pertaining to adverse impacts on visibility from potential growth in the region, identify clean air corridors, and recommend long-range strategies for addressing

regional haze for Class I areas on the Colorado Plateau. The GCVTC completed significant technical analyses and developed recommendations to improve visibility in the 16 mandatory federal Class I areas on the Colorado Plateau. Figure 5.5.1-1 shows the nine Western states that were included in the GCVTC analyses, the Class I areas located in those states, and the 16 Class I areas on the Colorado Plateau (see the boundary in red) that were the focus of the GCVTC recommendations.

These 16 Class I areas were as follows: Arches National Park, Black Canyon of the Gunnison Wilderness, Bryce Canyon National Park, Canyonlands National Park, Capital Reef National Park, Flat Tops Wilderness, Grand Canyon National Park, Maroon Bells Wilderness, Mesa Verde National Park, Mt. Baldy Wilderness, Petrified Forest National Park, San Pedro Parks Wilderness, Sycamore Canyon Wilderness, Weminuche Wilderness, West Elk Wilderness, Zion National Park.

Figure 5.5.1-1: Map of Western States in GCVTC Study, and the 16 Class I Areas of Colorado Plateau



The Commission found that visibility impairment on the Colorado Plateau was caused by a wide variety of sources and pollutants. A comprehensive strategy was needed to address all of

the causes of regional haze. The GCVTC submitted these recommendations to EPA in a report dated June 1996 for consideration in rule development. These recommendations were:

Air Pollution Prevention. Air pollution prevention and reduction of per capita pollution was a high priority for the Commission. The Commission recommended policies based on energy conservation, increased energy efficiency and promotion of the use of renewable resources for energy production.

Clean Air Corridors. Clean air corridors are geographic areas that provide a source of clean air to the 16 Class I areas of the Colorado Plateau. For these areas, the Commission primarily recommended careful tracking of emissions growth that may affect air quality in these corridors, and ultimately the 16 Class I areas.

Stationary Sources. For stationary sources, the Commission recommended closely monitoring the impacts of current requirements under the Clean Air Act and ongoing studies. It also recommended regional targets for SO₂ emissions from stationary sources, starting in 2000. If these targets are exceeded, a regional cap and market-based emission trading program should be implemented.

Areas In And Near Parks. The Commission's research and modeling showed that a host of sources adjacent to parks and wilderness areas, including large urban areas, have significant visibility impacts. However, the Commission lacked sufficient data regarding the visibility impacts of emissions from some areas in and near parks and wilderness areas. In general, the models used by the Commission were not readily applicable to such areas. Pending further studies of these areas, the Commission recommended that local, state, tribal, federal, and private parties cooperatively develop strategies, expand data collection, and improve modeling for reducing or preventing visibility impairment in areas within and adjacent to parks and wilderness areas.

Mobile Sources. The Commission recognized that mobile source emissions are projected to decrease through about 2005 due to improved control technologies. The Commission recommended capping emissions at the lowest level achieved and establishing a regional emissions budget, and also endorsed national strategies aimed at further reducing tailpipe emissions, including the so-called 49-state low emission vehicle, or 49-state LEV.

Road Dust. The Commission's technical assessment indicated that road dust is a large contributor to visibility impairment on the Colorado Plateau. As such, it requires urgent attention. However, due to considerable skepticism regarding the modeled contribution of road dust to visibility impairment, the Commission recommended further study in order to resolve the uncertainties regarding both near-field and distant effects of road dust, prior to taking remedial action. Since this emissions source is potentially such a significant contributor, the Commission felt that it deserved high priority attention and, if warranted, additional emissions management actions.

Emissions from Mexico. Mexican sources are also shown to be significant contributors, particularly of SO₂ emissions. However, data gaps and jurisdictional issues made this a

difficult issue for the Commission to address directly. The Commission recommendations called for continued bi-national collaboration to work on this problem, as well as additional efforts to complete emissions inventories and increase monitoring capacities. These matters should receive high priority for regional and national action.

Fire. The Commission recognized that fire plays a significant role in visibility on the Plateau. In fact, land managers propose aggressive prescribed fire programs aimed at correcting the buildup of biomass due to decades of fire suppression. Therefore, prescribed fire and wildfire levels are projected to increase significantly during the studied period. The Commission recommended the implementation of programs to minimize emissions and visibility impacts from prescribed fire, as well as to educate the public.

Future Regional Coordinating Entity. Finally, the Commission believed there was a need for an entity like the Commission to oversee, promote, and support many of the recommendations in their report. To support that entity, the Commission developed a set of recommendations addressing the future administrative, technical and funding needs of the Commission or a new regional entity. The Commission strongly urged the EPA and Congress to provide funding for these vital functions and give them a priority reflective of the national importance of the Class I areas on the Colorado Plateau.

4. The WRAP

The GCVTC recognized the need for a long-term organization to address the policy and technical studies needed to address regional haze. The Western Regional Air Partnership (WRAP) was formed in September 1997 as the successor organization to the GCVTC. Figure 5.5.1-1 shows the original nine GCVTC state and additional Western states that are part of the WRAP. The WRAP's charter allows it to address any air quality issue of interest to WRAP members, though most current work is focused on developing the policy and technical work products needed by states and tribes in developing their regional haze SIPs. The WRAP Board is currently composed of representatives from 13 states, 13 tribes, the US Department of Agriculture, the US Department of the Interior, and EPA. The WRAP operates on a consensus basis and receives financial support from EPA. The WRAP established stakeholder-based technical and policy oversight committees to assist in managing the development of regional haze work products. Stakeholder-based working groups and forums were established to focus attention on the policy and technical work products the states and tribes need to develop their implementation plans.

The WRAP developed and submitted an Annex to the GCVTC recommendations to define a voluntary program of sulfur dioxide emission reduction milestones coupled with a backstop market-trading program. On June 5, 2003, EPA approved the Annex and incorporated it into the regional haze rule (68 Federal Register 33764). The WRAP is completing a suite of work products to support states and tribes developing GCVTC based regional haze implementation plans. Additional information about the WRAP can be found on the WRAP web site at <http://www.wrapair.org>.

5.5.1.5 Purpose of this Document

This Regional Haze Implementation Plan has been prepared to meet the requirements of the Federal Regional Haze Rule, Section 40 CFR, Part 51, Section 309 entitled *Requirements related to the Grand Canyon Visibility Transport Commission (GCVTC)*.

The Oregon Section 309 Regional Haze Plan is based on the Model 309 SIP that was developed as part of the STIP-2 Project for the Air Manager's Committee of the Western Regional Air Partnership to provide a model for States (and Tribes) to follow for developing a Section 309 SIP for the Regional Haze Rule. The Model SIP contained general language and other elements necessary to obtain U.S. Environmental Protection Agency (EPA) approval of regional haze implementation plans. The Model SIP listed each of the 309 regulatory requirements, provided a general description of each requirement, and summarized the pertinent Western Regional Air Partnership (WRAP) policies and technical support documentation needed for the 309 SIP.

The Oregon Section 309 Regional Haze Plan provides introductory and background information and 12 chapters containing the strategies and elements related to each requirement in Section 309 of the federal rule. Nine appendices at the end of this document provide additional information related to the strategies and elements in these chapters. Included in the appendices are two new Oregon administrative rules related to the stationary source strategy described in Section 5.5.2.2 (see Appendix D8-3).

Relation to the WRAP's Regional Technical Support Document

The regional Technical Support Document (TSD) summarizes key information from WRAP technical forums and committees related to Section 309 of the Regional Haze Rule. States and Tribes will use this technical information when preparing SIPs and TIPS. Underlying the key information presented in the chapters of the WRAP TSD are the contractor reports prepared for the WRAP and technical memoranda. The analytical work described in the WRAP TSD evaluates the visibility improvement associated with regional strategies and programs, but it does not describe specific state or tribal control strategies and regulatory programs. The Model SIP and TIP and the TSD are to be used jointly by states and tribes in preparing regional haze implementation plans. Therefore, the Model SIP contains important references to the technical information in the TSD needed to address each Regional Haze Rule requirement. The WRAP TSD is available at www.wrapair.org, or on CD-ROM.

5.5.1.6 Mandatory Federal Class I Areas Addressed in this SIP

The Regional Haze Rule under 40 CFR 51.309 requires states to address visibility protection for regional haze in the 16 Class I areas studied by the GCVTC in the initial regional haze SIP submitted by December 31, 2003. None of these 16 Class I areas are in Oregon. These Class I areas are identified on the map in Figure 5.5.1-1. Oregon's Class I areas will be addressed in the SIP revision in 2008. Oregon's Class I areas are listed under Section 5.5.1.2, and are also depicted on the map in Figure 5.5.1-1.

5.5.1.7 Definitions

This Implementation Plan contains terms and phrases that have formal definitions under 40 CFR 51.301, 40 CFR 51.309(b), and other terms specific to the programs set forth in this Plan. These definitions are contained in Appendix D8-1 of this implementation plan and prevail over other interpretations as to the meaning and intent of this implementation plan.

5.5.2 REGIONAL HAZE RULE STRATEGIES AND ELEMENTS

The following strategies and elements meet the requirements in Section 309 of the Regional Haze Rule pursuant to 40 CFR 51.309. The strategies are listed first in the order they appear in the Rule, except for the Geographic Enhancement Strategy, which has been moved under the Stationary Source Strategy. The table below lists the strategies and elements contained in this implementation plan and a citation of the applicable section in the Regional Haze Rule:

Table 5.5.2-2: List of SIP Strategies and Elements

Oregon SIP Rule Section	Regional Haze Strategy or Element	Applicable Section 309 Rule Requirement
5.5.2.1	1. Clean Air Corridor Strategy	40 CFR 51.309(d)(3)
5.5.2.2	Stationary Source Strategy:	40 CFR 51.309(d)(4)
5.5.5.3	2. Part 1 - General	40 CFR 51.309(f)(4)
	3. Part 2 – Milestones & Backstop Trading Program	40 CFR 51.309(h)
5.5.2.4	4. Mobile Source Strategy	40 CFR 51.309(d)(5)
5.5.2.5	5. Fire Program Strategy	40 CFR 51.309(d)(6)
5.5.2.6	6. Assessment of Emissions from Paved and Unpaved Road Dust	40 CFR 51.309(d)(7)
5.5.2.7	7. Pollution Prevention Strategy	40 CFR 51.309(d)(8)
5.5.2.8	8. Additional GCVTC Recommendations	40 CFR 51.309(d)(9)
5.5.2.9	9. Projection of Visibility Improvement	40 CFR 51.309(d)(2)
5.5.2.10	10. Periodic Plan Revisions	40 CFR 51.309(d)(10)
5.5.2.11	11. State Planning/Interstate Coordination and Tribal Implementation	40 CFR 51.309(d)(11)
5.5.2.12	12. Declaration for “other” Class I areas	40 CFR 51.309(g)(1)

5.5.2.1 Clean Air Corridor Strategy

5.5.2.1.1 Regulatory History and Requirements

One of the required tasks of the GCVTC was to review whether clean-air corridors exist for the 16 GCVTC Class I areas. A clean-air corridor is a geographic region that contributes clean air to the Class I areas on the days with best visibility. If clean-air corridors were found to exist, the GCVTC was required to recommend whether additional control strategies were needed to manage emissions growth to protect visibility on the least impaired days in the Class I areas. For the purpose of assessment, the GCVTC considered the average of the days representing the 20% best visibility conditions to be the least impaired days. EPA also used this definition in defining the term in the Regional Haze Rule (40 CFR 51.308 and 51.309).

In 1995 the GCVTC Meteorology Subcommittee completed an analysis of the geographical source areas contributing to least impaired days in the 16 GCVTC Class I areas. The analysis, which is contained in a report entitled *Clean-Air Corridors: A Framework for Identifying Regions that Influence Clean Air on the Colorado Plateau*,¹ showed that the area north and west of the Grand Canyon National Park does provide clean air to the Grand Canyon area. This is due primarily to a combination of favorable meteorological conditions (rain washout and higher ventilating winds) and low emissions of pollutants from the sparsely populated area. The GCVTC Public Advisory Committee (PAC) reviewed the clean-air corridor analysis and emission projections and determined emissions growth was less than the amount that would degrade visibility on the least impaired days in the 16 Class I areas. Based on this finding, the PAC recommended monitoring emissions growth but concluded that no additional control strategies were needed unless there was significant growth in the future. The GCVTC adopted this recommendation and included it in its final report to EPA, which was integrated into the Regional Haze Rule.

The Regional Haze Rule requires states submitting implementation plans under 40 CFR 51.309 to identify and track emissions within any clean air corridor. If significant emissions growth occurs, states must first determine if these emissions degrade visibility on the least impaired days in the 16 Class I areas and then take corrective action if they do. To help states meet these requirements, the WRAP formed a task team to review the GCVTC work. The result of this review was a report entitled *WRAP Policy on Clean Air Corridors*.² This report found that there is only one clean air corridor. It concluded that patterns of growth in and adjacent to the corridor were not expected to cause significant emissions increases and, consequently, would not adversely impact visibility in the 16 Class I areas of the Colorado Plateau. The report found that only 4% emissions growth was likely to occur. The GCVTC work indicated it would take at least a 25% increase in emissions to result in perceptible visibility impact (0.7 deciview). Because no impairment of air quality in the corridor was identified, the report concluded that no further visibility analysis or additional emission reduction measures are

¹ See #2, Oregon Section 309 Reference Materials - Applicable WRAP Reports and Documents. See also WRAP website at <http://www.wrapair.org/309/index.htm>

² *WRAP Policy on Clean Air Corridors*, adopted by Western Regional Air Partnership, October 9, 2002. See Appendix D8-2 of this implementation plan.

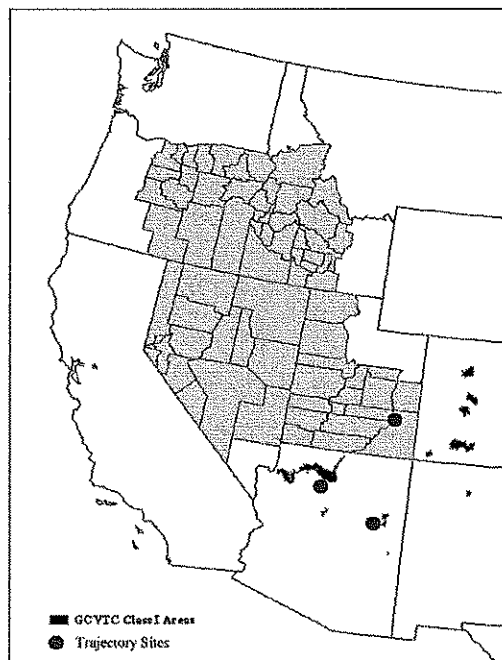
needed now, but should be re-evaluated in 2008. Additional technical analysis in support of this report can be found in the Clean Air Corridor section (Chapter 3) of the WRAP TSD.

The *WRAP Policy on Clean Air Corridors* is provided in Appendix D8-2 of this implementation plan. This appendix also describes the comprehensive emissions tracking system that will be used for the Clean Air Corridor, as discussed Section 5.5.2.1.3 below.

5.5.2.1.2 Identification of Clean Air Corridor and other Clean Air Corridors

Pursuant to 40 CFR 51.309(d)(3)(i), the State of Oregon concurs with the identification of the clean-air corridor as defined in the *WRAP Policy on Clean Air Corridors*, and adopts this as the boundary of the clean-air corridor for Oregon. This boundary is shown on the map in Figure 5.5.2-1 below. This clean-air corridor was first identified in studies conducted by the Meteorological Subcommittee of the GCVTC and later by the WRAP. A large portion of Oregon resides within the boundary of the clean-air corridor, as shown below.

Figure 5.5.2-1: Map of the Clean Air Corridor in the Transport Region



The counties that are contained within the Clean Air Corridor in Oregon are as follows: Wasco, Sherman, Gilliam, Morrow, Umatilla, Union, Wallowa, Jefferson, Wheeler, Grant, Baker, Deschutes, Crook, Lake, Harney, and Malheur. Pursuant to 40 CFR 51.309(d)(3)(v) and based on the *WRAP Policy on Clean Air Corridors* and technical analysis, the State of Oregon has determined that no other clean-air corridors can be identified at this time. The State of Oregon commits to participating in a regional effort to review this determination as part of periodic plan revisions required under 40 CFR 51.309(d)(10).

5.5.2.1.3 Clean Air Corridor Strategy Elements

a. Comprehensive emissions tracking program

Pursuant to 40 CFR 51.309(d)(3), the State of Oregon commits to monitoring changes in emissions inside and adjacent to the clean-air corridor with an emissions tracking system developed and employed by the WRAP to ensure that visibility does not degrade on the least impaired days in any of the 16 GCVTC Class I areas. The State of Oregon commits to providing statewide annual emission inventory data for use in the WRAP emissions tracking program. This emissions tracking will include SO₂, NO_x, PM₁₀, PM_{2.5}, and VOC. Appendix D8-2 of this implementation plan describes the WRAP's Emissions Data Management System (EDMS) that will be used for comprehensive emissions tracking and summarizing annual emission trends in order to identify any significant emissions growth that could lead to visibility degradation in the 16 Class I areas. The State of Oregon will work cooperatively with states not submitting a plan revision under 40 CFR 51.309 that have emissions within or adjacent to the clean-air corridor that could affect air quality in the clean-air corridor to assure the emissions are incorporated into the tracking program through inter-state consultation.

b. Patterns of growth within the Clean Air Corridor

Pursuant to 40 CFR 51.309(d)(3)(ii) and based on the *WRAP Policy on Clean Air Corridors* and WRAP technical analysis, the State of Oregon has determined that current projections of emissions changes inside the identified clean-air corridor will not contribute to degradation of visibility on the least impaired days in the 16 Class I areas during the planning period from 2004 through 2018. Future emissions growth will be tracked in accordance with the comprehensive emissions tracking system noted in (a) above. The WRAP will summarize annual emission trends within the clean-air corridor and assess whether any significant emission growth has occurred within the corridor as an analysis tool for states.

c. Patterns of growth outside the Clean Air Corridor

Pursuant to 51 CFR 309(d)(3)(iii) and based on the *WRAP Policy on Clean Air Corridors* and technical analysis, the State of Oregon has determined that current projections of emission changes in areas adjacent to the identified clean-air corridor will not contribute to degradation of visibility on the least impaired days in the 16 Class I areas during the planning period from 2004 through 2018. The State of Oregon will ensure that WRAP will track emissions in areas adjacent to the clean-air corridor and report on any significant changes in emission projections to the State of Oregon that may require a reassessment of this determination in future SIP revisions, as required in 40 CFR 51.309(d)(10).

d. Actions if impairment inside or outside the Clean Air Corridor occurs

The State of Oregon, in coordination with other transport region states and tribes, will review the WRAP's annual summary of emission trends inside and outside the clean-air corridor and determine if significant emissions growth has occurred that could contribute to degradation of visibility on the least impaired days in accordance with (b) and (c) above. If significant

emissions growth is identified, the State of Oregon, in coordination with other transport region states and tribes, will conduct, or ensure WRAP assistance in conducting, an analysis of the emissions growth on visual air quality impacts on the least impaired days in any of the 16 Class I areas of the Colorado Plateau. Pursuant to 40 CFR 51.309(d)(3)(iv), if this analysis demonstrates significant growth of emissions inside or outside the clean-air corridor has or will cause visibility impairment on the least impaired days in the 16 Class I areas, the State of Oregon, in coordination with other transport region states and tribes through the WRAP regional planning process, will evaluate the need for additional emission reduction measures consistent with the criteria for reasonable progress. The State of Oregon, in coordination with other transport region states and tribes through the WRAP regional planning process, will identify an implementation schedule for measures needed to make reasonable progress toward the national goal in accordance with the periodic progress reports required under 40 CFR 51.309(d)(10)(i). If the WRAP regional planning process is unable to perform such an analysis for Class I areas in Oregon or come to a consensus on the interpretation of such an analysis, the State of Oregon will perform such studies and engage in independent interstate consultation provided for under 40 CFR 51.309(d)(11).

5.5.2.2 Stationary Source Strategy

5.5.2.2.1 Regulatory History and Requirements

The GCVTC studied the long-term projected changes of emissions from stationary sources. It was found that emissions of sulfur dioxide (SO₂) from stationary sources would decline by at least 13% between 1990 and 2000. Also, emissions of SO₂ would continue to decline through 2040 when only 30% to 50% of the 1990 emission levels would remain. This decline was due to the normal turnover of source technology as older sources retire and are replaced by newer and cleaner technologies.

The GCVTC decided that the most appropriate way to address emissions of SO₂ from stationary sources is to establish regional emission milestones and allow voluntary measures to achieve the emission reductions. If the emission reduction milestones are not achieved, then a backstop market trading program will be implemented to guarantee the emission reductions are achieved. The GCVTC did not have sufficient time to develop the details of the emission milestones or backstop program, but committed to develop it and submit it to EPA.

In the Regional Haze Rule, EPA required the Western states to complete the development of the stationary source program for sulfur dioxide and to submit it as an Annex to the GCVTC recommendations. The WRAP submitted the Annex (*Voluntary Emissions Reduction Program for Major Industrial Sources of Sulfur Dioxide in Nine Western States and a Backstop market Trading Program, An Annex to the Report of the Grand Canyon Visibility Transport Commission*) in September 2000. On June 5, 2003, EPA issued the final rules related to the sulfur dioxide program for stationary sources (68 FR 33764). These rules incorporated the materials in the Annex.

5.5.2.2.2 Achievement of Greater than a 13% Reduction in Sulfur Dioxide by 2000

One item that must be included in the first implementation plan is monitoring and reporting of stationary source SO₂ emissions. This monitoring and reporting data must be sufficient to determine whether a 13% reduction in actual stationary source SO₂ emissions has occurred between the years 1990 and 2000, and whether milestones required by Section 51.309(d)(4)(ii) have been achieved for the transport region. As shown in Table 5.5.2-3, regional SO₂ emissions were reduced from an estimated 828,775 tons in 1990 to 621,838 tons in 2000 (a 25% reduction). This emission reduction is documented in the WRAP report entitled *Year 2000 Point Source SO₂ Emissions Analysis - 9 State Western Region*, by E.H. Pechan and Associates, May 2002. For the five Western States (Arizona, New Mexico, Oregon, Utah, and Wyoming) that are submitting a Section 309 SIP, the SO₂ emissions reduction between 1990 and 2000 is 33 percent.

Table 5.5.2-3: State by State Comparison of 1990 to 2000 Stationary Source SO₂ Emissions in the 9 GCVTC Transport Region States (tons per year)

States	1990	2000
Arizona	185,398	99,133
California	52,832	38,501
Colorado	95,534	99,161
Idaho	24,652	27,763
Nevada	52,775	53,943
New Mexico	177,994	117,344
Oregon	17,705	23,362
Utah	85,567	38,521
Wyoming	136,318	124,110
Totals	828,775	621,838

5.5.2.2.3 Stationary Sources Strategy Elements

The strategy for stationary sources implements the GCVTC recommendation to develop regional SO₂ milestones and a backstop trading program to ensure that the milestone goals are achieved. The GCVTC recommendations were further refined in the Annex to the Commission report that was submitted to EPA in September 2000. This strategy for stationary sources is implemented through the following elements:

- Section 5.5.2.3 of this implementation plan, the Sulfur Dioxide Milestones and Backstop Trading Program, describes the overall program and commits Oregon to implementing all parts of the program as outlined in the plan. The plan establishes the regional SO₂ milestones and the emissions tracking requirements. If the Western Backstop SO₂ Trading Program (“WEB Trading Program”) is triggered, the plan also describes how Oregon will determine allocations and manage the allowance tracking system that is needed to implement the program.
- The *Western Backstop Sulfur Dioxide Trading Program*, adopted by the State of Oregon as administrative rules (OAR 340-228-0400 to OAR 340-228-0530), contains the requirements applicable to major industrial sources of sulfur dioxide under the backstop regulatory program if the SO₂ milestones are exceeded. The rule may never be implemented if the goal of meeting the regional SO₂ milestones through voluntary means is achieved. If the backstop rule is triggered, it establishes the procedures and compliance requirements for sources in the Trading Program. A copy of this rule is provided in Appendix D8-3 of this implementation plan.
- OAR 340-214-0400 through 340-214-0430 require major industrial sources of SO₂ to submit an annual emissions inventory to measure compliance with the regional SO₂ milestones. If the backstop program is triggered, then these requirements will

eventually be replaced by more rigorous monitoring requirements in OAR 340-228-0400 through 340-228-0530, as described above.

a. Year 2018 Milestone

The year 2018 milestone of 510,000 tons, including a 30,000 ton set-aside for two copper smelters not currently operating (or 480,000 tons if the suspended smelters do not resume operation), represents a regional SO₂ emissions reduction of approximately 320,000 tons from the 1990 baseline emissions of 830,000 tons. This reduction is well on the way to the Commission's goal of a 50-70% reduction by 2040. The regional haze rule requires that total reductions by 2018 be "better than BART," that is, greater than could be achieved by retrofitting 250 tons-per-year sources that were built between 1962 and 1977 and currently are operating without modern emissions controls. The WRAP estimated that BART reductions would total approximately 170,000 tons by 2018.

b. Interim Milestones

After considerable investigation, the WRAP Market Trading Forum determined that 1999 SO₂ emissions, including expected emissions of 38,000 tons from the two smelters not currently operating, were about 690,000 tons. Interim milestones are intended to meet the Commission's recommendation for steady and continuing reductions while giving the regulated community operating flexibility in the early years and time to mesh planning for regional haze reductions with other factors, such as electricity deregulation. The proposed interim milestones with the suspended smelters in and out respectively are 720,000/682,000 tons in 2003; 715,000/677,000 tons in 2008; and 655,000/625,000 tons in 2013.

c. Triggering the Trading Program

States and tribes will collect an annual SO₂ inventory. Compliance with the milestones is determined by an annual comparison of the rolling 3-year average of total regional emissions with the rolling 3-year average of the milestones. For 2018, total emissions will be compared with the 2018 milestone. If a milestone is exceeded, the trading program is activated and emission allocations are made one year later. Sources have five years from the year of exceedance to comply with their allocation. Sources may comply by retrofitting to bring emissions below their allocation, by buying credits to emit from other sources, or by retiring the source.

d. Certainty that the 2018 Milestone will be met on time

With such a large proportion of the reductions scheduled to occur in the last five years of the program, it is important to ensure that all the reductions occur on time. Therefore, the proposal includes a mechanism for the states and tribes to activate the trading program in 2013 if available evidence indicates the 2018 milestone will not be reached. In order to be in compliance with the 2018 milestone, the 2018 emissions must be less than the 2018 milestone.

e. Trading Program Features

Details of the backstop trading program, such as applicability, monitoring and reporting, trading procedures, compliance requirements, and penalties, are defined in OAR 340-228-0400 through 340-228-0530. Sources that reduce their emissions below their allocation will be able to "bank" those credits for sale to other sources, within certain programmatic restrictions.

f. Allocations

If the program is triggered, 20,000 tons of SO₂ allocations will be set aside for tribal interests, acknowledging that tribal lands are largely undeveloped and that tribes will not benefit from a plan based only on past emissions. Second, there will be a new source set-aside to accommodate growth within the region. Third, existing sources will receive a "floor" allocation based on some specified level of control, such as Best Available Control Technology (BACT), Best Available Retrofit Technology (BART), Lowest Achievable Emission Rate (LAER), and an allocation for certain renewable energy sources. The remainder of the allowances, which will decline over the years, will be allocated to existing sources. If the program is triggered, sources may buy and sell allowances to come into compliance. Sources that have not controlled their emissions in accordance with their allocations will be subject to financial penalties and a 2:1 offset of future emissions allocations for each ton of excess emissions.

g. State and Tribal Opt-in or Opt-out

If states or tribes with existing sources in the region choose to develop their regional haze plans under 40 CFR 51.308, proportional adjustments will be made to the milestones, and the program components will be altered accordingly.

h. Additional efforts to ensure 309 state coordination

The State of Oregon and the four other states following Section 309 (Arizona, New Mexico, Utah and Wyoming) will form a "309 Coordinating Committee" within the WRAP, to facilitate communication and information exchange, and to provide a mechanism to develop the agreements and understandings of how states and tribes will work together to implement the requirements of Section 309, especially the stationary source strategy (i.e., the regional SO₂ milestone and backup market trading program).

5.5.2.2.4 Geographic Enhancement Element

The requirements for geographic enhancement are related to 40 CFR 51.309(f), which describes requirements for the Annex. The Annex allows states to submit a SIP that adopts an alternative measure to regional haze BART. Geographic enhancement is a voluntary approach that can be included in the Annex for addressing Reasonably Attributable Visibility Impairment (RAVI) for stationary sources under the provisions of Section 51.302(c). RAVI is different from regional haze visibility impairment in that it addresses "hot spots" or situations where visibility impairment in a Class I area is reasonably attributable to a single source or small

group of sources in relatively close proximity to the Class I area. The geographic enhancement approach would allow states or tribes to use the efficiencies and reduced cost provided by the market trading program in the Annex to accommodate situations where RAVI needs to be addressed.

The State of Oregon and the Federal Land Manager will pursue a process to address RAVI certification for BART in any Class I areas in Oregon, should this ever occur, as it relates to the regional SO₂ milestones and the backstop emission trading program. This process will be formalized through a Memorandum of Agreement (MOA) between the Oregon Department of Environmental Quality and the U.S. Forest Service.

If the Forest Service certifies impairment, the State of Oregon will fulfill its obligation to determine attribution and, if necessary, determine BART for the applicable source or group of sources in accordance with Section 5.2.2.2 of Oregon's Visibility Protection Plan for phase I visibility protection, which was submitted to EPA in October 1986.

The WESTAR report *Recommendations for Making Attribution Determinations in the Context of Reasonably Attributable BART* will be used to provide a list of appropriate technical criteria and techniques for determining attribution.

5.5.2.2.5 Assessment of NO_x and PM Control Strategies

Pursuant to 40 CFR 51.309(d)(4)(v), the State of Oregon has evaluated the need for nitrogen oxide (NO_x) and particulate matter (PM) emission control strategies, the degree of visibility improvement expected, and whether such milestones are needed to avoid any net increase in these pollutants. This evaluation relied upon the WRAP report entitled *Stationary Source NO_x and PM Emissions in the WRAP Region: An Initial Assessment of Emissions, Controls and Air Quality Impacts*. This report was made by the WRAP Market Trading Forum for all WRAP states, including the transport region states.

The report concluded the following:

- Analysis of current and future emissions, ambient monitoring data, and very limited modeling results does not show stationary source NO_x and PM emissions to be a major contributor to regional haze in the vast majority of Class I areas in the West. Specifically for the Colorado Plateau 16 Class I areas, stationary source NO_x emissions are estimated to contribute two to five percent to light extinction, while PM₁₀ stationary source emissions contribute less than two percent;
- These findings may change as emission projections are updated and ambient monitoring data from new sites is collected and analyzed. It is also expected modeling capabilities will improve as more data becomes available on the best and worst visibility days.
- RAVI remedies are available in cases where particular stationary sources may impact particular Class I areas;
- The need for stationary source NO_x and PM milestones is not supported at this time with current state of analyses, but the need for milestones should be reassessed based on

more complete and accurate analyses prior to submittal of the 2008 Section 309 SIP revision.

Based on these findings, no NO_x and PM milestones have been included in this implementation plan. The need for these milestones will be reevaluated by the WRAP and State of Oregon as part of the next SIP update and revision required for 2008.

5.5.2.3 Sulfur Dioxide Milestones and Backstop Trading Program

5.5.2.3.1 Milestones and Determination of Program Trigger

a. Regional SO₂ Milestones

(1) Base Milestone Values

The regional sulfur dioxide base milestones for the years 2003 through 2018 are provided in Table 5.5.2-4. The base milestones will be adjusted annually as described in Section 5.5.2.3.1 (a)(2) and (a)(3) of this implementation plan.

Table 5.5.2-4: Base Sulfur Dioxide Emissions Milestones (excludes Smelter Set-aside)

Column 1	Column 2	Column 3
For the year	the base regional sulfur dioxide milestone is	and the annual SO ₂ emissions for these years will determine whether emissions are greater than or less than the milestone
2003	682,000 tons SO ₂	2003
2004	682,000 tons SO ₂	Average of 2003 and 2004
2005	682,000 tons SO ₂	Average of 2003, 2004 and 2005
2006	682,000 tons SO ₂	Average of 2004, 2005 and 2006
2007	682,000 tons SO ₂	Average of 2005, 2006 and 2007
2008	680,333 tons SO ₂	Average of 2006, 2007 and 2008
2009	678,667 tons SO ₂	Average of 2007, 2008 and 2009
2010	677,000 tons SO ₂	Average of 2008, 2009 and 2010
2011	677,000 tons SO ₂	Average of 2009, 2010 and 2011
2012	677,000 tons SO ₂	Average of 2010, 2011 and 2012
2013	659,667 tons SO ₂	Average of 2011, 2012 and 2013
2014	642,333 tons SO ₂	Average of 2012, 2013 and 2014
2015	625,000 tons SO ₂	Average of 2013, 2014 and 2015
2016	625,000 tons SO ₂	Average of 2014, 2015 and 2016
2017	625,000 tons SO ₂	Average of 2015, 2016 and 2017
2018	480,000 tons SO ₂	Year 2018 only
2019 forward, until replaced by an approved SIP	480,000 tons SO ₂	Annual; no multiyear averaging

(2) Adjustments for participation by eligible States and Tribes.

The amount provided in Table 5.5.2-5 below will be subtracted from the milestone in Table 5.5.2-4 for each state and tribe that does not have an Implementation Plan approved by the EPA Administrator as meeting the requirements of 40 CFR 51.309 as of December 31 of the year following the milestone year. The first adjustment to the 2003 milestone will be made no later

than March 31, 2005 and will be based on all states and tribes that do not have a federally-approved Implementation Plan as of December 31, 2004.

Table 5.5.2-5: [Years 2003-2010] Amounts of SO₂ tons to be Subtracted from the Base Milestones for States and Tribes that do not have an Approved Implementation Plan under 40 CFR 51.309*

State or Tribe	2003	2004	2005	2006	2007	2008	2009	2010
1. Arizona	117,372	117,372	117,372	117,372	117,372	117,941	118,511	119,080
2. California	37,343	37,343	37,343	37,343	37,343	36,363	35,382	34,402
3. Colorado	98,897	98,897	98,897	98,897	98,897	98,443	97,991	97,537
4. Idaho	18,016	18,016	18,016	18,016	18,016	17,482	16,948	16,414
5. Nevada	20,187	20,187	20,187	20,187	20,187	20,282	20,379	20,474
6. New Mexico	84,624	84,624	84,624	84,624	84,624	84,143	83,663	83,182
7. Oregon	26,268	26,268	26,268	26,268	26,268	26,284	26,300	26,316
8. Utah	42,782	42,782	42,782	42,782	42,782	42,795	42,806	42,819
9. Wyoming	155,858	155,858	155,858	155,858	155,858	155,851	155,843	155,836
10. Navajo Nation	53,147	53,147	53,147	53,147	53,147	53,240	53,334	53,427
11. Shoshone-Bannock Tribe of the Fort Hall Reservation	4,994	4,994	4,994	4,994	4,994	4,994	4,994	4,994
12. Ute Indian Tribe of the Uintah and Ouray Reservation	1,129	1,129	1,129	1,129	1,129	1,131	1,1233	1,135
13. Wind River Reservation	1,384	1,384	1,384	1,384	1,384	1,384	1,384	1,384

Table 5.5.2-6: [Years 2011-2018] Amounts of SO₂ tons to be Subtracted from the Base Milestones for States and Tribes that do not have an Approved Implementation Plan under 40 CFR 51.309*

State or Tribe	2011	2012	2013	2014	2015	2016	2017	2018
1. Arizona	119,080	119,080	116,053	113,025	109,998	109,998	109,998	82,302
2. California	34,402	34,402	33,265	32,128	30,991	30,991	30,991	27,491
3. Colorado	97,537	97,537	94,456	91,375	88,294	88,294	88,294	57,675
4. Idaho	16,414	16,414	15,805	15,197	14,588	14,588	14,588	13,227
5. Nevada	20,474	20,474	20,466	20,457	20,449	20,449	20,449	20,232
6. New Mexico	83,182	83,182	81,682	80,182	78,682	78,682	78,682	70,000
7. Oregon	26,316	26,316	24,796	23,277	21,757	21,757	21,757	8,281
8. Utah	42,819	42,819	41,692	40,563	39,436	39,436	39,436	30,746
9. Wyoming	155,836	155,836	151,232	146,629	142,025	142,025	142,025	97,758
10. Navajo Nation	53,427	53,427	52,707	51,986	51,266	51,266	51,266	44,772
11. Shoshone-Bannock Tribe of the Fort Hall Reservation	4,994	4,994	4,994	4,994	4,994	4,994	4,994	4,994
12. Ute Indian Tribe of the Uintah and Ouray Reservation	1,135	1,135	1,135	1,135	1,135	1,135	1,135	1,135
13. Wind River Reservation	1,384	1,384	1,384	1,384	1,384	1,384	1,384	1,384

*These numbers differ from Annex opt-in/-out tables in that the smelter set-aside is excluded and the new source set-aside is included.

(3) Adjustment for Future Operation of Copper Smelters in Arizona and New Mexico

If either the BHP San Manuel smelter in Arizona or the Phelps Dodge Hidalgo smelter in New Mexico resumes operation, the milestones will be increased as described below. The adjustment will occur only if the respective state has a State Implementation Plan approved by the EPA Administrator under 40 CFR 51.309. Once the adjustments have been made, the milestones will not be changed due to future suspensions or changes in plant operations, except as provided below. If Arizona or New Mexico elect not to submit a SIP under 40 CFR 51.309, the emissions for the smelters in the state opting out will be subtracted from the smelter set-aside.

(a) If one or both smelters resume operations under their existing permits, the milestone will automatically be adjusted upward for each smelter respectively by the following amounts:

1. Phelps Dodge Corporation, Hidalgo Smelter: 22,000 tons SO₂
2. BHP, San Manuel Smelter: 16,000 tons SO₂
3. For the 2013 through 2018 milestones, the maximum increase will be 30,000 tons SO₂.

(b) If Arizona or New Mexico determines that either smelter will resume operation by operating only a portion of the plant, the milestone adjustment in (a) will be reduced by a percentage to reflect current conditions. If the smelter resumes normal operations at a later date, the full adjustment described in (a) will be applied.

(c) If one or both smelters resume operations after going through new source review, the milestone adjustment will be based on the new permitted level for the source, but in no instance may the adjustment to the milestones exceed 22,000 tons SO₂ per year for the Hidalgo Smelter or 16,000 tons SO₂ per year for the San Manuel Smelter.

(d) If one or both smelters do not resume operation, Arizona and New Mexico will determine, based on the calculation procedures in 5.5.2.3.1.c(4) of this plan, the amount of source-specific set-aside that will be added to the milestone to account for capacity expansion at the remaining smelters. This set-aside will only be available for use if emissions from the copper smelters are above the baseline level listed in Table 5.5.2-7 in any particular year as a result of increased capacity. The increase to the milestone will be based on a smelter's proportional increase above its baseline sulfur input. The set-aside will be recalculated every year to reflect actual operations of the remaining copper smelters. The set-aside may not be traded under the backstop trading program.

Table 5.5.2-7: Preliminary Smelter-Specific Set Aside

Company / Smelter	Baseline Sulfur Input	Baseline Allocation	Smelter-specific Set-aside
BHP San Manuel	417,200 tons	16,000 tons SO ₂	1,500 tons SO ₂
Asarco Hayden	235,000 tons	23,000 tons SO ₂	3,000 tons SO ₂
Phelps Dodge Chino	212,800 tons	16,000 tons SO ₂	3,000 tons SO ₂
Phelps Dodge Hidalgo	256,800 tons	22,000 tons SO ₂	4,000 tons SO ₂
Phelps Dodge Miami	208,700 tons	8,000 tons SO ₂	2,000 tons SO ₂
Kennecott Oregon Copper Corporation, Smelter and Refinery	340,259 tons	1,000 tons SO ₂	100 tons SO ₂
TOTAL	1,670,769 tons	86,000 tons SO₂	13,600 tons SO₂

(4) Other Milestone Adjustments

(a) All other milestone adjustments will require a SIP revision. Section 5.5.2.3.1.c(3) of this plan outlines adjustments to be made to the emissions inventory to ensure a consistent comparison to the milestones. These adjustments will be incorporated into the milestones every five years as part of the periodic implementation plan revisions required by 40 CFR 51.309(d)(10). Adjustments to the milestones must be tracked in the annual emissions report in c(2) below.

(b) Within ninety days of the periodic Implementation Plan revision incorporating adjustments based on section 5.5.2.3.1.c(3), the Department must provide notice to sources whose records were used to calculate the adjustments. Such notice must include the date of the SIP revision reflecting the milestone adjustment to sources whose records were used as the basis for the milestone adjustment and state that the source must retain the record at least five years from the date of the SIP revision or ten years from the date of establishing the record, whichever is longer.

b. Regional Program Administration

(1) Pre-trigger tracking of regional SO₂ emissions.

The Department will work cooperatively with the states and tribes that are participating in the SO₂ Milestones and Backstop Trading Program to ensure that an emission tracking system for the regional SO₂ inventory is developed and maintained. The Department is responsible for all regional program administration functions as described in this plan. The Department will perform these functions using the Western Regional Air Partnership (WRAP) as the Department's agent. The WRAP compiled the SO₂ emission inventories that were used during the development of the Annex, and the WRAP continues to refine and improve the overall tracking system for regional haze. The WRAP will maintain the pre-trigger emissions tracking functions outlined in this plan for the foreseeable future. If the WRAP is no longer able to

fulfill this function, then the Department will ensure that other arrangements are made, either through a different regional organization or through a contractor, to maintain the SO₂ tracking system that is described in this plan. The Department is responsible for all regional program administration functions as described in this plan. The Department will perform these functions through the WRAP, as the Department's agent. The WRAP has no authority to make regulatory determinations. The WRAP has limited authority under this plan to perform tracking and accounting functions, prepare reports, and perform other administrative functions as directed by the Department. The Department will work expeditiously to correct any problems if the WRAP fails to perform any of the functions described in this plan in a timely manner.

(2) Designation of the Tracking System Administrator

If the backstop trading program is triggered due to an exceedance of the SO₂ milestones as outlined in section 5.5.2.3.1 of this plan, the Department will work cooperatively with the other participating states and tribes to designate one Tracking System Administrator (TSA). The TSA will be designated as expeditiously as possible, but no later than six months after the program trigger date. In addition, before the TSA is designated, the Department will have entered into a binding contract with the TSA that will require the TSA to perform all TSA functions described in this plan. The Department has sufficient authority under ORS chapters 468 and 468A to ensure that the TSA carries out its functions in this plan.

(3) Information Provided by other States and Tribes

The Department will accept the emission inventory and permitting information provided by the other participating states and tribes in order to determine the milestone value and program trigger if such other states and tribes have provided proper documentation and followed the public notification process in their federally approved implementation plans.

c. Determination of Program Trigger

(1) Until the program has been triggered, and source compliance is required under the backstop trading program, the Department will submit an annual emissions report to the WRAP and all participating states and tribes by September 30 of each year. The report will document actual sulfur dioxide emissions during the previous calendar year for all sources subject to the requirements of OAR 340-214-0400 to OAR 340-214-0430, Sulfur Dioxide Milestone Emission Inventory. The first report for calendar year 2003 will be submitted by September 30, 2004. The Department will prepare the supporting documentation that is included with the annual emissions report as noted in (2) and (3) below.

(2) The annual emissions report for Oregon will include a source emissions change report that contains the following information:

(a) Identification of any new sources that were not contained in the previous calendar year's emissions report and an explanation of why the source is now included in the program;

(b) Identification of any sources that were included in the previous year's report and are no longer included in the program and an explanation of why this change has occurred; and

(c) An explanation for emissions variations at any applicable source that exceed +/- 20 percent from the previous year.

(3) The annual emissions report for Oregon will include a proposed emissions adjustment as described in (a) through (d) below to ensure a consistent comparison to the milestones.

(a) Changes in flow rate measurement methods. Actual emission inventories for utilities that use EPA's Reference Method 2F, 2G, or 2H to measure stack flow rate will be adjusted to be comparable with the flow rate assumptions that were used in 1999, the base year inventory for the Annex. The adjustment may be calculated using any of the following three methods, and emissions for the year 2018 will not be adjusted.

(i) Directly determine the difference in flow rate through a side-by-side comparison of data collected with the new and old flow reference methods during a relative accuracy test audit (RATA) test.

(ii) Compare the annual average heat rate using Acid Rain heat input data (MMBtu) and total generation (MWHrs) as reported to the federal Energy Information Administration (EIA). Under this approach, the flow adjustment factor will be calculated using the following ratio:

Heat input/MW for first full year of data using new flow rate method
Heat input/MW for last full year of data using old flow rate method.

(iii) Compare the standard CFM per MW before and after the new flow reference method based on CEMs data submitted in the Acid Rain Program, as follows:

SCF/Unit of Generation for first full year of data using new flow rate method
SCF/Unit of Generation for last full year of data using old flow rate method.

(b) Changes in emission monitoring or calculation methods. Actual emission inventories for sources that change the method of monitoring or calculating their emissions will be adjusted to be comparable to the emission monitoring or calculation method that was used in the base year inventory for the Annex (1999 for utilities and 1998 for all other sources).

(c) Changes due to enforcement actions.

(i) Adjustments due to enforcement actions arising from settlements. Adjustments to the milestones must be made, as specified in Section 5.5.2.3.1(c)(3)(a) and (b), if:

(A) An agreement to settle an action is reached between the parties to the action if the action arose from allegations that an owner or operator of an emissions unit at a source in the program failed to comply with applicable regulations that were in effect during the base year;

(B) The alleged failure to comply with applicable regulations affects the assumptions that were used in calculating the source's base year and forecasted sulfur dioxide emissions; and
(C) The settlement includes or recommends an adjustment to the milestones.

(ii) Adjustments due to enforcement actions arising from administrative or judicial orders. If a final administrative or judicial order does not include a reforecast of the source's baseline, the Department must evaluate whether a reforecast of the source's baseline emissions is appropriate.

(iii) Adjustments for enforcement actions. Based on Section 5.5.2.3.1(c)(3)(a) and (b), the milestone must be decreased by an appropriate amount based on a reforecast of the source's decreased sulfur dioxide emissions. The adjustments do not become effective until after the source has reduced its sulfur dioxide emissions as required in the settlement agreement or administrative or judicial order. All adjustments based upon enforcement actions must be made in the form of an implementation plan revision that complies with the procedural requirements of 40 CFR 51.102 and 51.103.

(iv) Documentation of adjustments for enforcement actions. In the periodic plan revision required under 40 CFR 51.309(d)(10), the Department will include the following documentation of any adjustment due to an enforcement action:

(A) Identification of each source under the Department's jurisdiction that has reduced sulfur dioxide emissions pursuant to a settlement agreement or an administrative or judicial order;

(B) For each source identified, a statement indicating whether the milestones were adjusted in response to the enforcement action;

(C) Discussion of the rationale for the Department's decision to adjust or not to adjust the milestones; and

(D) If extra SO₂ emissions reductions (over and above those reductions needed for compliance with the applicable regulations) were part of an agreement to settle an action, a statement indicating whether such reductions resulted in any adjustment to the milestones or allowance allocations and a discussion of the rationale for the Department's decision on any such adjustment.

(4) The annual sulfur dioxide milestone and emissions report for Oregon will document any adjustments that should be made to the milestone for the previous year, as described in (a).

(a) The Department will document the submittal date of this Implementation Plan to implement the regional WEB Trading Program, and the approval date by the EPA Administrator, if applicable.

(5) The Department will retain emission inventory records for non-utilities from 1996 and 1998 until the year 2018 to ensure that changes in emissions monitoring techniques can be tracked.

(6) Compilation of Reports

(a) The WRAP will compile the annual emissions reports submitted by all participating states and tribes into a draft regional emissions report for sulfur dioxide. The WRAP will follow

additional quality assurance procedures developed by states and tribes to identify possible errors in the emissions data, including screening for missing or added sources, name changes, and significant changes in reported emissions. Any questions or anomalies regarding Oregon's report will be referred back to the Department for resolution before WRAP submits the draft regional emission report.

(b) By December 31 of each year, the WRAP will submit the draft regional emission and milestone report to all participating states and tribes and will post the report on the WRAP's web page. The report will include the following information for all states and tribes that have a federally approved implementation plan:

- (i) Actual regional sulfur dioxide emissions (tons/year).
- (ii) Adjustments to account for:
 - (A) changes in flow rate measurement methods,
 - (B) changes in emissions monitoring or calculation methods, or
 - (C) enforcement actions or settlement agreements as a result of enforcement actions.
- (iii) Average adjusted emissions for the last three years (if applicable) for comparison to the regional milestone.
- (iv) Regional milestone adjustments to account for participation by eligible states and tribes and the future operation of smelters in Arizona and New Mexico.

WRAP will also prepare a separate report including information from the states and tribes that have submitted implementation plans that are still under review by the EPA.

(7) The Department will evaluate the draft regional emissions report and propose a draft determination that the sulfur dioxide milestone either has been met in the region, or has been exceeded. If the TSA has not submitted a draft regional emissions and milestone report to the Department by the December 31 deadline for any year, the Department will prepare the report for that year based upon the annual emissions reports submitted by all participating states and tribes to the WRAP for that year. The Department will modify the data in these annual emissions reports or use data where such report(s) have not been submitted, based upon direction received from the EPA.

(8) The Department will advertise availability of the draft regional emissions report and notify the public of the draft determination by publishing a notice in the Oregon Bulletin and by mail to interested persons and legislators. A 30-day public comment period will be established. The Department will also submit the draft determination to EPA for review and comment.

(9) The Department will consider any comments received during the comment period and will submit a copy of all comments and response to comments to the WRAP and all participating states and tribes.

(10) The WRAP will compile the comments and responses from all participating states and tribes and prepare a draft final regional emissions report. The report will be submitted to the states and tribes that are participating in the program and, if necessary, will propose a common program trigger date.

(11) The Department will review and approve the final regional emissions report. The Department will then submit this report to the EPA along with a final determination that the milestone either has been met in the region, or that the milestone has been exceeded and the WEB Trading Program has been triggered in Oregon. This final determination will be submitted to the EPA by the end of March, fifteen months following the milestone year. The first determination will be submitted by March 31, 2005 for the 2003 milestone. If the milestone has been exceeded, the common trigger date proposed in the regional report will become the program trigger date for purposes of implementing the WEB Trading Program. If the Department must establish the program trigger date without a regional emissions and milestone report prepared by the WRAP, the date will be March 31 of the applicable year.

(12) The Department will publish a notice of the final determination in the Oregon Bulletin and in newspapers of general circulation throughout the state of Oregon. This notice will include the milestone and the final annual regional SO₂ emissions for that year. If the milestone has been exceeded, the notice will specify the program trigger date and the first year that WEB sources must be in compliance with the WEB Trading Program provisions as outlined in OAR 340-228-0510.

d. Year 2013 Assessment

(1) Initial Assessment in 2013 Periodic SIP Review.

(a) The Department will work cooperatively with the WRAP and other participating states and tribes to develop a projected emission inventory for SO₂ through the year 2018 using the 2010 regional inventory as a baseline. This projected inventory will be included in the 2010 annual emission and milestone report that will be completed in March 2012, as outlined in section 5.5.2.3.1.c of this plan.

(b) The Department will evaluate the projected inventory and, based upon this information, assess the likelihood of meeting the regional milestone for the year 2018. The Department will include this assessment as part of Oregon's progress report that must be submitted by December 31, 2013, as required by 40 CFR 51.309 (d)(10).

(2) Regional Emissions Report for 2012.

(a) The Department will prepare an SO₂ emissions report for the year 2012 by September 30, 2013, as described in section 5.5.2.3.1.c (1) of this plan. The Department will include a list of all known projects in Oregon that are anticipated to affect SO₂ emissions in 2018. This may include permitted projects, projects that are still in the planning stage, or projections from the affected sources of anticipated emissions in 2018. The status of these projects will be described to provide a better understanding of the degree of certainty that individual projects will be completed by 2018.

(b) The WRAP will compile the information from all participating states and tribes, prepare draft SO₂ inventory projections for the year 2018, and estimate the effect of known future

projects on SO₂ emissions. Projected 2018 emissions will be compared to the 2018 milestone. This information will be included in the draft regional emissions report for 2012 that will be submitted to the Department by December 31, 2013, as outlined in section 5.5.2.3.1.c(5) of this plan.

(3) Consensus Decision

The Department will meet with the participating states and tribes in March 2014 to discuss any comments received on the 2018 emission projections in the draft report. The participating states and tribes will decide, through a consensus process, whether an early trigger of the WEB Trading Program is necessary to meet the SO₂ emission reduction goals in 2018.

(4) Early Trigger

If the participating states and tribes unanimously decide in the March 2014 meeting that an early trigger of the backstop trading program is necessary, the Department will trigger the WEB Trading Program, and the timing of various program elements will be adjusted as follows to ensure that the WEB Trading Program is in place in 2018. The date of the consensus decision by the participating states and tribes to voluntarily trigger the WEB trading program will become the program trigger date.

(a) Allowances for 2018 will be distributed to WEB sources by January 1, 2015.

(b) The first control period will be the year 2018. WEB sources will need to demonstrate at the end of the first control period that they have enough allowances to cover their SO₂ emissions in 2018.

(5) Public Notice

The Department will publish notice of the decision in the Oregon Bulletin and in newspapers of general circulation throughout Oregon. If applicable, the notice will include a statement that the WEB Trading Program is in effect and will specify the program trigger date.

e. Special Penalty Provisions for the 2018 Milestone

If the WEB Trading Program is triggered as outlined in Oregon SIP Section 5.5.2.3 and the first control period will not occur until after the year 2018, a penalty will be assessed for the exceedance of the 2018 milestone.

(1) The Department will allocate allowances to all WEB sources using the methods established in the 2013 SIP revision described in section 5.5.2.3.4 of this plan. WEB sources will have the option of buying and selling allowances during a two-month allowance transfer period as provided in OAR 340-228-0520(1)(c).

(2) At the end of this two-month allowance transfer period, compliance with the allowance limitation will be determined as provided in OAR 340-228-0510. Penalties will be assessed for

SO₂ emissions that are greater than the allowance limitation for each WEB source as provided in OAR 340-228-0510(3) and (4). However, notwithstanding OAR 340-228-0510(1) through (3), SO₂ emissions in the year 2018 for each WEB source will be determined in accordance with the Sulfur Dioxide Milestone Inventory requirements of OAR 340-214-0400 through OAR 340-214-0430.

(3) The 2018 special penalty provision will continue to be applied each year after 2018 until the 2018 milestones have been achieved.

5.5.2.3.2 Pre-Trigger Emissions Tracking Requirements

a. SO₂ Emission Inventory

40 CFR 51.309 sets forth emissions inventory requirements for tracking compliance with the SO₂ milestones. OAR 340-214-0400 to OAR 340-214-0430 has been adopted to supplement Oregon's inventory requirements to satisfy the needs of this program.

(1) Applicability. The Sulfur Dioxide Emission Inventory requirements of OAR 340-214-0400 to OAR 340-214-0430 require all stationary sources with actual emissions of 100 tons per year or more of SO₂ in the year 2000 or in any subsequent year to submit an annual inventory of SO₂ emissions, beginning with the 2003 emission inventory. A source that meets these criteria that then emits less than 100 tons/year in a later year must still submit an SO₂ inventory for tracking compliance with the regional SO₂ milestones until 2018 or until the WEB Trading Program has been fully implemented and emissions tracking is occurring under OAR 340-228-0490, whichever is earlier.

(2) OAR 340-214-0400 to OAR 340-214-0430 contains enforceable conditions requiring WEB sources to:

(a) submit an annual inventory of SO₂ emissions;

(b) use appropriate emission factors and estimating techniques and document the emissions monitoring/estimation methodology used;

(c) include emissions from start up, shut down, and upset conditions in the annual total inventory;

(d) use 40 CFR Part 75 methodology for reporting emissions for all sources subject to the federal acid rain program;

(e) include the rate and period of emissions, the specific installation that is the source of the air pollution, composition of air contaminant, type and efficiency of the air pollution control equipment and other information necessary to quantify operation and emissions, and to evaluate pollution control; and

(f) retain records for a minimum of ten years from the date of establishment, or if the record was the basis for an adjustment to the milestone, 5 years after the date of an implementation plan revision, whichever is longer.

(3) The Department will assure the quality of the submitted inventory data as outlined in the Inventory Preparation Plan. The Department will screen the inventories to identify changes in emission measurement techniques that would require an inventory and milestone adjustment as outlined in Section 5.5.2.3.a (3)

(4) The Department will retain historical emission inventory records for non-utilities (1996 and 1998) that may affect milestone calculations under Section 5.5.2.3.1.c (3) and allocation decisions under Section 5.5.2.3.3.a of this plan until the year 2018 to ensure that changes in emissions monitoring techniques can be tracked.

b. Development of Emissions Tracking System

The Department will work cooperatively with the states and tribes that are participating in the WEB Trading Program to ensure that an emissions tracking system for the regional SO₂ inventory is developed and maintained.

c. Periodic Audit of Pre-Trigger Emission Tracking Database

(1) During the pre-trigger phase when the Department is tracking compliance with the regional SO₂ milestones, the Department will work cooperatively with the participating states and tribes to ensure that an independent audit of the tracking database is conducted to ensure that the WRAP is accurately compiling the regional emissions report. The first audit will occur during the year 2006 and will review data collected during the first two years of the program. Subsequent audits will occur in 2011 (which will cover emissions years 2005-2009) and 2016 (which will cover emissions years 2010-2014).

(2) The primary focus of the audit will be the process that is used to compile the regional inventory from the data provided by each state and tribe and the tracking of accumulated changes during the period between SIP revisions. The audit will also review the accuracy and integrity of the regional reports that are used to determine compliance with the milestones. The audit is not intended to be a full review of Oregon's process for compiling and reporting SO₂ emissions, but it will include a broad review of Oregon's inventory management and quality assurance systems (*i.e.*, presence and exercise of systems to assure data quality and integrity).

(3) The audit will discuss the uncertainty of emissions calculations and whether this uncertainty is likely to affect the annual determination of whether the milestone is exceeded. The audit will identify any recommended changes to emissions monitoring, calculation methods, or data quality assurance systems. The audit will also review and recommend any changes to improve the administrative process for collecting the annual emissions data at the state and tribal level, compiling a regional emission inventory, and making the annual determination of whether the WEB Trading Program has been triggered.

(4) Changes to the WEB trading program, including any changes to the milestones, due to the results of these periodic audits will be submitted to EPA as a SIP revision as part of the five-year SIP review required by 40 CFR 51.309(d)(10).

(5) The Department will respond to comments and provide notice of the availability of the final audit report. The Department will submit the final audit report to EPA's regional office.

5.5.2.3.3 Western Backstop Trading Program Requirements

a. Initial Allocation of SO₂ Allowances

(1) Draft Allocation Report.

Within six months of the program trigger date, as outlined in section 5.5.2.3.1.c(11) of this plan, the Department will submit a draft allocation report to all participating states and tribes and to the Tracking System Administrator. This report will contain the following information:

(a) List of all WEB sources in Oregon as defined in OAR 340-228-400 through OAR 340-228-0530. The list will group the sources into two categories:

(i) Category 1: WEB sources that commenced operation before January 1, 2003. These sources will receive a floor allocation and are eligible for the reducible portion of the allocation.

(ii) Category 2. WEB sources that commenced operation on January 1, 2003 or a later date. These sources will receive a floor allocation, but are not eligible for the reducible allocation. The floor allocation for Category 2 sources will be deducted from the new source set-aside.

WEB sources that have received a retired source exemption under OAR 340-228-0430(5) will be included in the allocation process in the same manner as WEB sources that are currently operating. However, sources that were permanently shut down before the program trigger date are not considered WEB sources under OAR 340-228-0430(1) and will not be included in the allocation process.

(b) Floor allocation for all WEB sources in Oregon.

(i) For non-utility category 1 WEB sources, the floor allocation is as established in the WRAP Report *Market Trading Forum Non-Utility Sector Allocation Final Report from the Allocations Working Group* by E.H. Pechan, November 2002.³ If any additional category 1 sources are identified, the Department will calculate a floor allocation using the methodology outlined in the E.H. Pechan Report.

(ii) For utility category 1 WEB sources, the floor will be calculated by first assigning a "clean unit" emission rate to each unit. The clean unit emission rate will then be multiplied by an annual heat input (MMBtu) that represents a realistic upper bound for the unit.

³ See #7, Oregon Section 309 Reference Materials - Applicable WRAP Reports and Documents. See also WRAP website at <http://www.wrapair.org/309/index.htm>

Note: The floor level approach described above is designed to address equity issues regarding the allocation process for utilities. The Department is participating in ongoing discussions with the other participating states, tribes, and regional stakeholders to ensure that all equity issues have been addressed.

Principles

- Each unit will have enough allowances to operate as a clean source and at an operating rate (capacity factor) that is a realistic upper bound for the unit.
- There will not be significant winners and losers in this process.
- The focus is on a fair approach that is applied equally to all sources rather than on state and tribal budgets.
- The allocation process will use data that reflect current conditions, including current monitoring methodologies.

Equity Issues

- Sources that are currently burning very low sulfur coal may see changes in their supply in the future. Historic actual emissions may not reflect future operations.
- Sources that are currently operating at a low utilization may not reach full capacity in the future. Assumptions about growth that are realistic on the regional level may provide an advantage to some sources and provide inadequate allowances for other sources.
- Some utility units in the region are not BART-eligible and are operating at a low level of control for SO₂. The relative responsibility of BART-eligible vs. non-BART-eligible is a consideration in the process.
- Sources that are operating at a high level of control are already bearing the cost of control, and this affects their ability to compete in the market.
- Sources that have no SO₂ controls are facing a large expense that could affect their ability to continue to operate.
- Emission rate disparities exist throughout the region.

(iii) For category 2 WEB sources, the floor allocation will be the lower of the permitted SO₂ annual emissions for the WEB source or SO₂ annual emissions calculated based on a level of control equivalent to BACT and assuming 100% utilization of the WEB source.

(c) A list of certified early reductions expressed as tons of SO₂. Early reductions will be calculated and certified as follows:

(i) Any WEB source that installs control technology and accepts new permit emission limits that are, for a non-utility source, below its floor as established in this section or, for a utility source, below BACT, may apply for an early reduction credit as outlined in OAR 340-228-0460(5). The application must show that the floor was calculated in a manner that is consistent with the monitoring requirements in OAR 340-228-0480, and the new permit must contain monitoring requirements that are consistent with OAR 340-228-0480. The credits that accumulate from the time the new controls come on line until the program trigger date will be allocated to the WEB source over a 10 year period. The use of early reduction credits in any control period is limited to no more than five percent, systemwide, of the existing available allowances, as provided in Section 5.5.2.3.3.a(2)(f) of this plan.

(ii) The Department will review the application and certify early reductions for each full year between 2003 and the program trigger year that meet the requirements of OAR 340-228-0460(5) and this plan.

(iii) The source's certified early reductions will be summed for all years to obtain the total certified early reductions for each source.

(d) A list of all renewable energy facilities in Oregon that began operation after October 1, 2000 and the MW of installed nameplate capacity for each of these resources. Renewable energy credits will be granted at a rate of 2.5 tons per MW and will accumulate from the beginning of the facility's operation. Their use in any control period is limited to no more than five percent, systemwide, of the existing available allowances, as provided in Section 5.5.2.3.3.a(2)(g) of this plan.

(e) Historical SO₂ emissions data for all Category 1 sources for the purposes of calculating the reducible allocation.

(i) For utilities, the average SO₂ emissions of the years 2000-2002. Another time period may be used for individual emission units if needed to be representative of normal operating conditions.

(ii) For non-utilities, the average of SO₂ emissions reported in the years 1996 and 1998.

(f) Changes due to enforcement actions or settlement agreements as a result of enforcement actions. The adjustment will be determined in accordance with Section 5.5.2.3.1(c)(3)(c) of this plan. The difference between the WEB source's allocations before and after the enforcement action will be removed from the allocation pool.

(2) Compiled Allocation Report

The Tracking System Administrator will compile the information provided by all participating states and tribes into a draft regional allocation report and submit the draft regional report to all

participating states and tribes for review and comment thirty days after receiving the preliminary allocation reports. The draft report will include a proposed budget for each state and tribe and the proposed allocation for each WEB source in Oregon.

The following methodology for calculating the proposed regional allocation for utilities and non-utilities is based on the assumption that the states of Arizona, Oregon, New Mexico, Utah, and Wyoming are the only participating states in the WEB Trading Program. These five states are actively pursuing a SIP under section 309 of the Regional Haze Rule, and it is unlikely that any other states will be able to develop a SIP under section 309 by the December 31, 2002 deadline. The Department will work closely with the other four states that are developing Section 309 SIPs to ensure that the regional allocation is distributed consistently and fairly and to address any change in status that may affect this process. Additionally, the State of Oregon will use the same regional allocations methodology as the other participating 309 states to allocate allowances to the sources in Oregon. Tribal nations may participate in the program at a later date under the provisions of the Tribal Authority Rule. There are currently four category 1 sources operating on tribal lands under the jurisdiction of three tribal nations. The following methodology will remain unchanged if any of these tribal nations opt in to the program at a later date because the allocation for any of the four existing tribal sources will be covered by the opt-in adjustment for the tribe, and the allocation for any new sources will be covered by the regional new-source set-aside.

- (a) Table 5.5.2-8 shows the calculation of the available allocation for existing sources. The base milestone for the 5-state region calculated in accordance with section 5.5.2.3.1.a(2) of this plan is the starting point. The base milestone does not include the smelter set-aside. 20,000 tons of SO₂ is then subtracted for a tribal set-aside.

Table 5.5.2-8. Utility/Non-utility Split

	Base Milestone from Table 5.5.2-5	Tribal Set-Aside	New Source Set-aside	Remaining Allocation	Utility Portion	Non-utility portion
2003	446,904	20,000	6,390	420,514	275,027	145,488
2004	446,904	20,000	6,390	420,514	275,027	145,488
2005	446,904	20,000	6,390	420,514	275,027	145,488
2006	446,904	20,000	6,390	420,514	275,027	145,488
2007	446,904	20,000	6,390	420,514	275,027	145,488
2008	447,014	20,000	12,902	414,112	275,636	138,476
2009	447,123	20,000	12,902	414,221	275,708	138,513
2010	447,333	20,000	12,902	414,331	275,782	138,549
2011	447,333	20,000	12,902	414,331	275,782	138,549
2012	447,333	20,000	12,902	414,331	275,782	138,549
2013	435,455	20,000	19,370	396,085	259,171	136,914
2014	423,676	20,000	19,370	384,306	251,463	132,843
2015	411,898	20,000	19,370	372,528	243,757	128,771
2016	411,898	20,000	19,370	372,528	243,757	128,771
2017	411,898	20,000	19,370	372,528	243,757	128,771
2018	309,087	20,000	19,370	269,717	155,367	114,350

(b) Table 5.5.2.-8 shows the new source set-aside for the 5-state region.

(i) The new source set-aside is calculated by subtracting the new source set-aside adjustment listed in Table 5.5.2-9 for all states and tribes that do not have a federally approved Implementation Plan for the WEB trading program under 40 CFR 51.309 as of the program trigger date from the maximum possible set-aside for each of the first five years of the trading program.

Table 5.5.2-9: New Source Set-Aside Adjustment

	2003 - 2007	2008 - 2012	2013 - 2018
Maximum Possible Set-Aside	9,000	18,000	27,000
State or Tribe	Adjustment (tons/yr SO₂)		
1. Arizona	1,757	3,596	5,437
2. California	559	1,039	1,532
3. Colorado	1,480	2,945	4,364
4. Idaho	270	496	721
5. Nevada	302	618	1,011
6. New Mexico	1,267	2,512	3,889
7. Oregon	393	795	1,075
8. Utah	640	1,293	1,949
9. Wyoming	2,333	4,706	7,020
10. Tribes	No adjustment needed	No adjustment needed	No adjustment needed

(ii) Subtract the floor allocation for all WEB sources in the region that were identified as Category 2 from the new source set-aside for the 5-state region to determine the available allocation for new sources that begin operation after the program trigger date. The allocation process for these new sources is described in section 5.5.2.3.3.c of this plan.

Example calculation of the new source set-aside.

The example uses the following assumptions:

- (i) Emissions exceed the milestones based on an average of the years 2003-2005.
- (ii) The program trigger date is March 31, 2007.
- (iii) The first 5 years of the program are 2011-2015.
- (iv) Five states are participating in the program (AZ, NM, OR, UT, WY).
- (v) New sources that commenced operation between January 1, 2003 and the program trigger date have a total floor allocation of 6,000.

	2011	2012	2013	2014	2015
Maximum Possible Set-Aside	18,000	18,000	27,000	27,000	27,000
5-State Adjustment	- 5,098	-5,098	-7,628	-7,628	-7,628
Floor for Category 2 Sources	-6,000	-6,000	-6,000	-6,000	-6,000
Remaining New Source Set-aside	6,902	6,902	13,372	13,372	13,372

(c) The remaining allocation shown in Table 5.5.2-8 is available for distribution to category 1 sources. The final two columns in Table 5.5.2-8 split this remaining allocation into a utility allocation and a non-utility allocation. Apply any milestone adjustments due to the smelter set-aside as outlined in section 5.5.2.3.1(a)(3) to the non-utility allocation listed in Table 5.5.2-8.

(d) Subtract the floor allocations for all category 1 utility and non-utility sources in the region from the utility allocation or the non-utility allocation.

(e) Calculate the early reduction allocation.

(i) Divide the number of certified early reduction credits for all WEB sources in the region by ten.

(ii) Add the utility allocation for 2018 to the non-utility allocation for 2018 and then multiply this total by 0.05.

(iii) If the product of paragraph (i) is no more than the product of paragraph (ii), the product of paragraph (i) is the early reduction allocation, and each source is allocated ten percent of its early reduction credits.

(iv) If the product of paragraph (i) is more than the product of paragraph (ii), the early reduction allocation for the region is the product of paragraph (ii). To determine a source's allocation, divide the product of paragraph (ii) by 0.10 times the total number of early reduction credits and apply that ratio to the early reduction credits claimed by the source.

(v) Split the regional early reduction allocation based on the ratio of utility to non-utility allocations in 2018 and subtract the early reduction allocation from the utility and non-utility allocation totals.

(vi) The early reduction allocation will be calculated in a similar manner for the second five-year allocation period under this program. It will then be discontinued for any future allocation periods.

(g) Calculate the regional renewable energy allocation.

(i) Add together the reported MW of installed nameplate capacity for renewable energy facilities reported by the participating states and tribes and then multiply this number by 2.5.

(ii) Add the utility allocation for 2018 to the non-utility allocation for 2018 and then multiply this total by 0.05.

(iii) If the product of paragraph (i) is no more than the product of paragraph (ii), the product of paragraph (i) is the renewable energy allocation.

(iv) If the product of paragraph (i) is greater than or equal to the product of paragraph (ii), the renewable energy allocation for the region is the product of paragraph (ii). To determine a source's allocation, divide the product of paragraph (ii) by the total number of renewable energy credits and apply that ratio to the early reduction credits claimed by the source.

(v) Split the regional renewable energy allocation based on the ratio of utility to non-utility allocations in 2018 and subtract the renewable energy allocation from the utility and non-utility allocation totals.

(g) Any remaining allowances in the utility allocation or the non-utility allocation after subtracting the early reduction allocation and the renewable energy allocation is considered the reducible allocation and will be assigned to Category 1 sources.

(i) For non-utility sources, add together the historic SO₂ emissions in accordance with section 5.5.2.3.3(a)(1)(e) of this plan for all Category 1 non-utility sources in the region to determine an historic emissions total. Determine a percent contribution of SO₂ emissions for each WEB source to the historic emissions total. Multiply the non-utility reducible allocation calculated in paragraph (h) by the percent contribution for each WEB source to determine a reducible allocation for each WEB source.

(ii) For utility sources, the reducible allocation will be distributed to sources that emitted above their floor in the baseline period (2000 through 2002) based on their percentage of total floor emissions for sources emitting above the floor times the number of reducible allowances available for the first five years of the WEB Trading Program. The number of allowances for any source receiving a reducible allocation may not exceed a recent historic emission rate times a heat input that represents a realistic upper bound for the unit.

Note: The approach for distributing the reducible utility allocation described above is designed to address equity issues regarding the allocation process for utilities. The Department is participating in ongoing discussions with the other participating states, tribes, and regional stakeholders to ensure that all equity issues have been addressed. The principles and equity issues that are under discussion are listed in section 5.5.2.3.3(a)(1)(b)(ii) of this plan.

(h) Add together the floor allocation, early reduction allocation, renewable energy resource allocation, and reducible allocation for each WEB source and each renewable energy source to determine the proposed allocations for the first five years of the WEB Trading Program.

(i) Add together the proposed allocations for all of the WEB sources in the jurisdiction of each participating state and tribe to determine a draft SO₂ allowance budget for each state and tribe.

(j) The total allowances allocated each year will not exceed the milestone established for that year.

(3) Public Comment Period

The Department will publish notice of availability of the draft regional allocation report in newspapers of general circulation throughout Oregon. A minimum 30-day public comment period will be established, and a hearing will be held during the comment period. The Department will consider the comments and will revise the draft report as needed.

(4) Proposed Changes Submitted to Tracking System Administrator

The Department will submit proposed changes to the budget and source allocations to the Tracking System Administrator within sixty days of receipt of the draft regional allocation report.

(5) Compilation of Changes

The Tracking System Administrator will compile the proposed changes and submit a final draft regional allocation report to the Department for approval within 30 days of receiving the recommended changes.

(6) Final Regional Allocation Report

The Department will review the final regional allocation report and determine the budget for Oregon and allocations for WEB sources within Oregon in accordance with the provisions of this plan within thirty days of receipt of the final draft allocation report. The Department will submit the budget and allocations for all WEB sources in Oregon to EPA and notify the Tracking System Administrator that the WEB source allocations should be recorded in the allowance tracking system.

(7) The Department will notify all WEB sources within Oregon of the number of allowances that have been recorded in their compliance account. The notice will include a warning to the WEB sources that reported annual sulfur dioxide emissions may change due to the implementation of new monitoring methodologies as required by OAR 340-228-0480. Allocations for the first five years of the program will not be adjusted to account for changes due to the new monitoring methodology. However, allocations during the next five-year distribution will be adjusted as needed to account for paper changes in emissions due to changes in monitoring methodology.

b. Distribution of Allowances for Future Control Periods.

By December 1 of the year five years after the initial allocation, the Department will follow the process outlined in section 5.5.2.3.3.a of this plan to distribute allowances for the next five-year period. This process will continue every five years until allowances have been allocated through the year 2018.

c. Distribution of the New Source Allocation

(1) The new source set-aside will be available for two categories of sources.

(a) A new WEB source is eligible to receive an annual allocation equal to the annual sulfur dioxide limit in the source's approval order, beginning with the first full year of operation and in accordance with the provisions of OAR 340-228-0460(6).

(b) An existing WEB source that has increased production capacity through a new approval order issued under OAR 340-224 is eligible to receive an allocation from the new source set-aside equal to:

(i) the permitted annual sulfur dioxide emissions limit for a new unit; or

(ii) the permitted annual SO₂ emission increase for the WEB source due to the replacement of an existing unit with a new unit or the modification of an existing unit that increased production capacity of the WEB source.

The allocation from the new source set-aside in the first year of operation will be adjusted to account for the number of days that the source is operating in that first year.

EXAMPLE. A new unit with a nameplate capacity of 400 MW is constructed at a power plant with two existing units with nameplate capacities of 400 MW and 300 MW. The two existing units install SO₂ controls and reduce emissions to meet PSD requirements for the construction of the new unit. In this example, the source would continue to receive a floor and a reducible allocation for each of the existing units. It also would be eligible to receive an allocation from the new source set-aside for the new unit. Even though total SO₂ emissions will decrease at this plant due to the construction of the new unit, the allowances allocated to the source will increase to reflect the increase in production capacity of 400 MW of electricity. If the new unit comes on line on July 1, the allocation for the first year will be reduced by 50 percent because the unit was operational for half of the year.

(2) Allocations from the new source set-aside will remain constant for the applicable WEB source and will be made on an annual basis by March 31 of each year for the current control period. When the next five-year allocation block is distributed as outlined in section 5.5.2.3.3.b of this plan, all sources with an allocation under the new source set-aside will receive a five-year allocation block from the new source set-aside and will continue to receive this allocation in future five-year allocation blocks.

(3) Owners or operators of new WEB sources or modified WEB sources that meet the eligibility requirements of (1) may apply for an allocation from the new source set-aside by submitting a written request to the Department as outlined in Section OAR 340-228-0460(6).

(4) The Department will review the application for an allocation from the new source set-aside for accuracy and completeness and notify the source of the Department's intent to distribute allocations from the regional new source set-aside, pending verification that allowances are

available in the new source set-aside account. The Department will forward the request to the Tracking System Administrator.

(5) The Tracking System Administrator will document the date that it receives the request. Requests for allocation of allowances from the new source set-aside will be processed in the order received. The Tracking System Administrator will deduct the number of allowances requested from the regional new source set-aside that was established by the participating states and tribes and will record an equal number of allowances in the source's compliance account for each remaining year of the five-year period. The Tracking System Administrator will then send written notification to the source and to the Department that the allowances have been recorded in the source's compliance account.

(6) If there are insufficient allowances remaining in the new source set-aside to fulfill the request, the source must purchase the allowances required to demonstrate compliance. Any eligible WEB source that does not receive an allocation from the new source set-aside because the set-aside was depleted will be first in line to receive an allocation when the new source set-aside is increased in the next five-year period as outlined in Table 5.5.2-10 of this plan. If there is more than one such source, their allocation requests will be processed in the order they were received by the Tracking System Administrator.

(7) A source that has received a retired source exemption and continues to receive an allocation as a retired WEB source is ineligible to receive an allocation from the new source set-aside.

d. Regional Tribal Set-aside

(1) Each year after the program is triggered, 20,000 allowances will exist as a tribal set-aside.

(2) The tribal caucus of the WRAP has stated its intent to determine the means for distributing the allowances among the tribes by one year after the program trigger date. The Department understands that there will be a process that will meet the tracking and data security requirements of the allowance tracking system by which a tribe will move its set-aside allowances into the trading program for the purposes of trading.

(3) The Department recognizes that the tribal set-aside allowances are bonus allowances for the tribes and, as such, are separate and in addition to any allowances included in a tribal budget or the new source set-aside as outlined in the allocation report that is prepared in accordance with section 5.5.2.3.3.a(6) of this plan.

e. Distribution of Allowances for Opt-in Sources.

The WRAP Market Trading Forum recommended including provisions in this plan that allow smaller sources to opt in to the program. Opt-in sources may provide a more cost-effective way to reduce overall regional SO₂ emissions and, therefore, may strengthen the market incentives of this program. While the benefits of allowing sources to opt in to the program are important, the program must also provide safeguards to ensure that the integrity of the program is not affected. For example, it would be counter productive to allow sources that were already

planning to shut down to opt in the to program and then sell allowances to an existing source. In this example, regional emissions could slowly creep upward in a manner that is inconsistent with the goals of the SO₂ milestones.

The Department has deferred including provisions for opt-in sources until a future SIP revision. This will allow time to thoroughly consider how to provide the flexibility and potential benefits to the market by expanding the program while also ensuring that the SO₂ emission reduction goals are maintained.

f. WEB Allowance Tracking System (WEB ATS)

Section 51 CFR 309(h)(4)(v) requires a centralized system for the tracking of allowances and emissions. The centralized system will be referred to as the WEB Allowance Tracking System (WEB ATS). The WEB ATS must provide that all necessary information regarding emissions, allowances, and transactions is publicly available in a secure, centralized database. The ATS must ensure that each allowance is uniquely identified, allow for frequent updates, and include enforceable procedures for recording data.

The Department will work cooperatively with other states and tribes participating in the WEB Trading Program to designate this system. The Department will be responsible for ensuring that all the ATS provisions are completed as described in this plan.

The ATS will not exist unless the program is triggered. Before implementing the WEB Trading Program, a separate emissions tracking database will be employed to track the ongoing emissions of sources emitting SO₂ at amounts equal to or greater than 100 tons per year. The emissions tracking database, used to track and measure SO₂ emissions against the milestones, will still exist once the WEB Trading Program is triggered; however, it will become incorporated into the SO₂ Allowance Tracking System. Both the emissions tracking database and the ATS will be centralized systems with data posted in a format, including an electronic, Web-based program, and available to all persons.

The participating states and tribes will contract with a common Tracking System Administrator to service and maintain the WEB ATS. It is envisioned that the ATS will require the use of a contracted consultant or database design engineer to create a secure, efficient and transparent tracking system. Because all states and tribes participating in the program will use the ATS program, the design will require a uniform approach and level of security that will satisfy regional needs and concerns as well as meet the electronic, Web-based, access needs and security provisions. Due to the dynamic needs of the marketplace, the ATS will require a database that will reflect the current status of allowances and allowance transactions. The ATS will be operational within one year after the program trigger date.

Specifications of the WEB ATS, such as emissions tracking, recording allowance transactions, account management, system integrity, and transparency are outlined in an appendix to this plan. The appendix and related Sections of OAR 340-228-0400 through OAR 340-228-0530 detail how a WEB source will register for the ATS and how the source will, through an account representative, establish accounts, transfer allowances, and track unused allowances from a

previous year. The account representative will also look to the appendix to determine the appropriate interface with the ATS.

Neither the Department nor the TSA will adjudicate any dispute between the parties concerning the authorization of any Account Representative with regard to any of the Account Representative's representations, actions, inactions, or submissions.

As an example of how the WEB ATS will generally function once the WEB Trading Program is triggered, a WEB source will have its allowance allocation determined. At the same time, the WEB source's Account Representative will register for the ATS under OAR 340-228-0450, and a compliance account will be established under OAR 340-228-0470. Each allowance will be assigned a serial number. The allowance serial number will be used by the WEB ATS to track allowance allocations, transfers (OAR 340-228-0490), deductions, and to account for any unused allowances from a previous year (OAR 340-228-0500). The serial number will also be assigned each allowance recorded in a general account, which is an account for allowances that are not held to meet program compliance requirements. Furthermore, the ATS will track tribal allowance set-asides and new source allowance set-asides not yet assigned to either a compliance or general account.

It is important to note that while an effort has been made in this plan to provide a design for and an operational understanding of the ATS, the components of the ATS will need to be examined and possibly altered upon each required SIP revision.

g. Allowance Transfers

40 CFR 51.309(h)(4)(viii) requires the Implementation Plan to include provisions for detailing the process for transferring allowances between parties. Transfers are defined as the conveyance from one account to another account (compliance account or general account) of one or more allowances by whatever means, including but not limited to purchase, trade, or gift in accordance with the procedures established in OAR 340-228-0490. This includes transfer of allowances for the purpose of retirement. Once an allowance is retired, it is no longer available for transfer to or from any account. Allowances may be purchased by any party for the purpose of retirement.

The Tracking System Administrator will have specific recording requirements involving transfers. These required procedures will be detailed in the service contract and will include the following activities.

(1) Recording of Allowance Transfers

Within five business days of receiving an allowance transfer, except when the transfer does not meet the requirements of OAR 340-228-0490, the Tracking System Administrator will record an allowance transfer by moving each allowance from the transferor account to the transferee account as specified by the request, provided that:

- (a) The transfer is correctly submitted; and

(b) The transferor account includes each allowance identified in the transfer.

Any allowance transfer that is submitted for recording after the allowance transfer deadline and that includes any allowances allocated for a control period before or the same as the control period to which the allowance transfer deadline applies will not be recorded until after the compliance account reconciliation is completed.

If an allowance transfer submitted for allowance transfer recording fails to meet the requirements of OAR 340-228-0490, the Tracking System Administrator will not record such transfer.

(2) Notification of the Recording of Allowance Transfers

The Tracking System Administrator has specific responsibilities involving the notification of the recording of any transferred allowances, including the failure to record any transfer of allowances. Again, these required procedures will be outlined in the service contract but must include the following.

(a) Within five business days of the recording of an allowance transfer, the Tracking System Administrator will notify the Account Representatives of both the transferor and transferee accounts and make the transfer information publicly available on the Internet.

(b) Within five business days after receiving an allowance transfer that fails to meet the requirements of OAR 340-228-0490, the Tracking System Administrator will notify the Account Representatives of both accounts of the decision not to record the transfer and the reasons for not recording the transfer.

h. Use of Allowances from a Previous Year

(1) Background

51 CFR 309(h)(4)(ix) allows states to include in the implementation plan provisions for banking unused allowances from a previous year. The unused allowances may be kept for use in future years in accordance with OAR 340-228-0500 and describe the restrictions on the use of the allowances in accordance with OAR 340-228-0500. The federal rule requires that allowances kept for use in future years may be used in calendar year 2018 only to the extent that the implementation plan guarantees that such allowances will not interfere with achieving the 2018 milestone as outlined in Table 5.5.2-4 of this plan and adjusted according to the provisions of section 5.5.2.3.1.a (2) and (3). OAR 340-228-0500 addresses this requirement by prohibiting the use of allowances allocated for the years 2003-2017 after the year 2017. This provision ensures that actual emissions will be less than the 2018 milestone because only allowances allocated for the year 2018 could be used to show compliance in that year. The provision also maintains flexibility by resetting the baseline to the year 2018 and then allowing sources to once again use extra allowances to show compliance in any future year. This flexibility is important for sources that have variable operations because the source may build up a reserve of unused allowances for use in a high production year.

The Annex explains the benefits of allowing the WEB source to use unused allowances from previous years, including increased flexibility and early reduction stimulus. The risk of allowing allowances to be carried over from a previous year is the possible increase in emissions in later years as the unused allowances are withdrawn for compliance.

Because the regional haze SIP is based on reasonable progress requirements related to remedying or preventing any future visibility impairment, it is important to assure that using these allowances will not interfere with attaining or maintaining any reasonable progress goals. The safeguard for mitigating this type of risk is termed “flow control,” which is described below.

(2) Flow Control Provisions

At the end of each control period, WEB sources may transfer allowances in and out of their compliance account for a period of 60 days to ensure that the account will contain enough allowances to cover SO₂ emissions during the previous year. At the end of the sixty-day transfer period, allowances will be deducted from the compliance account of each WEB source in an amount equal to the sulfur dioxide emissions of that source during the control period.

After the deductions have been completed, the Tracking System Administrator will perform the following calculations and prepare a report according to section 5.5.2.3.3.k(b) of this plan.

(a) Determine the total number of allowances remaining in the allowance tracking system that were allocated for the just-completed control period and all previous control periods.

(b) If the number calculated in (a) exceeds 10 percent of the milestone for the next control period, then the flow control procedures in OAR 340-228-0500 will be triggered for that next control period. These flow control provisions will discourage the excessive use of allowances that were allocated for an earlier control period without establishing an absolute limit on their use. WEB sources will maintain the option of using allowances allocated for an earlier control period but will be required to use two allowances for each ton of SO₂ emissions. Flow control operates as follows:

(i) The flow control ratio is calculated by multiplying 0.1 times the milestone for the next control period and then dividing that number by the total number of unused allowances remaining in the system.

(ii) To calculate the number of prior-year allowances that can be used without restriction by a source for the next control period, the TSA will multiply the prior-year allowances by the flow control ratio. The resulting number of allowances may be used on a one-to-one ratio to show compliance with the source’s emission limitation.

(iii) The remaining prior-year allowances may be used on a two-to-one ratio to show compliance. Thus, WEB sources will maintain the option of using allowances allocated for an earlier control period but must use two of those allowances for each ton of SO₂ emissions.

Example: On March 1, 2010 (the compliance transfer deadline for the 2009 control period), the Tracking System Administrator deducts allowances from the compliance account for each WEB source to cover 2009 SO₂ emissions from that source. After completing these deductions, the TSA reports the following information:

Total number of allowances still in the system for the years 2003 – 2009 = 75,000
2010 milestone (5-state, no smelter) = 508,223
Percent of milestone = 14.75 %

Because the number of allowances not used in previous control periods is greater than 10% of the milestone, flow control procedures are triggered. In the annual report required in 5.5.2.3.l(1), the TSA will then calculate the flow control ratio for 2010:

$0.1 \times 2010 \text{ Milestone} \div \text{prior year allowances} = \text{flow control ratio}$
 $20.1 \times 508,223 \div 75,000 = 0.67$

On March 1, 2011 (the compliance transfer deadline for the 2010 control period), the TSA will apply the 2010 flow control ratio before deducting allowances from each WEB source's compliance account

WEB Source A
2010 Allowances = 1,000
Remaining Prior Year Allowances = 500
2010 Emissions = 1,400

In this example, the TSA would multiply the prior year allowances by 0.67 to determine the number of prior year allowances that could be used without restriction, at a one-to-one ratio. This would equal 335. The remaining prior year allowances would then be used at a 2:1 ratio. 130 allowances would be needed to cover the remaining 65 tons of SO₂ emissions. The TSA would therefore deduct a total of 1,465 allowances (1,000 + 335 + 130) to cover 1,400 tons of SO₂ emissions.

i. Monitoring/Recordkeeping section

(1) For WEB sources subject to 40 CFR Part 75, the TSA will use data that has been quality assured and finalized by the EPA.

(2) The data will be verified and submitted to the emissions tracking database as soon as reasonably feasible after annual emissions are reported by the WEB sources. The Department will review the data and modify the timelines, as necessary, according to the monitoring protocols.

j. Compliance and Penalties

(1) Compliance

When a WEB source exceeds its allowance limitation, the Department will require the Tracking System Administrator to deduct allowances from the following year's allocation in an amount equal to two times the WEB source's emissions of SO₂ in excess of its allowance limitation. This deduction will be made from the WEB source's compliance account after deductions for compliance under OAR 340-228-0510. If sufficient allowances do not exist in the compliance account for the next control period to cover this amount, the Department will require the Tracking System Administrator to deduct the required number of allowances, regardless of the control period for which they were allocated, whenever the allowances are recorded in the account.

(2) Penalties

The amount of the penalty will be evaluated at each five-year SIP review and adjusted so that penalties per ton exceed the expected cost of allowances to ensure that this remains a stringent penalty. OAR 340-228-0510(3)(b) establishes a penalty for each ton of emissions above the source's allowance limitation, in accordance with OAR 340, Division 12. This is in addition to the two allowances from the next year's allocation to be deducted from the account for each one allowance of exceedance. For a violation of any provision of the market trading program, each day of excess emissions during the control period is a separate violation under Oregon's rule, and each ton of excess emissions is a separate violation.

k. Periodic Evaluation of the Trading Program

(1) Annual Report

(a) Beginning one year after compliance with the trading program is required, the Tracking System Administrator will provide to the Department an annual report containing the following information:

(i) The level of compliance program-wide;

(ii) A summary of the use and transfer of allowances, both geographically and temporally;

(iii) A source-by-source accounting of allocations compared to emissions;

(iv) A report on the use of unused allowances from a previous year in order to determine whether these emissions have or have not contributed to emissions in excess of the cap; and

(v) The total number of WEB sources participating in the trading program and any changes to eligible sources, such as retired sources or sources that emit more than 100 tons of SO₂ after the program trigger date.

(b) Within 10 months after the allowance transfer deadline for each control period when compliance with the trading program is required, the Tracking System Administrator will prepare a draft report that lists:

- (i) the total number of allowances deducted for the control period,
 - (ii) the total number of allowances remaining in the Allowance Tracking System allocated for that control period and any earlier control period,
 - (iii) a proposed determination that flow control procedures either have or have not been triggered for the next control period, and calculated according to Section 5.5.2.3.3.d(2) of this State Implementation Plan.
- (c) The Department will evaluate the draft report and propose a determination that flow control procedures either have or have not been triggered for the next control period.
- (d) The Department will publish notice of availability of the draft report in newspapers of general circulation throughout Oregon and hold a 30-day public comment period.
- (e) After the comment period, the Department will make a final determination that the flow control procedures either have or have not been triggered for the next control period. If the flow control procedures have been triggered, the Department will notify all WEB sources in Oregon that flow control procedures will be in effect during the next control period.

(2) Five-year Evaluation

(a) The Department will work cooperatively with other participating states and tribes to conduct an audit of the WEB Trading Program no later than three years following the first full year of the trading program and at least every five years thereafter. This evaluation does not replace the implementation plan assessments in 2008, 2013, and 2018 as required by the regional haze regulations. The evaluation will be conducted by an independent third party and include an analysis of:

- (i) Whether the total actual emissions could exceed the values in Table 5.5.2-4 of this Implementation Plan even though sources comply with their allowances;
- (ii) Whether the program achieved the overall emission milestone it was intended to reach;
- (iii) The effectiveness of the compliance, enforcement, and penalty provisions;
- (iv) A discussion of whether states and tribes have enough resources to implement the WEB Trading Program;
- (v) Whether the trading program resulted in any unexpected beneficial effects or any unintended detrimental effects;
- (vi) Whether the actions taken to reduce sulfur dioxide have led to any unintended increases in other pollutants;

(vii) Whether any changes are needed in emissions monitoring and reporting protocols or in the administrative procedures for program administration and tracking;

(viii) The effectiveness of the provisions for interstate trading and whether any procedural changes are needed to make the interstate nature of the program more effective; and

(ix) The integrity of the emissions and allowance tracking system, including whether the procedures for recording transactions are adequate, the procedures are being followed and in a timely manner, the information on sources' emissions are accurately recorded, the emissions and allowance tracking system has procedures in place to ensure that the transactions are valid, and back-up systems are in place to account for problems with loss of data.

(b) The public will have an opportunity to participate in this trading program evaluation.

(c) In the event that any audit results in recommendations for program revisions, the State of Oregon, in consultation with the WRAP, will make appropriate modifications to this plan. The State of Oregon will revise this plan if the program is not meeting its emission reduction goals.

(d) The Department will submit a copy of the report to EPA Region X.

I. Retired Source Exemption

OAR 340-228-0430(5) outlines the procedure that a WEB source must follow to receive a retired source exemption. The exemption allows a source to continue receiving an allocation, but exempts the source from monitoring and recordkeeping requirements that would serve no useful function for a source that has ceased operations. The Department will notify the source of its obligation to apply for a retired source exemption when the permit is cancelled or relinquished.

To receive a retired source exemption, the source must submit a request for the exemption to the Department. The Department will review this request and notify the source within sixty days of receipt of the request whether the retired source exemption has been granted or rejected. If the Department rejects the request for exemption, the notification will explain why.

The TSA will record an allocation to a WEB source that has received a retired source exemption. However, the allowances will be recorded in a general account rather than a compliance account for the source.

A WEB source that is permanently retired and that does not request a retired source exemption will forfeit all abandoned allowances in that source's compliance account, as outlined in OAR 340-228-0430(5)(e). The forfeited allowances will not be redistributed to other sources but will be permanently retired from the Allowance Tracking System, as outlined in OAR 340-228-0490(3). During the next five-year allowance distribution period, the retired source will not receive an allocation, and the allowances that would have been distributed to that source will be added to the new source set-aside.

m. Integration into Permits

40 CFR §51.309 requires that the requirements for emissions reporting and for the trading program be incorporated into a permit that is enforceable as a practical matter by EPA and by citizens to the extent permitted by the Act. It is expected that all WEB sources will, at least initially, be subject to Oregon's Title V permitting requirements. Under OAR 340, Division 218, Oregon's delegated Title V permitting program, the pre- and post-trigger requirements of the market trading program meet the definition of "applicable requirements" and will be incorporated into each source's Title V permit. OAR 340-228-0530 requires that any source that for any reason and at any time is not required to have a permit under OAR 340, Division 218 must obtain a New Source Review permit pursuant to OAR 340-224 that incorporates the same requirements. Both types of permits are federally enforceable by EPA.

5.5.2.3.4 2013 SIP Revision; Backstop for beginning of second planning period

In addition to the requirements of 40 CFR § 51.309(d)(10), the periodic SIP revision due in 2013 will contain:

- a. Source specific allocations for all WEB sources in Oregon for the year 2018; and
- b. Either the provisions of a program designed to achieve reasonable progress for stationary sources of SO₂ beyond the 2018 or a commitment to submit a SIP revision containing the provisions of such a program no later than December 31, 2016. The program will ensure that the requirements of 40 CFR § 51.309 for the first planning period are achieved, including requirements that cannot be measured until after 2018, such as the determination of compliance with the 2018 milestone.

This 2013 SIP revision will provide certainty to sources regarding their potential liability under the special penalty provisions for the year 2018 outlined in Section 5.5.2.3.1.e of this plan. The calculation of these allocations is delayed until 2013 to provide certainty about the number of sources that would qualify as WEB sources at that time; the allocations needed for new sources in the region; and the magnitude of renewable energy development and early reductions that would need to be included in the allocation process. It is difficult to estimate the impact of these factors in 2003 because many things may change during the next 10 years.

If the 2018 milestone is not met, the starting point for the next planning period will be the 2018 milestones, not actual emissions in 2018.

5.5.2.4 Mobile Source Strategy

5.5.2.4.1 Regulatory History and Requirements

In its June 1996 Report, the GCVTC recommended EPA move forward on new national vehicle emission and fuel standards to reduce emissions from mobile sources. The GCVTC also recommended other regional and local strategies be considered to manage mobile source emissions. One of the local strategies was to establish emission budgets for those pollutants in urban areas shown to significantly contribute to visibility impairment in any of the 16 GCVTC Class I areas. The budget caps were to be set at the 2005 emission levels.

When EPA finalized the Regional Haze Rule in July 1999, the rule acknowledged the GCVTC recommendations related to national vehicle emission and fuel standards. EPA included a status of planned actions on those recommendations as of July 1999 (Preamble to the regional haze rule, 64 FR 35753). EPA noted these new measures were over and above those included in the Regional Haze Rule for mobile sources that simply required a cap on emissions in significantly contributing urban areas at the 2005 level. EPA also indicated that emission reductions resulting from new standards adopted after the Regional Haze Rule was approved would be creditable toward reasonable progress. EPA also committed to work with the states if new national standards impacted the efficacy of regional or local strategies.

After the Regional Haze Rule was finalized, EPA established new standards for on-road vehicle emission and fuel standards. As a result, current mobile source emission projections developed by WRAP for the GCVTC Transport Region indicate overall mobile source emissions will decline continuously from 2003 through the end of the SIP planning period in 2018, which is more than the level of emission reductions that EPA approved to meet reasonable progress. In addition, new standards for off-road vehicles were proposed by EPA on April 15, 2003, and are expected to be finalized by the end of 2003, which will further reduce overall mobile source emissions.

In April 2003, the WRAP approved a recommendation for EPA to eliminate the current requirements related to mobile source emission significance determination and budgets in 40 CFR 309(d)(5)(ii) and (iii), and replacing those requirements with a new requirement focused on tracking mobile source emission reductions resulting from national standards to assure reasonable progress. This action was based on the finding that emissions of all pollutants from on-road and off-road mobile sources are expected to decline significantly through 2018 except for sulfur dioxide from non-road sources. If EPA adopts new low-sulfur standards for off-road mobile sources then off-road mobile source sulfur dioxide emissions would also decline continuously through 2018.

Appendix D8-4 contains EPA's proposed amendments to 40 CFR 51.309(d)(5), published July 3, 2003, in 68 FR 39888.

5.5.2.4.2 Mobile Source Strategy Elements

a. Inventory of Current and Projected Emissions from Mobile Sources

Pursuant to 40 CFR 51.309(d)(5)(i), the State of Oregon, in collaboration with the WRAP, assembled a comprehensive statewide inventory of mobile source emissions. This emission inventory is shown below in Table 5.5.2-10, and projects a continuous decrease in statewide mobile source emissions from 2003 to 2018. It should be noted that 2018 is the lowest level of emissions, rather than 2005 or another year, as originally estimated by the GCVTC. This emission reduction is documented in Chapter 5 of the WRAP TSD. This substantial reduction of projected mobile source emissions from 2003 to 2018 is due to the adoption of new on-road vehicle emission and fuel standards by EPA.

Table 5.5.2-10: Oregon Total Mobile Source (on-road & non-road) Emission Projections, 2003 and 2018 (tons per day)

Pollutant	2003	2018*	% change
VOC	333.5	156.5	53%
NOx	678	393.3	42%
PM2.5	20.8	16.1	23%
SO ₂	44.7	25.5	43%
Totals	1077	591.4	41%

* 2018 emissions are lowest for all pollutants between 2003-2018

b. Determination of Significance of Oregon Urban Area Mobile Source Emissions

Pursuant to 40 CFR 51.309(d)(5)(ii) and (iii), the State of Oregon determined that mobile source emissions from any area of the state do not contribute significantly to visibility impairment in any of the 16 GCVTC Class I areas. This determination is based on a continuous decline in mobile source emissions from 2003-2018. The determination of significance requirement in Section 309(d)(5)(ii) was based on modeling performed in 1994-1995 by the GCVTC, which showed mobile source emissions reaching a low point in 2005, then increasing across the region. The WRAP determined, using updated mobile source emissions models (both on-road and off-road) and new federal engine and fuel standards, that total mobile source emissions will continue to steadily decline through 2018. (This is also described in Chapter 5 of the WRAP TSD.) The State of Oregon will be using the emissions data management system (EDMS) developed by the WRAP to track on-road and off-road mobile source emissions, and include the status of such in future SIP periodic reports. In addition, WRAP is coordinating a regional effort to evaluate and encourage demonstration projects and retrofit programs to reduce on-road and off-road emissions during the phase-in periods of the federal standards.

c. Programs to Reduce Mobile Source Emissions

The State of Oregon relies on efforts of EPA to reduce emissions from mobile sources through the national programs for vehicle emissions and fuel standards. Actions taken by EPA have resulted, or will result, in significant mobile source emission reductions that will positively impact visibility in the 16 GCVTC Class I areas and additional Class I areas. Additionally, in Oregon there are several control measures and requirements in place in urban areas to attain and maintain the NAAQS that reduce mobile source emissions and thereby contribute to improvement of visibility in Class I areas. Section 5.5.2.8 and Appendix D8-7 of this implementation plan describe these elements as they relate to the requirement in 40 CFR 51.309(d)(9) regarding the implementation of "Additional GCVTC Recommendations".

d. Progress Reports

Pursuant to 40 CFR 51.309(d)(5)(iv), the State of Oregon will submit progress reports in 2008, 2013 and 2018 on the implementation of regional and local mobile source strategies recommended by the GCVTC. See Section 5.5.2.8 and Appendix D8-7 of this implementation plan regarding the implementation of additional GCVTC recommendations under 40 CFR 51.309(d)(9). Included in these progress reports will be an update on the continuous decline in mobile source emissions as identified in Table 5.5.2-12, and an update on existing or any proposed federal programs to reduce mobile source emissions that could result in visibility improvements in the 16 Class I areas and other Class I areas in the West.

5.5.2.5 Fire Program Strategy

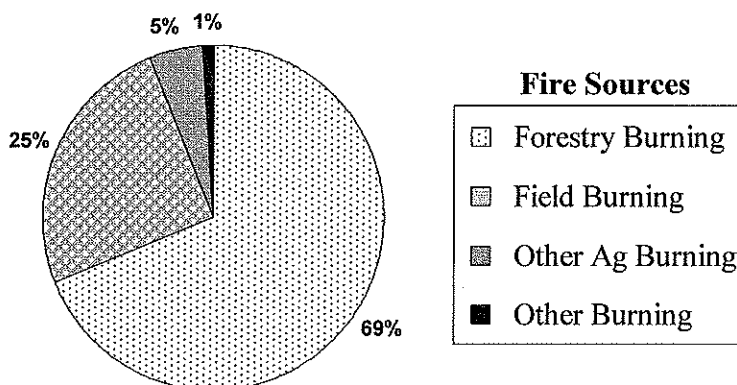
5.5.2.5.1 Regulatory History and Requirements

In its 1996 final report, the GCVTC recognized that past land management practices, including decades of fire suppression, have led to an increase of accumulated forest fuels. Fire is a component of most natural ecosystems in the West and must be a component of processes to meet land management, human health and visibility objectives. The GCVTC recognized that prescribed fire and wildfire levels are projected to increase significantly for decades to come, and that programs to minimize emissions and visibility impacts, and to educate the public, should be implemented. WRAP modeling shows that increases in prescribed fire in the future to restore forest health and reduce the incidence and severity of wildfires will have an adverse impact on visibility. See Chapter 6 of the WRAP TSD for further details.

The Regional Haze Rule contains five requirements related to Fire under 40 CFR 51.309(d)(6): (1) document that all federal, state and private prescribed fire programs in the state evaluate and address the degree of visibility impairment from smoke in their planning and application; (2) establish a statewide inventory and emissions tracking system for volatile organic compounds, nitrogen oxides, elemental and organic carbon, and fine particle emissions; (3) identify a plan for removing any administrative barriers to the use of alternatives to burning; (4) adopt an Enhanced Smoke Management Program that considers visibility as well as health and nuisance objectives, and reduces visibility impacts; and (5) adopt Annual Emission Goals to minimize emissions increases from fire to the maximum extent feasible.

The fire strategy included in this implementation plan focuses on reducing emissions from both prescribed fire (forestry burning) and agricultural field burning to minimize visibility impacts in the 16 Class I areas of the Colorado Plateau. As indicated in Figure 5.5.2-2, emissions from these two activities are the dominant source of open burning in Oregon.

**Figure 5.5.2-2: Major Sources of Fire Emissions in Oregon
(1999 emissions, tons per year)**



The fire strategy applies to federal, state, and private lands in the state where concentrated burning presently occurs, and where smoke management programs have already been adopted

by the state to control the burning and minimize air quality impacts. Other areas in the state where low concentrations of burning take place are not part of the fire strategy in the 2003 SIP, but will be evaluated as part of the SIP revisions in 2008 in order to address “other” Class I areas, including those in Oregon. This evaluation will include identifying any additional measures needed to minimize visibility impacts in Oregon and neighboring state Class I areas.

Appendix D8-5 of this implementation provides additional information on fire emissions and programs in the state, and how they satisfy the rule requirements for fire.

5.5.2.5.2 Prescribed Fire Program Evaluation

Pursuant to 40 CFR 51.309(d)(6)(i), the State of Oregon has evaluated all Federal, State, and private prescribed fire programs in the state, based on the potential to contribute to visibility impairment in the 16 Class I areas of the Colorado Plateau, and how visibility protection from smoke is addressed in planning and operation. The State of Oregon has also evaluated whether these prescribed fire programs contain the following seven elements, as specified by rule: actions to minimize emissions; evaluation of smoke dispersion; alternatives to fire; public notification; air quality monitoring; surveillance and enforcement; and program evaluation. This evaluation focused on agricultural and forestry burning smoke management programs. A complete description of this evaluation is provided in Appendix D8-5 of this implementation plan.

5.5.2.5.3 Emission Inventory and Tracking System

Pursuant to 40 CFR 51.309(d)(6)(ii), the State of Oregon, starting in 2004, will employ an emissions inventory and tracking system for fire sources, that will include the following pollutants: volatile organic compounds, nitrogen oxides, elemental and organic carbon, and fine particulate.

For consistency, the State of Oregon will use the emissions tracking system developed by the WRAP Fire Emissions Joint Forum, in the *WRAP Policy on Fire Tracking Systems (FTS)*. The FTS identifies a process for gathering the essential post-burn activity information necessary to consistently calculate emissions and uniformly assess fire impact on regional haze on an annual basis. The FTS will be the basis for creating a fire emissions inventory within the State of Oregon, to be in conjunction with the WRAP’s Emissions Data Management System (EDMS), which is a larger and more comprehensive emissions tracking and forecasting system developed by the WRAP for point, area, biogenic, and mobile sources. Fire emission inventory updates will be provided in future progress reports as part of the reasonable progress demonstration specified in 40 CFR 51.309(d)(10)(i). See Appendix D8-5 of this implementation plan for further information on the WRAP FTS and WRAP EDMS, and how these will be used for fire emission inventory and tracking in Oregon.

5.5.2.5.4 Identification and Removal of Administrative Barriers

Under 40 CFR 51.309(d)(6)(iii), states are required to identify and remove administrative barriers to the use of non-burning alternatives, wherever feasible. The State of Oregon has

evaluated the administrative barriers that currently exist in the state for agricultural burning and prescribed fire (forestry burning). This evaluation and the strategy that has been developed are described in detail in Appendix D8-5 of this implementation plan. As explained in this appendix, the strategy developed by Oregon focuses on non-burning alternatives to prescribed fire (forestry burning). For agricultural burning, the use of non-burning alternatives are being actively pursued and successfully implemented in the state, due in large part to a state law related to Willamette Valley field burning. This is described further in Appendix D8-5.

5.5.2.5.5 Enhanced Smoke Management Program

Pursuant to 40 CFR 51.309(d)(6)(iv), the State of Oregon evaluated the existing smoke management programs in the state to determine if these programs meet this rule requirement, based on the WRAP *Enhanced Smoke Management Programs for Visibility Policy*. This policy (referred to as the WRAP ESMP) takes the position that there are nine elements of an enhanced smoke management program that are necessary to meet the requirements of the rule; the first seven of these are listed in 40 CFR 51.309(d)(6)(i). The WRAP ESMP provides states with an equitable and practical method for implementing an enhanced smoke management program. Under the rule, an enhanced smoke management program shall consider efficiency, economics, law, emission reduction opportunities, land management objectives, and reduction of visibility impacts. Appendix D8-5 summarizes the WRAP ESMP, and describes how agricultural and prescribed burning smoke management programs in the state meet the policy and the rule requirements.

5.5.2.5.6 Annual Emission Goal

Pursuant to 40 CFR 51.309(d)(6)(v), efforts will be made within the State of Oregon to minimize emission increases in fire to the maximum extent feasible, through the use of annual emission goals, in accordance with the WRAP *Annual Emission Goals for Fire Policy*. The State of Oregon intends to use this policy to quantify the emission reduction techniques that are being used within the state on a project-specific basis to reduce the total amount of emissions being generated from areas where prescribed fire is being used. Appendix D8-5 summarizes the WRAP *Annual Emission Goals for Fire Policy* and describes how it will be used to provide annual emission goal estimates for prescribed fire in the state. As explained in Appendix D8-5, emission increases in prescribed fire are expected in Oregon and nationally under the National Fire Plan, in order to restore forest ecosystem health. In regards to agricultural burning, no emission increases are expected, due primarily to state law which prevents any increase in Willamette Valley field burning, the largest source of agricultural burning in the state.

5.5.2.6 Assessment of Emissions from Paved and Unpaved Road Dust

5.5.2.6.1 Regulatory History and Requirements

The GCVTC believed that dust emissions from paved and unpaved roads were generally near-field transport issues rather than long-range transport issues, especially with respect to larger, coarse materials that settle out of the atmosphere before being transported long distances. The GCVTC recommended additional studies to ascertain this fact since the state of the science for characterizing the emissions and transport of road dust was limited. Additionally, the GCVTC recognized that based on projected population growth and increases in vehicle miles traveled, there was the potential for significant increases in on-road emissions and for these emissions to contribute to regional haze.

The Regional Haze Rule (40 CFR 51.309(d)(7)) requires states to assess the impact of dust emissions from paved and unpaved roads on regional haze in the 16 Class I areas located on the Colorado Plateau in the first implementation plans due December 2003. The WRAP analyzed this issue, including efforts to improve methods for estimating road dust emission inventories as applied to regional scale modeling and characterization of the transport and deposition processes. Results of WRAP modeling work has demonstrated road dust is not a significant contributor to visibility impairment in the 16 Class I areas on the basis of regional transport. For further information on road dust emissions and impacts, see Chapter 7 of the WRAP TSD.

5.5.2.6.2 Road Dust Strategy Elements

a. Assessment of Paved and Unpaved Road Dust Emissions

Pursuant to 40 CFR 51.309(d)(7), an assessment was made by the WRAP of the impact of dust emissions from paved and unpaved roads from transport region states on the 16 Class I areas of the Colorado Plateau. A complete description of this assessment is provided in Chapter 7 of the WRAP TSD.

b. Contribution to Visibility Impairment Finding

Pursuant to 40 CFR 51.309(d)(7), the State of Oregon, in collaboration with other states through the WRAP, has determined that based on the results of the above assessment on road dust emissions, that they are not a significant contributor to regional haze visibility impairment within the Colorado Plateau 16 Class I areas. Based on these findings, no emission management strategies have been identified. The technical and policy foundation for this determination can be found in Chapter 7 of the WRAP TSD.

c. Tracking of Road Dust Emissions

The State of Oregon, with assistance from the WRAP, shall track road dust emissions and provide an update on paved and unpaved road dust emissions trends, including any new information regarding WRAP modeling results of road dust impacts on visibility in the Colorado Plateau 16 Class I areas, as part of the periodic implementation plan revisions

required under 40 CFR 51.309(d)(10). The tracking of road dust emissions shall utilize the WRAP EDMS, as described in Chapter 7 of the WRAP TSD.

5.5.2.7 Pollution Prevention Strategy

5.5.2.7.1 Regulatory History and Requirements

The GCVTC's 1996 recommendations for improving regional haze included the need to combine cost-effective pollution control strategies with a greater emphasis on pollution prevention, including low or zero emission technologies and energy conservation. The Commission found that there was a high potential for energy efficiency and promotion of the use of renewable resources for energy production. One of the GCVTC recommendations was a goal that renewable energy should comprise 10 percent of the regional power needs by 2005 and 20 percent by 2015. The GCVTC identified strategies to help achieve this renewable energy goal.

The Regional Haze Rule requires a detailed assessment of pollution prevention programs and activities in each state, and an estimate of emission reductions and visibility improvements that could result from these programs and activities. This requirement is only for an assessment - it does not require a state to adopt any specific pollution prevention-related strategies or regulations for regional haze.

The following table summarizes the pollution prevention requirements in 40 CFR 51.309(d)(8) and the elements described Section 5.5.2.7.2 below.

Table 5.5.2-11: Regional Haze Rule Pollution Prevention Rule Requirements and Section 5.5.2.7.2 Elements

Rule Citation	Rule Summary	SIP Section
309(d)(8)(i)	1. An initial summary of all air pollution prevention programs currently in place.	5.5.2.7.2(a)
	2. An inventory of all renewable energy capacity and production in use or planned as of 2002 (expressed in megawatts and megawatt-hours).	5.5.2.7.2(b)
	3. Total energy generation capacity and production for the state.	5.5.2.7.2(c)
	4. Percent of total energy generation capacity and production that is derived from renewable energy.	5.5.2.7.2(d)
	5. The state's anticipated contribution toward the 10/20 goals (based on the programs and policies each state relies on to achieve its renewable goals).	5.5.2.7.2(e)
309(d)(8)(ii)	6. Programs providing incentives to reward efforts that go beyond compliance and/or achieve early compliance with air pollution related requirements.	5.5.2.7.2(f)
309(d)(8)(iii)	7. Programs to preserve and expand energy conservation efforts.	5.5.2.7.2(g)
309(d)(8)(iv)	8. An identification of specific areas where renewable energy has the potential to supply power where it is now lacking and	5.5.2.7.2(h)

	where renewable energy is most cost-effective.	
309(d)(8)(v)	9. Projections of the short- and long-term emissions reductions, visibility improvements, cost savings, and secondary benefits associated with the renewable energy goals, energy efficiency and air pollution prevention activities.	5.5.2.7.2(i)
309(d)(8)(vi)	10. A description of the programs relied on to achieve the state's contribution toward the 10/20 goals and a demonstration of the progress made toward achievement of the renewable energy goals in the years 2003, 2008, 2013, and 2018. This description must include documentation of the potential for renewable energy resources, the percentage of renewable energy associated with new power generation projects implemented or planned and the renewable energy generation capacity and production.	5.5.2.7.2(j)

Much of the work related to pollution prevention has been conducted by the WRAP's Air Pollution Prevention Forum (AP2). This work is described in Appendix D8-6. The AP2 Forum's workplan called for the forum to:

- Examine barriers restricting the penetration of renewable energy, energy efficient technologies, and adoption of energy efficient practices in the Transport Region;
- Identify and evaluate economic incentives, legislative actions, and regulatory policies that will increase investments in renewable energy and energy efficiency, including actions currently underway in the Grand Canyon Visibility Transport Region; and
- Recommend market-based incentives and public policies that will support increased investment in renewable energy within the Grand Canyon Visibility Transport Region and improve the efficiency of the region's energy production and end-use sectors.

The AP2 Forum developed recommendations over a three-year period through a stakeholder-based consensus process supported, in part, by nationally recognized renewable energy and energy efficiency experts, including the National Renewable Energy Laboratory. The Forum and workgroups held more than 11 meetings and workshops to examine barriers and identify policies that would lead to increased investment in renewable energy and energy efficiency in the Grand Canyon Visibility Transport Region. The Forum also commissioned ICF Consulting Group to analyze the potential emissions reductions, energy cost savings, and secondary environmental and economic benefits of meeting the Grand Canyon Visibility Transport Commission's 10/20 goal and implementing a suite of cost-effective energy efficiency programs and policies the AP2 Forum identified as "best practices" for the region.

5.5.2.7.2 Pollution Prevention Strategy Elements

a. Summary of Pollution Prevention programs

Pursuant to 40 CFR 51.309(d)(8)(i) regarding pollution prevention programs currently in place, the state of Oregon is providing an initial summary of pollution prevention programs that

correspond to electricity consumption, as this sector accounts for the single largest reduction in air pollution compared to other pollution prevention programs in Oregon. A list of pollution prevention programs associated with energy conservation is provided in Table 5.5.2-12 below. A list of pollution prevention programs that are associated with renewable energy is provided in Table 5.5.2-13 below.

b. Renewable Energy capacity and production in use or planned as of 2002

40 CFR 51.309(d)(8)(i) requires an inventory of all renewable generation capacity and production in use or planned as of the year 2002 (expressed in megawatts and megawatt hours), the total energy generation capacity and production in Oregon, and the percent of the total that is renewable. A list of renewable energy *generation* projects that physically exist in Oregon is provided in Appendix D8-6 of this implementation plan. It is important to note that the amount of renewable energy *generated* is greater than the amount of renewable energy *consumed* in Oregon. Also, this inventory does not include approximately 8,667 MW of capacity that is generated as hydroelectricity, primarily from six dams on the Columbia and Snake Rivers. Additional information on other renewable energy projects that are planned, “small” renewable installations, and references to wind, solar, and biomass narratives for Oregon are also provided in Appendix D8-6.

c. Total energy generation capacity and production

See Section 5.5.2.7.2(d) below.

d. Percent of total energy generation and capacity derived from Renewable Energy

For this implementation plan, the total energy use and percent of the total that is renewable in Oregon is based on energy *consumption*. The information to fulfill this requirement is provided in Section 5.5.2.7.2(j) below, which also documents the percent of renewable energy associated with new power projects implemented or planned, and the renewable energy generation capacity and production in use and planned, pursuant to 40 CFR 51.309(d)(8)(vi).

e. Anticipated contribution toward the Renewable Energy goals for 2005 and 2015

Pursuant to 40 CFR 51.309(d)(8)(i), Oregon’s anticipated contribution toward meeting the GCVTC renewable energy goals for 2005 and 2015 is presented in Section 5.5.2.7.2(j) below, which also addresses the requirement to document the potential for renewable energy resources, pursuant to 40 CFR 51.309(d)(8)(vi).

f. Incentive programs

Pursuant to 40 CFR 51.309(d)(8)(ii), programs to provide incentives that reward efforts to go beyond compliance and/or achieve early compliance with air pollution related requirements in Oregon are often integrated with other pollution reduction programs associated with water and land. A summary of these programs and projects in Oregon are described in the *Oregon State Agency Sustainability Report*, provided in Appendix D8-6 of this implementation plan.

g. Programs that preserve and expand Energy Conservation efforts

Pursuant to 40 CFR 51.309(d)(8)(iii), Table 5.5.2-12 identifies programs in Oregon that preserve and expand energy conservation. Summaries of these energy conservation programs, including web links, are provided in Appendix D8-6 of this implementation plan.

Table 5.5.2-12: Oregon’s Energy Conservation Programs

Policies, Rules and Regulations
1. System Benefits Charge
2. Energy-efficient State Buildings
3. Residential Building Code
4. Commercial Building Code
5. Biennial Energy Plan
Incentive Programs
1. Residential Energy Tax Credit
2. Business Energy Tax Credit
3. Small Scale Energy Loan Program
4. State Home Oil Weatherization Program
5. Energy Conservation Lender’s Credit
6. Bonneville Power Administration and Consumer-Owned Utilities
7. Northwest Energy Efficiency Alliance
Outreach and Education
1. Energy Awareness Campaign
2. Telecommuting
3. Energy Efficient Manufactured Homes

The Oregon Office of Energy estimates that state programs are saving about 600,000 MWh per year through energy conservation programs. If this pace is maintained from 2002 through 2015, the reduction in use in 2015 will be 6.4 million MWh. If these programs were not in place, the forecast of electricity sales for 2015 would be 10 percent higher.

h. Potential for Renewable Energy

Pursuant to 40 CFR 51.309(d)(8)(iv), areas where the potential for renewable energy to supply power and where renewable energy is most cost-effective are illustrated by maps and described in a number of reports provided in Appendix D8-6 of this implementation plan. Of note is the Western Systems Coordinating Council Map of Principal Transmission Lines, dated January 1, 2002, of the western grid system that shows areas in Oregon that do not have access to electricity, and could benefit from renewable power alternatives. In general, extending conventional power to areas outside of a one-half mile distance from existing distribution lines is cost prohibitive.

i. Projections of Renewable Energy goals, Energy Efficiency and pollution prevention activities

Pursuant to 40 CFR 51.309(d)(8)(v), regional projections of the short and long term emissions reductions, visibility improvements, cost savings, and secondary benefits associated with “renewable energy goals, energy efficiency and pollution prevention activities” are presented for the nine transport region states collectively in the report *Economic Assessment of Implementing the 10/20 goals and Energy Efficiency Recommendations*, prepared by ICF Consulting for the WRAP.⁴ The ICF report did not include projections for individual states. At this time there is no reliable means to make renewable generation goal projections for individual states. Forecasts of program performance are uncertain, and “309 states” do not know if the 9 state transport region will achieve the regional goals of 10 percent of energy from new renewable by 2005 and 20 percent by 2015.

Although only five states may end up as 309 states, efforts from other 308 states in the transport region will contribute to the GCVTC 10/20 goals. California and Nevada are aggressively pursuing renewable resources. Nevada's renewable portfolio standard (RPS) requires utilities in the State to obtain 5 percent of their electricity from renewable resources by next year. In 2000 California electricity sales were 48 percent of sales in the nine state transport region. California recently adopted a Renewable Portfolio Standard (the RPS statutory requirements of Senate Bill 1078 and Senate Bill 1038 took effect January 1, 2003 and are codified in Public Utilities Code (PUC) sections 399.11 through 399.15, and sections 381, 383.5, and 445, respectively). SB 1078 establishes an RPS program that requires retail electricity sellers, such as investor-owned utilities (IOUs), to increase the renewable content of their electricity deliveries by one percent per year over a baseline level to be determined by the California PUC. Retail sellers must meet a target of 20 percent renewable content in their electricity portfolio by December 31, 2017. SB 1038 revises the structure and funding allocation for the Energy Commission's Renewable Energy Program, linking payments made to new renewable electricity generating facilities to the RPS, with the goal of increasing the amount of renewable generation in California.

The 309 States will report on regional progress for the nine state transport region in their 2008 submittals, as required under 40 CFR 51.309(d)(8)(vi).

Projections of visibility improvements for the 16 Class I areas on the Colorado Plateau are provided in Table 5.5.2-15 and Table 5.5.2-16 in Section 5.5.2.9 of this implementation plan. These projections include the combined effects of all measures in this SIP, and from contributions of the other 309 states, including air pollution prevention programs. Although emission reductions and visibility improvements from air pollution prevention programs are expected at some level, they were not explicitly calculated because the resolution of the regional air quality modeling system is not currently sufficient to show any significant visibility

⁴ See #16, Oregon Section 309 Reference Materials - Applicable WRAP Reports and Documents. See also WRAP website at <http://www.wrapair.org/309/index.htm>

changes resulting from the marginal nitrogen oxide emission reductions described above for air pollution prevention programs.

j. Demonstration of progress in achieving the GCVTC Renewable Energy goal

Pursuant to 40 CFR 51.309(d)(8)(vi), Table 5.5.2-13 identifies the programs relied upon in Oregon to achieve the State’s contribution toward the GCVTC goal that renewable energy comprise 10 percent of the regional power needs by 2005 and 20 percent by 2015. Summaries of these programs, including web links are provided in Appendix D8-6 of this implementation plan.

Table 5.5.2-13: Oregon’s Renewable Resource Programs

Policies, Rules and Regulations	Financial Incentives
1. System Benefits Charge	1. Residential Energy Tax Credit
2. Utility Green Power Options	2. Business Energy Tax credit
3. Power Source Disclosure	3. Small Scale Energy Loan program
4. Utility Integrated Resource Plans	4. Property Tax Exemptions
5. Siting of Renewable Resource Facilities	5. Bonneville Power Administration and Consumer Owned Utilities
6. Net Metering	
7. Biennial Energy Plan	

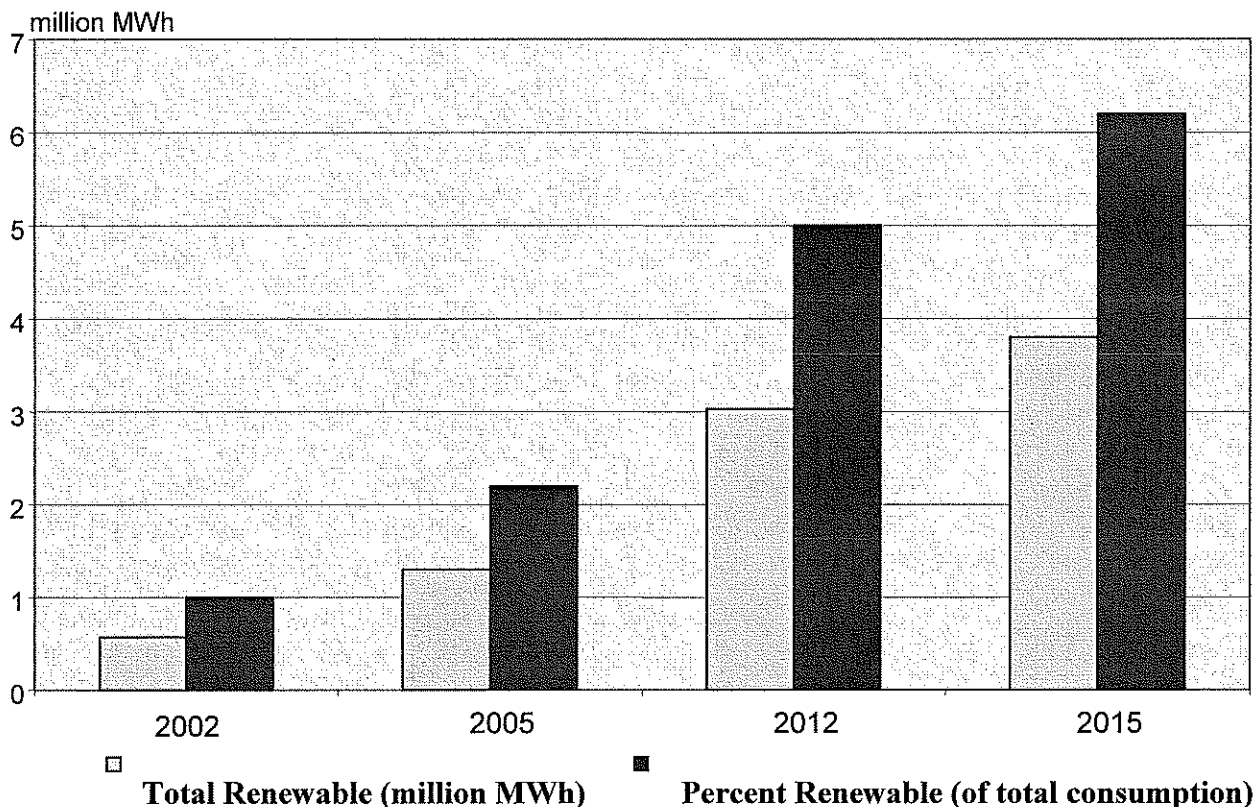
The programs described in Table 5.5.2-13 also demonstrate Oregon’s progress toward achievement of the renewable energy goals for 2003. The information provided in Section 5.5.2.7.2(i) also support Oregon’s commitment towards progress. Further progress demonstrations will be submitted to EPA as part of a revised Oregon SIP in the years 2008, 2013, and 2018, as provided in Section 5.5.2.7.2(k) below.

As previously noted in 5.5.2.7.2(d), Oregon’s projected contribution towards the goal of the GCVTC that renewable energy comprise 10 percent of the regional power needs by 2005 and 20 percent by 2015 is based on *consumption* of electricity in Oregon, which is consistent with how renewable contributions will be projected by the other 309 states.

The Energy Trust of Oregon (ETO) administers the renewable portion of the public purpose charge that tracks and projects renewable energy use in Oregon. The ETO forecasts that roughly 5 percent of Oregon’s consumption of electricity will be supplied by renewables in 2012, or about 3.03 million MWh of renewable power. For 2002 Oregon used 570,000 MWh of electricity from renewable energy sources, about 1 percent of use. A linear extrapolation of these values would indicate 1.3 million MWh of renewable power use for Oregon in 2005 and 3.8 million MWh in 2015. Figure 5.5.2-3 below shows Oregon’s renewable energy growth projections.

Note that the potential renewable resource forecast provided in this section also addresses the requirements pursuant to 40 CFR 51.309(d)(8)(i), as presented in Section 5.5.2.7.2(a) and 5.5.2.7.2(e) above.

Figure 5.5.2-3: Oregon Renewable Energy Projections



Regarding new power projects, Oregon electricity load has increased approximately 2 percent per year since 1990. If Oregon load continues to grow at the same pace of 2 percent per year until 2015, new renewable power generation will meet about 25 percent of load growth from 2002 to 2005 and 23 percent of load growth 2002 to 2015. PacifiCorp’s January 24, 2003, Integrated Resource Plan indicates that significant amounts of wind power are cost-effective relative to gas-fired and coal-fired power. If this proves true, Oregon’s use of renewable power will likely exceed these forecasts.

k. Future progress reports

Pursuant to 40 CFR 51.309(d)(8)(vi), the State of Oregon shall submit progress reports in 2008, 2013, and 2018, describing the state’s contribution toward meeting the GCVTC renewable energy goals. Information consistent with 5.5.2.7.2(i) and 5.5.2.7.2(j) above, regarding further progress demonstrations, will be provided as part of a revised Oregon SIP in the years 2008, 2013, and 2018. To the extent that it is not feasible for Oregon to meet its contribution to these goals, Oregon shall identify what measures were implemented to achieve its contribution, and explain why meeting its contribution was not feasible.

5.5.2.8. Additional Grand Canyon Visibility Transport Commission Recommendations

5.5.2.8.1 Regulatory History and Requirements

The GCVTC's recommendations are found in the June 1996 final report *Recommendations for Improving Western Vistas*, on pages 28-65. Not all the recommendations were included in the Regional Haze Rule when it was adopted. Some of the recommendations were intended as a general list of options, with no expectation that any geographic area would implement all of them. The GCVTC pointed out in its' 1996 report that:

“Some of the Commission's recommendations ask the EPA to take specific **actions** or institute particular **programs**, in cooperation with the tribes, states and federal agencies as implementing bodies. Other recommendations provide a range of potential policy or strategy **options for consideration** by the EPA and implementing entities. As the EPA develops policies and takes actions based on this report, this distinction between "actions" and "options" should be maintained with diligence. That is, recommendations intended as policy options should not become mandated actions or regulatory programs.” [Bold emphasis in original.]

The Regional Haze Rule requires states to determine if any of the other GCVTC recommendations not originally included in Section 309 can be “practically” included in their regional haze SIP.⁵ These other recommendations included some suggested technical and administrative actions that may not be viable or appropriate for a state to address, such as regional haze impacts caused by international transport of emissions from Mexico and Canada. It does not require adoption of any control measures unless the state determines they are appropriate. States must conduct this evaluation and submit a report to EPA and the public again in 2008, 2013, and 2018, showing there has been an evaluation of these additional recommendations, and “progress toward developing and implementing policy or strategy options recommended in the Commission Report”.

5.5.2.8.2 Strategy for Implementing Additional GCVTC Recommendations

a. Evaluation of Additional Recommendations

Pursuant to 40 CFR 51.309(d)(9), the State of Oregon has evaluated the “additional” recommendations of the Grand Canyon Visibility Transport Commission, to determine if any of these recommendations can be practicably included in this implementation plan. Oregon reviewed the Commission's 1996 report *Recommendations for Improving Western Vistas*, Section III, pages 28-65, to identify those recommendations that were not incorporated into Section 309 of the Regional Haze Rule. This evaluation is described in a report entitled *2003 Progress Report on Implementation of Additional Recommendations of the Grand Canyon*

⁵ It should be noted neither the regulatory language nor the preamble of the Regional Haze Rule identify these additional recommendations.

Visibility Transport Commission, Oregon Department of Environmental Quality. This progress report is provided in Appendix D8-7 of this implementation plan.

b. Implementation of Additional Recommendations

Based on the evaluation made by the State of Oregon, as described in *Progress Report on Implementation of Additional Recommendations of the Grand Canyon Visibility Transport Commission, Oregon Department of Environmental Quality*, no additional measures have been identified as being practicable or necessary to demonstrate reasonable progress.

However, it should be noted that there are several on-going emission reduction programs being implemented in Oregon that likely have regional haze benefits. These include: (1) emission growth limits within urban areas under the Plant Site Emission Limitation rules; (2) attainment and maintenance plans for communities that do not meet National Ambient Air Quality Standards; (3) specific emission standards for numerous industrial sources, such as waste incinerators, pulp mills, board product industries, etc.; (4) motor vehicle inspection and maintenance programs; (5) open burning rules; and (6) residential woodstove requirements. In addition, the provisions of the Intergovernmental Review (A-95) Process give the Department the opportunity to review proposed federal projects to ensure that environmental (e.g. visibility) impacts will not occur.

c. Future progress reports

Pursuant to 40 CFR 51.309(d)(9), the state of Oregon shall provide a progress report in 2008, 2013, and 2018 that contains an evaluation in accordance with sections (a) and (b) above. This progress report will be concurrent with the periodic implementation plan revisions required under 40 CFR 51.309(d)(10).

5.5.2.9 Projection of Visibility Improvement from Section 309 Control Strategies

5.5.2.9.1 Regulatory History and Requirements

The Regional Haze Rule requires a projection of visibility improvement for the 16 Class I areas of the Colorado Plateau, based on application of the strategies required under Section 309. The projection of visibility improvement needs to show the improvement in visibility from 1996 (the baseline year) to 2018, for the best and worst 20% days.

The WRAP has performed extensive analysis and modeling in order to determine the impact of the 309 strategies on regional haze in the 16 Class I areas of the Colorado Plateau. This work was performed by several contractors under the direction of various technical and policy forums of the WRAP. This work began with development of a comprehensive emissions inventory throughout the region for all categories of sources. In addition, econometric models and new technology profiles were used to project changes in those emissions over time expected from implementation of current requirements under the CAA, and programs contained in the long-term strategy for regional haze. The WRAP Regional Modeling Center used the CMAQ model to project aerosol concentrations and visibility at each of the 16 Class I areas based on these emission inventories.

5.5.2.9.2 Projected Visibility Improvement

a. Emission Inventory Methodology and Scope

The WRAP emission inventories used for the projection of visibility included the following pollutants:

- Volatile Organic Compounds (VOCs)
- Oxides of Nitrogen (NO_x)
- Carbon Monoxide (CO)
- Sulfur Dioxide (SO₂)
- Particulate Matter smaller than 10 microns (PM₁₀)
- Particulate Matter smaller than 2.5 microns (PM_{2.5})
- Ammonia (NH₃)

The geographic domain for the inventory included the 22 states west of the Mississippi River, and portions of Mexico and Canada. A detailed base year emission inventory was developed for 1996 and included emissions from all of the following categories of sources:

- Stationary Point Sources
- Mobile Sources
- Area Sources
- Biogenic Sources

In addition, a projected emission inventory for the year 2018 was developed from the base 1996 inventory and other information related to growth and technology issues. A detailed discussion of the emission inventories and projections is contained at the beginning of Chapter 1 of the WRAP TSD.

Projected Changes in Emissions for 9 GCVTC States

Table 5.5.2-14 shows the emissions change projected from 1996 to 2018 for the nine GCVTC states, including Oregon. Emissions of sulfur dioxide are expected to decrease by 22% by 2018. This reduction is due primarily to the regional strategy for stationary sources of sulfur dioxide described in Section 5.5.2.3. Also, emissions of nitrogen oxides and volatile organic compounds are expected to decline by 32% and 30%, respectively, due to the implementation of new federal engine standards and fuel standards, as described in the Mobile Source Strategy in Section 5.5.2.4.2.

Table 5.5.2-14: Summary of Expected Emissions Changes from 1996 to 2018 for the Nine GCVTC States (in 000's per year)

Year	VOC	NOx	SO ₂	PM2.5*	CM
1996	3,325.3	3,952.1	1,036.3	1,196.7	1,170.6
2018**	2,339.2	2,691.8	808.9	1,228.3	1,198.4
% Change	-30%	-32%	-22%	3%	2%

*PM2.5 includes organic carbon, elemental carbon, and fine soils/dusts.

**2018 represents application of Section 309 regional haze strategies and programs

b. Projected Changes in Visibility

This projection of visibility improvement covers the 16 Class I areas of the Colorado Plateau, as defined in 40 CFR 51.309(b)(1).

Pursuant to 40 CFR 51.309(d)(2), Tables 5.5.2-15 and 5.5.2-16 below indicate the projected visibility improvement in deciviews for each of the 16 Class I areas, from the baseline year of 1996 through December 31, 2018. This projection was made for the 20% worst days and 20% best days, and is expressed in deciview (dV). The technical work was conducted by the WRAP, which evaluated the visibility improvements resulting from the application of the regional haze control strategies and programs. Chapter 2 and Appendix A of the WRAP TSD describes the control strategies and programs modeled for improvement of visibility by 2018. Appendix D8-8 of this implementation plan contains the technical information from Chapter 2 of the WRAP TSD.

Table 5.5.2-15: Projected Visibility Improvement at the 16 Colorado Plateau Class I Areas in 2018 on the Average 20% Worst Days, resulting from implementation of “All §309 Control Strategies”.

		Modeling Results Deciviews			
Colorado Plateau Class I Area	State	<u>1997-2001 Monitoring Data</u> (20% Worst Days' Visibility - deciviews)	<u>2018 Base Case</u> (20% Worst Days' Visibility for all controls “on the books” as of 2002)	<u>2018 Scenario 1</u> (20% Worst Days' Visibility for all §309 Control Strategies (SO₂ Annex Milestones and Pollution Prevention) with Base Smoke Management)	<u>2018 Scenario 2</u> (20% Worst Days' Visibility for all §309 Control Strategies (SO₂ Annex Milestones and Pollution Prevention) with Optimal Smoke Management)
Grand Canyon National Park	AZ	12.30	11.62	11.56	11.51
Mount Baldy Wilderness	AZ	14.30	12.22	12.02	11.96
Petrified Forest National Park	AZ	13.00	11.99	11.82	11.74
Sycamore Canyon Wilderness	AZ	15.40	11.63	11.51	11.48
Black Canyon of the Gunnison NP Wilderness	CO	11.30	10.90	10.76	10.60
Flat Tops Wilderness	CO	10.50	11.04	10.91	10.73
Maroon Bells Wilderness	CO	10.60	11.15	10.00	10.84
Mesa Verde National Park	CO	13.10	12.24	12.03	11.84
Weminuche Wilderness	CO	10.60	11.19	10.99	10.84
West Elk Wilderness	CO	11.30	11.08	10.89	10.72
San Pedro Parks Wilderness	NM	10.70	12.33	12.12	11.71
Arches National Park	UT	12.10	12.41	12.29	12.15
Bryce Canyon National Park	UT	11.80	12.26	12.24	11.95
Canyonlands National Park	UT	12.10	12.41	12.31	12.18
Capital Reef National Park	UT	12.10	12.51	12.49	12.36
Zion National Park	UT	13.60	12.13	12.09	12.03

Table 5.5.2-16: Projected Visibility Improvement at the 16 Colorado Plateau Class I Areas in 2018, on the Average 20% Best Visibility Days, resulting from implementation of “All §309 Control Strategies”.

Colorado Plateau Class I Area	State	Modeling Results (deciviews)			
		<u>1997-2001 Monitoring Data</u> (20% Best Days' Visibility - deciviews)	<u>2018 Base Case</u> (20% Best Days' Visibility for all controls “on the books” as of 2002)	<u>2018 Scenario 1</u> (20% Best Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Base Smoke Management)	<u>2018 Scenario 2</u> (20% Best Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Optimal Smoke Management)
Grand Canyon National Park	AZ	4.80	4.76	4.72	4.64
Mount Baldy Wilderness	AZ	5.50	5.49	5.46	5.36
Petrified Forest National Park	AZ	6.50	5.18	5.14	5.10
Sycamore Canyon Wilderness	AZ	6.30	4.85	4.82	4.75
Black Canyon of the Gunnison NP Wilderness	CO	4.60	3.89	3.83	3.75
Flat Tops Wilderness	CO	3.10	3.96	3.90	3.81
Maroon Bells Wilderness	CO	3.10	3.90	3.85	3.80
Mesa Verde National Park	CO	5.50	4.40	4.38	4.33
Weminuche Wilderness	CO	3.10	3.89	3.83	3.74
West Elk Wilderness	CO	4.60	3.97	3.92	3.82
San Pedro Parks Wilderness	NM	4.00	5.59	5.51	5.36
Arches National Park	UT	5.50	4.85	4.72	4.61
Bryce Canyon National Park	UT	4.30	3.91	3.92	3.89
Canyonlands National Park	UT	5.60	4.87	4.76	4.67
Capital Reef National Park	UT	5.60	4.85	4.85	4.75
Zion National Park	UT	5.90	3.81	3.79	3.75

5.5.2.10 Periodic Implementation Plan Revisions

5.5.2.11.1 Regulatory History and Requirements

The Regional Haze Rule requires states to submit progress reports in the form of SIP revisions in 2008, 2013 and 2018. The SIP revisions must comply with the procedural requirements of 40 CFR 51.102 for public hearings and 51.103 for submission of plans.

5.5.2.10.2 Periodic Progress Reports for demonstrating Reasonable Progress

Pursuant to 40 CFR 51.309(d)(10)(i), the State of Oregon shall submit to EPA, as a SIP revision, periodic progress reports for the years 2008, 2013, and 2018 for the purpose of demonstrating reasonable progress in Class I areas within Oregon, and Class I areas outside Oregon that are affected by emissions from Oregon. This demonstration may be conducted by the WRAP, with assistance from Oregon, and shall address the elements listed under 40 CFR 51.309(d)(10)(i)(A) through (G), as summarized below:

1. Implementation status of 2003 SIP measures;
2. Summary of emissions reductions;
3. Assessment of most/least impaired days;
4. Analysis of emission reductions by pollutant;
5. Significant changes in anthropogenic emissions;
6. Assessment of 2003 SIP sufficiency; and
7. Assessment of visibility monitoring strategy.

5.5.2.10.3 Actions to be taken concurrent with Periodic Progress Reports

Pursuant to 40 CFR 51.309(d)(10)(ii), the State of Oregon shall take one of the following actions based upon information contained in each periodic progress report:

- (1) Provide a negative declaration statement to EPA saying that no implementation plan revision is needed if reasonable progress is being made, in accordance with section 5.5.2.10.2 above;
- (2) If the state finds that the implementation plan is inadequate to ensure reasonable progress due to emissions from outside the state, Oregon shall notify EPA and the other contributing state(s), and initiate efforts through a regional planning process to address the emissions in question. The State of Oregon shall identify in the next progress report the outcome of this regional planning effort, including any additional strategies that were developed to address the plan's deficiencies;
- (3) If the state finds that the implementation plan is inadequate to ensure reasonable progress due to emissions from another country, Oregon shall notify EPA and provide information on the impairment being caused by these emissions; or

- (4) If the state finds that the implementation plan is inadequate to ensure reasonable progress due to emissions from within Oregon, Oregon shall develop additional strategies to address the plan deficiencies and revise the implementation plan no later than one year from the date that the progress report was due.

5.5.2.11 State Planning/Interstate Coordination and Tribal Implementation

5.5.2.11.1 Regulatory History and Requirements

The Regional Haze rule allows States to participate in regional planning efforts, such as the Western Regional Air Partnership, in developing their 309 SIPs. The interstate strategies that are developed need to document each states contribution to visibility impairment to the 16 Class I areas, how coordination between state plans will be accomplished, and how compliance will be determined. It also allows states to develop their own programs without relying on a regional entity like the WRAP.

The Rule also clarifies that all tribes within transport region have the option to implement Section 309, not just those who were originally members of the GCVTC. The Tribal Authority Rule (40 CFR part 49) gives tribes in the transport region the option of implementing 51.308 or 51.309.

5.5.2.11.2 Participation in Regional Planning and Coordination

Pursuant to 40 CFR 51.309(d)(11), the State of Oregon has participated in regional planning and coordination with other states in developing its emission reduction strategies under 40 CFR 51.309, related to protecting the 16 Class I areas of the Colorado Plateau. This participation was through the Western Regional Air Partnership.

5.5.2.11.3 Applicability to Tribal Lands

Pursuant to 40 CFR 51.309(d)(12), and in accordance with the Tribal Authority Rule, the Tribe whose lands are located in Oregon have the option to develop a regional haze TIP for their lands to assure reasonable progress in the 16 Class I areas of the Colorado Plateau. As such, no provisions of this chapter of the implementation plan shall be construed as being applicable to tribal lands.

5.5.2.12 Declaration for “Other” Class I Areas

5.5.2.12.1 Regulatory History and Requirements

Section 309 (a) of the Regional Haze Rule requires that the first SIP due in December 2003 address the 16 Class I areas of the Colorado Plateau. The “other” Class I areas within the nine transport region states do not need to be addressed until the 2008 SIP submittal. Section 51.309(g)(1) requires each 309 State make a declaration as to whether it will address other Class I areas within the state under Section 308 or 309.

5.5.2.12.1 308/309 Declaration

Pursuant to 40 CFR 51.309(g)(1), the State of Oregon declares it will follow Section 309(g)(2) and (3) in developing an implementation plan for the 12 Class I areas in Oregon, to be submitted by December 31, 2008. These Class I areas are as follows:

1. Mt. Hood Wilderness Area
2. Mt. Jefferson Wilderness Area
3. Mt. Washington Wilderness Area
4. Three Sisters Wilderness Area
5. Diamond Peak Wilderness Area
6. Crater Lake National Park
7. Mountain Lakes Wilderness Area
8. Gearhart Mountain Wilderness Area
9. Kalmiopsis Wilderness Area
10. Strawberry Mountain Wilderness Area
11. Eagle Cap Wilderness Area
12. Hells Canyon Wilderness Area

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-1
Regional Haze Definitions

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-1 Regional Haze Definitions

The following definitions apply to this implementation plan, and can be separated into four categories: (A) general definitions from Section 301(40 CFR 51.301) related to visibility, some of which were added or revised upon adoption of the Regional Haze Rule in 1999; (B) general definitions from Section 309 (40 CFR 51.309) that apply to that section only; (C) specific definitions related to the requirements for stationary sources, under Section 5.5.2.3 of this implementation plan; and (D) specific definitions for the fire program strategy, under Section 5.5.2.5 of this implementation plan.

A. General Definitions from Section 301 related to Visibility:

1. **BART-eligible source** means an existing stationary facility as defined in this section.
2. **Best Available Retrofit Technology (BART)** means an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant, which is emitted by an existing stationary facility. The emission limitation must be established, on a case-by-case basis, taking into consideration the technology available, the costs of compliance, the energy and non-air quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.
3. **Deciview** means a measurement of visibility impairment. A deciview is a haze index derived from calculated light extinction, such that uniform changes in haziness correspond to uniform incremental changes in perception across the entire range of conditions, from pristine to highly impaired. The deciview haze index is calculated based on the following equation (for the purposes of calculating deciview, the atmospheric light extinction coefficient must be calculated from aerosol measurements):

$$\text{Deciview haze index} = 10 \ln_e (b_{\text{ext}}/10 \text{ Mm}^{-1}).$$

Where b_{ext} = the atmospheric light extinction coefficient, expressed in inverse megameters (Mm^{-1}).

4. **Existing stationary facility** means any of the following stationary sources of air pollutants, including any reconstructed source, which was not in operation prior to August 7, 1962, and was in existence on August 7, 1977, and has the potential to emit 250 tons per year or more of any air pollutant. In determining potential to emit, fugitive emissions, to the extent quantifiable, must be counted.

Fossil-fuel fired steam electric plants of more than 250 million British thermal units per hour heat input,
Coal cleaning plants (thermal dryers),

Kraft pulp mills,
Portland cement plants,
Primary zinc smelters,
Iron and steel mill plants,
Primary aluminum ore reduction plants,
Primary copper smelters,
Municipal incinerators capable of charging more than 250 tons of refuse per day,
Hydrofluoric, sulfuric, and nitric acid plants,
Petroleum refineries,
Lime plants,
Phosphate rock processing plants,
Coke oven batteries,
Sulfur recovery plants,
Carbon black plants (furnace process),
Primary lead smelters,
Fuel conversion plants,
Sintering plants,
Secondary metal production facilities,
Chemical process plants,
Fossil-fuel boilers of more than 250 million British thermal units per hour heat input,
Petroleum storage and transfer facilities with a capacity exceeding 300,000 barrels,
Taconite ore processing facilities,
Glass fiber processing plants, and
Charcoal production facilities.

5. **Federal Class I area** means any Federal land that is classified or reclassified Class I.
6. **Federal Land Manager** means the Secretary of the department with authority over the Federal Class I area (or the Secretary's designee) or, with respect to Roosevelt-Campobello International Park, the Chairman of the Roosevelt-Campobello International Park Commission.
7. **Federally enforceable** means all limitations and conditions which are enforceable by the Administrator under the Clean Air Act including those requirements developed pursuant to 40 CFR Parts 60 and 61, requirements within any applicable State Implementation Plan, and any permit requirements established pursuant to 40 CFR 52.21 of this chapter or under regulations approved pursuant to CFR Parts 51, 52, or 60.
8. **Implementation plan** means, for the purposes of this part, any State Implementation Plan, Federal Implementation Plan, or Tribal Implementation Plan.
9. **Indian tribe or tribe** means any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village, which is federally recognized as

eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

10. ***In existence*** means that the owner or operator has obtained all necessary preconstruction approvals or permits required by Federal, State, or local air pollution emissions and air quality laws or regulations and either has (1) begun, or caused to begin, a continuous program of physical on-site construction of the facility or (2) entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of construction of the facility to be completed in a reasonable time.
11. ***Least impaired days*** means the average visibility impairment (measured in deciviews) for the twenty percent of monitored days in a calendar year with the lowest amount of visibility impairment.
12. ***Major stationary source and major modification*** mean major stationary source and major modification, respectively, as defined in 40 CFR 51.166.
13. ***Mandatory Class I Federal Area*** means any area identified in 40 CFR Part 81, Subpart D.
14. ***Most impaired days*** means the average visibility impairment (measured in deciviews) for the twenty percent of monitored days in a calendar year with the highest amount of visibility impairment.
15. ***Natural conditions*** includes naturally occurring phenomena that reduce visibility as measured in terms of light extinction, visual range, contrast, or coloration.
16. ***Potential to emit*** means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.
17. ***Reasonably attributable*** means attributable by visual observation or any other technique the state deems appropriate.
18. ***Reasonably attributable visibility impairment*** means visibility impairment that is caused by the emission of air pollutants from one, or a small number of sources.
19. ***Regional haze*** means visibility impairment that is caused by the emission of air pollutants from numerous sources located over a wide geographic area. Such sources include, but are not limited to, major and minor stationary sources, mobile sources, and area sources.

20. *State* means "State" as defined in section 302(d) of the CAA.
21. *Stationary Source* means any building, structure, facility, or installation, which emits or may emit any air pollutant.
22. *Visibility impairment* means any humanly perceptible change in visibility (light extinction, visual range, contrast, coloration) from that which would have existed under natural conditions.

B. Definitions from Section 309 related to Regional Haze:

1. *16 Class I areas* means the following mandatory Class I Federal areas on the Colorado Plateau: Grand Canyon National Park, Sycamore Canyon Wilderness, Petrified Forest National Park, Mount Baldy Wilderness, San Pedro Parks Wilderness, Mesa Verde National Park, Weminuche Wilderness, Black Canyon of the Gunnison Wilderness, West Elk Wilderness, Maroon Bells Wilderness, Flat Tops Wilderness, Arches National Park, Canyonlands National Park, Capital Reef National Park, Bryce Canyon National Park, and Zion National Park.
2. *Transport Region State* means one of the States that is included within the Transport Region addressed by the Grand Canyon Visibility Transport Commission (Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, and Wyoming).
3. *Commission Report* means the report of the Grand Canyon Visibility Transport Commission entitled "Recommendations for Improving Western Vistas," dated June 10, 1996.
4. *Fire* means wildfire, wildland fire (including prescribed natural fire), prescribed fire, and agricultural burning conducted and occurring on Federal, State, and private wildlands and farmlands.
5. *Milestone* means the maximum level of annual regional sulfur dioxide emissions for a given year, assessed annually consistent with paragraph (h)(2) of this section beginning in the year 2003.
6. *Mobile Source Emission Budget* means the lowest level of VOC, NO_x, SO₂, elemental and organic carbon, and fine particles which are projected to occur in any area within the transport region from which mobile source emissions are determined to contribute significantly to visibility impairment in any of the 16 Class I areas.
7. *Geographic enhancement* means a method, procedure, or process to allow a broad regional strategy, such as a milestone or backstop market trading program designed to achieve greater reasonable progress than BART for regional haze, to accommodate BART for reasonably attributable impairment.

8. ***BHP San Manuel*** means: (i) The copper smelter located in San Manuel, Arizona which operated during 1990, but whose operations were suspended during the year 2000, (ii) The same smelter in the event of a change of name or ownership.
9. ***Phelps Dodge Hidalgo*** means: (i) The copper smelter located in Hidalgo, New Mexico which operated during 1990, but whose operations were suspended during the year 2000, (ii) The same smelter in the event of a change of name or ownership.

C. Definitions for the Sulfur Dioxide Milestones and Backstop Trading Program in Section 5.5.2.3 of this plan.

1. ***Account Certificate of Representation*** means the completed and signed submission required to designate an Account Representative for a WEB source or an Account Representative for a general account.
2. ***Account Representative*** means the individual who is authorized through an Account Certificate of Representation to represent owners and operators of the WEB source with regard to matters under the WEB Trading Program or, for a general account, who is authorized through an Account Certificate of Representation to represent the persons having an ownership interest in allowances in the general account with regard to matters concerning the general account.
3. ***Act*** means the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.*
4. ***Actual Emissions*** means total annual SO₂ emissions as reported to the executive secretary in accordance with the requirements OAR 340-214-0400 through 340-214-0430, as applicable.
5. ***Allocate*** means to assign allowances to a WEB source in accordance with Sections 5.9.2.3.3.a. through 5.5.2.3.3.e of this plan.
6. ***Allowance*** means the limited authorization under the WEB Trading Program to emit one ton of SO₂ during a specified control period or any control period thereafter subject to the terms and conditions for use of unused allowances as established by OAR 340-228-0400 through 340-228-0530.
7. ***Allowance limitation*** means the tonnage of SO₂ emissions authorized by the allowances available for compliance deduction for a WEB source for a control period under OAR 340-228-0510(1) on the allowance transfer deadline for that control period.
8. ***Allowance Tracking System*** means the system where allowances under the WEB Trading Program are recorded, held, transferred and deducted.
9. ***Allowance Tracking System account*** means an account in the Allowance Tracking System established for purposes of recording, holding, transferring, and deducting allowances.

10. **Compliance account** means an account established in the Allowance Tracking System under OAR 340-228-0470(1) for the purpose of recording allowances that a WEB source might hold to demonstrate compliance with its allowance limitation.
11. **Control period** means the period beginning January 1 of each year and ending on December 31 of the same year, inclusive.
12. **Emissions tracking database** means the central database where SO₂ emissions for WEB sources as recorded and reported in accordance with OAR 340-228-0400 through 340-228-0530 are tracked to determine compliance with allowance limitations.
13. **Emission Unit** means any part of a stationary source, which emits or has the potential to emit any pollutant subject to regulation under the Clean Air Act.
14. **EPA Administrator** means the Administrator of the United States Environmental Protection Agency or the Administrator's duly authorized representative.
15. **Existing source** means a stationary source that commenced operation before the Program Trigger Date.
16. **Floor allocation** means the amount of allowances set by the executive secretary in accordance with this Plan that represents the minimum necessary for a source to operate under stringent control assumptions.
17. **General account** means an account established in the Allowance Tracking System under OAR 340-228-0470 for the purpose of recording allowances held by a person that are not to be used to show compliance with an allowance limitation.
18. **Milestone** means the maximum level of stationary source regional sulfur dioxide emissions for each year from 2003 to 2018, established according to the procedures in Section 5.5.2.3.1 of this plan.
19. **New WEB Source** means a WEB source that commenced operation on or after the Program Trigger Date.
20. **New Source Set-aside** means a pool of allowances that are available for allocation to new WEB sources and modified WEB sources that have increased capacity in accordance with the provisions of Section 5.5.2.3.3.c of this plan.
21. **Opt-in** means to choose to participate in the WEB Trading Program by following the procedures in OAR 340-228-0430(4) and to comply with the terms and conditions of the OAR 340-228-0400 through 340-228-0530.

22. **Program Trigger Date** means the date that the executive secretary determines that the WEB Trading Program has been triggered in accordance with the provisions of Section 5.5.2.3.1.b of this plan.
23. **Reducible allocation** means the amount of allowances set by the executive secretary in accordance with Section 5.5.2.3.3.a(2)(i) of this plan that represents, for each source, emissions in excess of the floor allocation that shall be reduced over time as the regional milestone is decreased.
24. **Renewable Energy Facility** means a facility that generates electricity by non-nuclear and non-fossil technologies that results in low or no air emissions. The term includes electricity generated by wind energy technologies; solar photovoltaic and solar thermal technologies; geothermal technologies; technologies based on landfill gas and biomass sources, and new low-impact hydropower that meets the Low-Impact Hydropower Institute criteria. Biomass includes agricultural, food and wood wastes. For the purposes of this Plan, a renewable energy facility does not include pumped storage or biomass from municipal solid waste, black liquor, or treated wood.
25. **Retired source** means a WEB source that has received a retired source exemption as provided in OAR 340-228-0430(5).
26. **Stationary source** means any building, structure, facility or installation that emits or may emit any air pollutant subject to regulation under the Clean Air Act.
27. **Ton** means 2000 pounds and, for any control period, any fraction of a ton equaling 1000 pounds or more shall be treated as one ton and any fraction of a ton equaling less than 1000 pounds shall be treated as zero tons.
28. **Tracking System Administrator** means the person designated by the executive secretary as the administrator of the WEB Allowance Tracking System and the emission tracking database.
29. **Tribal Set-Aside** means a 20,000-ton SO₂ WEB allowance allocated to tribes on an annual basis. The tribes will decide how to distribute the allowances in the set-aside among tribes in the region. The set-side is intended to ensure equitable treatment for tribal economies and to prevent barriers to economic development.
30. **Trigger** refers to the activation of the WEB Trading Program for SO₂ in accordance with Section 5.5.2.3.1 of this plan.
31. **WEB source** means a stationary source that meets the applicability requirements of OAR 340-228-0430.
32. **WEB Trading Program** refers to the Western Backstop (WEB) Trading Program Rule, OAR 340-228-0400 through 340-228-0530, that shall be triggered as a backstop in

accordance the provisions in Section 5.5.2.3.1 of this plan to ensure that regional SO₂ emissions are reduced.

33. ***Western Regional Air Partnership (WRAP)*** means the collaborative effort of tribal governments, state governments, and federal agencies to promote and monitor implementation of recommendations from the Grand Canyon Visibility Transport Commission authorized under Section 169B(f) of the Clean Air Act, and to address other common Western regional air quality issues.

D. Definitions for the Fire Program Strategy in Section 5.5.2.5 of this plan.

1. ***Fire*** means any wildfire, wildland fire, prescribed fire, and agricultural burning that is conducted on Federal, State, and private wildlands and farmlands. Except where “prescribed fire” is noted, the term “fire” shall apply to the sources identified herein.
2. ***Land Manager*** means any federal, state, local, or private entity that owns, administers, directs, oversees or controls the use of public or private land, including the application of fire to the land.
3. ***Prescribed fire*** or ***prescribed burn*** means any fire ignited by management actions to meet specific objectives, such as achieving resource benefits.
4. ***Wildland Fire Used for Resource Benefits*** means naturally ignited wildland fire that is managed to accomplish specific prestated resource management objectives in predefined geographic areas.

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-2
Clean Air Corridor Strategy
Support Analysis

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-2 Clean Air Corridor Strategy Support Analysis

As described in Section 5.5.2.1 of this implementation plan, the identification of the Clean Air Corridor (see Figure 5.5.2.1) and the information related to patterns of growth inside and outside the Clean Air Corridor, is based on Chapter 3 of the WRAP TSD, and the *WRAP Policy on Clean Air Corridors*.

This appendix contains two elements. The first is a description of the Emissions Data Management System (EDMS), from Chapter 3 of the WRAP TSD, that the WRAP will use to track emissions within the Clean Air Corridor, in accordance with the requirement in 51.309(d)(3) for comprehensive emissions tracking. As specified in Section 5.5.2.1.3, Oregon will provide annual emission inventory data for use in the WRAP EDMS. The second is a the *WRAP Policy on Clean Air Corridors* that supports the Clean Air Corridor identified in Figure 5.5.2-1 and the strategy elements identified in Section 5.5.2.3 of this implementation plan.

1. Description of WRAP Emission Data Management System (EDMS) (from Chapter 3 of the WRAP TSD).

Emissions tracking for CAC using the WRAP Emissions Data Management System

The preamble of the Regional Haze Rule defines a CAC as “a region that generally brings clean air to a receptor region”, and also says, “the requirement to track emissions will enable states to quickly determine if changes in patterns of emissions will reduce the number of clean air days (defined as the average of the 20% clearest days) in any of the 16 Class I areas.” The actual requirements state that the §309 SIP or TIP must describe and provide for implementation of comprehensive emission tracking strategies for CAC to ensure that the visibility does not degrade on the least-impaired days at any of the 16 Class I areas.

Using the most recent emission inventory data available through the Emissions Data Management System (EDMS), WRAP will produce a report for each five-year implementation plan revision (2007-8, 2013, and 2018) on the current and projected emissions in the CAC and in areas surrounding the corridor and compare these emissions to a 1996 baseline, as part of a larger source apportionment exercise managed by the Technical Oversight Committee (described in the next section).

The EDMS will have the capability to produce the following special reports in tabular and simple plots (i.e. bar graph and pie chart) formats and allow queries of the same information including presentation in GIS format, in addition to the standard reports:

- A summary report of the annual summed total emissions for all six source categories and all of the pollutants by county/state and tribal lands, as well as for the entire CAC.
- A summary report of the annual summed total emissions for all six source categories and all of the pollutants for the same types of political boundaries surrounding the CAC.

- A summary report of the comparison of the annual summed total emissions for all six source categories and all of the pollutants for the same types of political boundaries, as well as the entire CAC and the corresponding base year total emissions.

The EDMS to be developed is described in a draft technical report to the Emissions Forum: *Needs Assessment for Evaluation and Design of an Emissions Data Reporting, Management, and Tracking System*, (EA Engineering, Science, and Technology, June 26, 2003).

Process to analyze emissions growth in, and surrounding, the CAC

As part of the next round of analysis and preparation for regional haze SIPs due in 2007-08, the Technical Oversight Committee will be conducting 2 separate visibility source apportionment exercises (described in the WRAP 2003-08 Strategic Plan), integrating analytical results from aerosol and meteorological monitoring, air quality modeling, and preparation of emissions inventories. These source apportionment exercises will identify the source regions and categories causing visibility impairment at Class I areas. As part of those source apportionment exercises, the TOC will analyze the changes in emissions for the counties and tribal lands in the CAC, as well as those surrounding the CAC. Better emissions inventory data expected to be available each time, as the TOC iterates through these two exercises. Specific results from each of the source apportionment exercises will address emissions growth both inside and surrounding the CAC, as well as the impact on visibility at affected Class I areas.

2. WRAP Policy on Clean Air Corridors, approved by the WRAP Board, November 13, 2002.

I. Summary of WRAP Policy

1. Pursuant to 40 CFR 51.309(d)(3), the WRAP directs its Technical Oversight Committee (TOC) to track emissions and to describe the tracking process in such a way that can be included in state and tribal implementation plans. At a minimum, using the most recent state emission inventories available, the TOC should produce a report for each five-year implementation plan revision on the current and projected emissions in the clean air corridor and in areas outside the corridor and compare these emissions to a 1996 baseline for purposes of this section.
2. Pursuant to 40 CFR 51.309(d)(3)(i), the WRAP identifies one clean air corridor as shown in Figure 1. The counties within the corridor are listed in Table 1. For ease of administration, the corridor's boundary follows county lines.
3. Pursuant to 40 CFR 51.309(d)(3)(ii), the WRAP has examined patterns of growth in the corridor and finds that they are not causing significant emission increases that could have or are having visibility impacts at one or more of the 16 Class I areas. Nor, at this time, are such emission increases expected during the first planning period (2003-2018). Analyses performed by the Grand Canyon Visibility Transport Commission found that an increase of 25% in weighted emissions would result in a 0.7 dv reduction in visibility, whereas the weighted emission increase expected by 2018 is only 4%.

4. Pursuant to 40 CFR 51.309(d)(3)(iii), the WRAP has examined emissions growth in areas outside the corridor and finds that significant emissions growth is not occurring that could begin or is beginning to impair the quality of the air in the corridor and thereby lead to visibility degradation for the least impaired days in one or more of the 16 Class I areas.
5. Since impairment of air quality in clean air corridors has not been identified pursuant to 40 CFR 51.309(d)(3)(ii) and (iii), the WRAP finds no requirement under 40 CFR 51.309(d)(3)(iv) for further visibility impact analysis or additional emission reduction measures until at least the next SIP revision (2008). However, the WRAP encourages its appropriate technical activities – such as the Causes of Haze report – to take into account the assessment and protection of clean air corridors.
6. Pursuant to 40 CFR 51.309(d)(3)(v), the WRAP finds no other clean air corridors beyond the corridor identified in Figure 1.

II. Clean Air Corridors, the Clean Air Act, and the Regional Haze Rule

The Clean Air Act Amendments of 1990 specifically require that visibility transport commissions, including the Grand Canyon Visibility Transport Commission (“Commission”), address “the establishment of clean air corridors, in which additional restrictions on increases in emissions may be appropriate to protect visibility in affected Class I areas.”⁶ The Clean Air Act also requires protection of clean air corridors in a less direct way. The Act establishes as a national goal the prevention of any future impairment of visibility in mandatory Class I areas. As a measure of progress towards this goal, the U.S. Environmental Protection Agency (EPA) has established a criteria of no degradation on the 20% cleanest days. Such days on the Colorado Plateau are usually dominated by northwest winds, hence defining a corridor to the northwest that must be protected to meet the broader visibility goal of the Clean Air Act.

In its regional haze rule, the EPA provides more specificity on the requirements to protect clean air corridors, based largely on the recommendations of the Commission. The preamble of the rule defines a clean air corridor as “a region that generally brings clean air to a receptor region” The preamble also says, “the requirement to track emissions will enable states to quickly determine if changes in patterns of emissions will reduce the number of clean air days (defined as the average of the 20% cleanest days) in any of the 16 Class I areas.” The actual requirements of the rule are found in 40 CFR 51.309(d)(3):

The [state implementation] plan must describe and provide for implementation of comprehensive emission tracking strategies for clean-air corridors to ensure that the visibility does not degrade on the least-impaired days at any of the 16 Class I areas. The strategy must include:

- (i) An identification of clean-air corridors. The EPA will evaluate the State’s identification of such corridors based upon the reports of the Commission’s Meteorology Subcommittee and any future updates by a successor organization.

⁶ 42 U.S.C. 2169B(d)(2)(A).

- (ii) Within areas that are clean-air corridors, an identification of patterns of growth or specific sites of growth that could cause, or are causing, significant emissions increases that could have, or are having, visibility impairment at one or more of the 16 Class I areas.
- (iii) In areas outside of clean-air corridors, an identification of significant emissions growth that could begin, or is beginning, to impair the quality of air in the corridor and thereby lead to visibility degradation for the least-impaired days in one or more of the 16 Class I areas.
- (iv) If impairment of air quality in clean air corridors is identified pursuant to §§51.309(d)(3)(ii) and (iii), an analysis of the effects of increased emissions, including provisions for the identification of the need for additional emission reductions measures, and implementation of the additional measures where necessary.
- (v) A determination of whether other clean air corridors exist for any of the 16 Class I areas. For any such clean air corridors, an identification of the necessary measures to protect against future degradation of air quality in any of the 16 Class I areas.

These requirements do not apply to states submitting state implementation plans (SIPs) under §308 of the rule. However, such states should provide the data necessary for other states to comply and should make a good faith effort to protect the integrity of clean air corridors.

III. The Commission's Findings and Recommendations

The Commission found that clean air corridors exist and that, generally, clean air comes to the Colorado Plateau from the northwest.⁷ The Commission determined that one such corridor covers southern Utah, eastern Oregon, southwestern Idaho, and major portions of Nevada. This corridor was identified by the Commission's Meteorology Subcommittee, which examined the size and boundaries of the corridor under varying assumptions about the number of days defined as clean and the amount of protection to be afforded.⁸

Related work by Green et. al.⁹ identifies three factors that explain why air from the northwest is clean when it arrives at the Colorado Plateau: low emissions of air pollutants, enhanced dispersion of the air pollutants due to higher average ventilation (wind speed multiplied by mixing depth), and increased removal of pollutants due to precipitation. Although the corridor is mostly arid, the cleanest days occur most frequently in the winter, when there is more precipitation than average. Green et al., nonetheless, conclude that the most important factor at the south rim of the Grand Canyon for most weather conditions is the low emissions of pollutants in the area to the northwest.

⁷ Grand Canyon Visibility Transport Commission. Recommendations for Improving Western Vistas. Western Governors' Association. Denver, CO. June 1996.

⁸ Meteorological Subcommittee, Grand Canyon Visibility Transport Commission. Clean Air Corridors: A Framework for Identifying Regions that Influence Clean Air on the Colorado Plateau. Denver, CO. August 1995.

⁹ Green, M. C.; Pitchford, M. L.; and Ashbaugh, L.L. Identification of Candidate Clean Air Corridors for the Colorado Plateau. J. Air & Waste Manage. Assoc. 1996. 46(5), 446.

In addition to identifying a clean air corridor, the Commission projected emissions growth within the corridor through 2040 and found that growth is not expected to have a perceptible negative impact on the cleanest days on the Colorado Plateau. Specifically, a working group within the Meteorology Subcommittee used results from the IAS model (the model used to project visibility impacts in other Commission work) to estimate the emissions increase from 1990 that would be necessary to cause a perceptible decrease in visibility on the Plateau.¹⁰ The working group found that increasing emissions by 25% within the corridor would result in an average change of 0.7 deciviews (dv), which would be imperceptible to most people under most conditions, while a 100% increase in emissions within the corridor would result in a change of 2.5 dv.¹¹ This estimate was not based on a specific boundary for the corridor but rather on the general understanding of a corridor to the northwest of the Plateau. The implication, nonetheless, is that a 25% increase in emissions within the corridor could be considered a level of growth that would not impact visibility.

Using one of the proposed corridor alignments examined by the Meteorology Subcommittee – a corridor that would protect the 30% cleanest days on the Colorado Plateau, adjusted to account for emissions density and IAS region boundaries – BBC Research & Consulting conducted an economic and demographic assessment of the corridor to determine whether emissions would increase 25% by 2040. The assessment found that emissions are not expected to increase 25% by 2040.¹² Specifically, BBC used a weighting scheme defined in the IAS model to account for the varying effects of different pollutants on visibility. Total weighted emissions of elemental carbon, nitrogen oxides, organic carbon, particulate matter, reactive organic gases, and sulfur oxides in 1990 were 52,073 VEEU tons.¹³ A 25% increase would yield 65,092 VEEU tons. BBC projected that emissions in the corridor would increase to 55,047 VEEU tons by 2040, thus leaving an ample margin of safety of 10,054 VEEU tons.¹⁴

As a result of these analyses, the Commission recommended that no targeted policies or regulatory programs to control emissions growth were needed at that time, but that a regional tracking and accounting system be implemented to make sure that the frequency of clear days does not decrease at the 16 Class I areas and that the Commission's assumptions about increased emissions are proven reliable. The Commission recommended that, within areas that are sources of clean air, the tracking and accounting system should identify patterns of growth that have a negative impact on visibility and that, in areas outside the clean air corridors, the tracking and accounting system should identify significant emissions growth that begins to impair the quality of air in the corridor.

¹⁰ Marc Pitchford. Oral communication. October 3, 2002. Participants on the working group included Dr. Pitchford, Dr. William Malm, and Dr. Ivar Tombach.

¹¹ BBC Research & Consulting, Inc., for the Operations Committee of the Grand Canyon Visibility Transport Commission. Clean Air Corridor: An Economic Perspective. Denver, CO. November 1995. Page III-2:6.

¹² BBC report, page III-5

¹³ Visibility Equivalency Emission Units

¹⁴ BBC report, page III-6.

IV. WRAP Policy

A. EMISSIONS TRACKING – §309(d)(3)

The WRAP directs its Technical Oversight Committee (TOC) to track emissions and to describe the tracking process in such a way that can be included in state and tribal implementation plans. At a minimum, using the most recent state emission inventories available, the TOC should produce a report for each five-year implementation plan revision on the current and projected emissions in the clean air corridor and in areas outside the corridor and compare these emissions to a 1996 baseline for purposes of this section.

The tracking described above is intended to ensure that any unexpected changes are identified. This tracking would coincide with the periodic SIP revisions required in 2008, 2013, and 2018. States and tribes already prepare inventories at least every three years to meet federal requirements and will prepare detailed inventories annually for sources of sulfur dioxide of 100 tons per year or greater for compliance with the stationary source provisions of §309.¹⁵ The WRAP will use these state and tribal data for tracking emissions in general and can summarize emissions for the counties and tribal lands within the corridor and for areas outside the corridor for use by states and tribes as they revise their regional haze SIPs every five years. Further information on tracking point sources and area sources is provided below.

POINT SOURCES. Any new, large source will be required to undergo a Prevention of Significant Deterioration review and an Air Quality Related Values analysis before receiving an air quality permit and will also be subject to New Source Performance Standards and other requirements, giving the public, states, tribes, and federal land managers ample opportunity to evaluate any possible visibility impacts on the 16 Class I areas. Thus, it is unlikely that point sources will lead to a 25% increase and even less likely that a trend in that direction would go unnoticed.

AREA AND MOBILE SOURCES. Population and economic growth is expected to be slow in the corridor, holding down emissions from area and mobile sources within the corridor. Federal standards recently promulgated for on-road sources and additional ones pending for non-road sources are expected to reduce emissions from both of these source categories during the first planning period of the implementation plans (2018). However, emissions from prescribed burning are expected to increase and, depending on the location of the burns, could affect visibility in the 16 Class I areas. It is hard to predict how great the effect will be on clean days, but it is not expected to be severe. For one, prescribed fires generally occur in the spring and fall, whereas most clear days occur in the winter. In addition, prescribed fires are much less intense than wild fires. Nonetheless, careful fire emissions tracking is warranted and is being developed under separate WRAP policy and technical efforts.

¹⁵ Also see Western Regional Air Partnership. Voluntary Emissions Reduction Program for Major Industrial Sources of Sulfur Dioxide in Nine Western States and a Backstop Market Trading Program, An Annex to the Report of the Grand Canyon Visibility Transport Commission. Denver, CO. September 29, 2000.

B. BOUNDARY OF THE CLEAN AIR CORRIDOR – §309(d)(3)(i)

The WRAP identifies one clean air corridor as shown in Figure 1. The counties within the corridor are listed in Table 1. For ease of administration, the corridor's boundary follows county lines.

The WRAP adopts this boundary based on a balancing of demographic, economic, and air quality impact analyses performed on this corridor and their subsequent review and consensus-based approval by the Commission. The boundary identified is a slight modification of the boundary defined in the BBC report described above. The grid cells in the air quality analyses did not follow state or county boundaries, and for ease of administration the WRAP has removed small areas of southern Washington and southwestern Montana from the corridor. These small areas are far from the Colorado Plateau and unlikely to affect the Class I areas on the Plateau. In contrast, counties have been added to the corridor that were not originally included in the boundary defined in the BBC report. These include Box Elder, Tooele, and Grand Counties in Utah, Wasco and Sherman Counties in Oregon, and Cassia and Lemhi Counties in Idaho.

C. IDENTIFICATION OF EMISSIONS INCREASES – §309(d)(3)(ii) and (iii)

Pursuant to 40 CFR 51.309(d)(3)(ii), the WRAP has examined patterns of growth in the corridor and finds that they are not causing significant emission increases that could have or are having visibility impacts at one or more of the 16 Class I areas. Nor, at this time, are such emission increases expected during the first planning period (2003-2018). Analyses performed by the Grand Canyon Visibility Transport Commission found that an increase of 25% in weighted emissions would result in a 0.7 dv reduction in visibility, whereas the weighted emission increase expected by 2018 is only 4%.

Patterns of growth in the corridor are first examined by comparing 1990 emissions (those used in the Commission's final report) to 1996 emissions (the most recent comprehensive data set). This comparison is not easily made because emissions were aggregated into different categories. Nonetheless, it appears that emissions in 1996 were only slightly higher than in 1990. In the clean air corridor 73,637 tons of SO₂ were emitted in 1990 and 73,756 were emitted in 1996; 232,704 tons of NO_x were emitted in 1990 and 256,762 were emitted in 1996. In addition, the WRAP examined data from IMPROVE monitors and found that none of the seven long-term sites showed any significant decrease in visibility on the cleanest days for the period from 1988 through 1998.¹⁶

The WRAP is recommending, as part of this policy, that future clean air corridor analyses use a baseline year of 1996 to quantify emission increases. The first reason for this recommendation is that the 1996 inventory has been more carefully assembled than the 1990 inventory. The second reason is that future inventories are more likely to be structured like the 1996 inventory, thereby facilitating comparison. In addition, the most recent and comprehensive projection of emissions (discussed below) is based on the 1996 inventory, not the 1990 inventory.

¹⁶ EPA. Visibility in Mandatory Federal Class I Areas (1994-1998), A Report to Congress. EPA-452/R-01-008.

The WRAP also examined emission projections. These are used as a means to identify potential future increases that should be more carefully tracked and to identify preventive measures that could be implemented in a timely fashion. Table 2 summarizes the projected change in emissions between 1996 and 2018. PM₁₀ and PM_{2.5} emissions are expected to increase about 7% and 18%, respectively. NO_x and VOC emissions, however, are expected to decrease about 15% and 26%, respectively. SO₂ emissions are expected to increase about 5% within the corridor, even with the declining milestones of the backstop emissions trading program. Overall, SO₂ emissions are expected to decline by 17% in the 13-state contiguous WRAP region by 2018,¹⁷ and the fact that the projections show a 5% increase in SO₂ within the clean air corridor is a result of non-road mobile sources using high-sulfur diesel fuel. This source of sulfur dioxide is expected to be drastically reduced (e.g., from a fuel sulfur content of 3,000 ppm to 15 ppm) before 2018 according to announcements by EPA to develop new engine certification and fuel standards for non-road vehicles and equipment. Thus, 5% should be viewed as an upper bound on the possible increase of SO₂.

Since different pollutants have different impacts on visibility, the WRAP estimated a weighted emissions increase according to the VEEU system used by the Commission. As shown in Table 3, the weighted increase is expected to be 4%, substantially less than the 25% increase thought to be necessary to achieve an impact that may be perceptible. It is also worth noting the safety margins included within this analysis – the fact that the BBC corridor protects 30% of the clean days, not 20%; the benefits of new non-road mobile source standards; and the uncertainty in where additional electricity generating capacity will be located.

Pursuant to 40 CFR 51.309(d)(3)(iii), the WRAP has examined emissions growth in areas outside the corridor and finds that significant emissions growth is not occurring that could begin or is beginning to impair the quality of the air in the corridor and thereby lead to visibility degradation for the least impaired days in one or more of the 16 Class I areas.

The WRAP sees two purposes for emissions tracking in areas outside the corridor: first, to determine if such emissions are degrading visibility in the corridor, which may potentially affect one or more of the 16 Class I areas; and second, to compensate for any uncertainties in establishing the boundary of the corridor, such as those relating to computed air mass trajectories or introduced by aligning the corridor with county boundaries. Again, SO₂ emissions are expected to decline throughout the WRAP region. Emissions of other pollutants are also expected to decline. All visibility-impairing pollutants from on-road mobile sources, with the exception of some minor ammonia emissions, are expected to decline substantially. And all visibility impairing pollutants from non-road mobile sources are expected to decline, especially in areas upwind of the corridor. This decline would be greatly enhanced if the EPA promulgates stricter standards for non-road engines and fuel, as it has announced to do. Also, NO_x and PM from existing stationary sources remains to be addressed in future implementation plans by 2008 under Sections 308 and 309 of the regional haze rule. Finally, all states will have to implement measures to achieve reasonable progress in other Class I areas by 2008. Such measures are

¹⁷ WRAP Emissions Inventory Forum. 2018-1996 Difference: Actual to Control Spreadsheet. WRAP Web Site. September 25, 2002.

likely to “overlap” the clean air corridor and areas outside the corridor in such a way that provide further protection to the 16 Class I areas on the 20% cleanest days.

D. IF IMPAIRMENT OF AIR QUALITY IN THE CORRIDOR IS IDENTIFIED – §309(d)(3)(iv)

Since impairment of air quality in clean air corridors has not been identified pursuant to 40 CFR 51.309(d)(3)(ii) and (iii), the WRAP finds no requirement under 40 CFR 51.309(d)(3)(iv) for further visibility impact analysis or additional emission reduction measures until at least the next SIP revision (2008). However, the WRAP encourages its appropriate technical activities – such as the Causes of Haze report – to take into account the assessment and protection of clean air corridors.

The rule specifies that if impairment of air quality in the clean air corridor is identified, the plan must include "an analysis of the effects of increased emissions, including provisions for the identification of the need for additional emission reduction measures, and implementation of the additional measures if necessary." For reasons stated above, the WRAP finds no need at this time for additional emission reduction measures.

The periodic WRAP inventories to be produced by the TOC, as instructed above, will identify growth in emissions, and the periodic updates to the WRAP Causes of Haze report will help identify any effect on visibility that may result from such emissions increases. Should any effects be identified, the WRAP will conduct an analysis to determine the sources of impairment within six months of completion of the inventory indicating the increase. Additional control measures that may be warranted would be developed within another six months. The criteria the states and tribes would follow in making this determination are (a) the location of the significant emissions growth, (b) type of source activity causing the emissions growth, and (c) the appropriate control measure for the source(s) based on feasibility, cost, and anticipated visibility benefits. Any necessary additional control measures would be added in the next five-year SIP revision.

E. DO OTHER CORRIDORS EXIST? – §309(d)(3)(v)

The WRAP finds no other clean air corridors beyond the corridor identified in Figure 1.

The regional haze rule requires that implementation plans identify whether any other clean air corridors exist for any of the 16 Class I areas. The WRAP finds no such areas other than the corridor to the northwest of the Colorado Plateau identified in Figure 1. The WRAP recognizes, however, that additional work to identify clean air corridors may be needed. For example, several monitors have recently been installed at Class I areas on the Plateau which were not previously monitored. These may generate a slightly different set of 20% cleanest days and a slightly different set of back trajectories on those days, especially at sites furthest to the north and east. This may result in a broader or separate corridor. Such analysis should be performed when sufficient data are available. Adequate monitoring data could be available by 2004, and analysis of those data could be published by the WRAP as part of its Causes of Haze report.

V. Conclusion

The bottom line is that, while the area to the northwest of the Colorado Plateau delivers clean air to the Plateau on the cleanest days, emissions from throughout much of the region affect the Class I areas on the Plateau. Thus, emissions throughout the WRAP region will be tracked carefully. Ongoing WRAP efforts to improve the quality of inventories and the models used to make projections, and to produce a periodic Causes of Haze report, will bring increased understanding of the role that clean air corridors play in protecting the cleanest days. In the final analysis, the indicator of success or failure will be whether the measured light extinction at the Class I areas on the Colorado Plateau improves or declines on the cleanest days. Any indication of deterioration on the cleanest days should trigger an immediate investigation of the cause, as well as efforts to correct the problem.

Figure 1. Clean Air Corridor Endorsed by the WRAP

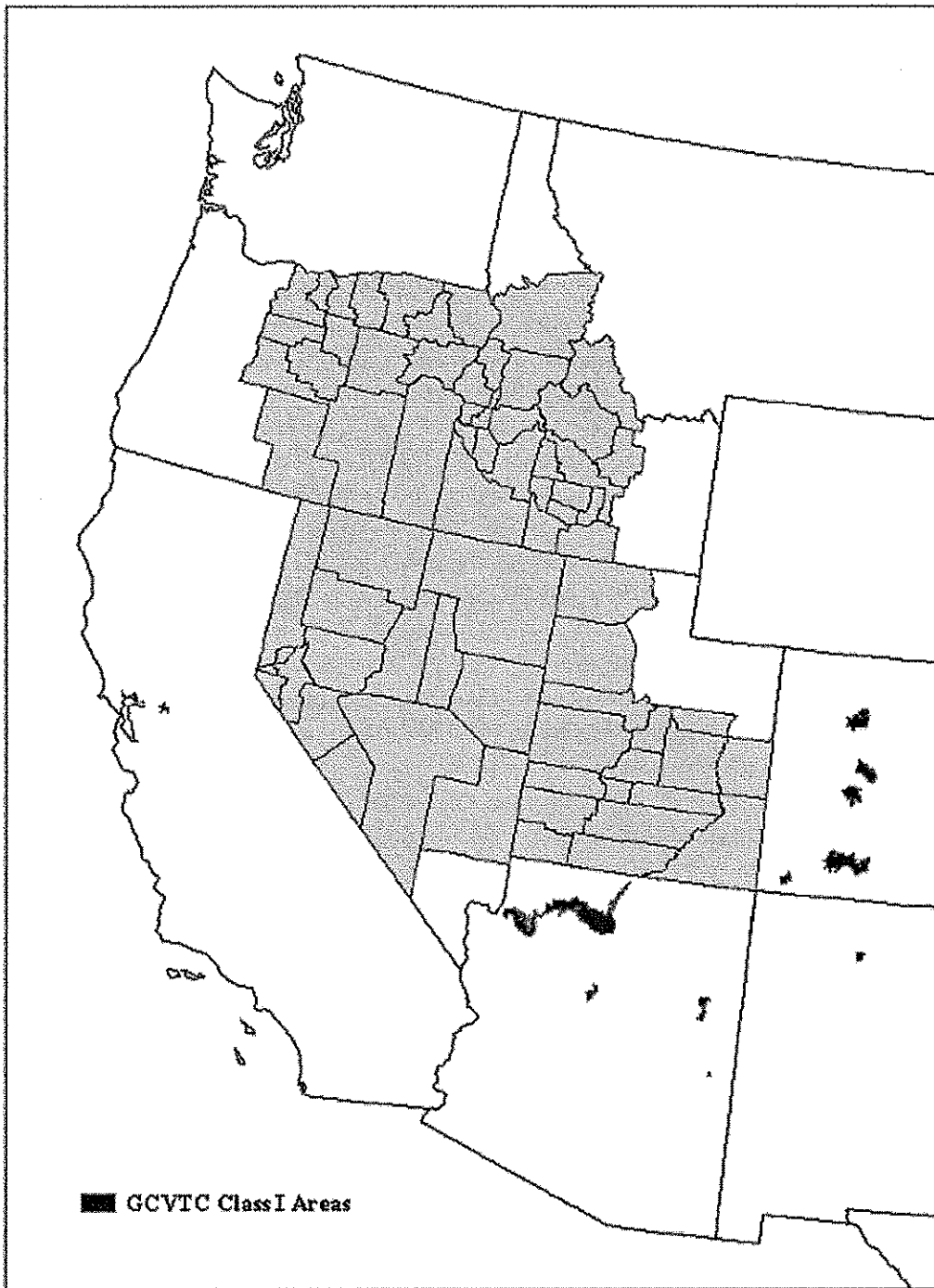


Table 1. Counties Within the Clean Air Corridor Endorsed by the WRAP.

<u>State</u>	<u>County</u>	<u>State</u>	<u>County</u>
Idaho	Ada	Oregon	Grant
Idaho	Adams	Oregon	Harney
Idaho	Blaine	Oregon	Jefferson
Idaho	Boise	Oregon	Lake
Idaho	Butte	Oregon	Malheur
Idaho	Camas	Oregon	Morrow
Idaho	Canyon	Oregon	Sherman
Idaho	Cassia	Oregon	Umatilla
Idaho	Custer	Oregon	Union
Idaho	Elmore	Oregon	Wallowa
Idaho	Gem	Oregon	Wasco
Idaho	Gooding	Oregon	Wheeler
Idaho	Idaho	Utah	Beaver
Idaho	Jerome	Utah	Box Elder
Idaho	Lemhi	Utah	Carbon
Idaho	Lincoln	Utah	Emery
Idaho	Minidoka	Utah	Garfield
Idaho	Owyhee	Utah	Grand
Idaho	Payette	Utah	Iron
Idaho	Twin Falls	Utah	Juab
Idaho	Valley	Utah	Kane
Idaho	Washington	Utah	Millard
Nevada	Churchill	Utah	Piute
Nevada	Douglas	Utah	San Juan
Nevada	Elko	Utah	Sanpete
Nevada	Esmeralda	Utah	Sevier
Nevada	Eureka	Utah	Tooele
Nevada	Humboldt	Utah	Washington
Nevada	Lander	Utah	Wayne
Nevada	Lincoln		
Nevada	Lyon		
Nevada	Mineral		
Nevada	Nye		
Nevada	Pershing		
Nevada	Storey		
Nevada	Washoe		
Nevada	White Pine		
Nevada	Carson City		
Oregon	Baker		
Oregon	Crook		
Oregon	Deschutes		
Oregon	Gilliam		

Table 2. Changes in Clean Air Corridor Emissions (Assuming SO₂ Milestones Are Met).

		Point	Area	On Road	Non Road	Paved	Unpaved	Total
SO ₂	1996	51,413	9,260	2,065	10,838	0	0	73,576
	2018	45,330	10,614	413	21,596	0	0	77,954
	2018-1996	-6,082	1,354	-1,652	10,758	0	0	4,378
NO _x	1996	85,782	12,935	93,581	64,462	0	0	256,762
	2018	109,863	17,576	28,692	62,557	0	0	218,689
	2018-1996	24,080	4,641	-64,889	-1,905	0	0	-38,072
PM ₁₀	1996	27,055	142,776	3,872	5,952	5,740	47,733	233,128
	2018	32,748	154,966	2,640	6,763	12,402	38,828	248,347
	2018-1996	5,692	12,190	-1,232	811	6,662	-8,904	15,219
PM _{2.5}	1996	11,987	41,595	3,495	5,487	1,435	7,160	71,160
	2018	14,583	52,069	2,058	6,228	3,101	5,824	83,863
	2018-1996	2,595	10,474	-1,438	740	1,665	-1,336	12,702
VOC	1996	5,993	95,921	69,899	38,535	0	0	210,349
	2018	7,921	95,515	22,651	29,233	0	0	155,321
	2018-1996	1,927	-406	-47,248	-9,301	0	0	-55,029

Table 3. Total Change in Emissions Weighted to Reflect Relative Impact on Visibility.

	SO ₂	NO _x	PM10	PM2.5	VOC	EC*	OC*	Total	Change
1996									
VEEU	5,445	1,746	1,958	932	294	902	856	12,133	--
2018									
VEEU	5,769	1,487	2,086	1,099	217	985	935	12,578	4%

* Estimates of elemental and organic carbon, EC and OC, were not available to the CAC Work Group for the 1996 and 2018 emission inventories. Values for this analysis were derived from the estimates of EC and OC for the 1990 inventory of the 9 GCVTC states. The method used was to take the proportion of EC to fine and coarse particulates (PM_{2.5} + PM₁₀) in the 1990 inventory and use that same proportion to calculate an EC value for the 1996, 2018, and 2018 milestone inventories. The same method was used for OC.

** VEEU – Visibility Equivalency Emission Units (Used in the GCVTC IAS Model.)

VEEU weights

PM2.5	PM10	NO _x	VOC	SO ₂	EC	OC
0.0131	0.0084	0.0068	0.0014	0.0740	0.6497	0.2466

Each category in the inventory is multiplied by these factors to create the VEEU-weighted inventory.

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-3
Proposed Administrative Rules for the
Stationary Source Strategy

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-3
Proposed Administrative Rules for the Stationary Source Strategy
OAR 340-214-0400 through 340-214-0430
OAR 340-228-400 through 340-228-530

Included in this proposed rulemaking are two proposed supporting rules associated with the stationary source strategy in Oregon Regional Haze Plan. The first is *Sulfur Dioxide Emission Inventory* (OAR 340-214-0400 through 340-214-0430), which clarify existing requirements related to reporting SO₂ emissions to DEQ under the Regional Haze Plan. (Note that no additional reporting is being proposed.) The second is the *Western Backstop Sulfur Dioxide Trading Program* (OAR 340-228-0400 to OAR 340-228-0530), which are requirements for an emissions trading program that will be implemented only if regional SO₂ milestones are not achieved. Under the federal Regional Haze rule, states are required to have this backup program in place when they adopt their Section 309 plans. Current projections indicate the SO₂ emissions in the West are well below the regional SO₂ milestones and are continuing to decline. Therefore, implementation of this backup program is unlikely.

Oregon Administrative Rules
DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 214

Sulfur Dioxide Emission Inventory

340-214-0400

Purpose

The purpose of OAR 340-214-0400 through 340-214-0430 is to establish consistent monitoring, recordkeeping, and reporting requirements for stationary sources in Oregon to determine whether sulfur dioxide emissions remain below the sulfur dioxide milestones established in the State Implementation Plan, section 5.5.2.3.1.a, incorporated by reference in OAR 340-200-0040.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-214-0410

Applicability

(1) OAR 340-214-0410 through OAR 340-214-0430 apply to all stationary sources with actual sulfur dioxide emissions of 100 tons per year or more in calendar year 2000 or any subsequent calendar year.

(2) Any source that triggers applicability and then emits less than 100 tons per year in any subsequent year remains subject to the requirements of OAR 340-214-0410 to OAR 340-214-

0430 until 2018 or until the first control period under the Western Backstop Sulfur Dioxide Trading Program as established in OAR 340-228-0510(1)(a), whichever is earlier.

(3) Sources that emit less than 100 tons per year of sulfur dioxide in all years (2003 through 2018) are not subject to OAR 340-214-0420 through 0430.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-214-0420

Annual Sulfur Dioxide Emission Report

(1) The owner or operator must:

(a) Submit a report of actual annual SO₂ inventory emissions;

(b) Use appropriate emission factors and estimating techniques and document the emissions monitoring/estimation methodology used;

(c) Include emissions from start up, shut down, and upset conditions in the annual total inventory;

(d) Use 40 CFR Part 75 methodology for reporting emissions for all sources subject to the federal acid rain program; and

(e) Maintain all records used in the calculation of the emissions, including but not limited to the following:

(A) Amount and type of fuel combusted

(B) Percent sulfur content of fuel and how the content was determined

(C) Quantity of product produced

(D) Emissions monitoring data

(E) Operating data

(F) How the emissions are calculated;

(G) If the emissions increased or decreased by twenty percent or more from a previous year, then the owner or operator must include in their annual emissions report an explanation of why this occurred.

(f) Maintain records of any physical changes to facility operations or equipment, or any other changes (e.g. raw material or feed) that may affect the emissions projections as established in the State Implementation Plan.

(g) Retain records for a minimum of ten years from the date of establishment, or if the record was the basis for an adjustment to the milestone, 5 years after the date of an implementation plan revision, whichever is longer. (2) Smelters must submit an annual report of sulfur input, in tons/year

(2) The owner or operator must report emissions for the year 2003 by May 15, 2004 and annually thereafter.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-214-0430

Changes in Emission Measurement Techniques

The owner or operator that uses a different emission monitoring or calculation method than was used to report their sulfur dioxide emissions (1999 for utilities and 1998 for all other sources) under OAR 340-214-0114 must adjust their reported emissions to be comparable to the emission monitoring or calculation method that was used in 1999 or 1998. The calculations that are used to make this adjustment must be included with the annual emission report under OAR 340-214-0420.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EOC under OAR 340-200-0040.]

DIVISION 228

Western Backstop Sulfur Dioxide Trading Program

340-228-0400

Purpose

(1) OAR 340-228-0400 through OAR 340-228-0530 implement the Western Backstop (WEB) Sulfur Dioxide (SO₂) Trading Program provisions in accordance with the federal Regional Haze Rule, 40 CFR 51.309 (2003), and Section 5.5.2.3 of the State Implementation Plan, titled "Sulfur Dioxide Milestones and Backstop Trading Program," incorporated under OAR 340-200-0040.

(2) Nothing in OAR 340-228-0400 through OAR 340-228-0530 waives any requirement otherwise in effect or subsequently required under another program, including Rules governing new sources.

340-228-0410

Definitions

The definitions in OAR 340-200-0020 and this rule apply to OAR 340-228-0400 through OAR 340-228-0530. If the same term is defined in this rule and OAR 340-200-0020, the definition in this rule applies to OAR 340-228-0400 through OAR 340-228-0530.

(1) "Account Certificate of Representation" means the completed and signed submission required to designate an Account Representative for a WEB source or an Account Representative for a general account.

(2) "Account Representative" means the individual who is authorized through an Account Certificate of Representation to represent owners and operators of the WEB source with regard to matters under the WEB Trading Program or, for a general account, who is authorized through an Account Certificate of Representation to represent the persons having an ownership interest in allowances in the general account with regard to matters concerning the general account.

(3) "Actual Emissions" means total annual SO₂ emissions determined in accordance with OAR 340-228-0480, or determined in accordance with SO₂ emission inventory requirements of OAR

340-214-0400 through OAR 340-214-0430 for sources that are not subject to OAR 340-228-0480.

(4) "Allocate" means to assign allowances to a WEB source through State Implementation Plan section 5.5.2.3.3.a.

(5) "Allowance" means the limited authorization under the WEB Trading Program to emit one ton of SO₂ during a specified control period or any control period thereafter subject to the terms and conditions for use of unused allowances as established by OAR 340-228-0400 through OAR 340-228-0530.

(6) "Allowance Limitation" means the tonnage of SO₂ emissions authorized by the allowances available for compliance deduction for a WEB source for a control period under OAR 340-228-0510(1) on the allowance transfer deadline for that control period.

(7) "Allowance Tracking System" means the system where allowances under the WEB Trading Program are recorded, held, transferred, and deducted.

(8) "Allowance Tracking System account" means an account in the Allowance Tracking System established for purposes of recording, holding, transferring, and deducting allowances.

(9) "Allowance transfer deadline" means the deadline established in OAR 340-228-0490(2) when allowances must be submitted for recording in a WEB source's compliance account in order to demonstrate compliance for that control period.

(10) "Compliance account" means an account established in the Allowance Tracking System under OAR 340-228-0470(1) for the purpose of recording allowances that a WEB source might hold to demonstrate compliance with its allowance limitation.

(11) "Compliance certification" means a submission to the Department by the Account Representative as required under OAR 340-228-0510(2) to report a WEB source's compliance or noncompliance with this rule.

(12) "Control period" means the period beginning January 1 of each year and ending on December 31 of the same year, inclusive.

(13) "Emission unit" means any part of a stationary source that emits or would have the potential to emit any pollutant submitted to regulations under the Clean Air Act.

(14) "Emissions tracking database" means the central database where SO₂ emissions for WEB sources as recorded and reported in accordance with OAR 340-228-0400 through OAR 340-228-0530 are tracked to determine compliance with allowance limitations.

(15) "Existing source" means a stationary source that commenced operation before the Program Trigger Date.

(16) “Fugitive emissions” are those emissions that could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

(17) “General account” means an account established in the Allowance Tracking System under OAR 340-228-0470 for the purpose of recording allowances held by a person that are not to be used to show compliance with an allowance limitation.

(18) “Milestone” means the maximum level of stationary source regional sulfur dioxide emissions for each year from 2003 to 2018, established according to the procedures in State Implementation Plan Section 5.5.2.3.1.

(19) “New WEB Source” means a WEB source that commenced operation on or after the Program Trigger Date.

(20) “New Source Set-aside” means a pool of allowances that are available for allocation to new sources in accordance with the provisions of State Implementation Plan Section 5.5.2.3.3.a(2).

(21) “Owner or operator” means any person who is an owner or who operates, controls or supervises a WEB source and includes but is not be limited to any holding company, utility system, or plant manager.

(22) “Potential to emit” means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, will be treated as part of its design if the limitation is enforceable by the EPA Administrator.

(23) “Program trigger date” means the date that the Department determines that the WEB Trading Program has been triggered in accordance with the State Implementation Plan Section 5.5.2.3.1(1)(b).

(24) “Program trigger years” means the years shown in Table 5.5.2-4, column 3, of the State Implementation Plan for the applicable milestone if the WEB Trading Program is triggered as described in State Implementation Plan Section 5.5.2.3.1 c.

(25) “Renewable Energy Resource” means a resource that generates electricity by non-nuclear and non-fossil technologies that results in low or no air emissions. The term includes electricity generated by wind energy technologies; solar photovoltaic and solar thermal technologies; geothermal technologies; technologies based on landfill gas and biomass sources; and new low-impact hydropower that meets the Low-Impact Hydropower Institute criteria. Biomass includes agricultural, food and wood wastes. The term does not include pumped storage or biomass from municipal solid waste, black liquor, or treated wood.

(26) “Retired source” means a WEB source that has received a retired source exemption as provided in OAR 340-228-0430(4).

(27) “Serial number” means, when referring to allowances, the unique identification number assigned to each allowance by the Tracking Systems Administrator, in accordance with OAR 340-228-0460(2).

(28) “SO₂ emitting unit” means any equipment that is located at a WEB source and that emits SO₂.

(29) “Stationary source” means any building, structure, facility or installation that emits or may emit any air pollutant subject to regulation under the Clean Air Act.

(30) “Submit” means to send to the appropriate authority under the signature of the Account Representative. For purposes of determining when something is submitted, an official U.S. Postal Service postmark or equivalent electronic time stamp will establish the date of submittal.

(31) “Ton” means 2000 pounds. For any control period, any fraction of a ton equaling 1000 pounds or more will be treated as one ton, and any fraction of a ton equaling less than 1000 pounds will be treated as zero tons.

(32) “Tracking System Administrator” means the person designated by the Department as the administrator of the Allowance Tracking System and the emission tracking database.

(33) “WEB source” means a stationary source that meets the applicability requirements of OAR 340-228-0430.

(34) “Web Trading Program” means OAR 340-228-0400 through 340-228-0530, the Western Backstop SO₂ Trading Program, triggered as a backstop in accordance with the provisions in the SO₂ Milestones and Backstop Trading Program Implementation Plan, if necessary, to ensure that regional SO₂ emissions are reduced.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0420

WEB Trading Program Trigger

(1) OAR 340-228-0400 through OAR 340-228-0530 becomes effective on the program trigger date established by the procedures outlined in the SO₂ Milestones and Backstop Trading Program Implementation Plan.

(2) Exception. Special Penalty Provisions for Year 2018, OAR 340-228-0520 becomes effective on January 1, 2018 and remains effective until the requirements of OAR 340-228-0520 have been met.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0430

WEB Trading Program Applicability

(1) General Applicability. Except as provided in section (2) of this rule, OAR 340-228-0400 through OAR 340-228-0530 apply to any stationary source or group of stationary sources that are located on one or more contiguous or adjacent properties and that are under the control of the same person or persons under common control, belong to the same industrial grouping, and are described in subsections (a) through (c) of this section. A stationary source or group of stationary sources is considered part of a single industrial grouping if all of the pollutant emitting activities at such source or group of sources on contiguous or adjacent properties belong to the same Major Group (i.e., all have the same two-digit code) as described in the Standard Industrial Classification Manual, 1987.

(a) All BART-eligible sources as defined in 40 CFR 51.301 (2003) that are BART-eligible due to SO₂ emissions.

(b) All stationary sources not meeting the criteria of subsection (a) of this rule that have actual SO₂ emissions of 100 tons or more per year in the program trigger years or any subsequent year. The fugitive emissions of a stationary source are not considered in determining whether the source is subject to OAR 340-228-0400 through OAR 340-228-0530 unless the source belongs to one of the following categories of stationary source:

(i) Coal cleaning plants (with thermal dryers);

(ii) Kraft pulp mills;

(iii) Portland cement plants;

(iv) Primary zinc smelters;

(v) Iron and steel mills;

(vi) Primary aluminum ore reduction plants;

(vii) Primary copper smelters;

(viii) Municipal incinerators capable of charging more than 250 tons of refuse per day;

(ix) Hydrofluoric, sulfuric, or nitric acid plants;

(x) Petroleum refineries;

(xi) Lime plants;

(xii) Phosphate rock processing plants;

(xiii) Coke oven batteries;

(xiv) Sulfur recovery plants;

(xv) Carbon black plants (furnace process);

(xvi) Primary lead smelters;

(xvii) Fuel conversion plants;

(xviii) Sintering plants;

(xix) Secondary metal production plants;

(xx) Chemical process plants;

(xxi) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;

(xxii) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;

(xxiii) Taconite ore processing plants;

(xxiv) Glass fiber processing plants;

(xxv) Charcoal production plants;

(xxvi) Fossil-fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input; or

(xxvii) Any other stationary source category, that is being regulated under Section 111 or 112 of the Act as of August 7, 1980.

(c) A new source that begins operation after the program trigger date and has the potential to emit 100 tons or more of SO₂ per year.

(2) The Department may determine on a case-by-case basis, with concurrence from the EPA Administrator, that a source is not a WEB source if the source:

(a) had actual sulfur dioxide emissions of 100 tons or more in a single year and in each of the previous five years had actual SO₂ emissions of less than 100 tons per year, and

(A)(i) the emissions increase that was caused by a sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner and that the source took timely and reasonable action to minimize the temporary emission increase. A temporary emission increase due to poor maintenance or careless operation does not meet the criteria of this section; and

(ii) has corrected the failure of air pollution control equipment, process equipment, or process by the time of the Department's determination under this section; or

(B) had to switch fuels or feedstocks on a temporary basis as a result of an emergency situation or unique and unusual circumstances besides the cost of such fuels or feedstocks.

(3) Duration of Applicability. Except as provided for in section (4) of this rule, once a source is subject to the WEB Trading Program (OAR 340-228-0400 through OAR 340-228-0530), it is subject to the requirements every year thereafter.

(4) Retired Source Exemption

(a) Application. Any WEB that is permanently retired must apply for a retired source exemption. The WEB source may only be considered permanently retired if all SO₂ emitting units at the source are permanently retired. The application must contain the following information:

(A) Identification of the WEB source, including the plant name and an appropriate identification code in a format specified by the Department.

(B) Name of Account Representative.

(C) Description of the status of the WEB source, including the date that the WEB source was permanently retired.

(D) Signed certification that the WEB source is permanently retired and will comply with the requirements of section (4) of this rule.

(E) Verification that the WEB source has a general account where any unused allowances or future allocations will be recorded.

(b) Notice. The retired source exemption becomes effective when the Department notifies the source that the Department has granted the retired source exemption.

(c) Responsibilities of Retired Sources:

(A) A retired source is exempt from OAR 340-228-0480 and OAR 340-228-0510, except as provided below.

(B) A retired source may not emit any SO₂ after the date the Department issues a retired source exemption.

(C) A WEB source must submit SO₂ emissions reports, as required by OAR 340-228-0480 for any time period the source was operating before the effective date of the retired source exemption. The retired source is subject to the compliance provisions of OAR 340-228-0510, including the requirement to hold allowances in the source's compliance account to cover all SO₂ emissions before the date the source was permanently retired.

(D) A retired source that is still in existence but no longer emitting SO₂ must, for a period of five years from the date the records are created, retain records demonstrating the effective date of the retired source exemption for purposes of this rule.

(d) Resumption of Operations

(A) Before resuming operation, the retired source must submit registration materials as follows:

(i) If the source is required to obtain a new source review permit or operating permit under OAR Chapter 340, Division 224 or OAR Chapter 340, Division 218, before resuming operation, then registration information as described in OAR 340-228-0450(1) and a copy of the retired source exemption must be submitted with the application required under Chapter 340, Division 224 or OAR Chapter 340, Division 218.

(ii) If the source does not meet the criteria under subparagraph (i) of this rule, then registration information as described in OAR 340-228-0450 and a copy of the retired source exemption must be submitted to the Department at least ninety days before the source resumes operation.

(B) The retired source exemption automatically expires on the day the source resumes operation.

(e) Loss of Future Allowances. A WEB source that is permanently retired and that does not apply to the Department for a retired source exemption within ninety days of the date that the source is permanently retired forfeits any unused and future allowances. The Tracking System Administrator must retire the abandoned allowances.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0440

Account Representative for WEB Sources

(1) Each WEB source must identify one Account Representative and may also identify an alternate Account Representative who may act on behalf of the Account Representative. Any representation, action, inaction, or submission by the alternate Account Representative will be deemed to be a representation, action, inaction, or submission by the Account Representative.

(2) Identification and Certification of an Account Representative.

(a) The Account Representative and any Alternate Account Representative must be appointed by an agreement that makes the representations, actions, inactions, or submissions of the Account Representative and any alternate binding on the owners and operators of the WEB source.

(b) The Account Representative must submit to the Department and the Tracking System Administrator a signed and dated Account Certificate of Representation (Certificate) that contains the following elements:

(A) Identification of the WEB source by plant name, state and an appropriate identification code in a format specified by the Department;

(B) The name, address, e-mail (if available), telephone, and facsimile number of the Account Representative and any alternate;

(C) A list of owners and operators of the WEB source;

(D) Information to be part of the emission tracking system database in accordance with the State Implementation Plan. The Department will specify specific data elements that are consistent with the data system structure, including basic facility information that appears in other reports and notices submitted by the WEB source, such as county location, industrial classification codes, and similar general facility information.

(E) The following certification statement: "I certify that I was selected as the Account Representative or alternate Account Representative, as applicable, by an agreement binding on the owners and operators of the WEB source. I certify that I have all the necessary authority to carry out my duties and responsibilities under the WEB Trading Program on behalf of the owners and operators of the WEB source, and that each such owner and operator will be fully

bound by my representations, actions, inactions, or submissions and by any decision or order issued to me by the Department regarding the WEB Trading Program.”

(c) Once the Department receives the complete Certificate, the Account Representative and any alternate Account Representative represents and, by his or her representations, actions, inactions, or submissions, legally binds each owner and operator of the WEB source in all matters pertaining to the WEB Trading Program. Any order issued by the Department regarding the WEB Trading Program is binding on the owners and operators, subject to the provisions of ORS chapter 183.

(d) No WEB Allowance Tracking System account may be established for the WEB source until the Tracking System Administrator has received a complete Certificate. Once the account is established, the Account Representative must make all submissions concerning the account, including the deduction or transfer of allowances.

(3) Requirements and Responsibilities

(a) The Account Representative’s responsibilities include, but are not limited to, transferring allowances; submitting monitoring plans, registrations, certification applications, SO₂ emissions data, and compliance reports as required by OAR 340-228-0400 through OAR 340-228-0530; and representing the source in all matters pertaining to the WEB Trading Program.

(b) Each submission under this program must be signed and certified by the Account Representative for the WEB source. Each submission must include the following truth and accuracy certification statement by the Account Representative: “I am authorized to make this submission on behalf of the owners and operators of the WEB source for which the submission is made. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.”

(4) Changing the Account Representative or Owners and Operators

(a) Changing the Account Representative or the Alternate Account Representative. The Account Representative or alternate Account Representative may be changed at any time by sending a complete superseding Certificate to the Department and the Tracking System Administrator under OAR 340-228-0440(2)(b). The change will be effective when the Tracking System Administrator receives it. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous Account Representative or alternate before the Tracking System Administrator receives the superseding Certificate are binding on the new Account Representative and the owners and operators of the WEB source.

(b) Changes in Owners and Operators

(A) Within thirty days of any change in the owners and operators of the WEB source, including the addition of a new owner or operator, the Account Representative must submit a revised Certificate amending the list of owners and operators to include such change.

(B) If a new owner or operator of a WEB source is not included in the list of owners and operators submitted in the Certificate, such new owner or operator is subject to and bound by the Certificate, the representations, actions, inactions, and submissions of the Account Representative of the WEB source, and the decisions, orders, actions, and inactions of the Department as if the new owner or operator were included in the list.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0450

Registration

(1) Deadlines

(a) Each source that is a WEB source on or before the Program Trigger Date must register by submitting the initial Certificate required in OAR 340-228-0440(2) to the Department no later than 180 days after the program trigger date.

(b) Any existing source that becomes a WEB source after the program trigger date must register by submitting the initial Certificate required in OAR 340-228-0440(2) to the Department no later than September 30 of the year following the inventory year in which the source exceeded the emission threshold.

(c) Any new WEB source must register by submitting the initial Certificate required in OAR 340-228-0440(2) to the Department before commencing operation.

(2) Any allocation, transfer or deduction of allowance to or from the compliance account of a WEB source does not require revision of the WEB source's operating permit.

(3) Whether or not a WEB source is not required to have a permit under OAR 340-218 or OAR 340-224 at any time after this Rule is effective, it must at all times possess a permit that includes the requirements of OAR 340-228-0400 through OAR 340-228-0530. If it does not possess a Title V permit under this rule, it must satisfy this paragraph's requirements by obtaining or modifying a permit under OAR Chapter 340, Division 216, to incorporate the requirements of OAR 340-228-0400 through OAR 340-228-0530. The source must at all times possess a permit that includes these requirements.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0460

Allowance Allocations

(1) The Tracking System Administrator must record the allowances for each WEB source in the compliance account for a WEB source after the Department allocates the allowances under Section 5.5.2.3.3(a) of the State Implementation Plan. If applicable, the Tracking System Administrator must record a portion of the SO₂ allowances for a WEB source in a WEB source's special reserve compliance account assigned to the Department to account for any allowances to be held by the Department in accordance with OAR 340-228-0480(1)(b).

(2) The Tracking System Administrator must assign a serial number to each allowance in accordance with State Implementation Plan Section 5.5.2.3.3(f).

(3) All allowances must be allocated, recorded, transferred, or used as whole allowances. To determine the number of whole allowances, the number of allowances must be rounded down for decimals less than 0.50 and rounded up for decimals of 0.50 or greater.

(4) An allowance is not a property right. It is a limited authorization to emit one ton of SO₂ for the purpose of meeting the requirements of this Rule. No provision of this WEB Trading Program or other law should be construed to limit the authority of the United States or the Department to terminate or limit such authorization.

(5) Early Reduction Bonus Allocation. Any WEB source that reduces its permitted annual SO₂ emissions to a level that is below the floor level allocation established for that source in State Implementation Plan Section 5.5.2.3.3.a between 2003 and the program trigger year may apply to the Department for an early reduction bonus allocation. The application must be submitted no later than ninety days after the Program Trigger Date. Any WEB source that applies and receives early reduction bonus allocations must retain the records referenced below for a minimum of five years after the early reduction bonus allowance is certified in accordance with Section 5.5.2.3.3(a)(c) of the State Implementation Plan. The application for an early reduction bonus allocation must contain the following information:

(a) Copies of all permits or other enforceable documents that include annual SO₂ emissions limits for the WEB source during the period the WEB source was generating the early reductions. Such permits or enforceable documents require monitoring for SO₂ emissions that meets the requirements in OAR 340-228-0480(1)(a) and OAR 340-228-0480(1)(c).

(b) Copies of emissions monitoring reports for the period the WEB source was generating the early reductions that document the actual annual SO₂ emissions and demonstrates that the actual annual SO₂ emissions were below the floor level allocation established for that source in Section 5.5.2.3.3.a of the State Implementation Plan.

(c) Demonstration that the floor level established for the source in accordance with Section 5.5.2.3.3.a of the State Implementation Plan was calculated using data that are consistent with the new monitoring methodology. If new monitoring techniques will change the floor level for

the source, then a demonstration of the new floor level based on new monitoring techniques must be included in the application.

(6) Request for allowances for new WEB sources or modified WEB Sources.

(a) A new WEB source or an existing WEB source that has increased production capacity through a permitted change in operations OAR 340, Division 224 may apply to the Department for an allocation from the new source set-aside, as outlined in Section 5.5.2.3.3.c. of the State Implementation Plan.

(A) A new WEB source is eligible to apply for an annual allocation equal to the permitted annual SO₂ emission limit for that source after the source has commenced operation.

(B) An existing WEB source is eligible to apply for an annual allocation equal to the permitted annual SO₂ emission limit for that source that is attributable to any amount of production capacity that is greater than the permitted production capacity for that source as of January 1, 2003.

(C) A source that has received a retired source exemption under OAR 340-228-0430(4) is not eligible to apply for an allocation from the new source set-aside.

(b) The application for an allocation from the new source set-aside must contain the following information:

(A) for an existing WEB source, documentation of the production capacity before and after the new permit;

(B) for new WEB sources, documentation of the actual date and a copy of the permit.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0470

Establishment of Accounts

(1) Allowance Tracking System Accounts. All WEB sources must open a compliance account. Any person may open a general account for the purpose of holding and transferring allowances. In addition, if a WEB source conducts monitoring under OAR 340-228-480(1)(b), the WEB source must open a special reserve compliance account for allowances associated with units monitored under those provisions. Allowances may not be transferred out of the special reserve account by the WEB source or account representative. The Department shall allocate allowances to the account in accordance with OAR 340-228-0480(1)(b)(E) and all such allowances for each control period shall be retired each year for compliance in accordance with OAR 340-228-0510. To open either type of account, an application that contains the following information must be submitted to the TSA.

(a) The Account Representative's name, mailing address, e-mail address, telephone number, and facsimile number. For a compliance account, include a copy of the Account Certificate of Representation of the Account Representative and any alternate as required in OAR 340-228-0440(2)(b). For a general account, include the Account Certificate of Representation of the Account Representative and any alternate as required in OAR 340-228-0470(3)(b).

(b) The WEB source or organization name;

(c) The type of account to be opened; and

(d) A signed certification of truth and accuracy by the Account Representative according to OAR 340-228-0440(3)(b) for compliance accounts and certification of truth and accuracy by the Account Representative according to OAR 340-228-0470(4) for general accounts.

(2) Account Representative for General Accounts. For a general account, one Account Representative must be identified and an alternate Account Representative may be identified and may act on behalf of the Account Representative. Any representation, action, inaction, or submission by the alternate Account Representative is a representation, action, inaction, or submission by the Account Representative.

(3) Identification and Certification of an Account Representative for General Accounts

(a) The Account Representative must be appointed by an agreement that makes the representations, actions, inactions, or submissions of the Account Representative binding on all persons who have an ownership interest with respect to allowances held in the general account.

(b) The Account Representative must submit to the Tracking System Administrator a signed and dated Account Certificate of Representation (Certificate) that contains the following elements:

(A) The name, address, e-mail (if available), telephone, and facsimile number of the Account Representative and any alternate;

(B) The organization's name;

(C) The following certification statement: "I certify that I was selected as the Account Representative or alternate Account Representative, as applicable, by an agreement binding on all persons who have an ownership interest in allowances in the general account with regard to matters concerning the general account. I certify that I have all the necessary authority to carry out my duties and responsibilities under the WEB Trading Program on behalf of said persons, and that each such person will be fully bound by my representations, actions, inactions, or submissions and by any decision or order issued to me by the Department regarding the general account."

(c) When the Department receives the complete Certificate, the Account Representative represents and, by his or her representations, actions, inactions, or submissions, legally binds each person who has an ownership interest in allowances held in the general account with regard

to all matters concerning the general account. Such persons will be bound by any decision or order issued by the Department.

(d) A WEB Allowance Tracking System general account may not be established until the Tracking System Administrator has received a complete Certificate. Once the account is established, the Account Representative must make all submissions concerning the account, including the deduction or transfer of allowances.

(4) Requirements and Responsibilities for General Accounts. Each submission for the general account must be signed and certified by the Account Representative for the general account. Each submission must include the following truth and accuracy certification statement by the Account Representative: "I am authorized to make this submission on behalf of all person who have an ownership interest in allowances held in the general account. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(5) Changing the Account Representative. The Account Representative or alternate Account Representative may be changed at any time by sending a complete superseding Certificate to the Department and the Tracking System Administrator, according to OAR 340-228-0470(3)(b). The change will take effect when the Department receives the Certificate. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous Account Representative or alternate before the Department receives the superseding Certificate are binding on the new Account Representative and all persons having ownership interest with respect to allowances held in the general account.

(6) Changes to the Account. Any change to the information required in the application for an existing account under OAR 340-228-0470(1) requires a revision of the application.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0480

Monitoring, Recordkeeping and Reporting

(1) General Requirements on Monitoring Methods

(a) For each SO₂ emitting unit at a WEB source the owner or operator must comply with the following, as applicable, to monitor and record SO₂ mass emissions:

(A) If a unit is subject to 40 CFR Part 75 (2003) under a requirement separate from the WEB Trading Program, the unit must meet the requirements contained in Part 75 with respect to monitoring, recording and reporting SO₂ mass emissions.

(B) If a unit is not subject to 40 CFR Part 75 (2003) under a requirement separate from the WEB Trading Program, a unit must use one of the following monitoring methods, as applicable:

(i) A continuous emission monitoring system (CEMS) for SO₂ and flow that complies with all applicable monitoring provisions in 40 CFR Part 75;

(ii) If the unit is a gas- or oil-fired combustion device, the excepted monitoring methodology in Appendix D to 40 CFR Part 75, or, if applicable, the low mass emissions (LME) provisions (with respect to SO₂ mass emissions only) of section 75.19 of 40 CFR Part 75; or

(iii) One of the optional WEB protocols, if applicable, in Appendix A to this Rule; or

(iv) A monitoring plan for site-specific monitoring that the source submits for approval by the Department and by the U.S. Environmental Protection Agency in accordance with OAR 340-228-0480(8)(e).

(C) A permanently retired unit is not required to monitor under this rule if such unit was permanently retired and had no emissions for the entire period for which the WEB source implements this paragraph (C) of this rule and the Account Representative certifies in accordance with OAR 340-228-0510(2) that these conditions were met. In the event that a permanently retired unit recommences operation, the WEB source shall meet the requirements of this rule in the same manner as if the unit was a new unit.

(b) Notwithstanding OAR 340-228-0480(1)(a), the owner or operator of a unit that meets one of the conditions of OAR 340-228-0480(1)(b)(A) may elect to have the provisions of this OAR 340-228-0480(1)(b) apply to that unit.

(A) Any of the following units may implement OAR 340-228-0480(1)(b):

(i) Any smelting operation where all of the emissions from the operation are not ducted to a stack; or

(ii) Any flare, except to the extent such flares are used as a fuel gas combustion device at a petroleum refinery.

(iii) Any other type of unit without add-on SO₂ control equipment, if no control level was assumed for the WEB source in establishing the floor level (and reducible allocation) provided in Section 5.5.2.3.3.a of the State Implementation Plan.

(B) For each unit covered by OAR 340-228-0480(1)(b), the Account Representative must submit a notice to request that OAR 340-228-0480(1)(b) applies to one or more SO₂ emitting units at a WEB source. The notice must be submitted in accordance with the compliance dates specified in OAR 340-228-0480(6)(a) and include the following information (in a format specified by the Department with such additional, related information as may be requested):

(i) A notice of all units at the applicable source, specifying which of the units are covered by OAR 340-228-0480(1)(b);

(ii) Consistent with the emission estimation methodology used to determine the floor level (and reducible allocation) for the source in accordance with State Implementation Plan Section 5.5.2.3.3.a, the portion of the WEB source's overall allowance allocation that is attributable to any unit(s) covered by OAR 340-228-0480(1)(b); and

(iii) An identification of any such units that are permanently retired.

(C) For each new unit at an existing WEB source for which the owner or operator seeks to comply with this OAR 340-228-0480(1)(b) and for which the Account Representative applies for an allocation under the new source set-aside provisions of OAR 340-228-0460(6), the Account Representative must submit a modified notice under OAR 340-228-0480(1)(b)(B) that includes such new SO₂ emitting unit(s). The modified notice must be submitted in accordance with the deadlines in OAR 340-228-0480, but no later than the date on which a request is submitted under OAR 340-228-0460(6) for allocations from the set-aside.

(D) The Department will evaluate the information submitted by the WEB source in paragraphs (B) and (C) of this subsection and may issue a notice to the source to exclude any units that do not qualify under OAR 340-228-0480(1)(b) or to adjust the portion of allowances attributable to units that do qualify to be consistent with the emission estimation methodology used to establish the floor level and reducible allocation for the source.

(E) The Department will allocate allowances equal to the adjusted portion of the WEB source's allowances under paragraphs (B), (C), and (D) of this subsection in a special reserve compliance account, provided that no such treatment of the WEB source's allocation will be required for any unit that is permanently retired and had no emissions for the entire period for which the WEB source implements subsection (b) of this rule and the Account Representative certifies in accordance with OAR 340-228-0510 that these conditions were met. In the event that a permanently retired unit recommences operation, the WEB source shall meet the requirements of this OAR 340-228-0480 in the same manner as if the unit was a new unit.

(F) The Account Representative for a WEB source must submit an annual emissions statement for each unit under OAR 340-228-0480(1)(b) pursuant to OAR 340-228-0480(8). The WEB source must maintain operating records sufficient to estimate annual emissions in a manner consistent with the emission estimation methodology used to establish the floor level (and reducible allocation) for the source. In addition, if the estimated emissions from all such units at the WEB source are greater than the allowances for the current control year held in the special reserve account under OAR 340-228-0480(1)(b)(E) for the WEB source, the Account Representative must report the extra amount as part of the annual report for the WEB source under OAR 340-228-0510 and be required to use other allowances in the standard compliance account to account for such emissions, in accordance with OAR 340-228-0510.

(G) The remaining provisions of OAR 340-228-0480 do not apply to units covered by this subsection except where otherwise noted.

(H) A WEB source may modify the monitoring for an SO₂ emitting unit by using monitoring under OAR 340-228-0480(1)(a), but any such monitoring change must take effect on January 1 of the next compliance year. In addition, the Account Representative must submit an initial monitoring plan at least 180 days before the date on which the new monitoring will take effect and a detailed monitoring plan in accordance with OAR 340-228-0480(2). The Account Representative must also submit a revised notice under OAR 340-228-0480(1)(b)(B) with the initial monitoring plan.

(c) For any monitoring method that the owner or operator uses under this rule (including OAR 340-228-0480(1)(a)(B)) the owner or operator (and, as applicable, the Account Representative) must install, certify, and operate such monitoring in accordance with this rule and record and report the data from such monitoring as required in this rule. In addition, the owner or operator (and, as applicable, the Account Representative) may not:

(A) Except for an alternative approved by the U.S. EPA Administrator for a WEB source that implements monitoring under OAR 340-228-0480(1)(a)(A), use an alternative monitoring system, alternative reference method, or another alternative for the required monitoring method without having obtained prior written approval in accordance with OAR 340-228-0480(8)(e) (relating to petitions);

(B) Operate an SO₂ emitting unit so as to discharge, or allow to be discharged, SO₂ emissions to the atmosphere without accounting for these emissions in accordance with the applicable provisions of this rule;

(C) Disrupt the approved monitoring method or any portion thereof and thereby avoid monitoring and recording SO₂ mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed in accordance with the applicable provisions of this rule; or

(D) Retire or permanently discontinue use of an approved monitoring method, except under one of the following circumstances:

(i) During a period when the unit is exempt from the requirements of this rule, including retirement of a unit as addressed in OAR 340-228-0480(1)(a)(3);

(ii) The owner or operator is monitoring emissions from the unit with another certified monitoring method approved under this rule for use at the unit that provides data for the same parameter as the retired or discontinued monitoring method; or

(iii) The Account Representative notifies the Department of the date of certification testing of a replacement monitoring system in accordance with this rule, and the owner or operator recertifies thereafter a replacement monitoring system in accordance with the applicable provisions of this rule.

(2) Monitoring Plan

(a) General Provisions. The owner or operator of an SO₂ emitting unit that uses a monitoring method under OAR 340-228-0480(1)(a)(A) must meet the following requirements:

(A) Prepare and submit to the Department an initial monitoring plan for each monitoring method that the owner or operator uses to comply with this rule. In accordance with OAR 340-228-0480(2)(c), the plan must contain sufficient information on the units involved, the applicable method, and the use of data derived from that method to demonstrate that all unit SO₂ emissions are monitored and reported. The plan must be submitted in accordance with the compliance deadlines specified in OAR 340-228-0480(6).

(B) Prepare, maintain and submit to the Department a detailed monitoring plan before the first day of certification testing, in accordance with the compliance deadline specified in OAR 340-228-0480(5). The plan must contain the applicable information required by OAR 340-228-0480(2)(d). The Department may require that the monitoring plan (or portions thereof) be submitted electronically. The Department also may require that the plan be submitted on an ongoing basis in electronic format as part of the quarterly report submitted under OAR 340-228-0480(8)(a) of this Rule or resubmitted separately within 30 days after any change is made to the plan in accordance with OAR 340-228-0480(2)(a)(C).

(C) Whenever the owner or operator makes a replacement, modification, or change in one of the systems or methodologies provided for in OAR 340-228-0480(1)(a)(B), including a change in the automated data acquisition and handling system or in the flue gas handling system, that affects information reported in the monitoring plan (e.g., a change to serial number for a component of a monitoring system), then the owner or operator must update the monitoring plan in accordance with the compliance deadline specified in OAR 340-228-0480(5).

(b) The owner or operator of an SO₂ emitting unit that uses a method under OAR 340-228-0480(1)(a)(A) (a unit subject to 40 CFR Part 75 (2003) under a program other than this WEB Trading Program) must meet the requirements of OAR 340-228-0480(2)(a)-(f) by preparing, maintaining, and submitting a monitoring plan in accordance with the requirements of 40 CFR Part 75 (2003), provided that the owner or operator also submits the entire monitoring plan to the Department upon request.

(c) Initial Monitoring Plan. The Account Representative must submit an initial monitoring plan for each SO₂ emitting unit (or group of units sharing a common methodology) that, except as otherwise specified in the permit monitoring requirements that, except as otherwise specified in an applicable provision in Appendix A, contains the following information:

(A) For all SO₂ emitting units involved in the monitoring plan:

(i) Plant name and location [street address, legal address, county, city];

(ii) Plant and unit identification numbers assigned by the Department;

(iii) Type of unit (or units for a group of units using a common monitoring methodology);

(iv) Identification of all stacks or pipes associated with the monitoring plan;

(v) Types of fuel(s) fired (or sulfur containing process materials used in the SO₂ emitting unit) and the fuel classification of the unit if combusting more than one type of fuel and using a 40 CFR Part 75 (2003) methodology;

(vi) Type(s) of emissions controls installed or to be installed, including specifications of whether such controls are pre-combustion, post-combustion, or integral to the combustion process;

(vii) Maximum hourly heat input capacity, or process throughput capacity, if applicable;

(viii) Identification of all units using a common stack; and

(ix) Indication of whether any stack identified in the plan is a bypass stack.

(B) For each unit and parameter required to be monitored, identification of monitoring methodology information monitoring methodology, monitor locations, substitute data approach for the methodology, and general identification of quality assurance procedures. If the proposed methodology is a site-specific methodology submitted pursuant to OAR 340-228-0480(1)(a)(B)(iv), the description under this paragraph must describe fully all aspects of the monitoring equipment, installation locations, operating characteristics, certification testing, ongoing quality assurance and maintenance procedures, and substitute data procedures.

(C) If the WEB source intends to petition for a change to any specific monitoring requirement otherwise required under OAR 340-228-0480, such petition may be submitted as part of the initial monitoring plan.

(D) The Department may issue a notice of approval or disapproval of the initial monitoring plan based on the compliance of the proposed methodology with the requirements for monitoring in this rule.

(d) Detailed Monitoring Plan. The Account Representative must submit a detailed monitoring plan that, except as otherwise specified in an applicable provision in Appendix A, contains the following information:

(A) Identification and description of each monitoring component (including each monitor and its identifiable components, such as analyzer and/or probe) in a CEMS (e.g., SO₂ pollutant concentration monitor, flow monitor, moisture monitor), a 40 CFR Part 75, Appendix D monitoring system (e.g., fuel flowmeter, data acquisition and handling system), or a protocol in or a protocol in Appendix A., including:

(i) Manufacturer, model number, and serial number;

(ii) Component/system identification code assigned by the facility to each identifiable monitoring component, such as the analyzer and/or probe;

(iii) Designation of the component type and method of sample acquisition or operation (e.g., in situ pollutant concentration monitor or thermal flow monitor);

(iv) Designation of the system as a primary or backup system;

(v) First and last dates the system reported data;

(vi) Status of the monitoring component; and

(vii) Parameter monitored.

(B) Identification and description of all major hardware and software components of the automated data acquisition and handling system, including:

(i) Hardware components that perform emission calculations or store data for quarterly reporting purposes (provide the manufacturer and model number); and

(ii) Software components (provide the identification of the provider and model/version number).

(C) Explicit formulas for each measured emissions parameter, using component/system identification codes for the monitoring system used to measure the parameter that links the system observations with the reported concentrations and mass emissions. The formulas must contain all constants and factors required to derive mass emissions from component/system code observations and an indication of whether the formula is being added, corrected, deleted, or is unchanged. The owner or operator of a low mass emissions unit for which the owner or operator is using the optional low mass emissions excepted methodology in 40 CFR section 75.19(c) (2003) is not required to report such formulas.

(D) for units with flow monitors only, include the inside cross-sectional area (ft²) at flow monitoring location.

(E) If using CEMS for SO₂ and flow, for each parameter monitored, include the scale, maximum potential concentration (and method of calculation), maximum expected concentration (if applicable) (and method of calculation), maximum potential flow rate (and method of calculations), span value, full-scale range, daily calibration units of measure, span effective date/hour, span inactivation date/hour, indication of whether dual spans are required, default high range value, flow rate span, and flow rate span value and full scale value (in scfh) for each unit or stack using SO₂ or flow component monitors.

(F) If the monitoring system or excepted methodology provides for use of a constant, assumed, or default value for a parameter under specific circumstances, then include the following information for each value of such parameter:

(i) Identification of the parameter;

- (ii) Default, maximum, minimum, or constant value, and units of measure for the value;
- (iii) Purpose of the value;
- (iv) Indicator of use during controlled/uncontrolled hours;
- (v) Types of fuel;
- (vi) Source of the value;
- (vii) Value effective date and hour;
- (viii) Date and hour value is no longer effective (if applicable); and
- (ix) For units using the excepted methodology under 40 CFR section 75.19 (2003), the applicable SO₂ emission factor.

- (G) Unless otherwise specified in section 6.5.2.1 of Appendix A to 40 CFR Part 75 (2003), for each unit or common stack on which hardware CEMS are installed:
 - (i) The upper and lower boundaries of the range of operation (as defined in section 6.5.2.1 of Appendix A to 40 CFR Part 75), or thousand of lb/hr of steam, or ft/sec (as applicable);
 - (ii) The load or operating level(s) designated as normal in section 6.5.2.1 of Appendix A to 40 CFR Part 75, or thousands of lb/hr of steam, or ft/sec (as applicable);
 - (iii) The two load or operating levels (i.e., low, mid, or high) identified in section 6.5.2.1 of Appendix A to 40 CFR Part 75 as the most frequently used;
 - (iv) The date of the data analysis used to determine the normal load (or operating) level(s) and the two most frequently-used load (or operating) levels; and
 - (v) Activation and deactivation dates when the normal load or operating level(s) change and are updated.

- (H) For each unit that is complying with 40 CFR Part 75 (2003) for which the optional fuel flow-to-load test in section 2.1.7 of appendix D to 40 CFR Part 75 is used:
 - (i) The upper and lower boundaries of the range of operation (as defined in section 6.5.2.1 of Appendix A to 40 CFR Part 75), expressed in thousand of lb/hr of steam;
 - (ii) The load level designated as normal, pursuant to section 6.5.2.1 of Appendix A to 40 CFR Part 75, expressed in thousands of lb/hr of steam; and
 - (iii) The date of the load analysis used to determine the normal load level.

(I) Information related to quality assurance testing, including (as applicable): identification of the test strategy; protocol for the relative accuracy test audit; other relevant test information; calibration gas levels (percent of span) for the calibration error test and linearity check; calculations for determining maximum potential concentration, maximum expected concentration (if applicable), maximum potential flow rate, and span;

(J) If applicable, apportionment strategies under 40 CFR sections 75.10 through 75.18 (2003).

(K) Description of site locations for each monitoring component in a monitoring system, including schematic diagrams and engineering drawings and any other documentation that demonstrates each monitor location meets the appropriate siting criteria. For units monitored by a continuous emission monitoring system, diagrams must include:

(i) A schematic diagram identifying entire gas handling system from unit to stack for all units, using identification numbers for units, monitor components, and stacks corresponding to the identification numbers provided in the initial monitoring plan and OAR 340-228-0480(2)(d)(A) and (C). The schematic diagram must depict the height of any monitor locations. Comprehensive and/or separate schematic diagrams must be used to describe groups of units using a common stack.

(ii) Stack and duct engineering diagrams showing the dimensions and locations of fans, turning vanes, air preheaters, monitor components, probes, reference method sampling ports, and other equipment that affects the monitoring system location, performance, or quality control checks.

(L) A data flow diagram denoting the complete information handling path from output signals of CEMS components to final reports.

(e) In addition to supplying the information in OAR 340-228-0480(2)(c) and (d), the owner or operator of an SO₂ emitting unit using either of the methodologies in OAR 340-228-0480(1)(a)(B)(ii) must include the following information in its monitoring plan for the specific situations described:

(A) For each gas-fired or oil-fired SO₂ emitting unit for which the owner or operator uses the optional protocol in appendix D to 40 CFR Part 75 for SO₂ mass emissions, the Account Representative must include the following information in the monitoring plan:

(i) Parameter monitored;

(ii) Type of fuel measured, maximum fuel flow rate, units of measure, and basis of maximum fuel flow rate (i.e., upper range value or unit maximum) for each fuel flowmeter;

(iii) Test method used to check the accuracy of each fuel flowmeter;

(iv) Submission status of the data;

(v) Monitoring system identification code;

(vi) The method used to demonstrate that the unit qualifies for monthly GCV sampling or for daily or annual fuel sampling for sulfur content, as applicable;

(vii) A schematic diagram identifying the relationship between the unit, all fuel supply lines, the fuel flowmeter(s), and the stack(s). The schematic diagram must depict the installation location of each fuel flowmeter and the fuel sampling location(s). Comprehensive and/or separate schematic diagrams will be used to describe groups of units using a common pipe;

(viii) For units using the optional default SO₂ emission rate for "pipeline natural gas" or "natural gas" in appendix D to 40 CFR Part 75 (2003), the information on the sulfur content of the gaseous fuel used to demonstrate compliance with either section 2.3.1.4 or 2.3.2.4 of appendix D to 40 CFR Part 75;

(ix) For units using the 720 hour test under section 2.3.6 of appendix D to 40 CFR Part 75 to determine the required sulfur sampling requirements, report the procedures and results of the test; and

(x) For units using the 720 hour test under section 2.3.5 of appendix D to 40 CFR Part 75 to determine the appropriate fuel gross calorific value (GCV) sampling frequency, report the procedures used and the results of the test.

(B) For each SO₂ emitting unit for which the owner or operator uses the low mass emission excepted methodology of section 75.19 to 40 CFR Part 75, the Account representative must include the following information in the monitoring plan that accompanies the initial certification application:

(i) The results of the analysis performed to qualify as a low mass emissions unit under 40 CFR section 75.19(c) (2003). This report must include either the previous three years actual or projected emissions. The following items must be included:

(I) Current calendar year of application;

(II) Type of qualification;

(III) Years one, two, and three;

(IV) Annual measured, estimated, or projected SO₂ mass emissions for years one, two, and three; and

(V) Annual operating hours for years one, two, and three.

(ii) A schematic diagram identifying the relationship between the unit, all fuel supply lines and tanks, any fuel flowmeter(s), and the stack(s). Comprehensive separate schematic diagrams must be used to describe groups of units using a common pipe;

(iii) For units which use the long term fuel flow methodology under 40 CFR section 75.19(c)(3) (2003), a diagram of the fuel flow to each unit or group of units and a detailed description of the procedures used to determine the long term fuel flow for a unit or group of units for each fuel combusted by the unit or group of units;

(iv) A statement that the unit burns only gaseous fuel(s) and/or fuel oil and a list of the fuels that are burned or a statement that the unit is projected to burn only gaseous fuel(s) and/or fuel oil and a list of the fuels that are projected to be burned;

(v) A statement that the unit meets the applicability requirements in 40 CFR 75.19(a) and (b) with respect to SO₂ emissions; and

(vi) Any unit historical actual, estimated and projected SO₂ emissions data and calculated SO₂ emissions data demonstrating that the unit qualifies as a low mass emissions unit under 40 CFR 75.19(a) and (b).

(C) For each gas-fired unit the Account Representative will include the following in the monitoring plan: current calendar year, fuel usage data as specified in the definition of gas-fired in 40 CFR section 72.2 (2003), and an indication of whether the data are actual or projected data.

(f) The specific elements of a monitoring plan under OAR 340-228-0480(2) must not be part of an operating permit for a WEB source issued in accordance with Title V of the Clean Air Act, and modifications to the elements of the plan must not require a permit modification.

(3) Certification/Recertification

(a) All monitoring systems are subject to initial certification and recertification testing as specified in 40 CFR Part 75 (2003) or Appendix A to this Rule as applicable. Certification or recertification of a monitoring system by the U.S. Environmental Protection Agency for a WEB source that is subject to 40 CFR Part 75 under a requirement separate from this division constitutes certification under the WEB Trading Program.

(b) The owner or operator of an SO₂ emitting unit not otherwise subject to 40 CFR Part 75 that monitors SO₂ mass emissions in accordance with 40 CFR Part 75 to satisfy the requirements of this rule must perform all of the tests required by that regulation and must submit the following to the Department:

(A) A test notice not later than 21 days before the certification testing of the monitoring system, provided that the Department may establish additional requirements for adjusting test dates after this notice as part of the approval of the initial monitoring plan under OAR 340-228-0480(2)(c); and

(B) An initial certification application within 45 days after testing is complete. A monitoring system will be considered provisionally certified while the application is pending.

(c) A monitoring system is provisionally certified while the application is pending, and the system shall be deemed certified if the Department does not approve or disapprove the system within six months after the date on which the application is submitted.

(d) Whenever an audit of any monitoring certified under OAR 340-228-0400 through OAR 340-228-0530, and a review of the initial certification or recertification application, reveal that any system or component should not have been certified or recertified because it did not meet a particular performance specification or other requirement of OAR 340-228-0400 through OAR 340-228-0530, both at the time of the initial certification or recertification application submission and at the time of the audit, the Department will issue a notice of disapproval of the certification status of such system or component. For the purposes of this subsection, an audit shall be either a field audit of the facility or an audit of any information submitted to the Department regarding the facility. By issuing the notice of disapproval, the certification status is revoked prospectively, and the data measured and recorded shall not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status until the date and time that the WEB source completes subsequently approved initial certification or recertification tests in accordance with the procedures in OAR 340-228-0480(3). The WEB source shall apply the substitute data procedures in OAR 340-228-0480(5)(b) to replace, prospectively, all of the invalid, non-quality-assured data for each disapproved system or component.

(4) Ongoing Quality Assurance and Quality Control. The WEB source must satisfy the applicable quality assurance and quality control requirements contained in 40 CFR Part 75 (2003) or, if the WEB source is subject to a WEB protocol in Appendix A, the applicable quality assurance and quality control requirements in Appendix A on and after the date that certification testing commences.

(5) Substitute Data Procedures

(a) For any period after certification testing is complete in which quality-assured, valid data are not being recorded by a monitoring system certified and operating in accordance with OAR 340-228-0400 through 0530, missing or invalid data must be replaced with substitute data in accordance with 40 CFR Part 75 (2003) or, if the WEB source is subject to a WEB protocol in Appendix A, with substitute data in accordance with Appendix A.

(b) For an SO₂ emitting unit that does not have a certified (or provisionally certified) monitoring system in place as of the beginning of the first control period for which the unit is subject to the WEB Trading Program, the owner or operator must:

(A) If the owner or operator will use a CEMS to comply with OAR 340-228-0400 through OAR 340-228-0530, substitute the maximum potential concentration of SO₂ for the unit and the maximum potential flow rate, as determined in accordance with 40 CFR Part 75 (2003). The procedures for conditional data validation under 40 CFR section 75.20(b)(3) may be used for any monitoring system under this Rule that uses these 40 CFR Part 75 procedures, as applicable;

(B) If the owner or operator will use the 40 CFR Part 75 Appendix D methodology, substitute the maximum potential sulfur content, density, or gross calorific value for the fuel and the maximum potential fuel flow rate, in accordance with section 2.4 of Appendix D to 40 CFR Part 75;

(C) If the owner or operator will use the 40 CFR Part 75 low mass emissions units, substitute the SO₂ emission factor required for the unit as specified in 40 CFR section 75.19 and the maximum rated hourly heat input, as defined in 40 CFR section 72.2.

(D) If using a protocol in Appendix A to this Rule, follow the procedures in the applicable protocol.

(6) Compliance Deadlines

(a) The initial monitoring plan must be submitted by the following dates:

(A) For each source that is a WEB source on or before the Program Trigger Date, the monitoring plan must be submitted 180 days after such Program Trigger Date.

(B) For any existing source that becomes a WEB source after the Program Trigger Date, the monitoring plan must be submitted by September 30 of the year following the inventory year in which the source exceeded the emissions threshold.

(C) For any new WEB source, the monitoring plan must be included with the permit application for New Source Review.

(b) A detailed monitoring plan under OAR 340-228-0480(2)(b) must be submitted no later than 45 days prior to commencing certification testing in accordance with (c) below.

(c) Emission monitoring systems must be installed, operational and meet all of the certification testing requirements of this OAR 340-228-0480 (including any referenced in Appendix A) by the following dates:

(A) For each source that is a WEB source on or before the Program Trigger Date, two years before the start of the first control period as described in OAR 340-228-0510.

(B) For any existing source that becomes a WEB source after the Program Trigger Date, one year after the due date for the monitoring plan OAR 340-228-0480(6)(a)(B).

(C) For any new WEB source (or any new unit at a WEB source under OAR 340-228-0480 (c)(A) or (c)(B)), the earlier of 90 unit operating days or 180 calendar days after the date the new source commences operation.

(d) The owner or operator must submit test notices and certification applications in accordance with the deadlines set forth in OAR 340-228-0480(3)(b).

(e) For each applicable control period, the WEB source must submit each quarterly report under OAR 340-228-0480(8) by no later than 30 days after the end of each calendar quarter and must submit the annual report under OAR 340-228-0480(8) no later than 60 days after the end of each calendar year.

(7) Recordkeeping

(a) Except as provided in OAR 340-228-0480(7)(b), the WEB source must keep copies of all reports, registration materials, compliance certifications, sulfur dioxide emissions data, quality assurance data, and other submissions under OAR 340-228-0400 through OAR 340-228-0530 for a period of five years. In addition, the WEB source shall keep a copy of all Account Certificates of Representation for the duration of the program. Unless otherwise requested by the WEB source and approved by the Department, the copies must be kept on site.

(b) The WEB source must keep records of all operating hours, quality assurance activities, fuel sampling measurements, hourly averages for SO₂, stack flow, fuel flow, or other continuous measurements, as applicable, and any other applicable data elements specified in this rule or in Appendix A to this Rule. The WEB source must maintain the applicable records specified in 40 CFR Part 75 for any SO₂ emitting unit that uses a Part 75 monitoring method to meet the requirements of this rule.

(8) Reporting

(a) Quarterly Reports. For each SO₂ emitting unit, the Account Representative must submit a quarterly report within thirty days after the end of each calendar quarter. The report must be in a format specified by the Department to include hourly and quality assurance activity information and must be submitted in a manner compatible with the emissions tracking database designed for the WEB Trading Program. If the owner or operator submits a quarterly report under 40 CFR Part 75 to the U.S. EPA Administrator, no additional report under this paragraph (a) are required; provided, however, that the Department may require that a copy of that report (or a separate statement of quarterly and cumulative annual SO₂ mass emissions) be submitted separately to the Department.

(b) Annual Report. Based on the quarterly reports, each WEB source must submit an annual statement of total annual SO₂ emissions for all SO₂ emitting units at the source. The annual report must identify total emissions for all units monitored in accordance with OAR 340-228-0480(1)(a) and the total emissions for all units with emissions estimated in accordance with OAR 340-228-0480(1)(b). The annual report must be submitted within 60 days after the end of a control period.

(c) If the Department so directs, that any monitoring plan, report, certification or recertification, or emissions data required to be submitted under this rule, will be submitted to the Tracking System Administrator.

(d) The Department may review and reject any report submitted under this OAR 340-228-0480(7) that contains errors or fails to satisfy the requirements of this rule, and the Account Representative must resubmit the report to correct any deficiencies.

(e) Petitions. A WEB source may petition for an alternative to any requirement specified in OAR 340-228-0480(1)(a)(B). The petition requires approval by the Department and the U.S. EPA Administrator. Any petition submitted under this paragraph must include sufficient information for evaluating the petition, including, at a minimum, the following information:

(A) Identification of the WEB source and applicable SO₂ emitting unit(s);

(B) A detailed explanation of why the proposed alternative is being suggested in lieu of the requirement;

(C) A description and diagram of any equipment and procedures used in the proposed alternative, if applicable;

(D) A demonstration that the proposed alternative is consistent with the purposes of the requirement for which the alternative is proposed is consistent with the purposes of OAR 340-228-0400 through OAR 340-228-0530, and that any adverse effect of approving such alternative will be *de minimis*; and

(E) Any other relevant information that the Department may require.

(f) Consistency of Identifying Information. For any monitoring plans, reports, or other information submitted under OAR 340-228-0400 through OAR 340-228-0530, the Account Representative must ensure that, where applicable, identifying information is consistent with the identifying information provided in the most recent certificate of representation for the WEB source submitted under OAR 340-228-0440.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0490

Allowance Transfers

(1) Procedure. To transfer allowances, the Account Representative must submit the following information to the Tracking System Administrator:

(a) The transfer account number(s) identifying the transferor account;

(b) The transfer account number(s) identifying the transferee account;

(c) The serial number of each allowance to be transferred; and

(d) The transferor's Account Representative's name, signature, and the date of submission.

(2) Allowance Transfer Deadline. The allowance transfer deadline is midnight Pacific Standard Time March 1 of each year (or if this date is not a business day, midnight of the first business day thereafter) following the end of the control period. By this time, the transfer of the allowances into the WEB source's compliance account must be correctly submitted to the Tracking System Administrator in order to demonstrate compliance under OAR 340-228-0510(1) for that control period.

(3) Retirement of Allowances. To permanently retire allowances, the transferor's account representative must submit the following information to the Tracking System Administrator:

(a) The transfer account number(s) identifying the transferor account;

(b) The serial number of each allowance to be retired; and

(c) The transferor's Account Representative's name, signature, and the date of submission accompanied by a signed statement acknowledging that each retired allowance as no longer available for future transfers from or to any account.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0500

Use of Allowances from a Previous Year

(1) Any allowance that is held in a compliance account or general account remains in the account until the allowance is either deducted in conjunction with the compliance process or transferred to another account.

(2) In order to demonstrate compliance under OAR 340-228-0510(1) for a control period, WEB sources may use allowances allocated for that control period or any previous year. Because all allowances held in a special reserve compliance account for a WEB source that monitors certain units in accordance with OAR 340-228-0480(1)(b) will be deducted for compliance for each control period, no banking of such allowances for use in a subsequent year is permitted by OAR 340-228-0400 through OAR 340-228-0530.

(3) If flow control procedures for the current control period have been triggered as outlined in Section 5.5.2.3.3(h)(2) of the State Implementation Plan, then the use of allowances that were allocated for any previous year will be limited as follows:

(a) The number of allowances that are held in each compliance account and general account as of the allowance transfer deadline for the immediately previous year and that were allocated for any previous year will be determined by the Department.

(b) The number determined in OAR 340-228-0500(3)(a) will be multiplied by the flow control ratio established in accordance with Section 5.5.2.3.3(k)(1) of the State Implementation Plan to

determine the number of allowances that were allocated for a previous year that can be used without restriction for the current control period.

(c) Allowances that were allocated for a previous year in excess of the number determined in OAR 340-228-0500(3)(b) may also be used for the current control period. If such allowances are used to make a deduction, two allowances must be deducted for each deduction of one allowance required under OAR 340-228-0510.

(4) Special provisions for the year 2018. After the Department has determined compliance with the 2017 allowance limitation in accordance with OAR 340-228-0510(1), allowances allocated for any year before 2018 may not be used for determining compliance with the 2018 allowance limitation or any future allowance limitation.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0510

Compliance

(1) Compliance with Allowance Limitations

(a) The WEB source must hold allowances, in accordance with OAR 340-228-0510(1)(b) and OAR 340-228-0500, as of the allowance transfer deadline in the WEB source's compliance account, (together with any current control year allowances held in the WEB source's special reserve compliance account under OAR 340-228-0480(1)(b)) in an amount not less than the total SO₂ emissions for the control period from the WEB source, as determined under the monitoring and reporting requirements of OAR 340-228-0480.

(A) For each source that is a WEB source on or before the Program Trigger Date, the first control period is the calendar year that is six years following the calendar year for which SO₂ emissions exceeded the milestone in accordance with procedures in Section 5.5.2.3.1 of the State Implementation Plan.

(B) For any existing source that becomes a WEB source after the Program Trigger Date, the first control period is the calendar year that is four years following the inventory year in which the source became a WEB source.

(C) For any new WEB source after the Program Trigger Date, the first control period is the first full calendar year that the source is in operation.

(D) If the WEB Trading Program is triggered in accordance with the year 2013 review procedures in section 5.5.2.3.1(d) of the State Implementation Plan, the first control period for each source that is a WEB source on or before the Program Trigger Date is the year 2018.

(b) An allowance may be deducted from the WEB source's compliance account only if:

(A) the allowance was allocated for the current control period or meets the requirements in OAR 340-228-0500 for use of allowances from a previous control period, and

(B) the allowance was held in the WEB source's compliance account as of the allowance transfer deadline for the current control period, or the allowance was transferred into the compliance account by an allowance transfer correctly submitted for recording by the allowance transfer deadline for the current control period.

(c) Compliance with allowance limitations must be determined as follows:

(A) The total annual SO₂ emissions for all SO₂ emitting units at the source that are monitored under OAR 340-228-0480(1)(b), as reported by the source in OAR 340-228-0480(8)(b) or (d), and recorded in the emissions tracking database shall be compared to the allowances held in the source's special reserve compliance account as of the allowance transfer deadline for the current control period, adjusted in accordance with OAR 340-228-0500. If the emissions are equal to or less than the allowances in such account, all such allowances shall be retired to satisfy the obligation to hold allowances for such emissions. If the total emissions from such units exceeds the allowances in such special reserve account, the WEB source shall account for such excess emissions in the following paragraph (A) of this subsection.

(B) The total annual SO₂ emissions for all SO₂ emitting units at the source that are monitored under OAR 340-228-0480(1)(a), as reported by the source in OAR 340-228-0480(8)(b) or (d), and recorded in the emissions tracking database, together with any excess emissions as calculated in the preceding paragraph (A) of this subsection, shall be compared to the allowances held in the source's compliance account as of the allowance transfer deadline for the current control period, adjusted in accordance with OAR 340-228-0500.

(d) Deduction of Allowances.

Other than allowances in a special reserve compliance account for units monitored under OAR 340-228-0480(1)(b) to the extent consistent with OAR 340-228-0500, allowances must be deducted for a WEB source for compliance with the allowance limitation as directed by the WEB source's Account Representative. Deduction of any other allowances as necessary for compliance with the allowance limitation must be on a first-in, first-out accounting basis in the order of the date and time of their recording in the WEB source's compliance account, beginning with the allowances allocated to the WEB source and continuing with the allowances transferred to the WEB source's compliance account from another compliance account or general account. The allowances held in a special reserve compliance account pursuant to OAR 340-228-0480(1)(b) shall be deducted as specified in OAR 340-228-0510(1)(c)(A).

(e) SO₂ emissions violations by a source subject to (c) and (d) of this rule:

(A) Each ton of SO₂ by a source in excess of its allowance limitation for a control period is a violation.

(B) Each day of the control period is a separate violation, and each ton of SO₂ emissions in excess of a source's allowance limitation is a separate violation.

(2) Certification of Compliance

(a) For each control period in which a WEB source is subject to the allowance limitation, the Account Representative of the source must submit to the Department a Compliance Certification report for the source.

(b) The Compliance Certification report must be submitted no later than the allowance transfer deadline of each control period and must contain the following:

(A) Identification of each WEB source;

(B) At the Account Representative's option, the serial numbers of the allowances that are to be deducted from a source's compliance account for compliance with the allowance limitation; and

(C) The Compliance Certification report according to OAR 340-228-0510(2)(c).

(c) In the Compliance Certification report, the Account Representative must certify, based on reasonable inquiry of those persons with primary responsibility for operating the WEB source in compliance with the WEB Trading Program, whether the WEB source for which the compliance certification is submitted was operated in compliance with the requirements of the WEB Trading Program applicable to the source during the control period covered by the report, including:

(A) Whether the WEB source operated in compliance with the SO₂ allowance limitation;

(B) Whether SO₂ emissions data was submitted to the Department in accordance with OAR 340-228-0480(8) and other applicable requirements, for review, revision as necessary, and finalization;

(C) Whether the monitoring plan for the WEB source has been maintained to reflect the actual operation and monitoring of the source and contains all information necessary to attribute SO₂ emissions to the source, in accordance with OAR 340-228-0480(1);

(D) Whether all the SO₂ emissions from the WEB source, were monitored or accounted for either through the applicable monitoring or through application of the appropriate missing data procedures;

(E) If applicable, whether any SO₂ emitting unit for which the WEB source is not required to monitor in accordance with OAR 340-228-0480(1)(a)(C) remained permanently retired and had no emissions for the entire applicable period; and

(F) Whether there were any changes in the method of operating or monitoring the WEB source that required monitor recertification. If there were any such changes, the report must specify the nature, reason, and date of the change, the method to determine compliance status subsequent to the change, and specifically, the method to determine SO₂ emissions.

(3) Penalties for any WEB source exceeding its allowance limitations

(a) Allowance deduction penalties

(A) An allowance deduction penalty will be assessed equal to two times the number of the WEB source's tons of SO₂ emissions in excess of its allowance limitation for a control period, determined in accordance with OAR 340-228-0510(1). Allowances allocated for that control period in the amount of the allowance deduction penalty will be deducted from the source's compliance account. If the compliance account does not have sufficient allowances allocated for that control period, the required number of allowances will be deducted from the WEB source's compliance account regardless of the control period for which they were allocated, once allowances are recorded in the account.

(B) Any allowance deduction required under OAR 340-228-0510(1)(c) will not affect the liability of the owners and operators of the WEB source for any fine, penalty, or assessment or their obligation to comply with any other remedy for the same violation as ordered under the Clean Air Act, implementing regulations, or applicable state or tribal law. Accordingly, a violation can be assessed each day of the control period for each ton of SO₂ emissions in excess of its allowance limitation or for each other violation of OAR 340-228-0400 through OAR 340-228-0530.

(4) Enforcement

(a) WEB Source liability for non-compliance. In addition to any allowance deduction, a WEB source that violates any requirement of this rule, including those listed under (1)(e) of this section, is subject to civil and criminal penalties, including but not limited to penalties under ORS 468, 468A, the Clean Air Act, and under OAR 340-012.

(b) General liability

(A) Any provision of the WEB Trading Program that applies to a source or an Account Representative also applies to the owners and operators of such source.

(B) Any person who violates any requirement or prohibition of the WEB Trading Program is subject to enforcement pursuant to OAR 340, Division 12.

(C) Any person who knowingly makes a false material statement in any record, submission, or report under this WEB Trading Program is subject to criminal enforcement pursuant to ORS 468.953.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0520

Special Penalty Provisions for 2018 Milestone

(1) If the WEB Trading Program is triggered as outlined in Section 5.5.2.3.1 of the State Implementation Plan, and the first control period will not occur until after the year 2018, the following provisions will apply for the 2018 emissions year.

(a) All WEB sources will register, and will open a compliance account within 180 days after the Program Trigger Date, in accordance with OAR 340-228-0450(1) and OAR 340-228-0470.

(b) The Tracking System Administrator will record the allowances for the 2018 control period for each WEB source in the source's compliance account once the Department allocates the 2018 allowances under Section 5.5.2.3.3(a) of the State Implementation Plan.

(c) The allowance transfer deadline is midnight Pacific Standard Time on May 30, 2021. WEB sources may transfer allowances as provided in OAR 340-228-0490(1) until the allowance transfer deadline.

(d) A WEB source must hold allowances allocated for 2018 including those transferred into the compliance account or a special reserve account by an allowance transfer correctly submitted by the allowance transfer deadline, in an amount not less than the WEB source's total SO₂ emissions for 2018. Emissions will be determined using the pre-trigger monitoring provisions in Section 5.5.2.3.2 of the State Implementation Plan, and OAR 340-214-0400 through OAR 340-214-0530.

(e) An allowance deduction and penalty for violation of SO₂ allowance limitation will be assessed and levied in accordance with OAR 340-228-0500(4), OAR 340-228-0510(1)(d) and (e), and OAR 340-228-0510(3) and (4), except that SO₂ emissions will be determined under OAR 340-228-0520(1)(d).

(2) If the program has been triggered and OAR 340-228-0520(1) is implemented, the provisions of OAR 340-228-0520(3) will apply for each year after the 2018 emission year until:

(a) The first control period under the WEB trading program; or

(b) The Department determined, in accordance with section 5.5.2.3.1(c)(10) of the Implementation Plan, that the 2018 SO₂ milestone has been met.

(3) If OAR 340-228-0520(1) was implemented, the following will apply to each emissions year after the 2018 emissions year:

(a) The Tracking System Administrator will record the allowances for the control period for the specific year for each WEB source in the source's compliance account once the Department allocates the allowances under Section 5.5.2.3.3.a of the State Implementation Plan.

(b) The allowance transfer deadline is midnight Pacific Standard Time on March 1 of each year (or if this date is not a business day, midnight of the first business day thereafter) following the end of the specific emissions year. WEB sources may transfer allowances as provided in OAR 340-228-0490(1) until the allowance transfer deadline.

(c) A WEB source must hold allowances allocated for that specific emissions year, or any year after 2018, including those transferred into the compliance account by an allowance transfer correctly submitted by the allowance transfer deadline, in an amount not less than the WEB source's total SO₂ emissions for the specific emissions year. Emissions are determined using the pre-trigger monitoring provisions in Section 5.5.2.3.2 of the State Implementation Plan, and OAR 340-214-0400 through 0530.

(d) An allowance deduction and penalty for violation of SO₂ allowance limitation will be assessed and levied in accordance with OAR 340-228-0500(4), OAR 340-228-0510(1)(d) and (e), and OAR 340-228-0510(3) and (4), except that SO₂ emissions shall be determined under OAR 340-228-0520(3)(c).

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0530

Integration into Permits

Any WEB source that is not subject to OAR 340, Division 218 at any time after OAR 340-228-0400 through OAR 340-228-0530 becomes effective must obtain a permit under OAR 340, Division 216 or modify an existing permit issued under that division that incorporates the requirements of OAR 340-228-0400 through OAR 340-228-0530.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

APPENDIX A: WEB MODEL RULE MONITORING PROTOCOLS

Protocol WEB-1: SO₂ Monitoring of Fuel Gas Combustion Devices

1. Applicability

(a) The provisions of this protocol are applicable to fuel gas combustion devices at petroleum refineries.

(b) Fuel gas combustion devices include boilers, process heaters, and flares used to burn fuel gas generated at a petroleum refinery.

(c) Fuel gas means any gas which is generated and combusted at a petroleum refinery. Fuel gas does not include: (1) natural gas, unless combined with other gases generated at a petroleum refinery, (2) gases generated by a catalytic cracking unit catalyst regenerator, (3) gases generated by fluid coking burners, (4) gases combusted to produce sulfur or sulfuric acid, or (5) process upset gases generated due to startup, shutdown, or malfunctions.

2. Monitoring Requirements

(a) Except as provided in paragraphs (b) and (c) of this Section 2, fuel gas combustion devices shall use a continuous fuel gas monitoring system (CFGMS) to determine the total sulfur content (reported as H₂S) of the fuel gas mixture prior to combustion, and continuous fuel flow meters to determine the amount of fuel gas burned.

(1) Fuel gas combustion devices having a common source of fuel gas may be monitored for sulfur content at one location, if monitoring at that location is representative of the sulfur content of the fuel gas being burned in any fuel gas combustion device.

(2) The CFGMS shall meet the performance requirements in Performance Specification 2 in Appendix B to 40 CFR Part 60, and the following:

(i) Continuously monitor and record the concentration by volume of total sulfur compounds in the gaseous fuel reported as ppmv H₂S.

(ii) Have the span value set so that the majority of readings fall between 10 and 95% of the range.

(iii) Record negative values of zero drift.

(iv) Calibration drift shall be 5.0% of the span.

(v) Methods 15A, 16, or approved alternatives for total sulfur, are the reference methods for the relative accuracy test. The relative accuracy test shall include a bias test in accordance with paragraph 4(c) of this section.

(3) All continuous fuel flow meters shall comply with the applicable provisions of Appendix D to 40 CFR Part 75.

(4) The hourly mass SO₂ emissions shall be calculated using the following equation:

$$E = (C_S)(Q_f)(K)$$

where:

- E = SO₂ emissions in lbs/hr
- C_S = Sulfur content of the fuel gas as H₂S(ppmv)
- Q_f = Fuel gas flow rate (scfh)
- $K = 1.660 \times 10^{-7}$ (lb/scf)/ppmv

(b) In place of a CFGMS in paragraph (a) of this Section 2, fuel gas combustion devices having a common source of fuel gas may be monitored with an SO₂ CEMS and flow CEMS at only one location, if the CEMS monitoring at that location is representative of

the SO₂ emission rate (lb SO₂/scf fuel gas burned) of all applicable fuel gas combustion devices. Continuous fuel flow meters shall be used in accordance with paragraph (b), and the fuel gas combustion device monitored by a CEMS shall have separate fuel metering.

(1) Each CEMS for SO₂ and flow shall comply with the operating requirements, performance specifications, and quality assurance requirements of 40 CFR Part 75.

(2) All continuous fuel flow meters shall comply with the applicable provisions of Appendix D to 40 CFR Part 75.

(3) The SO₂ mass emissions for all the fuel gas combustion devices monitored by this approach shall be determined by the ratio of the amount of fuel gas burned by the CEMS-monitored fuel gas combustion device to the total fuel gas burned by all applicable fuel gas combustion devices using the following equation:

$$E_t = (E_m)(Q_t)/(Q_m)$$

where: E_t = Total SO₂ emissions in lbs/hr from applicable fuel gas combustion devices.

E_m = SO₂ emissions in lbs/hr from the CEMS-monitored fuel gas combustion device.

Q_t = Fuel gas flow rate (scfh) from applicable fuel gas combustion devices.

Q_m = Fuel gas flow rate (scfh) from the CEMS-monitored fuel gas combustion device.

(c) In place of a CFGMS in paragraph (a) of this section, fuel gas combustion devices having a common source of fuel gas may be monitored with an SO₂ - diluent CEMS at only one location, if the CEMS monitoring at that location is representative of the SO₂ emission rate (lb SO₂/mmBtu) of all applicable fuel gas combustion devices. If this option is selected, the owner or operator shall conduct fuel gas sampling and analysis for gross calorific value (GCV), and shall use continuous fuel flow metering in accordance with paragraph (a) of this Section 2, with separate fuel metering for the CEMS-monitored fuel gas combustion device.

(1) Each SO₂-diluent CEMS shall comply with the applicable provisions for SO₂ monitors and diluent monitors in 40 CFR Part 75, and shall use the procedures in section 3 of Appendix F to Part 75 for determining SO₂ emission rate (lb/mmBtu) by substituting the term SO₂ for NO_x in that section.

(2) All continuous fuel flow meters and fuel gas sampling and analysis for GCV to determine the heat input rate from the fuel gas shall comply with the applicable provisions of Appendix D to 40 CFR Part 75.

(3) The SO₂ mass emissions for all the fuel gas combustion devices monitored by this approach shall be determined by the ratio of the fuel gas heat input to the CEMS-monitored fuel gas combustion device to the total fuel gas heat input to all applicable fuel gas combustion devices using the following equation:

$$E_t = (E_m)(H_t)/(H_m)$$

where: E_t = Total SO₂ emissions in lbs/hr from applicable fuel gas combustion devices.
E_m = SO₂ emissions in lb/mmBtu from the CEMS - monitored fuel gas combustion device.
H_t = Fuel gas heat input (mmBtu/hr) from applicable fuel gas combustion devices.
H_m = Fuel gas heat input (mmBtu/hr) from the CEMS - monitored fuel gas combustion device.

3. Certification/Recertification Requirements

All monitoring systems are subject to initial certification and recertification testing as follows:

(a) The owner or operator shall comply with the initial testing and calibration requirements in Performance Specification 2 in Appendix B of 40 CFR Part 60 and paragraph 2 (a)(2) of this section for each CFGMS.

(b) Each CEMS for SO₂ and flow or each SO₂-diluent CEMS shall comply with the testing and calibration requirements specified in 40 CFR Part 75, section 75.20 and Appendices A and B, except that each SO₂-diluent CEMS shall meet the relative accuracy requirements for a NO_x-diluent CEMS (lb/mmBtu).

(c) A continuous fuel flow meter shall comply with the testing and calibration requirements in 40 CFR Part 75, Appendix D.

4. Quality Assurance/Quality Control Requirements

(a) A quality assurance/quality control (QA/QC) plan shall be developed and implemented for each CEMS for SO₂ and flow or the SO₂-diluent CEMS in compliance with Appendix B of 40 CFR Part 75.

(b) A QA/QC plan shall be developed and implemented for each continuous fuel flow meter and fuel sampling and analysis in compliance with Appendix B of 40 CFR Part 75.

(c) A QA/QC plan shall be developed and implemented for each CFGMS in compliance with sections 1 and 1.1 of Appendix B of 40 CFR Part 75, and the following:

(1) Perform a daily calibration error test of each CFGMS at two gas concentrations, one low level and one high level. Calculate the calibration error as described in Appendix A to 40 CFR Part 75. An out of control period occurs whenever the error is greater than 5.0% of the span value.

(2) In addition to the daily calibration error test, an additional calibration error test shall be performed whenever a daily calibration error test is failed, whenever a monitoring system is returned to service following repairs or corrective actions that may affect the monitor measurements, or after making manual calibration adjustments.

(3) Perform a linearity test once every operating quarter. Calculate the linearity as described in Appendix A to 40 CFR Part 75. An out of control period occurs whenever the linearity error is greater than 5.0 percent of a reference value, and the absolute value of the difference between average monitor response values and a reference value is greater than 5.0 ppm.

(4) Perform a relative accuracy test audit once every four operating quarters. Calculate the relative accuracy as described in Appendix A to 40 CFR Part 75. An out of control period occurs whenever the relative accuracy is greater than 20.0% of the mean value of the reference method measurements.

(5) Using the results of the relative accuracy test audit, conduct a bias test in accordance with Appendix A to 40 CFR Part 75, and calculate and apply a bias adjustment factor if required.

5. Missing Data Procedures

(a) For any period in which valid data are not being recorded by an SO₂ CEMS or flow CEMS specified in this section, missing or invalid data shall be replaced with substitute data in accordance with the requirements in Subpart D of 40 CFR Part 75.

(b) For any period in which valid data are not being recorded by an SO₂-diluent CEMS specified in this section, missing or invalid data shall be replaced with substitute data on a rate basis (lb/mmBtu) in accordance with the requirements for SO₂ monitors in Subpart D of 40 CFR Part 75.

(c) For any period in which valid data are not being recorded by a continuous fuel flow meter or for fuel gas GCV sampling and analysis specified in this section, missing or invalid data shall be replaced with substitute data in accordance with missing data requirements in Appendix D to 40 CFR Part 75.

(d) For any period in which valid data are not being recorded by the CFGMS specified in this section, hourly missing or invalid data shall be replaced with substitute data in accordance with the missing data requirements for units performing hourly gaseous fuel sulfur sampling in section 2.4 of Appendix D to 40 CFR Part 75.

6. Monitoring Plan and Reporting Requirements

In addition to the general monitoring plan and reporting requirements of Section I of this Rule, the owner or operator shall meet the following additional requirements:

(a) The monitoring plan shall identify each group of units that are monitored by a single monitoring system under this Protocol WEB-1, and the plan shall designate an identifier for the group of units for emissions reporting purposes. For purpose of submitting emissions reports, no apportionment of emissions to the individual units within the group is required.

(b) If the provisions of paragraphs 2(b) or (c) are used, provide documentation and an explanation to demonstrate that the SO₂ emission rate from the monitored unit is representative of the rate from non-monitored units.

Protocol WEB-2: Predictive Flow Monitoring Systems for Kilns with Positive Pressure Fabric Filter

1. Applicability

The provisions of this protocol are applicable to cement kilns or lime kilns that (1) are controlled by a positive pressure fabric filter, and (2) have operating conditions upstream of the fabric filter that the WEB source documents would reasonably prevent reliable flow monitor measurements.

2. Monitoring Requirements

(a) A cement or lime kiln with a positive pressure fabric filter shall use a predictive flow monitoring system (PFMS) to determine the hourly kiln exhaust gas flow.

(b) A PFMS is the total equipment necessary for the determination of exhaust gas flow using process or control device operating parameter measurements and a conversion equation, a graph, or computer program to produce results in cubic feet per hour.

(c) The PFMS shall meet the following performance specifications:

(1) The PFMS must allow for the automatic or manual determination of failed monitors. At a minimum a daily determination must be performed.

(2) The PFMS shall have provisions to check the calibration error of each parameter that is individually measured. The owner or operator shall propose appropriate performance specifications in the initial monitoring plan for all parameters used in the PFMS comparable to the degree of accuracy required for other monitoring systems used to comply with this Rule. The parameters shall be

tested at two levels, low: 0 to 20% of full scale, and high: 50 to 100% of full scale. The reference value need not be certified.

(3) The relative accuracy of the PFMS must be < 10.0% of the reference method average value, and include a bias test in accordance with paragraph 4(c) of this section.

3. Certification Requirements

The PFMS is subject to initial certification testing as follows:

(a) Demonstrate the ability of the PFMS to identify automatically or manually a failed monitor.

(b) Provide evidence of calibration testing of all monitoring equipment. Any tests conducted within the previous 12 months of operation that are consistent with the QA/QC plan for the PFMS are acceptable for initial certification purposes.

(c) Perform an initial relative accuracy test over the normal range of operating conditions of the kiln. Using the results of the relative accuracy test audit, conduct a bias test in accordance with Appendix A to 40 CFR Part 75, and calculate and apply a bias adjustment factor if required.

4. Quality Assurance/Quality Control Requirements

A QA/QC plan shall be developed and implemented for each PFMS in compliance with sections 1 and 1.1 of Appendix B of 40 CFR Part 75, and the following:

(a) Perform a daily monitor failure check.

(b) Perform calibration tests of all monitors for each parameter included in the PFMS. At a minimum, calibrations shall be conducted prior to each relative accuracy test audit.

(c) Perform a relative accuracy test audit and accompanying bias test once every four operating quarters. Calculate the relative accuracy (and bias adjustment factor) as described in Appendix A to 40 CFR Part 75. An out of control period occurs whenever the flow relative accuracy is greater than 10.0% of the mean value of the reference method.

5. Missing Data

For any period in which valid data are not being recorded by the PFMS specified in this section, hourly missing or invalid data shall be replaced with substitute data in accordance with the flow monitor missing data requirements for non-load based units in Subpart D of 40 CFR Part 75.

6. Monitoring Plan Requirements

In addition to the general monitoring plan requirements of Section I of this Rule, the owner or operator shall meet the following additional requirements:

(a) The monitoring plan shall document the reasons why stack flow measurements upstream of the fabric filter are unlikely to provide reliable flow measurements over time.

(b) The initial monitoring plan shall explain the relationship of the proposed parameters and stack flow, and discuss other parameters considered and the reasons for not using those parameters in the PFMS. The [state or tribe] may require that the subsequent monitoring plan include additional explanation and documentation for the reasonableness of the proposed PFMS.

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-4
Mobile Source Strategy Support Material

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-4

Mobile Source Strategy Support Material

In accordance with Section 5.5.2.4 of this implementation plan, the following is EPA's proposal to eliminate the current requirements for mobile source emission significance determination and budgets under 40 CFR 309(d)(5)(ii) and (iii), and replace with a new requirement to track mobile source emission reductions. This action is based on a determination by the WRAP that mobile source emissions mobile sources in general are expected to continuously decline between 2003 and 2018, rather than 2005, as anticipated by the GCVTC in 1996.

1. EPA's proposed revisions to Section 309 Mobile Source requirements (68 FR 39888, July 3, 2003): *Revisions to the Regional Haze Rule To Correct Mobile Source Provisions in Optional Program for Nine Western States and Eligible Indian Tribes Within That Geographic Area.*

Subpart P—Protection of Visibility

Section 51.309 is amended by revising paragraphs (b)(6) and (d)(5)(i), deleting paragraphs (d)(ii) and (d)(iii), and renumbering (d)(iv) to (d)(ii), to read as follows:

§ 51.309 Requirements related to the Grand Canyon Visibility Transport Commission.

(b)(6) *Continuous decline in total mobile source emissions* means that the projected level of emissions from mobile sources of each listed pollutant in 2008, 2013, and 2018, are less than the projected level of emissions from mobile sources of each listed pollutant for the previous period (*i.e.*, 2008 less than 2003; 2013 less than 2008; and 2018 less than 2013).

(d)(5)(i) Statewide inventories of onroad and nonroad mobile source emissions of VOC, NOX, SO₂, PM_{2.5}, elemental carbon, and organic carbon for the years 2003, 2008, 2013, and 2018.

(A) The inventories must demonstrate a continuous decline in total mobile source emissions (onroad plus nonroad; tailpipe and evaporative) of VOC, NOX, PM_{2.5}, elemental carbon, and organic carbon, evaluated separately. If the inventories show a continuous decline in total mobile source emissions of each of these pollutants over the period 2003–2018, no further action is required as part of this plan to address mobile source emissions of these pollutants. If the inventories do not show a continuous decline in mobile source emissions of one or more of these pollutants over the period 2003–2018, the plan submission must provide for an implementation plan revision by no later than December 31, 2008 containing any necessary long-term strategies to achieve a continuous decline in total mobile source emissions of the pollutant(s), to the extent practicable, considering economic and technological reasonableness and federal preemption of vehicle standards and fuel standards under title II of the CAA.

(B) The plan submission must also provide for an implementation plan revision by no later than December 31, 2008 containing any long-term strategies necessary to reduce emissions of SO₂

from nonroad mobile sources, consistent with the goal of reasonable progress. In assessing the need for such long-term strategies, the State may consider emissions reductions achieved or anticipated from any new Federal standards for sulfur in nonroad diesel fuel.

(ii) [*text of (iv) retained same as before*] [FR Doc. 03-16923 Filed 7-2-03; 8:45 am]

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-5
Fire Source Strategy
Support Analysis

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-5

Fire Source Strategy Support Analysis

Section 5.5.2.5 of this implementation plan contains the fire strategy to address the requirements under 40 CFR 51.309(d)(6). This strategy focuses on reducing emissions from prescribed fire and agricultural burning in Oregon. Recognizing that the purpose of Section 309, as stated in 40 CFR 51.309(a), is to minimize visibility impacts of the 16 Class I areas of the Colorado Plateau, the fire strategy for Oregon is primarily a continuation of current state smoke management programs, rather than developing new ones. Much of this has to do with the great distance of Oregon fire sources from the Colorado Plateau, and documentation that identifies Oregon as a “Clean Air Corridor”, as described in Section 5.5.2.1 of this implementation plan.

This appendix provides additional information on the fire program elements described in Section 5.5.2.5. The following elements are described below:

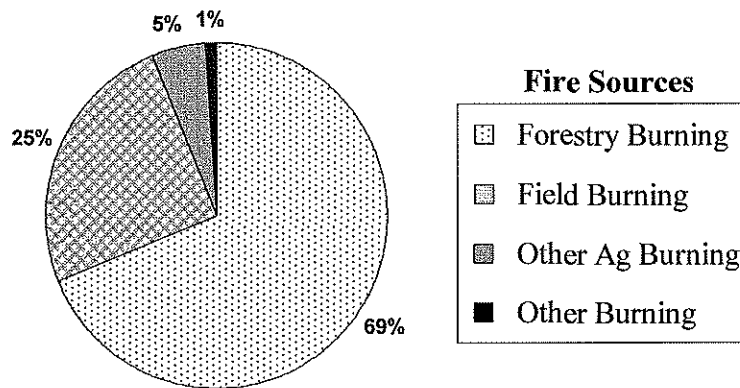
- 5.5.2.5.2 Fire Program Evaluation
- 5.5.2.5.3 Emission Inventory and Tracking System
- 5.5.2.5.4 Identification and Removal of Administrative Barriers
- 5.5.2.5.5 Enhanced Smoke Management Program
- 5.5.2.5.6 Annual Emission Goal

1. Fire Program Evaluation

40 CFR 51.309(d)(i) requires documentation that all federal, state, and private smoke management programs have a mechanism in place for evaluating and addressing the degree of visibility impairment from smoke in their planning and application. This rule also requires an evaluation whether smoke management program in the state contain the following seven components: (1) actions to minimize emissions; (2) evaluation of smoke dispersion; (3) alternatives to fire; (4) public notification; (5) air quality monitoring; (6) surveillance and enforcement; and (7) program evaluation.

As shown in Figure 1, prescribed fire (forestry burning) and agricultural field burning are the dominant fire sources in the state, representing 69 and 25 percent, respectively. Other agricultural burning and open burning (mostly domestic or backyard burning) are considerably less, representing only 5 and 1 percent. The forestry burning occurs statewide, except for the remote desert region of southern Oregon. The agricultural field burning is concentrated in specific locations, with the majority in the Willamette Valley, and smaller amounts in central and eastern Oregon. Other agricultural burning is intermittent in rural areas around the state, whereas backyard and other open burning is near more urbanized areas, mostly in Western Oregon.

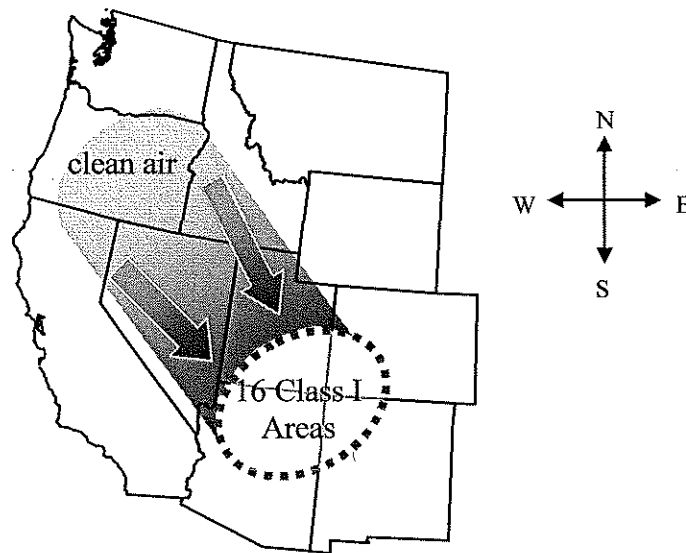
**Figure 1: Major Sources of Fire Emissions in Oregon
(1999 emissions, tons per year)**



Due the relatively large amounts of prescribed fire and agricultural field burning, this burning is controlled through smoke management programs. The prescribed fire is controlled under a statewide smoke management program operated by the Oregon Department of Forestry. The majority of field burning is the Willamette Valley, and is controlled under a smoke management program operated by the Oregon Department of Agriculture. These programs operate under the same smoke management objectives of minimizing smoke impacts in populated areas by conducting the burning under optimum smoke dispersion conditions.

As specified in Section 5.5.2.5.2 of this implementation plan, Oregon has evaluated these smoke management programs based on their potential to contribute to visibility impairment in the 16 Class I areas of the Colorado Plateau. Recognizing that Oregon is approximately 500-600 miles from the nearest Class I area in the Colorado Plateau, it is not expected that any of this burning would have an impact on these Class I areas at any measurable level. More significantly, meteorological work conducted by the GCVTC Meteorological Subcommittee and more recently by the WRAP related to clean air corridors has shown that when regional transport winds and air movement are coming from the northwest (i.e., from Oregon to the Colorado Plateau), this results in the best visibility days in the Colorado Plateau Class I areas. This is indicated in Figure 2 below, and described in further detail in Section 5.5.2.1.2 and Appendix D8-2. In addition, there does not appear to be any evidence or findings by the GCVTC or the WRAP that Oregon fire sources on a given day contribute to visibility impairment in the 16 Class I areas. Even if such evidence did exist, the State of Oregon does not believe the meteorological tools and capabilities exist to accurately project long-range smoke transport over 500 miles and predict visibility impact in these Class I areas.

Figure 2. Transport of “clean air” from Oregon to the Colorado Plateau, as basis for the Clean Air Corridor



The evaluation of state-run smoke management programs related to the seven components listed above was conducted by Oregon. This evaluation is presented under the discussion of Enhanced Smoke Management Program below.

2. Emission Inventory and Tracking System

Under 40 CFR 51.309(d)(ii), states must have a process in place for gathering the essential post-burn activity information to support emissions inventory and tracking systems for the five major pollutant types (VOC, NO_x, elemental and organic carbon, and fine particulate).

As indicated in Section 5.5.2.5.3, the State of Oregon will use the *WRAP Policy on Fire Tracking Systems (FTS)* developed by the Fire Emissions Joint Forum, for estimating and tracking emissions originating from prescribed fire and agricultural field burning conducted under the smoke management programs described above. Oregon DEQ will have assistance from the Oregon Department of Forestry and Oregon Department of Agriculture in obtaining the necessary post-burn activity information to calculate emissions using the WRAP FTS. This information consists of seven components: (1) date of burn, (2) burn location, (3) area of burn, (4) fuel type, (5) pre-burn fuel loading, (6) type of burn, and (7) “anthropogenic” or “natural” classification. The FTS will be used in conjunction with the WRAP’s Emissions Data Management System (EDMS), which is a larger and more comprehensive emissions tracking and forecasting system developed by the WRAP for point, area, biogenic, and mobile sources. The WRAP will be developing further guidance for states on how to establish quality assurance methods and the format for submitting FTS information to the WRAP. The EDMS, as it relates to tracking fire emissions, is described in Chapter 6 of the TSD Report.

3. Identification and Removal of Administrative Barriers

Under 40 CFR 51.309(d)(iii) state must identify a formal process that will be followed to identify and remove existing administrative barriers to the use of non-burning alternatives. As described in Section 5.5.2.5.4, the State of Oregon has developed a strategy that focuses on prescribed fire (forestry burning). This strategy identifies a process by which administrative barriers will be overcome, in part by promoting the use of non-burning alternatives to prescribed fire by using a WRAP document entitled *Nonburning Alternatives for Vegetation and Fuel Management*.

The *Nonburning Alternatives for Vegetation and Fuel Management* document was prepared for the WRAP Fire Emissions Joint Forum, and is a comprehensive reference manual of alternatives to prescribed fire that states can use for meeting the requirement of developing alternatives to prescribed fire. It evaluates non-burning vegetative management options, includes a "decision-tree" for considering treatment options, and identifies potential markets and funding sources for utilizing forest materials. It also describes how to develop a successful strategy for vegetation and fuel load management. This document is designed to provide landowners and land managers with a comprehensive list of viable options, and decision makers with the tools necessary to develop realistic non-burning strategies.

The State of Oregon intends to use this WRAP document as a reference guide in state and land-manager decision-making processes for evaluating non-burning alternatives for prescribed fire. Oregon DEQ is currently working with the Oregon Department of Forestry to develop guidance for incorporating this document into the daily operation of the Oregon Smoke Management Program, in accordance with the "Operational Guidance for the Oregon Smoke Management Program, Directive 1-4-1-601". This directive states that the policy of the State Forester is to "minimize emissions from prescribed burning, where appropriate, by encouraging: cost effective utilization of forest residue; alternatives to burning; and alternative burning practices".

Incorporating the WRAP *Nonburning Alternatives for Vegetation and Fuel Management* document into the Oregon Smoke Management Program will occur as part of periodic review process now being conducted by the Oregon Department of Forestry and Oregon DEQ. This periodic review is expected to be completed in early 2004. Once completed, Oregon DEQ will provide EPA Region X with supplemental information to this implementation plan that describes the actual process by which non-burning alternatives will be promoted under the Oregon Smoke Management Program using the WRAP *Nonburning Alternatives for Vegetation and Fuel Management*.

Currently, the Oregon Department of Forestry, under OAR 629-043-0043, and in cooperation with state and federal land managers and private land owners, is required to develop and apply Best Available Technology (BAT) related to prescribed burning. BAT elements include research to improve wood residue utilization and marketing, mechanical site preparation, techniques to reduce fuel loading such as chipping and yarding, and incentives for fuel removal such as tax credits. Efforts to implement BAT in Oregon are also encouraged and supported by the USDA Forest Service, Bureau of Land Management, and National Park Service. In addition to BAT, the Forest Practices Act also encourages utilization of residue, fuel reduction measures, low

emission-producing burning methods and alternate treatment practices that are consistent with the purposes of the Act.

As indicated in Section 5.5.2.5.4, the State of Oregon determined that for agricultural field burning, non-burning alternatives are being actively pursued and successfully implemented. This is especially true in for agricultural field burning in the Willamette Valley, where state law (ORS 468A.555) mandates a research and development program to seek, develop and promote viable alternatives to agricultural field burning. This includes a tax credit program for pollution control facilities for alternatives to burning (ORS 468.150). To date these programs have made major strides in finding viable alternatives, such as straw marketing to Japan and other countries, minimum tillage, and less-than-annual burning. A major reduction in the number of acres that can be burned has also occurred since the early 1990's, also as a result of state law (ORS 468A.610). As a result, there has been a significant increase in the use of alternatives, both in the Willamette Valley and other areas of the state. This high use of alternatives is expected to continue into the future.

4. Enhanced Smoke Management Program

40 CFR 51.309(d)(iv) requires that state implementation plans provide for enhanced smoke management programs, based on the criteria of efficiency, economics, law, emission reduction opportunities, land management objectives, and reduction of visibility impacts. As described in Section 5.5.2.5.5, the State of Oregon evaluated the existing smoke management programs in the state using the WRAP *Enhanced Smoke Management Programs for Visibility Policy*. This policy (referred to as the WRAP ESMP) identifies nine elements that are needed in an enhanced smoke management program to meet the requirements of the rule. The first seven elements are listed under 40 CFR 51.309(d)(i), while the last two are listed in the WRAP ESMP: (1) actions to minimize emissions; (2) evaluation of smoke dispersion; (3) alternatives to fire; (4) public notification; (5) air quality monitoring; (6) surveillance and enforcement; (7) program evaluation; (8) burn authorization; and (9) regional coordination.

The State of Oregon evaluated the Oregon Department of Forestry Smoke Management Program for prescribed burning, and the Oregon Department of Agriculture Field Burning Program. These two state-run smoke management programs control all of the prescribed fire and the majority of the agricultural field burning, as described under the Fire Program Evaluation section above. The following is an assessment of how both of these smoke management programs address the nine elements in the WRAP ESMP.

(1) Actions to Minimize Fire Emissions

Oregon Department of Forestry Smoke Management Program:

In 1992, the Oregon Department of Forestry (ODF) adopted the "Operational Guidance for the Oregon Smoke Management Program, Directive 1-4-1-601", which includes actions to minimize prescribed fire emissions in all areas of the state. The directive states that the policy of the State Forester is to "minimize emissions from prescribed burning, where appropriate, by encouraging: cost effective utilization of forest residue; alternatives to

burning; and alternative burning practices". The directive also states that ODF will encourage landowners to "burn only those units that must be burned to achieve the landowners' objectives", to burn during time periods when fuels have relatively high fuel moistures (which results in fewer emissions), and encourage to use of mass ignition methods to help reduce emissions.

In addition to this directive, there is a Memorandum of Understanding between the US Forest Service and Oregon DEQ that limits the amount of prescribed burning in Northeastern Oregon on an annual basis. This limit is 15,000 tons of PM10, and has been in effect since 1994, for the purpose of minimizing fire emissions associated with increased prescribed burning to address forest health, in four national forests in this region of the state. This burning is also controlled under the ODF Smoke Management Program.

Oregon Department of Agriculture Field Burning Program:

Willamette Valley growers utilize many different techniques to minimize emissions from field burning. Rapid ignition for open burning requires all sides of the field to be ignited as rapidly as practicable to maximize plume rise. Oregon Administrative Rules (OAR) 603-077-0110. Growers must ensure field residue is dry and in good burning condition. Growers may sanitize fields by propane flaming (OAR 603-077-0145). Prior to propane flaming, loose straw is removed from the field and the stubble cut close to the ground to prevent sustained open fire and reduce emissions.

(2) Evaluation of Smoke Dispersion

Oregon Department of Forestry Smoke Management Program:

The ODF program determines appropriate conditions for prescribed burning throughout the state in order to avoid smoke impacts in populated areas. Appropriate conditions are determined based on evaluation of daily weather forecasts and existing air quality. ODF employs meteorologists who develop forecasts, burning instructions and advisories using national, regional and local weather forecast models and data to determine dispersion conditions. Smoke dispersal conditions are determined for each area of the state, considering factors such as wind direction, wind speed, mixing height, and dispersion index.

Oregon Department of Agriculture Field Burning Program:

This program employs a full-time meteorologist to monitor and forecast smoke dispersal conditions. The meteorologist uses a variety of standard meteorological tools to evaluate atmospheric conditions and their suitability for open field burning. Conventional surface weather reports and rawinsonde observations are used to develop a snapshot of atmospheric conditions. In addition, the program utilizes pilot reports, a vertical sounder near Newport and information from the WSR88-D Doppler radar in Portland. These data are supplemented with strategically located wind monitoring sites maintained by Oregon DEQ. At periodic intervals, program personnel release pilot balloons at different locations in the Willamette

Valley which are optically tracked to measure wind speed and direction from the surface to approximately 6000 feet above ground.

In addition to the observed data, the meteorologist also looks at a variety of computer models or simulations of the atmosphere to determine what will happen in the future. Primary models used include the University of Washington's MM5 model, the National Centers for Environmental Prediction's (NCEP) Rapid Update Cycle model (RUC) and NCEP's Eta model.

All of this information is assessed by the program meteorologist to make recommendations to decision-makers regarding the appropriateness of open field burning on any given day.

(3) Alternatives to Fire

Oregon Department of Forestry Smoke Management Program:

As stated above, the Operational Guidance for the Oregon Smoke Management Program, Directive 1-4-1-601 encourages "cost effective utilization of forest residue; alternatives to burning; and alternative burning practices". New or improved harvesting techniques that reduce the need for burning are communicated to landowners by ODF, as appropriate.

Under OAR 629-043-0043, and in cooperation with state and federal land managers and private land owners, ODF is required to develop and apply Best Available Technology (BAT) related to prescribed burning. BAT elements include research to improve wood residue utilization and marketing, mechanical site preparation, techniques to reduce fuel loading such as chipping and yarding, and incentives for fuel removal such as tax credits.

ODF is also a member of the Wildland Fire Research and Development Collaboratory, which was recently formed to exchange information related to research and development activities associated with prescribed fire, and to "serve as a catalyst for accelerating the transfer of technology from the research community to the operational community." Alternatives to fire are expected to be one of the topics included in this effort.

Oregon Department of Agriculture Field Burning Program:

Oregon Revised Statutes (ORS) 468A.585 requires the Oregon Department of Agriculture (ODA) to conduct a program to research and develop alternatives to field burning. ODA and the Oregon Seed Council (OSC) have entered into a Memorandum of Understanding that consolidates field burning alternative research proposals and grass seed production research management proposals. A committee made up of representatives of sponsoring organizations and agencies decide how research funds are allocated based on the merit of each researcher's proposal.

In the 2002-2003 fiscal year, \$280,300.00 of research funding was distributed by ODA and OSC. Some of the research projects funded in 2002-2003 include: (1) a new approach to enhance weed control during grass seed establishment; (2) comparison of the impacts of

thermal and non-thermal residue management strategies on abundance and management of insect pests associated with Kentucky bluegrass in eastern and central Oregon; and (3) weed management in grass seed production.

(4) Public Notification of Burning

Oregon Department of Forestry Smoke Management Program:

ODF maintains a web site <http://www.odf.state.or.us/> that provides considerable information pertaining about the smoke management program and prescribed burning activity in the state.

1. Daily burning forecasts and instructions
2. Daily planned and accomplished burning activity
3. Registered burn information
4. Past years' burning activity
5. Public information newsletter about prescribed burning
6. The Smoke Management Plan requirements
7. Activities of the Smoke Management advisory committee

Oregon Department of Agriculture Field Burning Program:

Information about this program is available from many sources. ODA has a web page <http://oda.state.or.us/nrd/smoke/index.html> that provides detailed information about the program on a variety of topics and frequently asked questions. It also provides the public with the ability to “self-subscribe” to email weather and burn notifications, updated daily and when there is burning activity. An annual “Field Burning Summary” is also available on the website.

ODA provides two complaint lines (geographically located), allowing the public instant access to the ODA if there is a smoke impact occurring. If a complaint is called in after hours, or if ODA representatives are unavailable, the call will be directed into voicemail. An ODA employee will contact the caller if requested. ODA also maintains a “media line”, allowing the media instant access to the department and pertinent, up-to-date burn statistics. All acreage burned, number of complaints, and any smoke impacts are provided to the Oregon Governor’s office in a weekly “Governor’s Report”.

(5) Air Quality Monitoring

Oregon Department of Forestry Smoke Management Program:

ODF uses a variety of sources of information to monitor air quality and track smoke impacts. Air quality monitoring data collected by Oregon DEQ is accessed and evaluated for impacts. Data from a cooperative nephelometer network established by the US Forest Service is used to determine air quality levels and any intrusions that may be occurring. Airport weather observations and pilot reports are also used to determine smoke movement and visibility. Web cameras are monitored to ascertain visual air quality and smoke movement. Aircraft observations are used during periods of special concern to track smoke movement and to

determine burns that may be creating undesirable impacts. Fire lookouts are also utilized to determine smoke movement. Public calls about smoke help determine smoke impacts in areas where monitoring data is not available.

Oregon Department of Agriculture Field Burning Program:

ODA uses a variety of methods to monitor smoke impacts. Oregon DEQ nephelometer sites are located near populated areas of the Willamette Valley, and are used by ODA to monitor field burning activity. These monitors provide near real-time information on smoke impacts as they are occurring. In addition, ODA field personnel (inspectors, burn coordinators, and the program team leader) travel throughout the Willamette Valley to visually monitor smoke movement. These personnel maintain radio contact with each other and with office staff (including the meteorologist) in Salem. Changes in wind direction or in the rise characteristics of smoke plumes can be instantly assessed and field burning modified or stopped if the situation warrants. Smoke impact is also monitored via the complaint lines. Citizens can call local phone numbers in Salem and Eugene and report smoke intrusions. These calls are answered by smoke management program personnel if possible, if not they go to an answering machine and are evaluated and responded to as soon as staff workload permits.

(6) Surveillance and Enforcement

Oregon Department of Forestry Smoke Management Program:

ORS 477.515 requires that burning permits be obtained prior to burning. Violation of this statute by any individual may result in a legal citation and fine. Also, it is the policy of the State Forester to "achieve strict compliance with the smoke management plan, directive and instructions", as stated in the Operational Guidance for the Oregon Smoke Management Program, Directive 1-4-1-601.

Enforcement provisions in the directive state that "burning without a permit is a violation of ORS 477.515" on non-federal land. Also, since the Smoke Management Plan is already part of the Oregon State Clean Air Act Implementation Plan, violations of the Plan requirements on federal land are subject to federal enforcement action.

Oregon Department of Agriculture Field Burning Program:

The program is built on a foundation of cooperative compliance with rules governing open field burning. This compliance is supported by ODA enforcement rules (OAR 603-077-0175). Direct observation by ODA field personnel and others provide information of possible rule violations. Radio and cell phone communications facilitate the coordination among those actively involved in investigating possible rule infractions during burning periods. ODA staff and director evaluate the factors involved in each case and may assess warnings, notices of noncompliance, and civil penalties.

(7) Program Evaluation

Oregon Department of Forestry Smoke Management Program:

A standing Smoke Management Advisory Committee meets annually to review the previous year's smoke management activities and to provide input to ODF on program operations. A periodic review of the Plan is scheduled for every five years. The Plan is currently undergoing a complete review by a Committee consisting of individuals representing local and federal government, industry and environmental groups, and the general public.

Oregon Department of Agriculture Field Burning Program:

Program evaluation occurs in several ways. ODA conducts a review at the end of the burn season of the number and severity of field burning smoke impacts on the general public. This includes reviewing measured smoke impacts data from Oregon DEQ nephelometers located in the Willamette Valley, and reviewing all smoke intrusion complaint calls received via telephone, email, and regular mail. This information is compiled in an annual "Field Burning Summary" which is provided to Oregon DEQ and available to the general public.

During the burn season, ODA personnel work closely with the agricultural community. OSC invites ODA and growers to bi-weekly breakfast meetings to discuss field burning and smoke management issues. ODA attends and seeks input from growers during monthly Ag Fiber Association meetings throughout the year. ODA also works very closely with OSC to continually improve our operations with the agricultural community and the general public.

(8) Burn Authorization

Oregon Department of Forestry Smoke Management Program:

Under the program, the burn authorization process begins with the development and issuance of smoke management forecasts and burning instructions and advisories. Burning instructions must be strictly complied with, as described above. Local field personnel then evaluate the burning instructions and advisories in coordination with landowners who have burn units that may be in prescription and are ready for burning. Neighboring field offices may also be consulted to ensure that coordination takes place under burn scenarios where tonnage being burned may be limited in a given area. A burn might not occur if the local field administrator determines that a burn may not be advisable because of local factors, such as nearby burns being conducted, potential local smoke impacts, or adverse fire conditions. If a local burn manager would like to conduct a burn that is not within the burning instruction parameters, he/she must first obtain approval from the smoke management forecaster before proceeding.

Oregon Department of Agriculture Field Burning Program:

As previously described, ODA only allows field burning if weather conditions are favorable for avoiding smoke impacts in populated areas. Farmers obtain burn permits in their local fire protection district, and must monitor ODA radio broadcasts and pay close adherence to the burning authorized in these broadcasts. Meteorology varies in the Willamette Valley, and

burning is authorized in specific areas as conditions are appropriate. Special field burning zones have been established throughout the Valley. Burning is authorized based on an evaluation of the number of acres that can be burned in a certain zone within an allotted time period. Farmers must burn in accordance with the location, time, and acreage limit specified by ODA. Failure to adhere to this authorization is subject to enforcement action, as described above.

(9) Regional Coordination

Oregon Department of Forestry Smoke Management Program:

ODF burn information is available for other states or burning entities to review prior to the conduct of their operations. Also, ODF and the states of Washington and California maintain lines of communication on burning activity. ODF receives information from the Northeast Air Alliance in northern California about their planned activities. ODF also maintains communications with the Department of Agriculture regarding field burning activity to avoid any conflicts in burning schedules.

Coordination with other open burning in the Willamette Valley is enhanced by a contract between Oregon DEQ and ODF, under which ODF issues the daily open burning advisory between October 1 and June 15. Open burning and prescribed burning days are better managed through this coordination, resulting in less confusion for the public about burn days and better airshed management decisions.

Oregon Department of Agriculture Field Burning Program:

The ODA program is a cooperative effort between Oregon DEQ, the Oregon Department of Forestry, Oregon State University, OSC, approximately 60 local fire protection districts, and nearly 200 grass seed growers. ODA also has periodic contact with the Environmental Protection Agency Region X office. Due to distance and prevailing winds, smoke from field burning in the Willamette Valley rarely travels to neighboring states, making interstate coordination unnecessary.

5. Annual Emission Goal

Under 40 CFR 51.309(d)(6)(v), states must adopt a process for establishing annual emission goals (AEG) for fire sources (except wildfire) that will “minimize emission increases from fire to the maximum extent feasible”. As described in Section 5.5.2.5.6, the State of Oregon intends to use the WRAP *Annual Emission Goals for Fire Policy* to meet this requirement as it pertains to prescribed fire (forestry burning). Emission increases in prescribed fire are expected in Oregon and nationally under the National Fire Plan, in order to restore forest ecosystem health. In regards to agricultural burning, no emission increases are expected, due primarily to state law (ORS 468A.610) which prevents any increase in Willamette Valley field burning, the largest source of agricultural burning in the state.

The WRAP *Annual Emission Goals for Fire Policy* proposes the identification, use and tracking of emission reduction techniques (ERTs) to meet the annual emission goals requirement. It contains seven policy statements related to annual emission goals, including the following: (1) the minimum emission increase from fire can be accomplished through the optimal application of ERTs; (2) ERTs, such as biomass utilization prior to burning and increasing combustion efficiency, are proven methods of reducing fire emissions; (3) ERTs are control strategies to reduce smoke emission, distinct from non-burning alternatives or smoke management techniques; (4) the use of ERTs to meet the AEG requirement is subject to economic, safety, technical and environmental feasibility criteria, and land management objectives; and (5) states will need to develop a procedure for verifying the use of ERTs and for tracking the achievement of AEGs. The policy contains two options for how ERTs may be implemented, as well as an appendix with additional AEG and ERT guidance.

The State of Oregon intends to use the WRAP *Annual Emission Goals for Fire Policy* to meet the annual emission goal requirement. Oregon DEQ is currently working with the Oregon Department of Forestry to develop guidance for incorporating this policy into the daily operation of the Oregon Smoke Management Program, in accordance with the "Operational Guidance for the Oregon Smoke Management Program, Directive 1-4-1-601", as part of the periodic review of the Oregon Smoke Management Program currently underway. This periodic review is expected to be completed in early 2004. Once completed, Oregon DEQ will provide EPA Region X with supplemental information to this implementation plan that describes how ERTs will be tracked, quantified, and emission reductions estimated s in order to meet the annual emission goal requirement.

It is expected that some of the ERTs identified will include (1) evaluating changes in harvest diameter, (2) 1000-hour fuel moistures, and (3) fuel loading in various fuel size classes. The amount of fuels consumed is related to the amount of fuel available as well as the moisture regime under which the fuel is burned. Tracking these data parameters may help determine trends in the use of emission reduction techniques.

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-6
Pollution Prevention Strategy
Support Analysis

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-6 Pollution Prevention Report

The following is supporting documentation related to the Pollution Prevention Report described in Section 5.5.2.7 of this implementation plan. See also Chapter 8 of the WRAP TSD for regional modeling analysis related to the GCVTC 10/20 goals.

Below is a list of support documents, and the SIP section they are referenced:

1. List of Renewable Energy Generation Projects in use or planned as of the year 2002. See Section 5.5.2.7.2(a).
 2. Oregon State Agency Sustainability Report. See Section 5.5.2.7.2(f).
 3. Summary of Oregon Energy Conservation Programs. See Section 5.5.2.7.2(g), and Table 5.5.2-14.
 4. Maps and Reports on the potential for renewable energy to supply power and where renewable energy is most cost-effective, including the Western Systems Coordinating Council Map of Principal Transmission Lines, dated January 1, 2002. See Section 5.5.2.7.2(h).
 5. Summary of Oregon Renewable Resource Programs. See Section 5.5.2.7.2(j), and Table 5.5.2-15.
 6. Oregon statutes related to Pollution Prevention (not referenced in Section 5.5.2.7.2.)
 7. Summary of WRAP Air Pollution Forum Reports on Pollution Prevention. See Section 5.5.2.7.1)
- 1. List of Renewable Energy Generation Projects in use or planned as of the year 2002. See Section 5.5.2.7.2(a).**

Renewable Energy Generating Projects in place or planned as of 2002

Large Renewable Generating Systems:

Generating systems of 3 kW or larger are listed in the included spreadsheet title Renewable Generation Projects in Oregon. The 41 MW Combine Hills wind project is expected to be on line by December 2003. Also, the Office of Energy has issued a draft proposed order on the Stateline Wind Project's application to increase electrical generating capacity by 184 MW by December 2005 (for a total of 307.6 MW in Oregon).

Small Renewable Energy Installations (under 3 kW):

Solar:

14 solar electric systems for businesses (as of year-end 2002)
225 solar electric systems for homes (as of year-end 2001; data for 2002 not yet complete)

Wind turbines:

6 systems for businesses (as of year-end 2002)
32 home systems
(Some turbines were installed in the 1980s and are likely no longer in operation.)

Hydro:

20 home systems
Most of the systems installed by businesses are larger than 3 kW.

Narratives:

Descriptions by resource are available on Oregon Office of Energy Web site:

Wind: <http://www.energy.state.or.us/renew/wind/windarea.htm>

Solar: <http://www.energy.state.or.us/renew/solar.htm>

Biomass: <http://www.energy.state.or.us/biomass/Resource.htm>

In addition, the *2001 Oregon Biomass Energy Book* by the Oregon Office of Energy provides a directory of the state's biomass projects, by type.

Geothermal: <http://www.energy.state.or.us/renew/geo.htm>

Hydro: <http://www.energy.state.or.us/renew/water.htm>

2. Oregon State Agency Sustainability Report. See Section 5.5.2.7.2(f).

Oregon State Agency Sustainability Report: a Summary of State Sustainability Projects Initiated May 2000 through December 2002. April 18, 2003.

Note: This report is available upon request to the Department.

3. Summary of Oregon Energy Conservation Programs. See Section 5.5.2.7.2(g), and Table 5.5.2-14.

Oregon's Energy Conservation Programs

Policies, Rules and Regulations:

System Benefits Charge (ORS 757.612 - <http://www.leg.state.or.us/ors/757.html>)

For 10 years beginning March 2002, Portland General Electric (PGE) and Pacific Power customers pay a 3 percent charge on their monthly bill for conservation and renewable

resource programs under Oregon's electric industry restructuring law. Most of the funds go toward conservation:

- 56.7 percent of the funds are for projects that save electricity, primarily in homes and businesses. The Energy Trust of Oregon administers the funds and the conservation programs formerly run by PGE and Pacific Power. (www.energytrust.org). Some of the program elements remain the same and some are new. Programs for homes cover weatherization, lighting, space and water heating systems, appliances and new construction. Programs for businesses cover operations and maintenance, industrial processes, and new construction and major remodeling. The Energy Trust also is conducting pilot programs focusing on specific technologies and markets. The goal of the organization's conservation programs is 300 average megawatts of savings by 2012 — nearly a third of the state's projected growth in electricity needs over the next decade. The Trust will soon begin offering programs for natural gas customers as well.

Eligible large customers can use a portion of their system benefits charge for their own conservation investments. The Oregon Office of Energy certifies the projects and tracks expenditures (www.energy.state.or.us/sb1149/Business/self-direct.htm).

- 10 percent of the funds are for energy conservation in school buildings. Savings may include natural gas and oil, as well as electricity. Education Service Districts administer the funds. The Office of Energy provides technical help (www.energy.state.or.us/sb1149/Schools/index.htm).
- 12 percent of the funds are for weatherizing homes of low-income households that heat with electricity. Oregon Housing and Community Services Department administers these funds (www.hcs.state.or.us/community_resources/energy_wx/index.html).

Energy-Efficient State Buildings (ORS 276.900 to 276.915 - <http://www.leg.state.or.us/ors/276.html>)

A 1990 Oregon law requires new state buildings and major renovations to be as energy-efficient as possible, within cost-effectiveness guidelines. The 2001 Legislature modified the law to require that the buildings be 20 percent more energy-efficient than required by state building code. The Office of Energy recommends savings measures to consider in the design and reviews the plans to ensure targets are achieved. Typical measures include energy efficiency improvements for windows, lighting, controls, and heating, ventilation and air conditioning equipment. Average energy savings exceed 20 percent.

The 2001 Legislature also added a requirement that existing state buildings reduce electricity use 10 percent by July 2003 compared to energy use in 2000. The Office of Energy is working with state agencies to achieve that goal.

Residential Building Code (ORS 455.020 - <http://www.leg.state.or.us/ors/455.html>)

In 1974, Oregon became the first state in the nation to implement a statewide building code that included energy standards. The standards have been updated several times since then. Additional improvements for space heating, cooling, ventilation, water heating, lighting and building envelope took effect in 2003. They will reduce energy use in new houses by 5 percent to 10 percent.

Commercial Building Code (ORS 455.110- <http://www.leg.state.or.us/ors/455.html>)

Energy standards became part of the state building code for commercial buildings in 1978. The standards address lighting, heat loss and gain of the building shell, and heating, ventilation and cooling systems. Changes that go into effect October 2003 are expected to increase energy savings by 5 percent to 10 percent.

Biennial Energy Plan (ORS 469.060 - <http://www.energy.state.or.us/pubs/EnergyPlan-Final.pdf>)

The Office of Energy prepares a plan every two years that identifies trends in energy supply, demand, prices, conservation, renewable resources and nuclear safety; explains the key energy issues facing Oregon; and sets out a two-year action plan to clean up nuclear waste and ensure the state has an adequate supply of reliable and affordable energy through conservation and development of clean resources.

Incentive Programs:

Residential Energy Tax Credit (ORS 316.116 - <http://www.leg.state.or.us/ors/316.html>)

Homeowners and renters can get a state tax credit for eligible conservation investments:

- A tax credit based on energy savings and cost for highly energy-efficient refrigerators, clothes washers, dishwashers, and certain water heating, space heating, cooling and ventilation systems.
- Up to \$750 for alternative-fuel vehicles and \$750 for charging/fueling systems (a total of \$1,500 for hybrid gasoline-electric vehicles).
- Up to \$1,500 for fuel cells.

The credit may be taken in one year or carried forward for up to five years. Additions to systems in future years are eligible. A pass-through option allows another Oregon resident or business to claim the tax credit if they pay the applicant the value up-front. The Office of Energy administers the program (<http://www.energy.state.or.us/res/tax/taxcdt.htm>).

Oregonians have purchased more than 89,000 energy-efficient appliances and 500 alternative-fuel vehicles under the program as of year-end 2002. The program also is spurring the adoption of energy-efficient heating and cooling systems.

Business Energy Tax Credit (ORS 317.115 - <http://www.leg.state.or.us/ors/317.html>, ORS 469.185 to 469.225 - <http://www.leg.state.or.us/ors/469.html> and ORS 315.354 - <http://www.leg.state.or.us/ors/315.html>)

Business investments in energy conservation and less-polluting transportation fuels are eligible for a state tax credit worth 35 percent of eligible costs. For conservation projects, the energy savings must pay back the investment in one to 15 years.

The tax credit can be taken in one year for projects under \$20,000. For larger projects, the tax credit is taken over five years: 10 percent in the first and second years and 5 percent each year thereafter. The tax credit can be carried forward up to eight years. Schools, government agencies and other nonprofit organizations can use the program by finding a business partner to pass through the value of the tax credit. The Office of Energy administers the program (<http://www.energy.state.or.us/bus/tax/taxcdt.htm>).

About 5,000 business tax credits were awarded for conservation projects as of year-end 2002, and nearly 1,000 more were awarded for recycling projects that also save energy.

Small Scale Energy Loan Program (Oregon Constitution Article XI-J – <http://www.leg.state.or.us/orcons/orcons.html>)

Conservation investments are eligible for Oregon's Small Scale Energy Loan Program, created by the 1979 Legislature and approved by Oregon voters in 1980. Low-interest, fixed-rate, long-term loans are available for individuals, businesses, schools, special districts, governments, public corporations, cooperatives, tribes and nonprofit organizations. Loans range from \$20,000 to \$20 million.

Loans are funded by the periodic sale of state general obligation bonds. The program is self-supporting; borrowers pay administrative costs.

The Office of Energy administers the program (<http://www.energy.state.or.us/loan/selphme.htm>). Nearly 400 conservation projects have been financed through the program as of year-end 2002.

State Home Oil Weatherization Program (ORS 469.681, 469.710-720 - <http://www.leg.state.or.us/ors/469.html>)

The State Home Oil Weatherization (SHOW) Program ensures that households who heat with oil, propane or wood have incentives comparable to those who heat with electricity or natural gas. The program provides energy audits, loans and rebates to encourage households to weatherize their homes and improve the efficiency of their heating systems. More than 42,000 households have received energy audits through the program, and about a quarter have used the available incentives to install recommended conservation measures. The Office of Energy administers the program (<http://www.energy.state.or.us/res/weather/weahome.htm>).

Energy Conservation Lender's Credit (ORS 317.112 - <http://www.leg.state.or.us/ors/317.html>)

The commercial banks that provide the SHOW loans earn a tax credit that makes up the difference between the 6.5-percent interest rate provided to homeowners and the prevailing market rate.

Bonneville Power Administration and Consumer-Owned Utilities

(<http://www.bpa.gov/Energy/N/projects/>)

The Bonneville Power Administration provides power to Oregon's 36 consumer-owned utilities, and they offer conservation programs aided by two conservation incentives from the federal agency. One is a discount on wholesale power rates for utilities running qualifying conservation and renewable resource programs. Programs must be incremental to what the utility would have done without the discount, or in total they must account for more than 3 percent of its retail revenues. The second incentive is designed to achieve additional savings to ensure Bonneville achieves its share of the Northwest Power Planning Council's conservation target for the region. Under the augmentation program, utilities can submit for Bonneville's approval custom proposals tailored to their needs or use the agency's standard offer programs for residential and commercial/industrial markets.

Northwest Energy Efficiency Alliance (www.nwalliance.org)

The Northwest Energy Efficiency Alliance is a nonprofit group whose mission is to make affordable energy efficiency products and services available in the marketplace. The group works mainly with companies that make and sell energy-efficient products or offer energy efficiency services, rather than end users. The Alliance also promotes new technologies and supports training and information services. Oregon funds come from the Energy Trust and Bonneville Power Administration.

Outreach and Education:

Energy Awareness Campaign

The Office of Energy directs an annual multimedia campaign promoting the efficient use of energy in Oregon. Partners include the Energy Trust of Oregon, PGE, Pacific Power, NW Natural, Fred Meyer, Northwest Energy Efficiency Alliance and the Portland Office of Sustainable Development. Local utilities participate in Salem and Eugene. The fall program reaches a broad cross-section of Oregonians.

Telecommuting

The Office of Energy works with about 100 businesses a year to set up telecommuting programs for their employees. Staff provides on-site training for managers, technical help and incentives. An Internet-based training program for managers and telecommuters is being developed. The Office of Energy also helps establish technology centers that foster telecommuting.

Energy-Efficient Manufactured Homes

The Office of Energy works under a voluntary agreement with the manufactured home industry in the Northwest to build homes that use about half as much energy for heating as homes built to federal standards, on average. Under the agreement, Energy staff approves design plans, inspects homes at the plant, troubleshoots for homebuyers and manufacturers on any energy-related problems, and researches and tests new energy-efficient building practices and materials. About half of Oregonians buying a manufactured home have chosen to buy an energy-efficient model.

- 4. Maps and Reports on the potential for renewable energy to supply power and where renewable energy is most cost-effective, including the Western Systems Coordinating Council Map of Principal Transmission Lines, dated January 1, 2002. See Section 5.5.2.7.2(h).**

Renewable Energy Potential and Distribution Maps and Reports - Oregon

Maps and resource estimates for solar, wind, geothermal and biomass:

A map developed by Battelle National Laboratory, illustrates wind energy resources in Oregon by wind power class. (<http://rredc.nrel.gov/wind/pubs/atlas/maps/chap3/3-05m.html>)

The Northwestern Wind Resource Mapping Project has developed a series of wind resource maps for the region. These maps are based on a computer model that simulates complex meteorological phenomena.
(<http://www.windpowermaps.org/windmaps/states.asp#oregon>)

The *Renewable Energy Atlas of the West: A Guide to the Region's Resource Potential* is on line at www.EnergyAtlas.org.

Resource estimates for landfill gas potential:

A 1999 report by US EPA estimates that Oregon could develop an additional 23 MW of generating capacity beyond what's already been developed
(http://www.epa.gov/lmop/pdf/or_jan.pdf).

Estimates of low-impact hydro potential:

Because of severe limitations on sites that might meet Oregon's fish protection requirements, any low-impact hydro developed in the state would at best total in the tens of megawatts. The Northwest Power Planning Council assumes that any new low-impact hydro facilities would increase the total amount of hydropower serving the state, because it believes that de-ratings and retirements of existing facilities will be compensated by upgraded efficiency at remaining projects.

5. **Summary of Oregon Renewable Resource Programs.** See Section 5.5.2.7.2(j), and Table 5.5.2-15.

Oregon's Renewable Resource Programs

Policies, Rules and Regulations:

System Benefits Charge (ORS 757.612 - <http://www.leg.state.or.us/ors/757.html>)

For 10 years beginning March 2002, Portland General Electric (PGE) and Pacific Power customers pay a 3 percent charge on their monthly bills for conservation and renewable resource programs under Oregon's electric industry restructuring law. About 17 percent of the funds, estimated at \$10 million to \$13 million per year, are for projects that generate electricity from renewable resources.

The Energy Trust of Oregon administers the funds (www.energytrust.org). Its goal for renewable resources is that they supply 10 percent of the state's electricity needs by 2012, an eight-fold increase. To achieve that goal, at least 450 average megawatts of power from new renewable resources is needed — enough to meet more than half of the projected growth in state electricity use over the next decade. Projects already underway include a 41-megawatt wind plant, a 4.1-megawatt biogas generator at a dairy, an anemometer loan program for measuring wind resources, rebates and quality assurance for solar electric systems, a hydroelectric system to offset power use at a municipal water facility, and a microturbine demonstration project at a wastewater treatment plant.

Eligible large customers can use part of their system benefits charge, including the portion for renewable resources, for their own investments. The Oregon Office of Energy certifies the projects and tracks expenditures (www.energy.state.or.us/sb1149/Business/self-direct.htm).

Utility Green Power Options (ORS 757.603(2) - <http://www.leg.state.or.us/ors/757.html>)

Oregon's electric industry restructuring law requires that residential and small business customers of PGE and Pacific Power have at least one power option with significant new renewable resources. Since March 2002, customers have had three renewable resource options to choose from (http://www.portlandgeneral.com/home/products/power_options/ and <http://www.pacificpower.net/Article/Article22003.html>). By year-end 2002, more than 33,000 customers were supporting renewable resources through these programs.

One option provides energy from renewable resources each month in 100 kilowatt-hour blocks. PGE's program is called "Clean Wind"; Pacific Power's program is "Blue Sky." These programs also are available to large customers. The other two options, "Renewable Usage" and "Habitat," supply 100 percent of the customer's electricity use. "Habitat" includes a contribution for restoring salmon habitat. Green Mountain Energy Co. is currently providing green tags and marketing services for these options.

Consumer-owned utilities in the state also offer green power options. They include Eugene Water and Electric Board's Windpower option, the city of Ashland's Solar Pioneer Program, and power generated from landfill gas offered by member utilities of the Pacific Northwest Generating Cooperative. Salem Electric and Emerald PUD buy wind power on behalf of all customers from the Bonneville Power Administration.

Power Source Disclosure (ORS 757.659(3) - <http://www.leg.state.or.us/ors/757.html>)

Oregon's restructuring law requires PGE, Pacific Power and alternative electricity suppliers serving their customers to disclose their power sources and environmental impacts to help customers make informed choices. The Oregon Public Utility Commission prescribes the disclosure format. Nonresidential customers get the information with every bill; residential customers receive information quarterly. Pollutants covered include carbon dioxide, sulfur dioxide, nitrogen oxides and spent nuclear fuel.

Utility Integrated Resource Plans

Both PacifiCorp and PGE plan to acquire significant new generation resources under the integrated resource plans they recently filed with the Oregon Public Utility Commission. PacifiCorp's plan calls for 1,400 megawatts of wind power over 10 years (<http://www.pacificorp.com/File/File25682.pdf>). PGE will evaluate the cost and price volatility of renewable resource vs. natural gas facilities in its bidding process for new resources

(http://www.portlandgeneral.com/about_pge/regulatory_affairs/filings/2002_resource_plan.asp).

Siting of Renewable Resource Facilities (ORS 469.30010(a)(J) - <http://www.leg.state.or.us/ors/469.html> and OAR 345-015-0300 - http://arcweb.sos.state.or.us/rules/OARS_300/OAR_345/345_015.html)

The 2001 Legislature changed requirements for siting wind, geothermal and solar energy facilities to give developers a choice to use a local siting process or the consolidated state process if the average electric generating capacity is less than 35 megawatts within a single energy generation area. For larger renewable energy facilities where state siting is required, or when a developer chooses to use the state process, siting is expedited. The final order must be issued within six months of the filing of the application.

Net Metering (ORS 757.300 - <http://www.leg.state.or.us/ors/757.html>)

Oregon's net metering law in effect since September 1999 is for solar, wind, hydroelectric and fuel cell systems 25 kilowatts or less. Systems must meet national standards for safety and performance. All customer classes are eligible. Limits may be placed on net-metered systems after their installed capacity is one-half of 1 percent of the utility's single-hour peak load. The customer receives a generation credit automatically through the meter at the utility's retail rate for energy and delivery (unless the utility installs a second meter to measure how much power the customer produces). The utilities credit customers monthly at their avoided energy cost for any excess generation.

Biennial Energy Plan (ORS 469.060 - <http://www.energy.state.or.us/pubs/Energy Plan-Final.pdf>)

The Office of Energy prepares a plan every two years that identifies trends in energy supply, demand, prices, conservation, renewable resources and nuclear safety; explains the key energy issues facing Oregon; and sets out a two-year action plan to clean up nuclear waste and ensure the state has an adequate supply of reliable and affordable energy through conservation and development of clean resources.

Financial Incentives:

Residential Energy Tax Credit (ORS 316.116- <http://www.leg.state.or.us/ors/316.html>)

Homeowners and renters can get a state tax credit for renewable resource systems:

- Up to \$1,500 for solar and wind systems
- Up to \$900 for geothermal systems
- Up to \$1,500 for fuel cells (using renewable resources or conventional fuels)

The credit may be taken in one year or carried forward for up to five years. Additions to systems in future years are eligible. A pass-through option allows another Oregon resident or business to claim the tax credit if they pay the applicant the value up-front.

The Office of Energy administers the program (<http://www.energy.state.or.us/res/tax/taxcdt.htm>). More than 21,000 renewable energy systems for heating and power production have been installed under the program.

Business Energy Tax Credit (ORS 317.115 - <http://www.leg.state.or.us/ors/317.html>, ORS 469.185 to 469.225 - <http://www.leg.state.or.us/ors/469.html> and ORS 315.354 - <http://www.leg.state.or.us/ors/315.html>)

Business investments in renewable energy resources can earn a state tax credit worth 35 percent of eligible project costs. The tax credit may be taken in one year for projects under \$20,000. For larger projects, businesses take 10 percent of the credit in the first and second years and 5 percent each year thereafter.

Eligible costs for renewable resource projects are prorated if the payback is greater than 15 years, except the tax credit for solar energy systems is based on a 30-year payback. The tax credit can be carried forward up to eight years. Schools, government agencies and other nonprofit organizations can use the program by finding a business partner to pass through the value of the tax credit.

The Office of Energy administers the program (<http://www.energy.state.or.us/bus/tax/taxcdt.htm>). Businesses have invested in more than 500 renewable resource projects through the program as of year-end 2002.

Small Scale Energy Loan Program (Oregon Constitution Article XI-J – <http://www.leg.state.or.us/orcons/orcons.html>)

Renewable resource investments are eligible for Oregon's Small Scale Energy Loan Program, created by the 1979 Legislature and approved by Oregon voters in 1980. Low-interest, fixed-rate loans are available for individuals, businesses, schools, special

districts, governments, public corporations, cooperatives, tribes and nonprofit organizations. Loans range from \$20,000 to \$20 million. Terms range from five to 20 years.

Loans are funded by the periodic sale of state general obligation bonds. The program is self-supporting; borrowers pay administrative costs. The Office of Energy administers the program (<http://www.energy.state.or.us/loan/selphme.htm>). About 180 renewable resource projects have been financed as of year-end 2002.

Property Tax Exemption (ORS 307.175 - <http://www.leg.state.or.us/ors/307.html>)
Additional property value resulting from the installation of solar, geothermal, wind, water, fuel cell or methane gas energy systems for heating, cooling or generating electricity is exempt from state property tax until Dec. 31, 2012. The exemption is for end users and does not apply to property owned by the energy industry.

Bonneville Power Administration and Consumer-Owned Utilities
(http://www.bpa.gov/Energy/N/projects/cr_discount/index.shtml)

The Bonneville Power Administration provides power to Oregon's 36 consumer-owned utilities and to direct-service industrial customers (mostly aluminum smelters). Bonneville offers utilities a discount on wholesale power rates if they run qualifying conservation and renewable resource programs. Programs must be incremental to what the utility would have done without the discount, or in total they must account for more than 3 percent of its retail revenues. Eligible renewable resource programs include purchases of power or tradable certificates from renewable generating resources, including Bonneville's own Environmentally Preferred Power. Incentives for customers installing renewable energy systems under 25 kilowatts qualify as conservation programs.

6. Oregon statutes related to Pollution Prevention (not referenced in Section 5.5.2.7.2.)

The following is additional documentation related to Oregon state laws currently in place that support renewable energy and energy conservation. This documentation is available upon request to the Department.

1. Chapter 757 — Utility Regulation Generally
2. Chapter 469 — Energy Conservation
3. Chapter 315 — Personal and Corporate Income or Excise Tax Credits
4. Chapter 317 — Corporation Excise Tax
5. Chapter 317 — Corporation Excise Tax
6. Chapter 276 — Public Facilities

7. Summary of WRAP Air Pollution Forum Reports on Pollution Prevention. See Section 5.5.2.7.1)

The WRAP *Policy on Renewable Energy and Energy Efficiency as Pollution Prevention Strategies for Regional Haze* summarizes three years of stakeholder and consensus-based recommendations from the AP2. The policy reaffirms the findings of the GCVTC – that

energy efficiency measures and renewable energy goals could result in emissions reductions, improvements in visibility, energy costs savings, and secondary environmental and economic benefits. The WRAP policy provides a menu of individual policies and programs, various combinations of which would achieve the 10/20 renewable energy and energy efficiency goals, especially if implemented in a coordinated fashion among states and tribes. Specifically, ten recommendations are provided to promote renewable energy generation, and eight more are provided specifically for consideration by tribes. Similarly, seven recommendations are provided to promote energy efficiency, and eleven more are provided specifically for consideration by tribes. This policy will help states identify policies and programs within their state that are consistent with these recommendations, and that may be implemented or expanded to meet the 10/20 goals for regional renewable energy and energy efficiency.

Determining a State's Contribution to the GCVTC Regional Renewable Energy Goals. A discussion paper describing an approach for establishing a state's contribution by using the total electricity consumption within each state multiplied by the RE percentage target to yield each states' contribution in terms of MWh. This method bases a state's contribution on its share of overall regional electricity demand. This would be consistent with the principle that energy production, hence visibility degradation is driven by demand. States with higher demand and consumption, due to higher population, would have a greater share of contribution toward the RE goals. The discussion goes on to suggest an approach for crediting each states' programs against its contribution. Here, a program that induces increased RE production is counted, if the RE production occurs anywhere within the region. Several examples are provided to illustrate the concept. (See Appendix D8-6)

Recommendations of the Air Pollution Prevention Forum to Increase the Generation of Electricity from Renewable Resources presents a comprehensive state-by-state review of current energy production, consumption and existing RE policies, definition of Renewable Energy, a menu of potential additional RE projects and a recommended portfolio of projects states are required to include in their SIPs. The report provides detailed recommendations for state and federal programs to encourage increased RE production to displace potential new conventional energy production. Conclusions regarding most cost effective RE production projects, financial analysis, types of RE inducement policies are also included. (See Appendix D8-6)

Economic Assessment of Implementing the 10/20 Goals and Energy Efficiency Recommendations is a report prepared by ICF Consultants for the AP2 Forum which analyzes cost, emissions and regional economic impacts of meeting the 10-20 goals and implementing the energy efficiency recommendations. The report projects that with no additional efforts to promote renewable energy, (business as usual) the high technology costs for RE will not change significantly and that significant new additions to RE capacity will not occur. The report goes on to say that load reductions from energy efficiencies will continue. The economic impacts will not occur uniformly across the region. Some states will gain, some will not. Meeting the 10/20 goals and EE will likely increase annual region-wide electricity production costs by 1%-5%, and will mostly affect new gas generating capacity, rather than existing coal and oil power production. Some emission reductions should occur,

mostly CO₂ and NO_x. The overall effect on the regional economy is very limited and may produce some gains in employment and income.

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-7

Progress Report on Implementation of
Additional Recommendations of the Grand
Canyon Visibility Transport Commission,
Oregon Department of Environmental
Quality

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-7

Progress Report on Implementation of Additional Recommendations of the Grand Canyon Visibility Transport Commission, Oregon Department of Environmental Quality

The following is the *2003 Progress Report on Implementation of Additional Recommendations of the Grand Canyon Visibility Transport Commission*, as required under 40 CFR 51.309(d)(9) of the federal Regional Haze Rule, and described in Section 5.5.2.8 of this implementation plan.

1. Regulatory History and Requirements.

The Grand Canyon Visibility Transport Commission's June 1996 final report includes additional recommendations that were intended as a range of options for consideration by states and local authorities. There was no expectation that all or any of these additional recommendations would be implemented. The GCVTC stated that:

“Some of the Commission's recommendations ask the EPA to take specific actions or institute particular programs, in cooperation with the tribes, states and federal agencies as implementing bodies. Other recommendations provide a range of potential policy or strategy options for consideration by the EPA and implementing entities. As the EPA develops policies and takes actions based on this report, this distinction between “actions” and “options” should be maintained with diligence. That is, recommendations intended as policy options should not become mandated actions or regulatory programs.”
Recommendations for Improving Western Vistas, Grand Canyon Visibility Transport Commission, Western Governors' Association. Denver CO, June 1996, page i.

Pursuant to 40 CFR 51.309(d)(9), Oregon has evaluated the additional recommendations of the Grand Canyon visibility Transport Commission to determine if any of these recommendations can be practicably included in the state implementation plan. Based on this evaluation, Oregon has identified the measures that it will implement at the state level to demonstrate reasonable progress.

2. Evaluation of Additional Recommendations for Inclusion in Oregon's Visibility Implementation Plan.

a. Recommendations that will be implemented through existing state programs.

1. *Establish economic incentives to encourage low-emission industries to locate in the transport region.*

The Oregon tax credit program could serve as an incentive to low-emission industries by providing tax credits for pollution control beyond regulatory requirements. The Department's Green Permit program also provides incentives to facilities performing above compliance levels.

2. *Develop emission fees programs.*

Oregon collects emission fees as part of its Operating Permit Program as required by 40 CFR part 70.

3. Support promotion of future ultra-low and zero-emission vehicles.

The Department has worked with public fleets statewide to assist with transitions to alternative fuels and hybrid vehicles. In addition to the federal tax deduction for low emission vehicles, Oregon provides state tax credits for both low emission vehicles and residential refueling or recharging facilities.

4. Support requirements for effective refueling vapor recovery systems.

Oregon requires Stage I vapor recovery in Portland, Medford and Salem (OAR 340-243-0010 through 0230), and requires Stage II vapor recovery in Portland (OAR 340-242-0500 through 0520).

5. Develop funding and other incentive-based programs to promote transportation mitigation projects.

The Department works in partnership with urban planning agencies and local governments to promote funding and incentives for bus, rail, bicycle and pedestrian projects and public outreach. In addition to increasing transit and multi-modal transportation, these partnerships have also supported increased housing and business density in areas served by transit, numerous conferences, and very high ridership on transit. The Portland SIP for ozone and carbon monoxide includes requirements for parking ratios.

6. Encourage sustainable community and economic development (multi-modal transportation options, reduce/eliminate entry and rate regulations for transit industry to promote greater competition, establish information clearinghouse about sustainable communities, etc.).

The Department is preparing to implement a recent Governor's Order on Sustainability, with a focus on reducing toxics and diesel emissions.

7. Establish retirement programs for high-emitting vehicles.

Through an EPA grant, the Department has been operating a voluntary retirement program for vehicles that cannot pass the vehicle inspection test. Participants can get a free yearlong transit pass, \$500 towards car-sharing programs or a bicycle.

8. Initiate public education programs for citizens regarding vehicle maintenance and air quality benefits.

In Portland and Medford the Department operates vehicle inspection programs. These programs provide information to citizens regarding vehicle maintenance and air quality benefits. In addition, the Department has been using voluntary remote sensing tests in many other communities to inform citizens about their vehicles' emissions, offering local tune-up discounts.

9. Institute "green pricing" labeling on products – including information about pollution potential, energy requirements and relative efficiency.

The Department relies on federal product ratings for energy efficiency and VOC content. The Oregon Ecological Business Certification designates businesses within the state that have met multi-media environmental criteria.

10. *Develop cooperative funding mechanisms between burners and regulatory agencies to implement better smoke management plans.*

The Oregon Smoke Management Plan addresses prescribed burning, seeking to minimize impacts in populated areas.

11. *Develop a public education program regarding the rule of fire in air quality (i.e. prescribed burns vs. wildfires).*

The Department maintains information about burning and air quality on its website: <http://www.deq.state.or.us/aq/burning/index.HTM>. The Department has rules on open burning (OAR 340-264-0010 through 0190). Through fact sheets and other publications, the Department encourages alternatives to open burning. Wood chippers are now eligible for the Department's tax credit program because they decrease emissions from open burning.

12. *Identify and promote specific pollution prevention programs.*

Section 5.5.2.7 of the Regional Haze SIP describes pollution prevention programs and strategies.

b. Recommendations that may be implemented through new or developing state programs.

1. *Support of regional use of cleaner burning fuels, including RFG and diesel, natural gas, electric and hydrogen.*

Since 2002, Oregon's Clean Diesel Initiative has promoted retrofitting with filters through outreach and a 35% tax credit. The Oregon Department of Environmental Quality has also been working toward securing ultra low sulfur diesel fuel for the state, administering grants for public fleet fuel subsidies, school bus replacement, and reduction options for non-road diesel engines. Additional work has commenced on reducing diesel vehicle idling.

c. Recommendations that will not be implemented by the Department.

1. *Support adoption of more effective 49-state low emissions vehicle (LEV) program in 2001 or federal Tier II standards in 2004.*

EPA has already acted in this area. Federal Tier II standards were promulgated by EPA (65 FR 6698) along with requirements that reduce the sulfur in gasoline beginning in 2004. These requirements are primarily responsible for WRAP modeling demonstrations that vehicle emissions will decline in the West, in spite of increases in population and vehicle miles traveled, and that those declines will continue beyond 2018, the end of the first planning period for regional haze.

2. *Establish mobile source emissions budgets for major urban areas that don't have ones to ensure protection of NAAQS, PSD increments and visibility in downwind areas.*

The need to implement this has been superseded by EPA's new rules to reduce vehicle emissions and reduce sulfur in gasoline, as explained in (1) above.

3. *Encourage EPA to adopt fuel standards and control strategies for diesel locomotives, marine vessels/pleasure craft, airplanes and federal vehicles because states are preempted from establishing their own standards.*

Oregon supports these measures through active participation in the air pollution officers associations STAPPA/ALAPCO and WESTAR.

4. *Establish clean fuel demonstration zones throughout the transport region.*

The Department is not considering this measure.

5. *Complete regional analysis of economic pricing and incentive programs to reduce reliance on vehicle use and better internalize the true cost of using vehicles.* The WRAP Mobile Sources Forum is pursuing this project and Oregon is an active participant in WRAP.

6. *Develop an emissions inspection program for on-road heavy-duty diesel vehicles.* In the past, the Department has investigated an on-road heavy-duty diesel inspection program, but there was not adequate political support for this strategy. The Department is not currently considering this measure. EPA has issued new requirements for diesel emissions and reducing sulfur in diesel fuel. This, combined with the Oregon Clean Diesel Initiative will reduce diesel emissions in Oregon.

7. *Study near-field and distant effects of road dust. If impacts are validated, develop performance standards.*

The effects of road dust have been studied by the WRAP for six years. WRAP has achieved a much better understanding of distant effects, and has found that they are minimal, as documented in the WRAP Technical Support Document for regional haze SIPs. Oregon supports continued WRAP investigation of near-field and distant effects. Oregon's PM SIPs for Klamath Falls, Lakeview and Medford contain road dust control measures.

8. *Implement park and wilderness planning processes to include reduction of emissions from human-caused sources.*

This recommendation is currently being implemented by federal and state land managers.

9. *Develop comprehensive emissions inventory for Mexican sources.*

Both WRAP and the Western Governor's Association have been working to improve Mexican emission inventory information.

10. *Develop regional and local mechanisms to address transboundary air quality issues, including potential funding from NAFTA.*

Oregon supports efforts by the Western Governors' Association to address transboundary issues.

11. *Identify and promote specific renewable energy programs.*

The Oregon Department of Energy conducts renewable energy programs.

12. Integrate pollution prevention and renewable energy concepts in education programs at all levels, including energy efficient technologies at schools.

The Oregon Department of Energy promotes energy efficiency in schools through a variety of services and programs.

3. Areas Within/Near Class I Areas.

The Grand Canyon Visibility Transport Commission's June 1996 final report includes recommendations regarding emissions within and near Class I Areas. Most of the recommendations in this section are for federal land managers, advising them to participate in planning for Class I areas, review permit applications and request emission reduction strategies for sources contributing to visibility impairment. The GCVTC recommended that regulatory agencies develop and maintain an emission inventory tracking and reporting program for each Class I area, and actively involve Class I area land managers throughout their planning processes.

Oregon supports the WRAP In and Near Forum's efforts to reduce emissions at National Parks and Wilderness Areas. WRAP will conduct a survey of park activities to quantify emissions and gather information regarding pollution prevention and minimization activities. WRAP will also investigate creative ways of funding identified emission reduction strategies and work with park managers to implement identified emission reduction strategies as soon as possible. For emission from nearby Communities, WRAP will focus on one local gateway community and conduct a demonstration project as a case study. This case study will include a workshop with local government to provide information about visibility protection, identify successful efforts, further involve federal land managers, encourage regulatory authorities to propose emission reduction strategies, and mitigate nearby source impacts on Class I areas. Finally, WRAP will work to determine the extent of in and near source impacts on visibility impairment.

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-8
Projection of Visibility Improvement
Support Documentation

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-8

Projection of Visibility Improvement Support Documentation

The following is supporting documentation related to the Projection of Visibility Improvement from Section 309 Control Strategies, in Section 5.5.2.9 of this implementation plan. This is an excerpt from Chapter 2 of the WRAP TSD report – Projection of Visibility - describing the technical work conducted by the WRAP in evaluating the visibility improvements the application of 309 strategies on regional haze in the 16 Class I areas of the Colorado Plateau.

Chapter 2 – Projection of Improvement (from WRAP TSD report).

Analysis of visibility improvement from Section 309 control strategies in 2018

Improvement in visibility for the 16 Colorado Plateau Class I areas was modeled for two scenarios.

Scenario 1 is designed to assess the effect of the GCVTC-recommended control strategies, comparing the 1996 modeled base case to the visibility improvement resulting from the implementation of the following GCVTC strategies: the SO₂ Annex Milestones, the regional pollution prevention program, maintenance of existing base smoke management (BSM) programs, and accounting for the 2018 base case emissions (known and adopted federal, tribal, state, and local control programs in the contiguous WRAP region). Visibility changes resulting from regional implementation of state pollution prevention programs were modeled by the Regional Modeling Center, as part of the other Section 309 control strategies. Visibility changes resulting from implementation of pollution prevention programs by individual states or tribes were not modeled. Emissions changes from state or tribal pollution prevention programs, and the resulting visibility changes are small, based on the regional pollution prevention emissions analysis, but are accounted for in the regional modeling.

Scenario 2 is designed to assess the effect of the implementation of Enhanced Smoke Management Programs (ESMP), as reflected in the Fire Emissions Joint Forum's 2018 Optimal Smoke Management (OSM) inventory. ESMPs were recommended by GCVTC and are required in Section 309. This scenario uses the emissions inventories from Scenario 1, except the OSM inventory was substituted for fire emissions. Thus, the results for Scenario 2 are a comparison of visibility changes resulting from emission reductions between the 2018 BSM and 2018 OSM fire inventories.

Modeling results projecting visibility improvement in 2018, resulting from implementation of the Section 309 Control Strategies, for the 16 Class I Areas on the Colorado Plateau

Using the procedures for projecting changes in visibility discussed in Chapter 1, visibility at the 16 Class I areas on the Colorado Plateau was estimated for the 2018 Scenario 1 and Scenario 2 control strategies. Tables 30 and 31 display the improvements in visibility from the 1997-2001 baseline period to 2018 under Scenario 1 and 2 conditions for the, respectively, Worst 20% and Best 20% visibility days.

On the average 20% Worst visibility days, projected improvement from 1997-2001 to 2018 Scenario 1 at the 16 Class I areas on the Colorado Plateau range from a maximum reduction of 3.89 dV at Sycamore Canyon National Park in Arizona to a maximum increase of 1.42 dV at San Pedro Parks Wilderness in New Mexico. On the Worst 20% days, Scenario 1 shows improving visibility at half and degradation in visibility for the other half of the 16 Colorado Plateau Class I areas. On the average 20% Best visibility days, projected change from 1997-2001 to 2018 Scenario 1 ranged from a maximum reduction of 2.11 dV at Zion National Park in Utah to a maximum increase of 1.51 dV at San Pedro Parks Wilderness Area in New Mexico. On the Best 20% days, Scenario 1 improves visibility conditions a $\frac{3}{4}$ of the Class I areas on the Colorado Plateau.

A comparison of the visibility estimates for 2018 Scenarios 1 and 2 at the 16 Class I areas on the Colorado Plateau for the Worst 20% (Table 30) and Best 20% (Table 31) days reveals that 2018 Scenario 2 always estimated reduced (improved) visibility as compared to 2018 Scenario 1. That is, the Optimal Smoke Management (OSM) programs produces visibility improvements over the Base Smoke Management (BSM) programs across all 16 Class I areas for both the Worst 20% and Best 20% days.

The reason why visibility is projected to improve in some areas and degrade in others is due to the assumptions regarding the growth of emissions and the implementation of all controls “on-the-books” in 2002, as well as artifacts of the June 2000 version of the EPA NONROAD model. Figure 23 displays the differences in SO₂ emissions between the 1996 and 2018 Base Case emissions scenarios. Due to the implementation of SO₂ controls on the Navajo and Mojave electrical generating units (EGUs) between 1996 and 2018, there are projected to be large reductions in SO₂ emissions in the counties in Arizona and Nevada that contain these two point sources. However, in many of the counties where there are not reductions in point source SO₂ emissions, SO₂ emissions are projected to increase. As discussed in more detail in Section 4, this is due in part to increased activity in nonroad mobile source equipment, the assumed continued use of high sulfur diesel fuel in nonroad sources and errors in the June 2000 NONROAD model that overstated nonroad equipment activity as well as SO₂ emissions from nonroad equipment.

The Class I areas where visibility is improved for the Worst 20% and Best 20% days (Tables 30 and 31) include ones in Arizona and southern Utah in close proximity of the large SO₂ reductions from controls on the Navajo EGU and downwind from the large SO₂ reductions at the Mojave EGU in southern Nevada and in California. Whereas, the Class I areas where visibility is projected to degrade are near counties where SO₂ emissions are estimated to increase due to the assumed increases in SO₂ emissions from the nonroad mobile source sector. For example, the San Pedro Parks Wilderness Area in New Mexico lies in and near counties that are projected to have increases in SO₂ emissions under the 2018 Base Case conditions, and it is not surprising that the modeling projects that visibility would degrade at this Class I area. Use of the corrected NONROAD model, accounting for potential low sulfur diesel regulations for nonroad sources, and account for other local (e.g., 8-hour ozone and fine particulate) and regional (e.g., CSI, regional transport rule) in the 2018 projections would like produce improvements at all 16 areas.

The results are presented next in Tables 30 and 31.

Table 30: Projected Visibility Improvement at the 16 Colorado Plateau Class I Areas in 2018 on the Average 20% Worst Days, resulting from implementation of “All §309 Control Strategies” 2018 Scenarios 1 and 2.

Colorado Plateau Class I Area	State	Modeling Results Deciviews			
		<u>1997-2001 Monitoring Data</u> (20% Worst Days' Visibility - deciviews)	<u>2018 Base Case</u> (20% Worst Days' Visibility for all controls “on the books” as of 2002)	<u>2018 Scenario 1</u> (20% Worst Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Base Smoke Management)	<u>2018 Scenario 2</u> (20% Worst Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Optimal Smoke Management)
Grand Canyon National Park	AZ	12.30	11.62	11.56	11.51
Mount Baldy Wilderness	AZ	14.30	12.22	12.02	11.96
Petrified Forest National Park	AZ	13.00	11.99	11.82	11.74
Sycamore Canyon Wilderness	AZ	15.40	11.63	11.51	11.48
Black Canyon of the Gunnison NP Wilderness	CO	11.30	10.90	10.76	10.60
Flat Tops Wilderness	CO	10.50	11.04	10.91	10.73
Maroon Bells Wilderness	CO	10.60	11.15	10.00	10.84
Mesa Verde National Park	CO	13.10	12.24	12.03	11.84
Weminuche Wilderness	CO	10.60	11.19	10.99	10.84
West Elk Wilderness	CO	11.30	11.08	10.89	10.72
San Pedro Parks Wilderness	NM	10.70	12.33	12.12	11.71
Arches National Park	UT	12.10	12.41	12.29	12.15
Bryce Canyon National Park	UT	11.80	12.26	12.24	11.95
Canyonlands National Park	UT	12.10	12.41	12.31	12.18
Capital Reef National Park	UT	12.10	12.51	12.49	12.36
Zion National Park	UT	13.60	12.13	12.09	12.03

Table 31: Projected Visibility Improvement at the 16 Colorado Plateau Class I Areas in 2018 on the Average 20% Best Visibility Days, resulting from implementation of “All §309 Control Strategies” 2018 Scenarios 1 and 2.

Colorado Plateau Class I Area	State	Modeling Results (deciviews)			
		<u>1997-2001 Monitoring Data</u> (20% Best Days' Visibility - deciviews)	<u>2018 Base Case</u> (20% Best Days' Visibility for all controls “on the books” as of 2002)	<u>2018 Scenario 1</u> (20% Best Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Base Smoke Management)	<u>2018 Scenario 2</u> (20% Best Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Optimal Smoke Management)
Grand Canyon National Park	AZ	4.80	4.76	4.72	4.64
Mount Baldy Wilderness	AZ	5.50	5.49	5.46	5.36
Petrified Forest National Park	AZ	6.50	5.18	5.14	5.10
Sycamore Canyon Wilderness	AZ	6.30	4.85	4.82	4.75
Black Canyon of the Gunnison NP Wilderness	CO	4.60	3.89	3.83	3.75
Flat Tops Wilderness	CO	3.10	3.96	3.90	3.81
Maroon Bells Wilderness	CO	3.10	3.90	3.85	3.80
Mesa Verde National Park	CO	5.50	4.40	4.38	4.33
Weminuche Wilderness	CO	3.10	3.89	3.83	3.74
West Elk Wilderness	CO	4.60	3.97	3.92	3.82
San Pedro Parks Wilderness	NM	4.00	5.59	5.51	5.36
Arches National Park	UT	5.50	4.85	4.72	4.61
Bryce Canyon National Park	UT	4.30	3.91	3.92	3.89
Canyonlands National Park	UT	5.60	4.87	4.76	4.67
Capital Reef National Park	UT	5.60	4.85	4.85	4.75
Zion National Park	UT	5.90	3.81	3.79	3.75

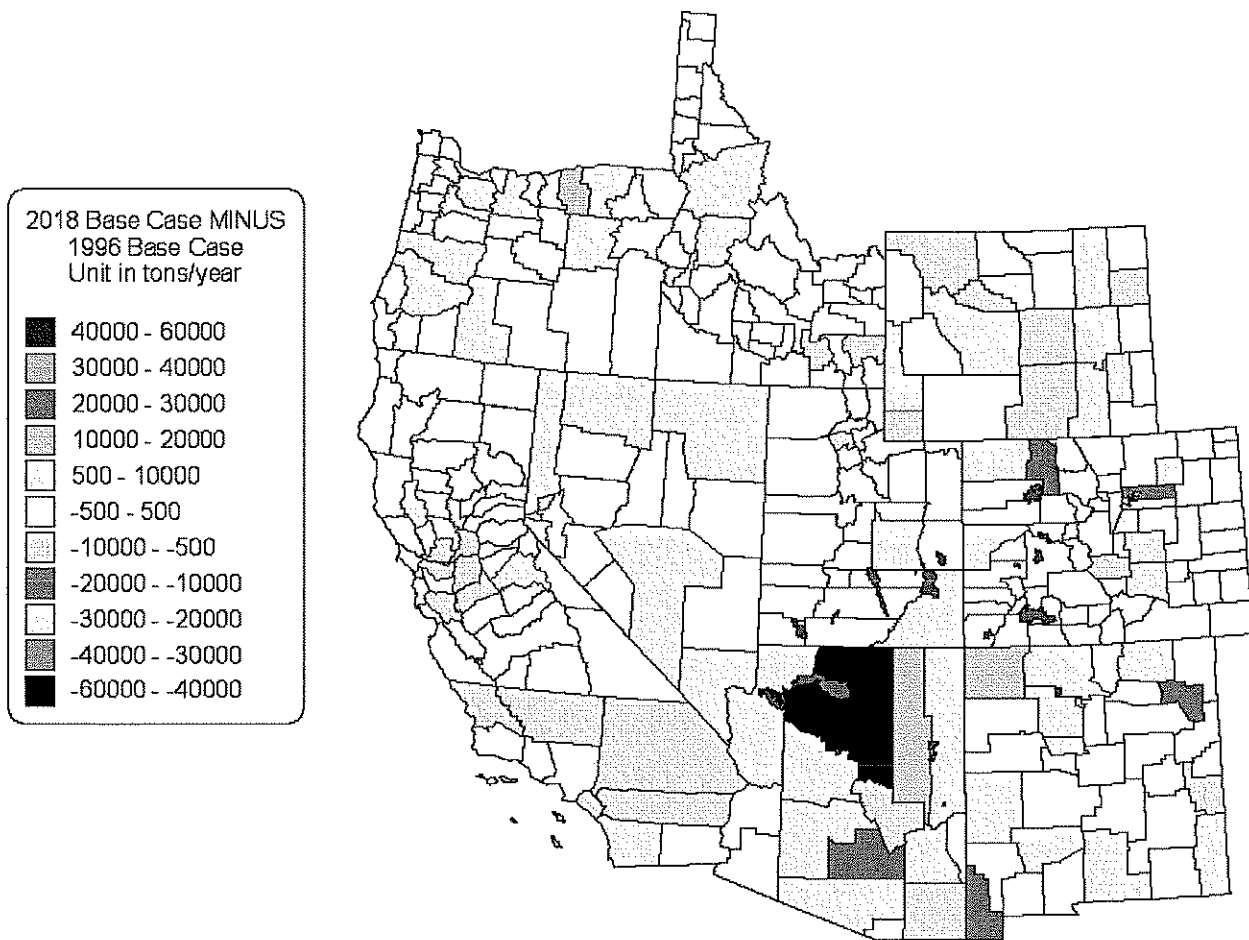


Figure 23: Differences in count average SO₂ emissions between the 1996 Base Case and the 2018 Base Case emissions scenarios.

Note: Tables 30 and 31 above are the same as Tables 5.5.2-17 and 5.5.2-18 contained in Section 5.5.2.9 of this implementation plan.

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-9
State of Oregon Clean Air Act
Implementation Plan
OAR 340-200-0040

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-9
State of Oregon Clean Air Act Implementation Plan

The following is the citation of the administrative rule for the State of Oregon Clean Air Act Implementation Plan. Adoption of the Oregon Section 309 Regional Haze Plan amends OAR 340-200-0040.

DIVISION 200

**GENERAL AIR POLLUTION
PROCEDURES AND DEFINITIONS**

General

340-200-0040

State of Oregon Clean Air Act Implementation Plan

(1) This implementation plan, consisting of Volumes 2 and 3 of the State of Oregon Air Quality Control Program, contains control strategies, rules and standards prepared by the Department of Environmental Quality and is adopted as the state implementation plan (SIP) of the State of Oregon pursuant to the federal Clean Air Act, 42 U.S.C.A §§ 7401 to 7671q.

(2) Except as provided in section (3), revisions to the SIP will be made pursuant to the Commission's rulemaking procedures in division 11 of this chapter and any other requirements contained in the SIP and will be submitted to the United States Environmental Protection Agency for approval.

(3) Notwithstanding any other requirement contained in the SIP, the Department may:

(a) Submit to the Environmental Protection Agency any permit condition implementing a rule that is part of the federally-approved SIP as a source-specific SIP revision after the Department has complied with the public hearings provisions of 40 CFR 51.102 (July 1, 2002); and

(b) Approve the standards submitted by a regional authority if the regional authority adopts verbatim any standard that the Commission has adopted, and submit the standards to EPA for approval as a SIP revision.

[NOTE: Revisions to the State of Oregon Clean Air Act Implementation Plan become federally enforceable upon approval by the United States Environmental Protection Agency. If any provision of the federally approved Implementation Plan conflicts with any provision adopted by the Commission, the Department shall enforce the more stringent provision.]

Stat. Auth.: ORS 468.020

Stats. Implemented: ORS 468A.035

Attachment B

Adoption of Regional Haze Section 309 Implementation Plan

DEPARTMENT OF ENVIRONMENTAL QUALITY

Chapter 340

Proposed Rulemaking

STATEMENT OF NEED AND FISCAL AND ECONOMIC IMPACT

This form accompanies a Notice of Proposed Rulemaking

Title of Proposed Rulemaking:	Adoption of Regional Haze Section 309 Implementation Plan
Need for the Rule(s)	<p>The Oregon Department of Environmental Quality (DEQ) is proposing to adopt regional haze strategies to reduce air pollution that impairs visibility in national parks and wilderness areas. These strategies represent the first step in improving visibility under the federal Regional Haze Rule, adopted by the Environmental Protection Agency (EPA).</p> <p>Good visibility is essential to the enjoyment of national parks and wilderness areas. Regional haze is air pollution in the form of haze that travels long distances and reduces visibility in these scenic areas. This haze is composed of small particles that absorb and scatter light, which are emitted by industry, motor vehicles, agricultural and forestry burning, and windblown dust from roads and farming practices. The Clean Air Act contains a national goal of improving visibility in 156 national parks and wilderness areas designated by Congress in 1977 as “Class I areas”. Oregon has 12 Class I areas, including Crater Lake National Park and 11 wilderness areas. To meet this goal, the EPA adopted the Regional Haze Rule (40 CFR Parts 51.308 and 51.309). States have the responsibility of implementing this federal rule.</p> <p>In 1990, Congress amended the Clean Air Act, giving EPA the authority to establish a special commission to study regional haze in the Grand Canyon National Park and surrounding region. Under this authority, EPA formed the Grand Canyon Visibility Transport Commission (GCVTC). After a 5-year study, the GCVTC submitted recommendations to EPA in 1996 for consideration in development of new regional haze rules. In 1999 EPA adopted the Regional Haze Rule.</p> <p>The Regional Haze Rule provides two options for implementing the rule in Oregon. The first option - “Section 308” - requires developing new long-term strategies to make “reasonable progress” in improving visibility in national parks and wilderness areas. For certain large industrial (stationary) sources, this includes applying Best Available Retrofit Technology (BART) controls to reduce emissions. The second option - “Section 309” - requires adopting the strategies developed by GCVTC in 1996, as described above. Included in these strategies is an alternative to BART that establishes voluntary SO₂ (sulfur dioxide) emission milestones, and a backup emissions trading program if the milestones are not achieved. Section 309 is an option for nine western states - Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, and Wyoming - that were members of the GCVTC. Section 309 strategies are focused on improving visibility in 16 Class I areas of the Colorado</p>

	<p>Plateau. Adopting these strategies constitutes reasonable progress until 2018. After 2018, additional strategies may be needed to reduce all human-caused visibility impairment by 2064.</p> <p>Early this year, DEQ held several informational meetings around the state, briefing stakeholders and the public on the Regional Haze Rule, and seeking feedback on the Section 308/309 option for developing a regional haze plan for Oregon. Based on feedback from the outreach effort, and analysis of these two options, DEQ decided to propose a plan under Section 309. The Section 309 regional haze strategies developed by the GCVTC were the result of five years of technical study, including an extensive stakeholder-consensus process. Under the timetable contained in Section 309, the first SIP submitted by states is due at the end of 2003, and only needs to address the 16 Class I areas of the Colorado Plateau. A second SIP submittal is required in 2008 to address other Class I areas, including the 12 Class I areas in Oregon.</p> <p>In developing the Section 309 SIP, Oregon has been actively involved in the Western Regional Air Partnership (WRAP), which is the successor organization to the GCVTC. The WRAP is a stakeholder-based organization charged with coordinating and overseeing the GCVTC recommendations, and developing the technical and policy work needed by states to develop Section 309 regional haze plans.</p>
Documents Relied Upon for Rulemaking	<p>Three documents were relied upon for this rulemaking:</p> <ol style="list-style-type: none"> 1. The federal Regional Haze Rule and Preamble, published July 1, 1999 in the Federal Register (64 FR 35712). 2. Section 309 of the Regional Haze Rule (40 CFR 51.309). 3. The Grand Canyon Visibility Transport Commission, Recommendations for Improving Western Vistas, June 10, 1996. 4. WRAP Report: <i>An Assessment of Critical Mass for the Regional SO₂ Trading Program</i>, ICF Consulting Group, September 27, 2002. 5. The WRAP TSD Report - <i>Regional Technical Support Document for the Requirements of §309 of the Regional Haze Rule</i>, prepared for WRAP Technical Oversight Committee, August 2003.
Fiscal and Economic Impact Overview	
	<p>The proposed regional haze strategies apply to air pollution sources such as industrial facilities, motor vehicles, and forestry/agricultural burning. As described above, this first SIP under Section 309 only needs to address only the 16 Class I areas of the Colorado Plateau. Given the distance to this region, Oregon sources have a relatively small effect on visibility impairment in these Class I areas. With the exception of an emission trading program that could be triggered (see description in Large Business), the strategies included in this first SIP will take advantage of measures already implemented by Oregon sources. If the emission trading program is triggered (see below under "Large Business"), certain industrial sources may incur some costs associated with complying with their sulfur dioxide allocations. However, the overall cost for these sources subject to the trading program (if triggered) would be approximately 50% of the cost associated with meeting the BART requirement under Section 308.</p>
General public	None.
Small Business	None.
Large Business	Most industrial sources with air quality permits in Oregon currently submit annual reports to the Department. Under the proposed Regional Haze Implementation Plan and the Sulfur

	<p>Dioxide Emission Inventory rule (OAR 340-214-0400 through 0430), the Department will review these reports and compile an annual inventory of sulfur dioxide (SO₂) emissions from stationary sources that emit 100 tons or more of SO₂. This inventory will be used to determine if regional SO₂ milestones are being achieved. None of this work will have any economic impact on stationary sources and the submittal of annual reports.</p> <p>If the regional SO₂ milestones are exceeded between the years 2004 to 2018, all sources in the state that emit 100 tons/year or more of SO₂ will be subject to a “Backstop Emissions Trading Program”. This program would allow sources to seek out the least-cost means of compliance through allowance transactions, compared to the BART requirement under Section 308, which would require installation of pollution control equipment. Under the trading program, the Department would issue SO₂ allocations to these sources. Each source would then have six years to comply with its allocation. This could potentially affect 20-30 sources in Oregon (note: affected sources are those emitting 100 tons or more the year the regional SO₂ milestone is exceeded). The owner or operator of a source can comply by adding controls, buying credits from other sources, or retiring the source. Sources that do not comply with their allocations can be fined approximately \$5000 per ton per day.</p> <p>Accompanying the proposed Regional Haze Plan is a proposed Western Backstop SO₂ Trading Program rule (OAR 340-228-0400 through 0530), which establishes requirements for sources subject to the trading program. This rule includes the monitoring, reporting, and compliance provisions. The earliest compliance date, if the milestones were exceeded in 2004, would be 2010.</p> <p>Based on estimates in the WRAP document (#4) listed above, the overall cost for Oregon sources subject to the trading program are estimated to be 50% of the cost associated with meeting the BART requirement under Section 308, or \$2 million under the trading program, and \$4 million under BART. The regional compliance costs under the trading program range from \$20 million to \$90 million less than under BART, depending on the number of western states participating in the trading program.</p> <p>These cost differences are significantly greater if the regional SO₂ milestones are achieved and no trading program is needed. SO₂ emission trends from 1990 to 2000 showed a decline of about 22%. SO₂ emissions in 2000 were well below the 2003 SO₂ milestone. Projections made by the WRAP indicate SO₂ emission will continue to decrease, making it very unlikely the milestones will be exceeded and trading program triggered.</p> <p>It should be noted that DEQ is seeking and will evaluate public comment on whether other options should be considered to achieve the proposed rulemaking substantive goals while reducing any potential negative impact of this rulemaking on large business.</p>
Local Government	<p>None. If the emissions trading program is ever triggered, the Lane Regional Air Pollution Authority would need to assess potential SO₂ allocations for the >100 sources within its jurisdiction. At present there is only one SO₂ source over 100 tons in Lane County, and it is unlikely there will be additional sources of this size. The workload impact from this is anticipated to be minor.</p>
State Agencies	<p>The state agencies affected by this proposed rulemaking are the Oregon Department of Forestry (ODF) and Oregon Department of Agriculture. Both agencies will need to provide the Department with information on annual emissions from prescribed burning and agricultural field burning. These agencies already track annual burning within their respective programs, so this is expected to be a minor workload impact. In addition, the</p>

	<p>Oregon Department of Forestry will need to conduct additional work related to (1) evaluating non-burning forest treatment and management options, and (2) quantifying and tracking the use of Emission Reduction Techniques (ERTs) related to forestry burning in the state. The Department will be working with ODF to develop new methods and procedures to accomplish this work with minimal increase in ODF workload.</p>
DEQ	<p>Overall, no new significant workload is associated with this proposed rulemaking.</p> <p>There will be some minor workload impact related to compiling emission data for stationary sources, mobile sources, and area sources. Under the Regional Haze Rule, states need to compile this data and submit to the WRAP, which collects this from other western states in order to prepare regional reports. Oregon stationary source SO₂ emissions need to be tracked to determine compliance with the regional SO₂ milestones. Since Oregon stationary sources have Air Contaminant Discharge Permits and Title V permits which already require the submittal of annual reports that include SO₂ emissions, this represents no additional workload for staff. Similarly, DEQ already compiles mobile and areas sources emissions to meet other federal requirements. Fire emissions will be estimated by other state agencies, and then passed on to DEQ, to be forwarded to the WRAP, along with the other emissions data.</p> <p>DEQ anticipates some minor work in early 2004 associated with providing EPA with supplemental information to the Oregon Regional Haze Plan, related to EPA's completeness review of the SIP. This should also be accommodated within existing workload.</p> <p>Although it is unlikely the regional SO₂ milestones will be exceeded, there would be some minor workload if the emissions trading program is triggered. Sources that emit over 100 tons of SO₂ will need to be issued SO₂ allocations, which will be incorporated into their permits. This is not expected to be a significant workload issue. There may also be enforcement work related to compliance with SO₂ allocations issued by DEQ. Any source exceeding an allocation would be subject to possible enforcement action.</p>
Other agencies	None.
Assumptions	Not applicable.
Housing Costs	The Department has determined that this proposed rulemaking will have no effect on the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel.
Administrative Rule Advisory Committee	No advisory committee was used for this rulemaking. The regional haze strategies that DEQ will be adopting are already identified in Section 309 of the Regional Haze Rule. The rule requires all the strategies be adopted as a package. DEQ is not proposing to adopt any additional strategies beyond those identified in the federal rule. The strategies that were developed by the GCVTC had extensive stakeholder and public involvement. In addition, the successor organization to the GCVTC – the Western Regional Air Partnership – has had similar stakeholder and public involvement in developing the technical and policy work being used by states in developing their 309 plans. Earlier this year DEQ held informational meetings around the state with stakeholders and the public on the Regional Haze Rule, seeking input on the 308/309 decision. Feedback from this effort was clearly in support of Section 309.

Brian Finneran
Prepared by DEQ AQ Planning

Brian Finneran
Printed name

10/13/03
Date

J. Roy
Approved by DEQ Budget Office

JAMES ROY
Printed name

10/14/03
Date

Attachment C

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
For
Regional Haze Implementation Plan

Land Use Evaluation Statement

1. Explain the purpose of the proposed rules.

The Department of Environmental Quality (DEQ) is proposing to revise the State of Oregon Clean Air Act Implementation Plan (OAR 340-200-0040) by adopting regional haze strategies to reduce air pollution and protect visibility in national parks and wilderness areas. These strategies represent the first step in improving visibility under the federal Regional Haze Rule, adopted by the Environmental Protection Agency (EPA) in 1999. States have the responsibility of implementing this federal rule. This rulemaking implements Section 309 of the Regional Haze Rule in Oregon.

2. Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?

Yes X No

a. If yes, identify existing program/rule/activity: Title V permits

b. If yes, do the existing statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules?

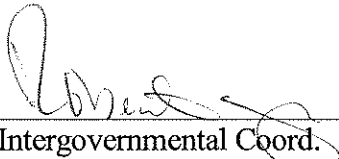
Yes X No (if no, explain):

The proposed regional haze plan has a contingency element that if triggered would be implemented by revising Title V operating permits for industrial sources. Title V permits affect land use activities. As such, DEQ requires a Land Use Compatibility Statement from the affected local government before issuance of a Title V operating permit.

3. If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.

Not applicable.

Division


Intergovernmental Coord.

10-14-03
Date

Attachment D

Adoption of Regional Haze Section 309 Implementation Plan

Relationship to Federal Requirements

Answers to the following questions identify how the proposed rulemaking relates to federal requirements and potential justification for differing from federal requirements. The questions are required by OAR 340-011-0029.

1. Are there federal requirements that are applicable to this situation? If so, exactly what are they?

The federal Clean Air Act requires the protection and improvement of visibility in national parks and wilderness areas. EPA adopted the Regional Haze Rule in 1999 to address visibility problems caused by regional haze air pollution. States have the responsibility of implementing this federal rule. Oregon has two implementation options. One is to follow Section 308 of the rule, which requires developing new long-term strategies, including subjecting certain industries to “Best Available Retrofit Technology” (BART), and making a demonstration that these strategies achieve “reasonable progress” in improving visibility. The second option is to follow Section 309 of the rule, which involves adopting a comprehensive set of strategies developed by the Grand Canyon Visibility Transport Commission (GCVTC) in 1996 to address regional haze in 16 Class I areas of the Colorado Plateau of the Southwest. These strategies apply to industrial facilities, motor vehicles, fire and dust sources, and energy generation. They also identify regions in the West that provide “clean air” to the Colorado Plateau, and emphasize the need for interstate coordination. Included in these strategies is an alternative to BART that establishes voluntary SO₂ (sulfur dioxide) emission milestones, and a backup emissions trading program if the milestones are not achieved. After considering feedback from public and stakeholder outreach, DEQ decided to propose a plan under Section 309. The advantages to this option are discussed in #4 below.

2. Are the applicable federal requirements performance based, technology based, or both with the most stringent controlling?

The federal Regional Haze Rule contains numerous performance-based strategies to reduce air pollution. This is especially the case with the Section 309 strategy for stationary sources, which requires annual SO₂ emission milestones (i.e. reductions) be achieved collectively among all stationary sources, instead of requiring each source to install Best Available Retrofit Technology pollution controls.

3. Do the applicable federal requirements specifically address the issues that are of concern in Oregon? Was data or information that would reasonably reflect Oregon's concern and situation considered in the federal process that established the federal requirements?

Yes. The regional haze strategies that are in Section 309 of the federal rule were adopted based on specific recommendations from the Grand Canyon Visibility Transport Commission (GCVTC) in 1996. These recommendations were the result of four years of technical study of the regional haze problem in the 16 Class I areas of the Colorado Plateau, and were developed through an extensive stakeholder-consensus process. The state of Oregon was actively involved in this effort, along with eight other Western states.

4. Will the proposed requirement improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later?

Yes. DEQ believes Section 309 has many advantages over Section 308 in terms of increasing certainty, being more cost effective, and providing other benefits. Unlike Section 308, which requires adopting new strategies, Section 309 strategies are already established, through the work of the GCVTC and an extensive stakeholder-consensus process. Section 308 requires a demonstration by the state that the new strategies make “reasonable progress”, while the pre-established strategies in Section 309 are presumed to meet this requirement. Unlike Section 309, the first SIP due under Section 308 does not have certainty in terms of a specific submittal date; it is tied to EPA’s designation of “nonattainment areas” during the period of 2004-2005. The first SIP submittal under Section 309 is due at the end of 2003; the second in 2008. The first SIP needs to address only the 16 Class I areas of the Colorado Plateau. The second SIP will need to address the other areas, including Oregon’s 12 Class I areas. This two-step process is more cost-effective and provides greater certainty, in that it gives five years to evaluate the effectiveness of Section 309 strategies and to develop an appropriate plan for Oregon. (Note that under Section 308, the SIP would need to address Oregon’s Class I areas by 2004-2005.) Finally, in terms of preventing or reducing the need for costly retrofitting, the Section 309 strategy for stationary sources allows for annual SO₂ emission milestones (i.e. reductions) to be achieved collectively among all stationary sources, instead of requiring each source to install Best Available Retrofit Technology pollution controls.

5. Is there a timing issue which might justify changing the time frame for implementation of federal requirements?

No. Based on the discussion above on the advantages of following Section 309 over Section 308, there is no reason to change the time frame for implementation of this rule. If the December 31, 2003 deadline for submitting the Section 309 SIP is not met, Oregon automatically becomes subject to Section 308, which as described above, has several disadvantages associated with it.

6. Will the proposed requirement assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth?

Yes, but indirectly. Some uncertainty and future growth in emissions were built into the annual SO₂ milestones for stationary sources under Section 309. The calculation of the SO₂ milestones included projected emission growth for new sources, such as new coal power plants, and some "headroom" for uncertain future events, such as plant shutdowns, retirements, sulfur content changes in fuel, natural gas switching to fuel oil, etc.

7. Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? (level the playing field)

Yes. The Section 309 of the Regional Haze Rule contains strategies that apply to all major categories of air pollution sources (industrial, motor vehicle, fire, dust, etc.) that cause regional haze in national parks and wilderness areas, and therefore is equitable.

8. Would others face increased costs if a more stringent rule is not enacted?

Not applicable. DEQ is proposing to adopt a regional haze implementation plan that is the same as the federal rule in terms of stringency.

9. Does the proposed requirement include procedural requirements, reporting or monitoring requirements that are different from applicable federal requirements? If so, Why? What is the "compelling reason" for different procedural, reporting or monitoring requirements?

No.

10. Is demonstrated technology available to comply with the proposed requirement?

Yes.

11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain?

Yes. One of the GCVTC recommendations and Section 309 rule requirement specifically addresses pollution prevention. States are required to provide a detailed assessment of their pollution prevention programs and activities, and an estimate of the visibility benefits of these programs and activities. DEQ has been working with the Oregon Department of Energy in identifying all renewable energy and energy conservation programs in the state, including incentives to go beyond compliance or promote early compliance, projections of the short and long-term emission reductions and cost savings, and the potential for expanding these programs in a cost-effective manner.

In addition to the pollution prevention measures, the voluntary SO₂ emission milestones and backup emissions trading program represents a more cost effective approach to reducing air pollution and improving visibility. As described above in #1, this program provides a cost-effective alternative for stationary sources to installing pollution control equipment to meet the BART, which is required under Section 308.

State of Oregon
Department of Environmental Quality

Memorandum

To: Environmental Quality Commission **Date:** November 26, 2003
From: Stephanie Hallock *S. Hallock*
Subject: Additional materials for Agenda Item J: Rule Adoption: Oregon Regional Haze Section 309 Implementation Plan

Enclosed are additional materials for *Agenda Item J, Rule Adoption: Oregon Regional Haze Section 309 Implementation Plan*. As explained in the November 13th staff report for this item, the schedule for completing this rulemaking was compressed to meet the end-of-the-year deadline specified in the federal Regional Haze Rule for submitting this plan to EPA. To meet the deadline, the Department had to shorten the amount of time planned between the end of the public comment period and the Commission's consideration of the plan. As a result, the Department's Response to Comments and the Presiding Officer's Report were not included in the staff report.

The Department held four public hearings that were lightly attended. Only four persons attended the hearings, and none provided testimony. However, before the end of the public comment period on November 21st, the Department received a total of seven written comments. Six expressed general support for the proposed Regional Haze Plan. One did not offer any support for or against the plan, only minor corrections.

Based on the written comments received from the National Park Service, PacifiCorp, and Covanta Energy, the Department has made several minor revisions to the plan. None are considered to be substantive changes. These revisions are described in the Department's Response to Comments, and have been incorporated into the Oregon Regional Haze Plan.

Therefore, attached to this memo are three additional items:

1. The Presiding Officer's Reports (from the 4 public hearings).
2. Department's Response to Comments
3. Revised Oregon Regional Haze Plan – as Attachment A.

(Note: copies of written comments we received are available upon request.)

If you have any questions about the meeting or these materials, please contact Andy Ginsburg at 503-229-5397, or toll-free at 1-800-452-4011 ext. 5397 in the state of Oregon.

**State of Oregon
Department of Environmental Quality**

Memorandum

Date: November 21, 2003

To: Environmental Quality Commission
From: Brian Finneran, DEQ Air Quality Division
Subject: Presiding Officer's Report for Rulemaking Hearing
Title of Proposal: Proposed Oregon Region Haze Plan

Hearing Dates and Times: November 19, 2003, 6:00 p.m.

Hearing Location: Portland
DEQ Conference Room 3A
811 SW 6th Ave.

Bend
Department of Environmental Quality
2146 NE Fourth St.
Conference Room

Hearing Dates and Times: November 20, 2003, 6:00 p.m.

Hearing Location: Medford
Department of Environmental Quality
201 W. Main St., Suite 2D
Conference Room

Pendleton
State Office Building
700 SE Emigrant Ave.
Conference Room

The rulemaking public hearings on the above titled proposal were convened at the times and locations listed above. DEQ staff members serving as hearings officers were Keith Tong (Medford), Mark Fisher (Bend), and Brian Finneran (Portland). A total of 4 persons attended the hearings: Portland - 0, Bend - 2, Medford - 0, Pendleton - 2. No oral or written testimony was provided at the hearings. However, 6 written comments were mailed to the Department prior to the November 21, 2003 comment period deadline.

Summary of the Oral Testimony

No oral testimony was provided at these hearings.

Summary of the Written Testimony

The following is a summary of the written comments were submitted to the Department during the public comment period. Copies are available upon request.

1. Jonathan B. Jarvis, Regional Director, Pacific West Region, USDI National Park Service, Oakland, California

Mr. Jarvis with the National Park Service supports the Oregon Regional Haze Plan. He states that the proposed plan "appears to contain all the major components required for inclusion in State Implementation Plans (SIPs) as specified in EPA's regional haze rule." He identifies three parts of the plan that need "fine-tuning" to be fully consistent with the rule:

- Under the *Geographic Enhancement Element* (Section 5.5.2.2.4) on page 18 in the plan, the National Park Service would like to be included in the Memorandum of Agreement that will be developed to implement this provision.
- Under the *Assessment of NOx and PM Control Strategies* (Section 5.5.2.2.5) on page 18 in the plan, DEQ should clarify that additional future work is needed to make this assessment, and that Oregon cannot determine what level of control is needed of NOx and PM through a stationary source milestone program.
- Under the *Declaration for "Other" Class I Areas* (Section 5.5.2.12) on page 76 in the plan, clarification is needed that in addition to addressing Oregon's 12 Class I areas in the 2008 regional haze plan, Oregon will address other Class I areas outside the state if they are affected by transport of emissions from Oregon.

2. Gregory R. McClarren, Chair, Bend Clean Air Committee, Bend, Oregon

The Bend Clean Air Committee supports the Oregon Regional Haze Plan. Mr. McClarren identifies several sources of air pollution that he is concerned contribute to regional haze: (1) agricultural burning other than grass seed and grain burning, such as by small farms, currently exempt from air pollution regulation under state law; (2) backyard and open burning around the state, including the burning of plastic and other matter; (3) rangeland burning as a widespread practice in the state; and (4) diesel particulate from all sources. He encourages DEQ to take a "holistic approach to monitoring of haze/smoke/pollution and management of smoke." He indicates that Section 309 of the regional haze rule allows time for the state to achieve these objectives. In addition to addressing haze, he mentions current health effects research that suggests there are adverse health effects from particulate matter at levels below current air quality health standards.

3. Mike Dykzeul, Director, Forest Protection, Oregon Forest Industries Council, Salem, Oregon

Mr. Dykzeul indicates that the Oregon Forest Industries Council (OFIC) supports the Department's decision to follow Section 309 over Section 308 of the federal Regional Haze Rule. His comments are limited to the *Fire Source Strategy*, as detailed in Appendix D8-5 of the plan. He cites the current Oregon Smoke Management Plan as effective in "managing both emissions and meeting business objectives." He states that OFIC supports DEQ's efforts to improve air quality and visibility, and recognizes the importance of using non-burning alternatives, when feasible. Much of his focus is on the fire strategies that will be needed for the regional haze plan in 2008 to address Oregon's 12 Class I areas. He cites the need for continuing to use controlled prescribed fire to reduce wildfire emissions and their impacts on visibility. He also mentions the "scientific value in the use of fire in maintaining forest sustainability." He indicates that OFIC looks forward to working with DEQ on the 2008 plan that will "balance both visibility and operational forestry needs."

4. Greg Ringer, Adjunct Assistant Professor, University of Oregon, Eugene, Oregon.

Mr. Ringer expresses general support for the plan, and strongly encourages DEQ to adopt more stringent restrictions on air pollution sources, especially motor vehicles and new industries and commercial facilities. He indicates that greater effort is needed to reduce haze, improve visibility, and reduce health risks from air pollution caused by "truck and auto emissions, agricultural burning, urban pollution, and the burning of dead wood in logging and forest thinning operations." He cites the importance of sustainable Oregon communities and businesses that "require a sustainable environment."

5. Russel B. Johnston, Covanta Marion Inc., Brooks, Oregon

Mr. Johnston comments are directed at the two supporting rules associated with the stationary source strategy in the Oregon Regional Haze Plan. His comments do not express support or opposition to the plan; they only suggest changes to three specific rule provisions.

- 1) Under the proposed *Annual Sulfur Dioxide Emission Inventory* rule, revisions are needed to OAR 340-214-0420 (1)(e)(B) "Percent sulfur content of fuel and how it was determined." Mr. Johnston believes this requirement should not apply to facilities that use a continuous emission monitoring system (CEMS) or non-fuel related emission factor to calculate SO₂ emissions.
- 2) Under the proposed *Annual Sulfur Dioxide Emission Inventory* rule, revisions are needed to OAR 340-214-0430 "Changes in Emission Measurement Techniques" that requires facilities to use the same calculation they used in 1998/1999. Mr. Johnston believes facilities should be able to use other calculation methods if they are more accurate and representative.

- 3) Under the proposed *Western Backstop Sulfur Dioxide Trading Program* rule, Mr. Johnston wants DEQ to revise OAR 340-228-0410 (25) definition for "Renewable Energy Resource" to include waste-to-energy (WTE) facilities, such as Covanta Marion. He states that WTE facilities in this country significantly reduce the amount of municipal waste going into landfills, and in doing so generate electricity to supply 2.3 million homes each year. In terms of the toxic air pollutants from the burning of municipal waste, he points out that federal regulations now require WTE facilities to install Maximum Achievable Control Technology (MACT), which significantly reduces emissions. He states that WTE facilities "produce electricity with less environmental impact than almost any other source of electricity", and provides EPA data showing overall emissions from WTE electricity generation less than wood-waste biomass burning and landfill gas emissions.

6. Bill Edmonds, Director, Environmental Policy, PacifiCorp, Portland, Oregon

Mr. Edmonds supports Oregon's decision to follow Section 309 of the regional haze rule and "compliments Oregon for its leadership role in developing the Section 309 option for nine Western states." He cites the benefits of the regional SO₂ milestones in giving stationary sources "the flexibility to choose the steps needed" to collectively meet the milestones, and that emissions trading program is good incentive for sources to manage their emissions effectively. Mr. Edmond's comments focus on three areas:

- 1) He cites the visibility modeling results conducted by the Western Regional Air Partnership (WRAP) that shows the regional SO₂ emission milestones achieve greater visibility improvement in the 16 Class I areas of the Colorado Plateau than Best Available Retrofit Technology (BART). This "better than BART" demonstration is required under the regional haze rule for the first SIP in 2003. Mr. Edmonds indicates that the modeling results also show that the SO₂ milestones are better than BART for other Class I areas in the West, including those in Oregon. He would like to see this information included in the Oregon Regional Haze Plan, so that when DEQ develops its plan in 2008 to address Oregon's Class I areas, the BART requirement for SO₂ stationary sources will already be satisfied.
- 2) Mr. Edmonds believes it is important that Oregon and the other four 309 states continue to work together to ensure consistency between Section 309 SIPs, so that affected sources face a consistent set of policies across the West.
- 3) Mr. Edmonds indicates that PacifiCorp recently submitted several technical comments to the State of Wyoming, which is a 309 state similar to Oregon. He is incorporating these comments, hoping they "will be useful Oregon for the purpose of identifying other issues that should be reconciled by the five Section 309 states."

The following are highlights of some of the Wyoming comments. (*Note: DEQ has added references to the applicable section and page in the Oregon Regional Haze Plan*).

- PacifiCorp urges the state to consider that emission increases may not necessarily influence all Class I areas on the Colorado Plateau on the least-impaired days. Efforts should be taken to further refine the underlying meteorology and modeling for demonstrating impacts on the least impaired days. (*Section 5.5.2.1.3, Clear Air Corridor Strategy Elements, page 12*)
- Under *Changes in flow rate measurement methods*, PacifiCorp recommends that the state be very cautious about adjusting the interim milestones due to changes in flow measurement techniques at electric generating utilities, and recommends that the state rely on the emissions that utilities report to EPA under the acid rain program rather than focusing on relatively minor changes in the milestones. (*Section 5.5.2.3.1, Milestones and Determination of Program Trigger, page 25*)
- Under the *Year 2013 Assessment*, describing the Regional Emissions Report for 2012, PacifiCore recommends adding the following sentence: "The draft report will be posted on the WRAP website for a period of public review and comment for not less than 30 days." (*Section 5.5.2.3.1, Milestones and Determination of Program Trigger, pages 28-29*)
- Under the *Year 2013 Assessment*, describing the Consensus Decision, PacifiCore recommends revising this provision: "The Department commits to meet with the participating states and tribes in March 2014 to discuss any comments received on the 2018 emission projections in the draft report. The participating states and tribes will decide, through a consensus process, whether it can be determined that the 2018 milestone will not be met, and whether it is necessary to trigger the WEB trading program early in order to meet the SO2 emission reduction goals in 2018." (*Section 5.5.2.3.1, Milestones and Determination of Program Trigger, page 29*)
- Under the *Western Backstop Trading Program Requirements*, describing the Initial Allocation of SO2 Allowances, it is not clear what threshold date applies to the controls eligible for this credit. PacifiCore recommends the state use 1/1/03 as the threshold date. (*Section 5.5.2.3.3, Western Backstop Trading Program Requirements, page 34*)
- In the *Pollution Prevention Strategy*, PacifiCore would like the state to add clarifying language from pages 35754-35755 of the July 1, 1999 Preamble to EPA's Regional Haze Rule. This language indicates that the goals set by the Grand Canyon Visibility Transport Commission for renewable energy use in 2005 and 2015 are not enforceable, but that states are required to assess progress towards meeting these goals. (*Section 5.5.2.7.2, Pollution Prevention Strategy Elements, page 61*)
- In the *Geographic Enhancement Element*, PacifiCorp urges the state to continue working with the federal land managers in order to refine the approach that will be used to address RAVI (Reasonably Attributable Visibility Impairment) given that regional emissions are

being reduced under the regional haze program. (*Section 5.5.2.2.4, Geographic Enhancement Element, page 18*)

7. Brian Litt, Senior Planner, Columbia River Gorge Commission, White Salmon, Washington

Mr. Litt supports reducing regional haze in Oregon in terms of the potential air quality benefits for the Columbia River Gorge National Scenic Area. He indicates that the Gorge Commission is very interested in following the results of the first regional haze plan, as one of the air quality strategies for the Gorge is to "assess expected air quality benefits from other programs".

Summary of Public Comment and Agency Response

Oregon Regional Haze Implementation Plan

Prepared by: Brian Finneran

Date: November 25, 2003

***Comment
period***

The public comment period opened on October 19, 2003 and closed at 5:00 p.m. on Friday, November 21, 2003. DEQ held four public hearings, as listed below.

Portland, November 19, 2003

Department of Environmental Quality
811 SW 6th Ave.
Conference Room 3A
6:00 to 8:00 p.m.

Bend, November 19, 2003

Department of Environmental Quality
2146 NE Fourth St.
Conference Room
6:00 to 8:00 p.m.

Medford, November 20, 2003

Department of Environmental Quality
201 W. Main St., Suite 2D
Conference Room
6:00 to 8:00 p.m.

Pendleton, November 20, 2003

State Office Building
700 SE Emigrant Ave.
Conference Room (1st floor)
6:00 to 8:00 p.m.

Summary

A total of 4 people attended the hearings: Portland - 0, Bend - 2, Medford - 0, Pendleton - 2. No oral testimony was provided. Seven written comments were received prior to the November 21st comment deadline. A complete description of these comments is provided in the Presiding Officer's Report.

***Organization
of comments
and
responses***

A summary of each comment and the Department's response is provided below. Note that not every comment received is listed here; but rather only those requesting a change be made to the proposal. Any changes made in response to comment are noted as well. For a complete summary of the comments received, see Attachment 1.



Summary of Comments and Agency Responses

Comment 1 PacifiCorp commented that under the *Geographic Enhancement Element*, the state should continue working with the federal land managers to refine the approach that will be used to address RAVI, given that regional emissions are being reduced under the regional haze program.

Response There are two requirements for BART (Best Available Retrofit Technology) identified in the Oregon Regional Haze Plan. RAVI, or Reasonably Attributable Visibility Impairment, refers to situations where BART is needed to address visibility impairment in a Class I area that is "reasonably attributable" to a single source or small group of stationary sources in relatively close proximity to the Class I areas. Regional Haze BART refers to the long-range transport of pollution from numerous sources that contribute collectively to regional haze. The Geographic Enhancement provision in the plan is a voluntary approach to address RAVI. Oregon DEQ will be working with the federal land managers (US Forest Service and National Park Service) to address RAVI certification for BART in Oregon Class I areas that considers reductions occurring under the regional haze program and other factors. This process will be formalized through a Memorandum of Agreement. The Department agrees that the resolution of any "hot spot" issues could be addressed with different remedies that achieved similar or better results. The Department will work the federal land managers to ensure that there are common understandings about visibility trends and conditions in the Class I areas.

Comment 2 Jonathan B. Jarvis of the National Park Service commented that under the *Geographic Enhancement Element* (Section 5.5.2.2.4) on page 18 in the plan, the National Park Service would like to be included in the Memorandum of Agreement that will be developed to implement this provision.

Response This change was made as recommended. The Department should have indicated that there are two federal land managers responsible for Class I areas in Oregon - the Forest Service and the National Park Service.

PLAN AMENDED:

5.5.2.2.4 Geographic Enhancement Elements

The State of Oregon and the Federal Land Managers will pursue a process to address RAVI certification for BART in any Class I areas in Oregon, should this ever occur, as it relates to the regional SO₂ milestones and the backstop emission trading program. This process will be formalized through a Memorandum of Agreement (MOA) between the Oregon Department of Environmental Quality, National Park Service, and the U.S. Forest Service.

If the Federal Land Managers certify impairment, the State of Oregon will fulfill its obligation to determine attribution and, if necessary, determine BART for the

applicable source or group of sources in accordance with Section 5.2.2.2 of Oregon's Visibility Protection Plan for phase I visibility protection, which was submitted to EPA in October 1986.

Comment 3 Jonathan B. Jarvis of the National Park Service commented that under the *Assessment of NO_x and PM Control Strategies* (Section 5.5.2.2.5) on page 18 in the plan, DEQ should clarify that additional future work is needed to make this assessment, and that Oregon cannot determine what level of control is needed of NO_x and PM through a stationary source milestone program.

Response This change was made as recommended. Note: the Assessment of NO_x and PM Control Strategies requirement applies only to the 16 Class I areas in the Colorado Plateau. This clarification has been added to the proposed change.

PLAN AMENDED:

5.5.2.2.5 Assessment of NO_x and PM Control Strategies

Based on these findings, for the 16 Class I areas of the Colorado Plateau, the State of Oregon was unable to determine the need for NO_x and PM emission reduction strategies or the need for NO_x and PM milestones at this time. The State of Oregon will continue to work with the WRAP to improve emission inventories and regional modeling capabilities to support future assessments. The State of Oregon will review the need for NO_x and PM emission reduction strategies as part of the next SIP update and revision required for 2008.

Comment 4 Jonathan B. Jarvis of the National Park Service commented that under the *Declaration for "Other" Class I Areas* (Section 5.5.2.12) on page 76 in the plan, clarification is needed that in addition to addressing Oregon's 12 Class I areas in the 2008 regional haze plan, Oregon will address other Class I areas outside the state if they are affected by transport of emissions from Oregon.

Response This change was not made. Section 309 of the regional haze rule requires that the 2003 plan address the 16 Class I areas of the Colorado Plateau. Other Class I areas do not need to be addressed until 2008. However, the 2003 plan does require a declaration by the state on how it will address its Class I areas in 2008 – following either Section 309 or Section 308. This declaration only applies to Class I areas within the state's jurisdiction. Other provisions in the regional haze rule, such as 40 CFR 51.309(d)(11), address the need for interstate coordination to address cross-boundary visibility impairment. DEQ will work with other Western states to evaluate interstate transport and the need for any interstate strategies.

Comment 5 Greg McClarren of the Bend Clean Air Committee commented that he is concerned the following sources contribute to regional haze: (1) agricultural

burning from small farms, currently exempt from air pollution regulation under state law; (2) backyard and open burning around the state, including the burning of plastic and other matter; (3) rangeland burning as a widespread practice in the state; and (4) diesel particulate from all sources.

Response The Department recognizes that these sources contribute to regional haze. The Oregon Regional Haze Plan is focused on the larger sources of burning in the state, such as forest prescribed burning and Willamette Valley field burning. For the next regional haze plan in 2008, DEQ will be evaluating the contribution of smaller burning sources and diesel emissions to regional haze impairment in Oregon's Class I areas. An assessment will be made at that time as to need for additional control measures.

Comment 6 Russel B. Johnston of Covanta Marion commented that under the proposed *Annual Sulfur Dioxide Emission Inventory* rule, revisions are needed to OAR 340-214-0420 (1)(e)(B) on "Percent sulfur content of fuel and how it was determined." This requirement should not apply to facilities that use a continuous emission monitoring system (CEMS) or non-fuel related emission factor to calculate SO₂ emissions.

Response This change was not made. The proposed rule already covers this. OAR 340-214-0420 (1)(e) requires that the source keep the records used in calculating its SO₂ emissions. Paragraph (e)(B) identifies "Percent sulfur content of the fuel and how it was determined". If a source uses CEMS, then paragraph (e)(D) "Emissions monitoring data" applies. If a source uses a non-fuel related emission factor, then paragraph (e)(E) "Operating Data" applies.

Comment 7 Russel B. Johnston of Covanta Marion commented that under the proposed *Annual Sulfur Dioxide Emission Inventory* rule, revisions are needed to OAR 340-214-0430 on Changes in Emission Measurement Techniques that require facilities to use the same calculation they used in 1998/1999. Facilities should be able to use other calculation methods if they are more accurate and representative.

Response The change has been made as recommended. The need to report SO₂ emissions in this manner is based on the need to show compliance with the regional SO₂ milestones. The Department did not anticipate this provision would create any significant additional work for sources to make these adjustments. However, the Department proposes changing this provision so that sources only need to inform the state if they make changes to their SO₂ calculations from 1998/1999. Under the stationary source section in the regional haze plan, the Department must screen the SO₂ emission data reported under this rule to identify changes in emission measurement techniques in order to ensure consistent comparison to the regional SO₂ milestones.

RULE AMENDED:

340-214-0430

Changes in Emission Measurement Techniques

The owner or operator that uses a different emission monitoring or calculation method than was used to report the sulfur dioxide emissions (1999 for utilities and 1998 for all other sources) under OAR 340-214-0114 must indicate this in the annual emission report, , so that the Department can ensure consistent comparison to the regional SO₂ milestones, as described in State Implementation Plan Section 5.5.2.3.2 a.(3).

Comment 8 Russel B. Johnston of Covanta Marion commented that under the proposed *Western Backstop Sulfur Dioxide Trading Program* rule, DEQ should revise OAR 340-228-0410 (25) definition for "Renewable Energy Resource" to include waste-to-energy (WTE) facilities, such as Covanta Marion.

Response This change has been made as recommended.

RULE AMENDED:

340-228-0410

Definitions

(25) "Renewable Energy Resource" means a resource that generates electricity by non-nuclear and non-fossil technologies that results in low or no air emissions. The term includes electricity generated by wind energy technologies; solar photovoltaic and solar thermal technologies; geothermal technologies; technologies based on landfill gas and biomass sources; waste-to-energy facilities that meet maximum achievable control technology (MACT) requirements, and new low-impact hydropower that meets the Low-Impact Hydropower Institute criteria. Biomass includes agricultural, food and wood wastes. The term does not include pumped storage, black liquor, or treated wood.

Comment 9 Bill Edmonds of PacifiCorp commented that the "better than BART" modeling results on SO₂ Emission Milestones for the Class I areas in Oregon should be included in the Oregon Regional Haze Plan, so that when DEQ develops its plan in 2008 to address Oregon's Class I areas, the BART requirement for SO₂ stationary sources will already be satisfied.

Response This change was made as recommended.

PLAN AMENDED:

5.5.2.2.3 Stationary Sources Strategy Elements

a. Year 2018 Milestone

The year 2018 milestone of 510,000 tons, including a 30,000 ton set-aside for two copper smelters not currently operating (or 480,000 tons if the suspended smelters do not resume operation), represents a regional SO₂ emissions reduction of approximately 320,000 tons from the 1990 baseline emissions of 830,000 tons. This reduction is well on the way to the Commission's goal of a 50-70% reduction by 2040. The Annex

demonstrated that the 2018 regional SO₂ milestones provide for greater reasonable progress than would be achieved by application of best available retrofit technology (BART), as required by 40 CFR 51.309(f)(1)(i). The WRAP estimated that BART reductions would total approximately 170,000 tons by 2018.

In modeling work conducted by the WRAP to verify the Annex analysis, it was determined that, in addition to the 16 Class I areas of the Colorado Plateau, the regional SO₂ milestones showed greater reasonable progress than would be achieved under BART for Oregon's Class I areas. This demonstration can be found in Section 4.1.2 of the WRAP Technical Support Document. In accordance with 40 CFR 51.309(g)(ii), no further demonstration will be needed prior to 2018 for Oregon's stationary sources identified in the Annex, in terms of satisfying BART for SO₂ under 40 CFR 51.308(e).

Comment 10 Bill Edmonds of PacifiCorp commented that it is important that Oregon and the other four 309 states continue to work together to ensure consistency between Section 309 SIPs, so that affected sources face a consistent set of policies across the West.

Response Oregon has been very active working with WRAP states to ensure consistency between Section 309 SIPs. Oregon actually developed a "Model SIP" that was used by the 309 states. There are some unique requirements in each state. However every effort has been made to minimize any differences between SIPs. This effort will continue as 309 states update their SIPs in the future. A special "309 Coordinating Committee" will be formed by the WRAP in 2004 for this specific purpose.

Comment 11 PacifiCorp commented that under the *Clean Air Corridor strategy*, the state should consider that emission increases may not necessarily influence all Class I areas on the Colorado Plateau on the least-impaired days. Efforts should be taken to further refine the underlying meteorology and modeling for demonstrating impacts on the least impaired days.

Response The Department agrees that analysis of impact should address each Class I area individually, and that refinements are needed in meteorological and monitoring data for demonstrating impacts of emissions from the clean air corridor. The Department expects periodic "Causes of Haze" reports prepared by the WRAP will provide a better understanding of how emissions from the clean air corridor influence Class I areas on the Colorado Plateau.

Comment 12 PacifiCorp commented that under *Changes in flow rate measurement methods*, the state should be very cautious about adjusting the interim milestones due to changes in flow measurement techniques at electric generating utilities. PacifiCore recommends the state rely on the emissions that utilities report to EPA under the acid rain program, rather than focus on relatively minor changes in the milestones.

Response This change was not made. The WRAP Market Trading Forum discussed at

length the issue of "paper" emission changes due to new flow measurement techniques. There was concern that these changes would undermine the goals of the Annex because real emission reductions would not occur, even though the reported emissions would show a decrease. The SIP provisions related to flow rate measurement methods were designed to ensure that actual emission reductions take place. These measures need to remain in place so that we can determine the scope of the "paper changes" that have occurred since 1999. The measures are also specifically required by 40 CFR 51.309(h)(1)(iv).

Comment 13 PacifiCorp commented that under the *Year 2013 Assessment*, in describing the Regional Emissions Report for 2012, the following sentence should be added: "The draft report will be posted on the WRAP website for a period of public review and comment for not less than 30 days."

Response The change has been made as recommended.

PLAN AMENDED:

5.5.2.3.1 Milestones and Determination of Program Trigger

d. Year 2013 Assessment

(2)(b) The WRAP will compile the information from all participating states and tribes, prepare draft SO₂ inventory projections for the year 2018, and estimate the effect of known future projects on SO₂ emissions. Projected 2018 emissions will be compared to the 2018 milestone. This information will be included in the draft regional emissions report for 2012 that will be submitted to the Department by December 31, 2013, as outlined in section 5.5.2.3.1.c(5) of this plan. The draft report will be posted on the WRAP website for a period of public review and comment for not less than 30 days.

Comment 14 PacifiCorp commented that under the *Year 2013 Assessment*, the description of the Consensus Decision should be revised to read: "The Department commits to meet with the participating states and tribes in March 2014 to discuss any comments received on the 2018 emission projections in the draft report. The participating states and tribes will decide, through a consensus process, whether it can be determined that the 2018 milestone will not be met, and whether it is necessary to trigger the WEB trading program early in order to meet the SO₂ emission reduction goals in 2018."

Response This change was not made. The purpose of the 2013 review is to determine the likelihood of meeting the 2018 milestone, so that 309 states can avoid a major non-compliance issue in 2018. If the 2018 penalty provisions are triggered, it will be a failure of the expected process, and sources in Oregon would face significant financial penalties. By triggering the trading program, the states will use the backstop regulatory program to ensure that sources remain in compliance, and that the goals of the program are met. The decision will be based on the best information available, but because the states will be using emission projections, there will always be some

uncertainties. It cannot be "determined that the milestones will not be met" with absolute certainty, and the proposed language could be interpreted to require certainty. The milestones are designed so that market forces and the incentive of avoiding a regulatory program, rather than a regulatory program, will drive emission reductions. 309 states will not trigger the trading program in 2013 unless this incentive process appears to be ineffective. It is impossible to identify all of the factors that must be considered in this decision process at this time.

Comment 15 PacifiCorp commented that under the *Western Backstop Trading Program Requirements*, in describing the Initial Allocation of SO₂ Allowances, it is not clear what threshold date applies to the controls eligible for this credit. PacifiCorp recommends the state use 1/1/03 as the threshold date.

Response The change has been made as recommended.

PLAN AMENDED:

5.5.2.3.3 Western Backstop Trading Program Requirements

a. Initial Allocation of SO₂ Allowances

(1)(c) A list of certified early reductions expressed as tons of SO₂. Early reductions will be calculated and certified as follows:

(i) Any WEB source that installs control technology and accepts new permit emission limits that are, for a non-utility source, below its floor as established in this section or, for a utility source, below BACT, may apply for an early reduction credit as outlined in OAR 340-228-0460(5). The credit will be available for reductions that occur between January 1, 2003 and the program trigger year. The application must show that the floor was calculated in a manner that is consistent with the monitoring requirements in OAR 340-228-0480, and the new permit must contain monitoring requirements that are consistent with OAR 340-228-0480. The credits that accumulate from the time the new controls come on line until the program trigger date will be allocated to the WEB source over a 10 year period. The use of early reduction credits in any control period is limited to no more than five percent, systemwide, of the existing available allowances, as provided in Section 5.5.2.3.3.a(2)(f) of this plan.

Comment 16 PacifiCorp commented that under the *Pollution Prevention Strategy*, clarifying language should be added from pages 35754-35755 of the July 1, 1999 Preamble to EPA's Regional Haze Rule. This language indicates that the goals set by the Grand Canyon Visibility Transport Commission for renewable energy use in 2005 and 2015 are not enforceable, but that states are required to assess progress towards meeting these goals.

Response The Department agrees. However, the preamble carries the same weight whether or not it is included in the SIP. Typically the Department does not repeat language from the preamble in a SIP, nor do we think in this case it is necessary.

Proposed Rulemaking

**For adoption by the Environmental Quality Commission
December 5, 2003**

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

**A Plan for Implementing
Section §309 (40 CFR 51.309)
of the Regional Haze Rule**

Section 5.5 of the State Implementation Plan

State of Oregon
Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204-1390

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- Appendix D8-3 Proposed Administrative Rules for the Stationary Source Strategy
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- Appendix D8-8 Projection of Visibility Improvement Support Documentation
- Appendix D8-9 State of Oregon Clean Air Act Implementation Plan (rule citation)

Oregon Section 309 Reference Materials - Applicable Western Regional Air Partnership (WRAP) Reports and Documents

Available on CD-ROM, or at the WRAP website: <http://www.wrapair.org/309/index.htm>

1. The WRAP TSD Report - *Regional Technical Support Document for the Requirements of §309 of the Regional Haze Rule*, prepared for WRAP Technical Oversight Committee, August 2003.
2. *Clean Air Corridors: Framework for Identifying Regions that Influence Clean Air on the Colorado Plateau*, Meteorology Subcommittee of the Grand Canyon Visibility Transport Commission; Western Governors' Association: Denver, CO, July 1995.
3. *Year 2000 Point Source SO₂ Emissions Analysis - 9 State Western Region Report*, Pechan and Associates, prepared for the WRAP Market Trading Forum, May 2002.
4. *An Assessment of Critical Mass for the Regional SO₂ Trading Program*, ICF Consulting Group, September 27, 2002.
5. *Recommendations for Making Attribution Determinations in the Context of Reasonably Attributable BART*, WESTAR RA BART Phase II Working Group, May 2003.
6. *Stationary Source NO_x and PM Emissions in the WRAP Region: An Initial Assessment of Emissions, Controls, and Air Quality Impacts*, Western Governors Association, May 30, 2003.
7. *Western Backstop (WEB) Emissions and Allowance Tracking System (EATS) Analysis*, Perrin Quarles Associates, Inc., prepared for the WRAP Market Trading Forum, July 31, 2003.
8. *Market Trading Forum Non-Utility Sector Allocation Final Report from the Allocations Working Group*, by E.H. Pechan, November 2002.
9. Proposed EPA rule to revise Section 309 Mobile Source Provisions - *Revisions to the Regional Haze Rule To Correct Mobile Source Provisions in Optional Program for Nine*

Western States and Eligible Indian Tribes Within That Geographic Area, 68 Federal Register 39888, July 3, 2003.

10. *Assessing Status of Incorporating Smoke Effects into Fire Planning and Operations*, WRAP Fire Emissions Joint Forum, August 29, 2002.
11. *WRAP Policy on Fire Tracking Systems*, WRAP Fire Emissions Joint Forum, April 2, 2003.
12. *Non-Burning Alternatives for Vegetation and Fuel Management on Wildlands*, WRAP Fire Emissions Joint Forum, November 2003.
13. *Non-Burning Management Alternatives on Agricultural Lands in the Western United States*, WRAP Fire Emissions Joint Forum, May 15, 2002.
14. *WRAP Policy on Enhanced Smoke Management Programs for Visibility*, WRAP Fire Emissions Joint Forum, November 12, 2002.
15. *WRAP Policy on Annual Emission Goals for Fire*, WRAP Fire Emissions Joint Forum, April 2, 2003.
16. *Methodology for Estimating Fugitive Windblown and Mechanically Resuspended Road Dust Emissions Applicable for Regional Scale Air Quality Modeling*, Countess Environmental, for WRAP Research and Development Forum, April 2001.
17. *WRAP Policy on Renewable Energy and Energy Efficiency As Pollution Prevention Strategies For Regional Haze*, WRAP Air Pollution Prevention Forum, April 2003.
18. *Economic Assessment of Implementing the 10/20 Goals and Energy Efficiency Recommendations*, WRAP Air Pollution Prevention Forum, October 2002.

Other Reference

1. Grand Canyon Visibility Transport Commission Final Report - *Recommendations for Improving Western Vistas*, June 1996.
2. EPA's Regional Haze Rule and Preamble - *Regional Haze Regulations* (64 Federal Register 35714), July 1, 1999.
3. Revision to Section 309 Incorporating the Annex - *Revisions to Regional Haze Rule To Incorporate Sulfur Dioxide Milestones and Backstop Emissions Trading Program for Nine Western States and Eligible Indian Tribes Within That Geographic Area* (68 Federal Register 33764), June 5, 2003.

5.5.0 ACKNOWLEDGEMENTS AND SUMMARY

5.5.0.1 Acknowledgements

Major assistance in preparing this implementation plan was provided by the Western Regional Air Partnership (WRAP) and its forums and committees, who provided Oregon and other western states with much of the policy and technical support information needed to meet the requirements of Section 309 of the Regional Haze Rule. Special thanks to the following staff:

- Pat Cummins, WRAP Co-Director
- Tom Moore, TOC Staff Support/Technical Coordinator
- Lee Alter, IOC Staff Support
- Don Arkell, State Caucus Coordinator/Visibility Program Coordinator with WESTAR

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5.5.0.2 Executive Summary

This document comprises the State of Oregon's State Implementation Plan submittal to EPA under Section 309 of the Regional Haze Rule (40 CFR 51.309). Adoption of the Oregon Section 309 Regional Haze Plan amends the State of Oregon Clean Air Act Implementation Plan, OAR 340-200-0040. See Appendix D8-9 for the complete citation of this rule.

Section 5.5.1 provides introductory and background information. Section 5.5.2 includes the strategies and elements as required under Section 309. Appendices at the end of this document provide additional information related to the strategies, including citations of two new Oregon administrative rules related to the stationary source strategy (see Appendix D8-3).

The following table summarizes each strategy and element contained in the Oregon plan.

Table 5.5.0-1: Summary of Oregon Regional Haze Implementation Plan

SIP Strategy/Element	Description
Projection of Visibility Improvement	Projected visibility improvement for each of the 16 Class I areas on the Colorado Plateau based on regional application of 309 regional haze control strategies.
Clean Air Corridors	The "CAC" is an area that provides clean air to the 16 Class I

	areas of the Colorado Plateau. The CAC includes the most of Oregon east of the Cascade Mountain Range. No significant emission growth is expected within the CAC. Commitment to conduct comprehensive emissions tracking to verify this, in order to protect visibility on the “clean days” in the 16 Class I areas.
Stationary Sources	Identifies 25% decrease in regional sulfur dioxide emissions from 1990-2000; additional reductions or “SO ₂ Milestones” for the 2003-2018 period; backstop market cap and trade program for major SO ₂ sources if milestones are not met; assessment of need for similar strategy for NO _x and PM milestones.
Mobile Sources	National programs for vehicle emissions and fuel standards indicate continuous decrease in mobile source emissions in Oregon and in the West for the 2003-2018 period, and support visibility improvement.
Fire Programs	Focus on tracking emissions from agricultural and forest burning, plan for overcoming barriers to the use of non-burning alternatives, documentation that Oregon smoke management programs meet the WRAP <i>Enhanced Smoke Management Programs for Visibility Policy</i> , and establishment of annual emission goals for fire.
Paved & Unpaved Road Dust	Road dust emissions were evaluated and not found to be a significant regional contributor to visibility impairment within the Colorado Plateau 16 Class I areas. Commitment to track road dust emissions to verify this.
Pollution Prevention	Comprehensive review of pollution prevention programs currently in place in Oregon related to renewable energy and energy efficiency. Projections of emission reductions and visibility improvements. Estimate of Oregon contribution to achieving the renewable energy goal recommended by the Grand Canyon Visibility Transport Commission (GCVTC).
Additional GCVTC Recommendations	Review of additional GCVTC recommendations made. None found to be practicable for implementing in Oregon at this time.
Periodic SIP Revisions	Oregon will submit revisions to this SIP every five years as required by the Regional Haze Rule.
State Planning & Interstate Coordination	Oregon has participated in the Western Regional Air Partnership and will continue to participate in the WRAP.
Geographic Enhancement	Oregon will pursue a Memorandum of Agreement with the USDA Forest Service to address reasonably attributable visibility impairment from stationary sources.
Additional Class I Areas	Declaration that Oregon will follow Section 309 to address additional Class I areas, including the 12 in Oregon, in the next regional haze SIP due in 2008.

Supporting this implementation plan revision and associated appendices is the *Regional Technical Support Document (TSD)* developed by the WRAP that contains the findings from the technical analyses and reports conducted by the various WRAP forums and committees related to Section 309. This is referred as the “WRAP TSD report” throughout this plan. In addition there are numerous other 309 reference materials cited in this plan. The TSD report and other reference materials are listed at the front of this implementation plan as “Oregon Section 309 Reference Materials - Applicable Western Regional Air Partnership (WRAP) Reports and Documents.” These reference materials are available on CD-ROM or at the WRAP website at <http://www.wrapair.org/309/index.htm>.

5.5.1 INTRODUCTION

5.5.1.1 Visibility and the Regional Haze Rule

Good visibility is essential to the enjoyment of national parks and scenic areas. Across the country, regional haze has decreased the visual range from 140 miles to 35-90 miles in the West, and from 90 miles to 15-25 miles in the East. Regional haze is air pollution that is transported long distances, causing reduced visibility in national parks and wilderness areas. This haze is composed of small particles that absorb and scatter light, affecting the clarity and color of what we see. The pollutants that create this haze are sulfates, nitrates, organic carbon, elemental carbon, and soil dust. Human-caused haze sources include industry, motor vehicles, agricultural and forestry burning, and windblown dust from roads and farming practices.

There are 156 national parks and wilderness areas that have been designated by Congress as "mandatory federal Class I areas" (referred to herein as Class I areas). The Clean Air Act contains a national goal of reducing man-made visibility impairment in all Class I areas. To meet this goal, the Environmental Protection Agency (EPA) adopted the Regional Haze Rules in July 1999. These rules complement and are in addition to "Phase I" visibility rules adopted by EPA in 1980. The Department developed the Oregon Visibility Protection Plan in 1986, in response to EPA's Phase I rules. This is described further in Section 5.5.1.4.

5.5.1.2 Oregon Class I areas

Oregon has 12 Class I areas, including Crater Lake National Park and 11 wilderness areas. These areas are listed below. These lands were designated as mandatory federal Class I Areas in 1977. At that time, Congress designated all wilderness areas over 5,000 acres and all national parks over 6,000 acres as mandatory federal Class I areas, subject to the visibility protection requirements in the Clean Air Act.

Oregon Class I Areas

<u>Class I Area</u>	<u>Acreage</u>
1. Crater Lake	183,315
2. Diamond Peak Wilderness	52,337
3. Eagle Cap Wilderness	360,275
4. Gearhart Mtn. Wilderness	22,809
5. Hells Canyon Wilderness	131,033
6. Mountain Lakes Wilderness	23,071
7. Mt. Hood Wilderness	47,160
8. Mt. Jefferson Wilderness.	107,008
9. Mt. Washington Wilderness	52,516
10. Strawberry Mtn. Wilderness	69,350
11. Three Sisters Wilderness	285,202
12. Kalmiopsis Wilderness	179,700

5.5.1.3 What is Section 309?

The goal of the Regional Haze Rule is to eliminate human-caused visibility impairment in Class I areas across the country. It contains strategies to improve visibility over the next 60 years, and requires states to adopt implementation plans.

The Regional Haze Rule provides two paths for developing and adopting regional haze implementation plans. One is "Section 308" (40 CFR 51.308), and requires most states to develop long-term strategies out to the year 2064. These strategies must be shown to make "reasonable progress" in improving visibility in Class I areas inside the state and in neighboring jurisdictions. The other is "Section 309" (40 CFR 51.309), and is an option for nine western states - Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, and Wyoming. These states can choose to follow Section 309 and adopt regional haze strategies for the period of 2003 to 2018. The regional haze strategies are based on recommendations from the Grand Canyon Visibility Transport Commission (GCVTC) for protecting the 16 Class I areas in the Colorado Plateau area (see map in Figure 5.5.1-1). Adopting these strategies constitutes reasonable progress until 2018. After 2018, Section 308 applies to all states.

The State of Oregon is following Section 309, along with four other states (Arizona, New Mexico, Utah and Wyoming). Under Section 309, the first regional haze plan (this document) needs to address only the 16 Class I areas of the Colorado Plateau. A second plan submittal, required in 2008, needs to address the "other" Class I areas. Oregon's 12 Class I areas will be addressed in the second regional haze plan. In developing the second plan, the Department will be evaluating the effectiveness of the 309 regional haze strategies contained in this plan, and other strategies developed by states pursuing Section 308, in making an assessment of applicable strategies for Oregon's Class I areas.

Additional information on the Regional Haze Rule can be found on the Department's website, at <http://www.deq.state.or.us/aq/regionalhaze/index.htm>.

5.5.1.4 Background on the Regional Haze Rule

1. The 1977 Clean Air Act Amendments

In 1977, Congress amended the Clean Air Act to include provisions to protect the scenic vistas of the nation's national parks and wilderness areas. In these amendments, Congress declared as a national visibility goal:

The prevention of any future, and the remedying of any existing impairment of visibility in mandatory class I Federal areas which impairment results from man-made air pollution. Section 169A.

To address this goal, the EPA developed regulations to reduce the impact of large industrial sources on nearby Class I areas. It was recognized at the time that regional haze, which comes from a wide variety of sources that may be located far from a Class I area, was also a part of the

visibility problem. However, monitoring networks and visibility models were not yet developed to the degree necessary to understand the causes of regional haze.

2. Phase I Visibility Rules – the Oregon Visibility Protection Plan

In 1980, EPA adopted regulations to address “reasonably attributable visibility impairment”, or visibility impairment caused by one or a small group of man-made sources generally located in close proximity to a specific Class I area. These became known as EPA’s “Phase I” visibility rules. At that time, EPA deferred writing rules to address regional haze, because they lacked the monitoring, modeling and scientific information needed to understand the nature of long-range transport and formation of regional haze. EPA adopted “Phase II” rules on regional haze in July 1999 (see further background information below).

In response to EPA’s Phase I visibility rules, the Department adopted the Oregon Visibility Protection Plan in October 1986. This visibility plan contains short and long-term strategies for making reasonable progress toward the national goal, related to addressing reasonably attributable impairment in the state’s Class I areas through visibility monitoring and control strategies. This includes evaluate visibility impacts of new or modified major stationary sources, and if necessary, applying Best Available Retrofit Technology (BART) to existing stationary sources if certified by the Federal Land Manager as causing reasonably attributable visibility impairment. This plan includes (a) the mitigation of visibility impairment within the Mt. Hood and Central Oregon Cascade wilderness areas through short and long-term control strategies for forest prescribed burning and Willamette Valley agricultural field burning, and (b) mitigation of impairment in the Eagle Cap Wilderness and Central Oregon Cascades resulting from agricultural field burning. Visibility protection for all of Oregon’s Class I areas is administered under the provisions of numerous regulations including the Prevention of Significant Deterioration, New Source Review rules and the USDA Forest Service forest planning process.

3. The 1990 Clean Air Act Amendments

Although the 1980 regulation addressed reasonably attributable visibility impairment from specific sources, it did not adequately address visibility impairment from large collections of sources whose emissions are mixed and transported over long distances. In the 1990 amendments to the Clean Air Act, Congress established the requirements to address regional haze. They gave EPA the authority to establish visibility transport commissions and promulgate regulations to address regional haze. The 1990 amendments also established a visibility transport commission to investigate and report on regional haze visibility impairment in the Grand Canyon National Park and nearby Class I areas.

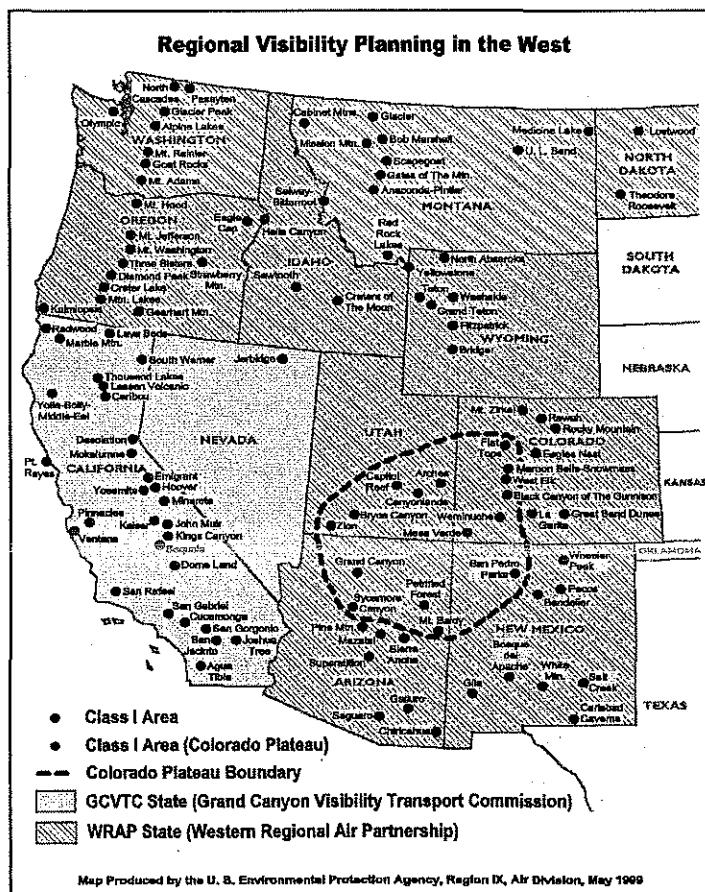
4. Grand Canyon Visibility Transport Commission

The 1990 Clean Air Act Amendments created the Grand Canyon Visibility Transport Commission (GCVTC). The GCVTC was given the charge to assess the currently available scientific information pertaining to adverse impacts on visibility from potential growth in the region, identify clean air corridors, and recommend long-range strategies for addressing

regional haze for Class I areas on the Colorado Plateau. The GCVTC completed significant technical analyses and developed recommendations to improve visibility in the 16 mandatory federal Class I areas on the Colorado Plateau. Figure 5.5.1-1 shows the nine Western states that were included in the GCVTC analyses, the Class I areas located in those states, and the 16 Class I areas on the Colorado Plateau (see the boundary in red) that were the focus of the GCVTC recommendations.

These 16 Class I areas were as follows: Arches National Park, Black Canyon of the Gunnison Wilderness, Bryce Canyon National Park, Canyonlands National Park, Capitol Reef National Park, Flat Tops Wilderness, Grand Canyon National Park, Maroon Bells Wilderness, Mesa Verde National Park, Mt. Baldy Wilderness, Petrified Forest National Park, San Pedro Parks Wilderness, Sycamore Canyon Wilderness, Weminuche Wilderness, West Elk Wilderness, Zion National Park.

Figure 5.5.1-1: Map of Western States in GCVTC Study, and the 16 Class I Areas of Colorado Plateau



The Commission found that visibility impairment on the Colorado Plateau was caused by a wide variety of sources and pollutants. A comprehensive strategy was needed to address all of

the causes of regional haze. The GCVTC submitted these recommendations to EPA in a report dated June 1996 for consideration in rule development. These recommendations were:

Air Pollution Prevention. Air pollution prevention and reduction of per capita pollution was a high priority for the Commission. The Commission recommended policies based on energy conservation, increased energy efficiency and promotion of the use of renewable resources for energy production.

Clean Air Corridors. Clean air corridors are geographic areas that provide a source of clean air to the 16 Class I areas of the Colorado Plateau. For these areas, the Commission primarily recommended careful tracking of emissions growth that may affect air quality in these corridors, and ultimately the 16 Class I areas.

Stationary Sources. For stationary sources, the Commission recommended closely monitoring the impacts of current requirements under the Clean Air Act and ongoing studies. It also recommended regional targets for SO₂ emissions from stationary sources, starting in 2000. If these targets are exceeded, a regional cap and market-based emission trading program should be implemented.

Areas In And Near Parks. The Commission's research and modeling showed that a host of sources adjacent to parks and wilderness areas, including large urban areas, have significant visibility impacts. However, the Commission lacked sufficient data regarding the visibility impacts of emissions from some areas in and near parks and wilderness areas. In general, the models used by the Commission were not readily applicable to such areas. Pending further studies of these areas, the Commission recommended that local, state, tribal, federal, and private parties cooperatively develop strategies, expand data collection, and improve modeling for reducing or preventing visibility impairment in areas within and adjacent to parks and wilderness areas.

Mobile Sources. The Commission recognized that mobile source emissions are projected to decrease through about 2005 due to improved control technologies. The Commission recommended capping emissions at the lowest level achieved and establishing a regional emissions budget, and also endorsed national strategies aimed at further reducing tailpipe emissions, including the so-called 49-state low emission vehicle, or 49-state LEV.

Road Dust. The Commission's technical assessment indicated that road dust is a large contributor to visibility impairment on the Colorado Plateau. As such, it requires urgent attention. However, due to considerable skepticism regarding the modeled contribution of road dust to visibility impairment, the Commission recommended further study in order to resolve the uncertainties regarding both near-field and distant effects of road dust, prior to taking remedial action. Since this emissions source is potentially such a significant contributor, the Commission felt that it deserved high priority attention and, if warranted, additional emissions management actions.

Emissions from Mexico. Mexican sources are also shown to be significant contributors, particularly of SO₂ emissions. However, data gaps and jurisdictional issues made this a

difficult issue for the Commission to address directly. The Commission recommendations called for continued bi-national collaboration to work on this problem, as well as additional efforts to complete emissions inventories and increase monitoring capacities. These matters should receive high priority for regional and national action.

Fire. The Commission recognized that fire plays a significant role in visibility on the Plateau. In fact, land managers propose aggressive prescribed fire programs aimed at correcting the buildup of biomass due to decades of fire suppression. Therefore, prescribed fire and wildfire levels are projected to increase significantly during the studied period. The Commission recommended the implementation of programs to minimize emissions and visibility impacts from prescribed fire, as well as to educate the public.

Future Regional Coordinating Entity. Finally, the Commission believed there was a need for an entity like the Commission to oversee, promote, and support many of the recommendations in their report. To support that entity, the Commission developed a set of recommendations addressing the future administrative, technical and funding needs of the Commission or a new regional entity. The Commission strongly urged the EPA and Congress to provide funding for these vital functions and give them a priority reflective of the national importance of the Class I areas on the Colorado Plateau.

4. The WRAP

The GCVTC recognized the need for a long-term organization to address the policy and technical studies needed to address regional haze. The Western Regional Air Partnership (WRAP) was formed in September 1997 as the successor organization to the GCVTC. Figure 5.5.1-1 shows the original nine GCVTC state and additional Western states that are part of the WRAP. The WRAP's charter allows it to address any air quality issue of interest to WRAP members, though most current work is focused on developing the policy and technical work products needed by states and tribes in developing their regional haze SIPs. The WRAP Board is currently composed of representatives from 13 states, 13 tribes, the US Department of Agriculture, the US Department of the Interior, and EPA. The WRAP operates on a consensus basis and receives financial support from EPA. The WRAP established stakeholder-based technical and policy oversight committees to assist in managing the development of regional haze work products. Stakeholder-based working groups and forums were established to focus attention on the policy and technical work products the states and tribes need to develop their implementation plans.

The WRAP developed and submitted an Annex to the GCVTC recommendations to define a voluntary program of sulfur dioxide emission reduction milestones coupled with a backstop market-trading program. On June 5, 2003, EPA approved the Annex and incorporated it into the regional haze rule (68 Federal Register 33764). The WRAP is completing a suite of work products to support states and tribes developing GCVTC based regional haze implementation plans. Additional information about the WRAP can be found on the WRAP web site at <http://www.wrapair.org>.

5.5.1.5 Purpose of this Document

This Regional Haze Implementation Plan has been prepared to meet the requirements of the Federal Regional Haze Rule, Section 40 CFR, Part 51, Section 309 entitled *Requirements related to the Grand Canyon Visibility Transport Commission (GCVTC)*.

The Oregon Section 309 Regional Haze Plan is based on the Model 309 SIP that was developed as part of the STIP-2 Project for the Air Manager's Committee of the Western Regional Air Partnership to provide a model for States (and Tribes) to follow for developing a Section 309 SIP for the Regional Haze Rule. The Model SIP contained general language and other elements necessary to obtain U.S. Environmental Protection Agency (EPA) approval of regional haze implementation plans. The Model SIP listed each of the 309 regulatory requirements, provided a general description of each requirement, and summarized the pertinent Western Regional Air Partnership (WRAP) policies and technical support documentation needed for the 309 SIP.

The Oregon Section 309 Regional Haze Plan provides introductory and background information and 12 chapters containing the strategies and elements related to each requirement in Section 309 of the federal rule. Nine appendices at the end of this document provide additional information related to the strategies and elements in these chapters. Included in the appendices are two new Oregon administrative rules related to the stationary source strategy described in Section 5.5.2.2 (see Appendix D8-3).

Relation to the WRAP's Regional Technical Support Document

The regional Technical Support Document (TSD) summarizes key information from WRAP technical forums and committees related to Section 309 of the Regional Haze Rule. States and Tribes will use this technical information when preparing SIPs and TIPS. Underlying the key information presented in the chapters of the WRAP TSD are the contractor reports prepared for the WRAP and technical memoranda. The analytical work described in the WRAP TSD evaluates the visibility improvement associated with regional strategies and programs, but it does not describe specific state or tribal control strategies and regulatory programs. The Model SIP and TIP and the TSD are to be used jointly by states and tribes in preparing regional haze implementation plans. Therefore, the Model SIP contains important references to the technical information in the TSD needed to address each Regional Haze Rule requirement. The WRAP TSD is available at www.wrapair.org, or on CD-ROM.

5.5.1.6 Mandatory Federal Class I Areas Addressed in this SIP

The Regional Haze Rule under 40 CFR 51.309 requires states to address visibility protection for regional haze in the 16 Class I areas studied by the GCVTC in the initial regional haze SIP submitted by December 31, 2003. None of these 16 Class I areas are in Oregon. These Class I areas are identified on the map in Figure 5.5.1-1. Oregon's Class I areas will be addressed in the SIP revision in 2008. Oregon's Class I areas are listed under Section 5.5.1.2, and are also depicted on the map in Figure 5.5.1-1.

5.5.1.7 Definitions

This Implementation Plan contains terms and phrases that have formal definitions under 40 CFR 51.301, 40 CFR 51.309(b), and other terms specific to the programs set forth in this Plan. These definitions are contained in Appendix D8-1 of this implementation plan and prevail over other interpretations as to the meaning and intent of this implementation plan.

5.5.2 REGIONAL HAZE RULE STRATEGIES AND ELEMENTS

The following strategies and elements meet the requirements in Section 309 of the Regional Haze Rule pursuant to 40 CFR 51.309. The strategies are listed first in the order they appear in the Rule, except for the Geographic Enhancement Strategy, which has been moved under the Stationary Source Strategy. The table below lists the strategies and elements contained in this implementation plan and a citation of the applicable section in the Regional Haze Rule:

Table 5.5.2-2: List of SIP Strategies and Elements

Oregon SIP Rule Section	Regional Haze Strategy or Element	Applicable Section 309 Rule Requirement
5.5.2.1	1. Clean Air Corridor Strategy	40 CFR 51.309(d)(3)
5.5.2.2	Stationary Source Strategy:	40 CFR 51.309(d)(4)
5.5.5.3	2. Part 1 - General	40 CFR 51.309(f)(4)
	3. Part 2 – Milestones & Backstop Trading Program	40 CFR 51.309(h)
5.5.2.4	4. Mobile Source Strategy	40 CFR 51.309(d)(5)
5.5.2.5	5. Fire Program Strategy	40 CFR 51.309(d)(6)
5.5.2.6	6. Assessment of Emissions from Paved and Unpaved Road Dust	40 CFR 51.309(d)(7)
5.5.2.7	7. Pollution Prevention Strategy	40 CFR 51.309(d)(8)
5.5.2.8	8. Additional GCVTC Recommendations	40 CFR 51.309(d)(9)
5.5.2.9	9. Projection of Visibility Improvement	40 CFR 51.309(d)(2)
5.5.2.10	10. Periodic Plan Revisions	40 CFR 51.309(d)(10)
5.5.2.11	11. State Planning/Interstate Coordination and Tribal Implementation	40 CFR 51.309(d)(11)
5.5.2.12	12. Declaration for “other” Class I areas	40 CFR 51.309(g)(1)

5.5.2.1 Clean Air Corridor Strategy

5.5.2.1.1 Regulatory History and Requirements

One of the required tasks of the GCVTC was to review whether clean-air corridors exist for the 16 GCVTC Class I areas. A clean-air corridor is a geographic region that contributes clean air to the Class I areas on the days with best visibility. If clean-air corridors were found to exist, the GCVTC was required to recommend whether additional control strategies were needed to manage emissions growth to protect visibility on the least impaired days in the Class I areas. For the purpose of assessment, the GCVTC considered the average of the days representing the 20% best visibility conditions to be the least impaired days. EPA also used this definition in defining the term in the Regional Haze Rule (40 CFR 51.308 and 51.309).

In 1995 the GCVTC Meteorology Subcommittee completed an analysis of the geographical source areas contributing to least impaired days in the 16 GCVTC Class I areas. The analysis, which is contained in a report entitled *Clean-Air Corridors: A Framework for Identifying Regions that Influence Clean Air on the Colorado Plateau*,¹ showed that the area north and west of the Grand Canyon National Park does provide clean air to the Grand Canyon area. This is due primarily to a combination of favorable meteorological conditions (rain washout and higher ventilating winds) and low emissions of pollutants from the sparsely populated area. The GCVTC Public Advisory Committee (PAC) reviewed the clean-air corridor analysis and emission projections and determined emissions growth was less than the amount that would degrade visibility on the least impaired days in the 16 Class I areas. Based on this finding, the PAC recommended monitoring emissions growth but concluded that no additional control strategies were needed unless there was significant growth in the future. The GCVTC adopted this recommendation and included it in its final report to EPA, which was integrated into the Regional Haze Rule.

The Regional Haze Rule requires states submitting implementation plans under 40 CFR 51.309 to identify and track emissions within any clean air corridor. If significant emissions growth occurs, states must first determine if these emissions degrade visibility on the least impaired days in the 16 Class I areas and then take corrective action if they do. To help states meet these requirements, the WRAP formed a task team to review the GCVTC work. The result of this review was a report entitled *WRAP Policy on Clean Air Corridors*.² This report found that there is only one clean air corridor. It concluded that patterns of growth in and adjacent to the corridor were not expected to cause significant emissions increases and, consequently, would not adversely impact visibility in the 16 Class I areas of the Colorado Plateau. The report found that only 4% emissions growth was likely to occur. The GCVTC work indicated it would take at least a 25% increase in emissions to result in perceptible visibility impact (0.7 deciview). Because no impairment of air quality in the corridor was identified, the report concluded that no further visibility analysis or additional emission reduction measures are

¹ See #2, Oregon Section 309 Reference Materials - Applicable WRAP Reports and Documents. See also WRAP website at <http://www.wrapair.org/309/index.htm>

² *WRAP Policy on Clean Air Corridors*, adopted by Western Regional Air Partnership, October 9, 2002. See Appendix D8-2 of this implementation plan.

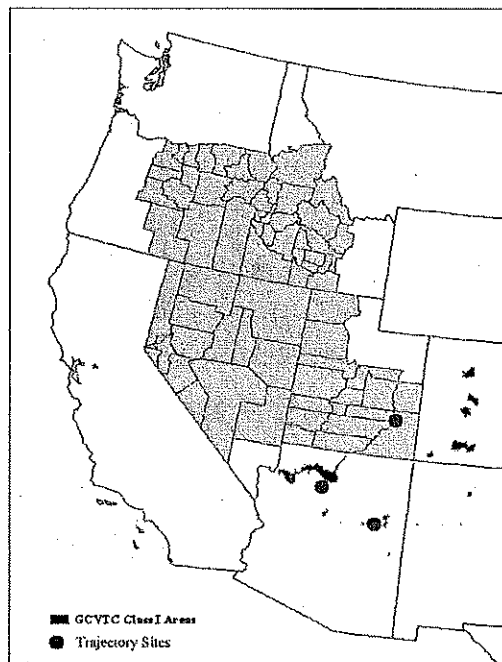
needed now, but should be re-evaluated in 2008. Additional technical analysis in support of this report can be found in the Clean Air Corridor section (Chapter 3) of the WRAP TSD.

The *WRAP Policy on Clean Air Corridors* is provided in Appendix D8-2 of this implementation plan. This appendix also describes the comprehensive emissions tracking system that will be used for the Clean Air Corridor, as discussed Section 5.5.2.1.3 below.

5.5.2.1.2 Identification of Clean Air Corridor and other Clean Air Corridors

Pursuant to 40 CFR 51.309(d)(3)(i), the State of Oregon concurs with the identification of the clean-air corridor as defined in the *WRAP Policy on Clean Air Corridors*, and adopts this as the boundary of the clean-air corridor for Oregon. This boundary is shown on the map in Figure 5.5.2-1 below. This clean-air corridor was first identified in studies conducted by the Meteorological Subcommittee of the GCVTC and later by the WRAP. A large portion of Oregon resides within the boundary of the clean-air corridor, as shown below.

Figure 5.5.2-1: Map of the Clean Air Corridor in the Transport Region



The counties that are contained within the Clean Air Corridor in Oregon are as follows: Wasco, Sherman, Gilliam, Morrow, Umatilla, Union, Wallowa, Jefferson, Wheeler, Grant, Baker, Deschutes, Crook, Lake, Harney, and Malheur. Pursuant to 40 CFR 51.309(d)(3)(v) and based on the *WRAP Policy on Clean Air Corridors* and technical analysis, the State of Oregon has determined that no other clean-air corridors can be identified at this time. The State of Oregon commits to participating in a regional effort to review this determination as part of periodic plan revisions required under 40 CFR 51.309(d)(10).

5.5.2.1.3 Clean Air Corridor Strategy Elements

a. Comprehensive emissions tracking program

Pursuant to 40 CFR 51.309(d)(3), the State of Oregon commits to monitoring changes in emissions inside and adjacent to the clean-air corridor with an emissions tracking system developed and employed by the WRAP to ensure that visibility does not degrade on the least impaired days in any of the 16 GCVTC Class I areas. The State of Oregon commits to providing statewide annual emission inventory data for use in the WRAP emissions tracking program. This emissions tracking will include SO₂, NO_x, PM₁₀, PM_{2.5}, and VOC. Appendix D8-2 of this implementation plan describes the WRAP's Emissions Data Management System (EDMS) that will be used for comprehensive emissions tracking and summarizing annual emission trends in order to identify any significant emissions growth that could lead to visibility degradation in the 16 Class I areas. The State of Oregon will work cooperatively with states not submitting a plan revision under 40 CFR 51.309 that have emissions within or adjacent to the clean-air corridor that could affect air quality in the clean-air corridor to assure the emissions are incorporated into the tracking program through inter-state consultation.

b. Patterns of growth within the Clean Air Corridor

Pursuant to 40 CFR 51.309(d)(3)(ii) and based on the *WRAP Policy on Clean Air Corridors* and WRAP technical analysis, the State of Oregon has determined that current projections of emissions changes inside the identified clean-air corridor will not contribute to degradation of visibility on the least impaired days in the 16 Class I areas during the planning period from 2004 through 2018. Future emissions growth will be tracked in accordance with the comprehensive emissions tracking system noted in (a) above. The WRAP will summarize annual emission trends within the clean-air corridor and assess whether any significant emission growth has occurred within the corridor as an analysis tool for states.

c. Patterns of growth outside the Clean Air Corridor

Pursuant to 51 CFR 309(d)(3)(iii) and based on the *WRAP Policy on Clean Air Corridors* and technical analysis, the State of Oregon has determined that current projections of emission changes in areas adjacent to the identified clean-air corridor will not contribute to degradation of visibility on the least impaired days in the 16 Class I areas during the planning period from 2004 through 2018. The State of Oregon will ensure that WRAP will track emissions in areas adjacent to the clean-air corridor and report on any significant changes in emission projections to the State of Oregon that may require a reassessment of this determination in future SIP revisions, as required in 40 CFR 51.309(d)(10).

d. Actions if impairment inside or outside the Clean Air Corridor occurs

The State of Oregon, in coordination with other transport region states and tribes, will review the WRAP's annual summary of emission trends inside and outside the clean-air corridor and determine if significant emissions growth has occurred that could contribute to degradation of visibility on the least impaired days in accordance with (b) and (c) above. If significant

emissions growth is identified, the State of Oregon, in coordination with other transport region states and tribes, will conduct, or ensure WRAP assistance in conducting, an analysis of the emissions growth on visual air quality impacts on the least impaired days in any of the 16 Class I areas of the Colorado Plateau. Pursuant to 40 CFR 51.309(d)(3)(iv), if this analysis demonstrates significant growth of emissions inside or outside the clean-air corridor has or will cause visibility impairment on the least impaired days in the 16 Class I areas, the State of Oregon, in coordination with other transport region states and tribes through the WRAP regional planning process, will evaluate the need for additional emission reduction measures consistent with the criteria for reasonable progress. The State of Oregon, in coordination with other transport region states and tribes through the WRAP regional planning process, will identify an implementation schedule for measures needed to make reasonable progress toward the national goal in accordance with the periodic progress reports required under 40 CFR 51.309(d)(10)(i). If the WRAP regional planning process is unable to perform such an analysis for Class I areas in Oregon or come to a consensus on the interpretation of such an analysis, the State of Oregon will perform such studies and engage in independent interstate consultation provided for under 40 CFR 51.309(d)(11).

5.5.2.2 Stationary Source Strategy

5.5.2.2.1 Regulatory History and Requirements

The GCVTC studied the long-term projected changes of emissions from stationary sources. It was found that emissions of sulfur dioxide (SO₂) from stationary sources would decline by at least 13% between 1990 and 2000. Also, emissions of SO₂ would continue to decline through 2040 when only 30% to 50% of the 1990 emission levels would remain. This decline was due to the normal turnover of source technology as older sources retire and are replaced by newer and cleaner technologies.

The GCVTC decided that the most appropriate way to address emissions of SO₂ from stationary sources is to establish regional emission milestones and allow voluntary measures to achieve the emission reductions. If the emission reduction milestones are not achieved, then a backstop market trading program will be implemented to guarantee the emission reductions are achieved. The GCVTC did not have sufficient time to develop the details of the emission milestones or backstop program, but committed to develop it and submit it to EPA.

In the Regional Haze Rule, EPA required the Western states to complete the development of the stationary source program for sulfur dioxide and to submit it as an Annex to the GCVTC recommendations. The WRAP submitted the Annex (*Voluntary Emissions Reduction Program for Major Industrial Sources of Sulfur Dioxide in Nine Western States and a Backstop market Trading Program, An Annex to the Report of the Grand Canyon Visibility Transport Commission*) in September 2000. On June 5, 2003, EPA issued the final rules related to the sulfur dioxide program for stationary sources (68 FR 33764). These rules incorporated the materials in the Annex.

5.5.2.2.2 Achievement of Greater than a 13% Reduction in Sulfur Dioxide by 2000

One item that must be included in the first implementation plan is monitoring and reporting of stationary source SO₂ emissions. This monitoring and reporting data must be sufficient to determine whether a 13% reduction in actual stationary source SO₂ emissions has occurred between the years 1990 and 2000, and whether milestones required by Section 51.309(d)(4)(ii) have been achieved for the transport region. As shown in Table 5.5.2-3, regional SO₂ emissions were reduced from an estimated 828,775 tons in 1990 to 621,838 tons in 2000 (a 25% reduction). This emission reduction is documented in the WRAP report entitled *Year 2000 Point Source SO₂ Emissions Analysis - 9 State Western Region*, by E.H. Pechan and Associates, May 2002. For the five Western States (Arizona, New Mexico, Oregon, Utah, and Wyoming) that are submitting a Section 309 SIP, the SO₂ emissions reduction between 1990 and 2000 is 33 percent.

Table 5.5.2-3: State by State Comparison of 1990 to 2000 Stationary Source SO₂ Emissions in the 9 GCVTC Transport Region States (tons per year)

States	1990	2000
Arizona	185,398	99,133
California	52,832	38,501
Colorado	95,534	99,161
Idaho	24,652	27,763
Nevada	52,775	53,943
New Mexico	177,994	117,344
Oregon	17,705	23,362
Utah	85,567	38,521
Wyoming	136,318	124,110
Totals	828,775	621,838

5.5.2.2.3 Stationary Sources Strategy Elements

The strategy for stationary sources implements the GCVTC recommendation to develop regional SO₂ milestones and a backstop trading program to ensure that the milestone goals are achieved. The GCVTC recommendations were further refined in the Annex to the Commission report that was submitted to EPA in September 2000. This strategy for stationary sources is implemented through the following elements:

- Section 5.5.2.3 of this implementation plan, the Sulfur Dioxide Milestones and Backstop Trading Program, describes the overall program and commits Oregon to implementing all parts of the program as outlined in the plan. The plan establishes the regional SO₂ milestones and the emissions tracking requirements. If the Western Backstop SO₂ Trading Program (“WEB Trading Program”) is triggered, the plan also describes how Oregon will determine allocations and manage the allowance tracking system that is needed to implement the program.
- The *Western Backstop Sulfur Dioxide Trading Program*, adopted by the State of Oregon as administrative rules (OAR 340-228-0400 to OAR 340-228-0530), contains the requirements applicable to major industrial sources of sulfur dioxide under the backstop regulatory program if the SO₂ milestones are exceeded. The rule may never be implemented if the goal of meeting the regional SO₂ milestones through voluntary means is achieved. If the backstop rule is triggered, it establishes the procedures and compliance requirements for sources in the Trading Program. A copy of this rule is provided in Appendix D8-3 of this implementation plan.
- OAR 340-214-0400 through 340-214-0430 require major industrial sources of SO₂ to submit an annual emissions inventory to measure compliance with the regional SO₂ milestones. If the backstop program is triggered, then these requirements will

eventually be replaced by more rigorous monitoring requirements in OAR 340-228-0400 through 340-228-0530, as described above.

a. Year 2018 Milestone

The year 2018 milestone of 510,000 tons, including a 30,000 ton set-aside for two copper smelters not currently operating (or 480,000 tons if the suspended smelters do not resume operation), represents a regional SO₂ emissions reduction of approximately 320,000 tons from the 1990 baseline emissions of 830,000 tons. This reduction is well on the way to the Commission's goal of a 50-70% reduction by 2040. The regional haze rule requires that total reductions by 2018 be "better than BART," that is, greater than could be achieved by retrofitting 250 tons per year sources that were built between 1962 and 1977 and currently are operating without modern emissions controls. The Annex demonstrated that the 2018 regional SO₂ milestones provide for greater reasonable progress than would be achieved by application of best available retrofit technology (BART), as required by 40 CFR 51.309(f)(1)(i). The WRAP estimated that BART reductions would total approximately 170,000 tons by 2018.

In modeling work conducted by the WRAP to verify the Annex analysis, it was determined that, in addition to the 16 Class I areas of the Colorado Plateau, the regional SO₂ milestones showed greater reasonable progress than would be achieved under BART for Oregon's Class I areas. This demonstration can be found in Section 4.1.2 of the WRAP Technical Support Document. In accordance with 40 CFR 51.309(g)(ii), no further demonstration will be needed prior to 2018 for Oregon's stationary sources identified in the Annex, in terms of satisfying BART for SO₂ under CFR 51.308(e).

b. Interim Milestones

After considerable investigation, the WRAP Market Trading Forum determined that 1999 SO₂ emissions, including expected emissions of 38,000 tons from the two smelters not currently operating, were about 690,000 tons. Interim milestones are intended to meet the Commission's recommendation for steady and continuing reductions while giving the regulated community operating flexibility in the early years and time to mesh planning for regional haze reductions with other factors, such as electricity deregulation. The proposed interim milestones with the suspended smelters in and out respectively are 720,000/682,000 tons in 2003; 715,000/677,000 tons in 2008; and 655,000/625,000 tons in 2013.

c. Triggering the Trading Program

States and tribes will collect an annual SO₂ inventory. Compliance with the milestones is determined by an annual comparison of the rolling 3-year average of total regional emissions with the rolling 3-year average of the milestones. For 2018, total emissions will be compared with the 2018 milestone. If a milestone is exceeded, the trading program is activated and emission allocations are made one year later. Sources have five years from the year of exceedance to comply with their allocation. Sources may comply by retrofitting to bring emissions below their allocation, by buying credits to emit from other sources, or by retiring the source.

d. Certainty that the 2018 Milestone will be met on time

With such a large proportion of the reductions scheduled to occur in the last five years of the program, it is important to ensure that all the reductions occur on time. Therefore, the proposal includes a mechanism for the states and tribes to activate the trading program in 2013 if available evidence indicates the 2018 milestone will not be reached. In order to be in compliance with the 2018 milestone, the 2018 emissions must be less than the 2018 milestone.

e. Trading Program Features

Details of the backstop trading program, such as applicability, monitoring and reporting, trading procedures, compliance requirements, and penalties, are defined in OAR 340-228-0400 through 340-228-0530. Sources that reduce their emissions below their allocation will be able to "bank" those credits for sale to other sources, within certain programmatic restrictions.

f. Allocations

If the program is triggered, 20,000 tons of SO₂ allocations will be set aside for tribal interests, acknowledging that tribal lands are largely undeveloped and that tribes will not benefit from a plan based only on past emissions. Second, there will be a new source set-aside to accommodate growth within the region. Third, existing sources will receive a "floor" allocation based on some specified level of control, such as Best Available Control Technology (BACT), Best Available Retrofit Technology (BART), Lowest Achievable Emission Rate (LAER), and an allocation for certain renewable energy sources. The remainder of the allowances, which will decline over the years, will be allocated to existing sources. If the program is triggered, sources may buy and sell allowances to come into compliance. Sources that have not controlled their emissions in accordance with their allocations will be subject to financial penalties and a 2:1 offset of future emissions allocations for each ton of excess emissions.

g. State and Tribal Opt-in or Opt-out

If states or tribes with existing sources in the region choose to develop their regional haze plans under 40 CFR 51.308, proportional adjustments will be made to the milestones, and the program components will be altered accordingly.

h. Additional efforts to ensure 309 state coordination

The State of Oregon and the four other states following Section 309 (Arizona, New Mexico, Utah and Wyoming) will form a "309 Coordinating Committee" within the WRAP, to facilitate communication and information exchange, and to provide a mechanism to develop the agreements and understandings of how states and tribes will work together to implement the requirements of Section 309, especially the stationary source strategy (i.e., the regional SO₂ milestone and backup market trading program).

5.5.2.2.4 Geographic Enhancement Element

The requirements for geographic enhancement are related to 40 CFR 51.309(f), which describes requirements for the Annex. The Annex allows states to submit a SIP that adopts an alternative measure to regional haze BART. Geographic enhancement is a voluntary approach that can be included in the Annex for addressing Reasonably Attributable Visibility Impairment (RAVI) for stationary sources under the provisions of Section 51.302(c). RAVI is different from regional haze visibility impairment in that it addresses “hot spots” or situations where visibility impairment in a Class I area is reasonably attributable to a single source or small group of sources in relatively close proximity to the Class I area. The geographic enhancement approach would allow states or tribes to use the efficiencies and reduced cost provided by the market trading program in the Annex to accommodate situations where RAVI needs to be addressed.

The State of Oregon and the Federal Land Managers will pursue a process to address RAVI certification for BART in any Class I areas in Oregon, should this ever occur, as it relates to the regional SO₂ milestones and the backstop emission trading program. This process will be formalized through a Memorandum of Agreement (MOA) between the Oregon Department of Environmental Quality, National Park Service, and the U.S. Forest Service.

If the Federal Land Managers Forest Service certifies impairment, the State of Oregon will fulfill its obligation to determine attribution and, if necessary, determine BART for the applicable source or group of sources in accordance with Section 5.2.2.2 of Oregon's Visibility Protection Plan for phase I visibility protection, which was submitted to EPA in October 1986.

The WESTAR report *Recommendations for Making Attribution Determinations in the Context of Reasonably Attributable BART* will be used to provide a list of appropriate technical criteria and techniques for determining attribution.

5.5.2.2.5 Assessment of NO_x and PM Control Strategies

Pursuant to 40 CFR 51.309(d)(4)(v), the State of Oregon has evaluated the need for nitrogen oxide (NO_x) and particulate matter (PM) emission control strategies, the degree of visibility improvement expected, and whether such milestones are needed to avoid any net increase in these pollutants. This evaluation relied upon the WRAP report entitled *Stationary Source NO_x and PM Emissions in the WRAP Region: An Initial Assessment of Emissions, Controls and Air Quality Impacts*. This report was made by the WRAP Market Trading Forum for all WRAP states, including the transport region states.

The report concluded the following:

- Analysis of current and future emissions, ambient monitoring data, and very limited modeling results does not show stationary source NO_x and PM emissions to be a major contributor to regional haze in the vast majority of Class I areas in the West. Specifically for the Colorado Plateau 16 Class I areas, stationary source NO_x emissions

are estimated to contribute two to five percent to light extinction, while PM₁₀ stationary source emissions contribute less than two percent;

- These findings may change as emission projections are updated and ambient monitoring data from new sites is collected and analyzed. It is also expected modeling capabilities will improve as more data becomes available on the best and worst visibility days.
- RAVI remedies are available in cases where particular stationary sources may impact particular Class I areas;
- The need for stationary source NO_x and PM milestones is not supported at this time with current state of analyses, but the need for milestones should be reassessed based on more complete and accurate analyses prior to submittal of the 2008 Section 309 SIP revision.

Based on these findings, the State of Oregon was unable to determine the need for NO_x and PM emission reduction strategies or the need for NO_x and PM milestones at this time. have been included in this implementation plan. The State of Oregon will continue to work with the WRAP to improve emission inventories and regional modeling capabilities to support future assessments. The need for these milestones will be reevaluated by the WRAP and The State of Oregon will review the need for NO_x and PM emission reduction strategies as part of the next SIP update and revision required for 2008.

5.5.2.3 Sulfur Dioxide Milestones and Backstop Trading Program

5.5.2.3.1 Milestones and Determination of Program Trigger

a. Regional SO₂ Milestones

(1) Base Milestone Values

The regional sulfur dioxide base milestones for the years 2003 through 2018 are provided in Table 5.5.2-4. The base milestones will be adjusted annually as described in Section 5.5.2.3.1 (a)(2) and (a)(3) of this implementation plan.

Table 5.5.2-4: Base Sulfur Dioxide Emissions Milestones (excludes Smelter Set-aside)

Column 1	Column 2	Column 3
For the year	the base regional sulfur dioxide milestone is	and the annual SO ₂ emissions for these years will determine whether emissions are greater than or less than the milestone
2003	682,000 tons SO ₂	2003
2004	682,000 tons SO ₂	Average of 2003 and 2004
2005	682,000 tons SO ₂	Average of 2003, 2004 and 2005
2006	682,000 tons SO ₂	Average of 2004, 2005 and 2006
2007	682,000 tons SO ₂	Average of 2005, 2006 and 2007
2008	680,333 tons SO ₂	Average of 2006, 2007 and 2008
2009	678,667 tons SO ₂	Average of 2007, 2008 and 2009
2010	677,000 tons SO ₂	Average of 2008, 2009 and 2010
2011	677,000 tons SO ₂	Average of 2009, 2010 and 2011
2012	677,000 tons SO ₂	Average of 2010, 2011 and 2012
2013	659,667 tons SO ₂	Average of 2011, 2012 and 2013
2014	642,333 tons SO ₂	Average of 2012, 2013 and 2014
2015	625,000 tons SO ₂	Average of 2013, 2014 and 2015
2016	625,000 tons SO ₂	Average of 2014, 2015 and 2016
2017	625,000 tons SO ₂	Average of 2015, 2016 and 2017
2018	480,000 tons SO ₂	Year 2018 only
2019 forward, until replaced by an approved SIP	480,000 tons SO ₂	Annual; no multiyear averaging

(2) Adjustments for participation by eligible States and Tribes.

The amount provided in Table 5.5.2-5 below will be subtracted from the milestone in Table 5.5.2-4 for each state and tribe that does not have an Implementation Plan approved by the EPA Administrator as meeting the requirements of 40 CFR 51.309 as of December 31 of the year following the milestone year. The first adjustment to the 2003 milestone will be made no later

than March 31, 2005 and will be based on all states and tribes that do not have a federally-approved Implementation Plan as of December 31, 2004.

Table 5.5.2-5: [Years 2003-2010] Amounts of SO₂ tons to be Subtracted from the Base Milestones for States and Tribes that do not have an Approved Implementation Plan under 40 CFR 51.309*

State or Tribe	2003	2004	2005	2006	2007	2008	2009	2010
1. Arizona	117,372	117,372	117,372	117,372	117,372	117,941	118,511	119,080
2. California	37,343	37,343	37,343	37,343	37,343	36,363	35,382	34,402
3. Colorado	98,897	98,897	98,897	98,897	98,897	98,443	97,991	97,537
4. Idaho	18,016	18,016	18,016	18,016	18,016	17,482	16,948	16,414
5. Nevada	20,187	20,187	20,187	20,187	20,187	20,282	20,379	20,474
6. New Mexico	84,624	84,624	84,624	84,624	84,624	84,143	83,663	83,182
7. Oregon	26,268	26,268	26,268	26,268	26,268	26,284	26,300	26,316
8. Utah	42,782	42,782	42,782	42,782	42,782	42,795	42,806	42,819
9. Wyoming	155,858	155,858	155,858	155,858	155,858	155,851	155,843	155,836
10. Navajo Nation	53,147	53,147	53,147	53,147	53,147	53,240	53,334	53,427
11. Shoshone-Bannock Tribe of the Fort Hall Reservation	4,994	4,994	4,994	4,994	4,994	4,994	4,994	4,994
12. Ute Indian Tribe of the Uintah and Ouray Reservation	1,129	1,129	1,129	1,129	1,129	1,131	1,1233	1,135
13. Wind River Reservation	1,384	1,384	1,384	1,384	1,384	1,384	1,384	1,384

Table 5.5.2-6: [Years 2011-2018] Amounts of SO₂ tons to be Subtracted from the Base Milestones for States and Tribes that do not have an Approved Implementation Plan under 40 CFR 51.309*

State or Tribe	2011	2012	2013	2014	2015	2016	2017	2018
1. Arizona	119,080	119,080	116,053	113,025	109,998	109,998	109,998	82,302
2. California	34,402	34,402	33,265	32,128	30,991	30,991	30,991	27,491
3. Colorado	97,537	97,537	94,456	91,375	88,294	88,294	88,294	57,675
4. Idaho	16,414	16,414	15,805	15,197	14,588	14,588	14,588	13,227
5. Nevada	20,474	20,474	20,466	20,457	20,449	20,449	20,449	20,232
6. New Mexico	83,182	83,182	81,682	80,182	78,682	78,682	78,682	70,000
7. Oregon	26,316	26,316	24,796	23,277	21,757	21,757	21,757	8,281
8. Utah	42,819	42,819	41,692	40,563	39,436	39,436	39,436	30,746
9. Wyoming	155,836	155,836	151,232	146,629	142,025	142,025	142,025	97,758
10. Navajo Nation	53,427	53,427	52,707	51,986	51,266	51,266	51,266	44,772
11. Shoshone-Bannock Tribe of the Fort Hall Reservation	4,994	4,994	4,994	4,994	4,994	4,994	4,994	4,994
12. Ute Indian Tribe of the Uintah and Ouray Reservation	1,135	1,135	1,135	1,135	1,135	1,135	1,135	1,135
13. Wind River Reservation	1,384	1,384	1,384	1,384	1,384	1,384	1,384	1,384

*These numbers differ from Annex opt-in/-out tables in that the smelter set-aside is excluded and the new source set-aside is included.

(3) Adjustment for Future Operation of Copper Smelters in Arizona and New Mexico

If either the BHP San Manuel smelter in Arizona or the Phelps Dodge Hidalgo smelter in New Mexico resumes operation, the milestones will be increased as described below. The adjustment will occur only if the respective state has a State Implementation Plan approved by the EPA Administrator under 40 CFR 51.309. Once the adjustments have been made, the milestones will not be changed due to future suspensions or changes in plant operations, except as provided below. If Arizona or New Mexico elect not to submit a SIP under 40 CFR 51.309, the emissions for the smelters in the state opting out will be subtracted from the smelter set-aside.

(a) If one or both smelters resume operations under their existing permits, the milestone will automatically be adjusted upward for each smelter respectively by the following amounts:

1. Phelps Dodge Corporation, Hidalgo Smelter: 22,000 tons SO₂
2. BHP, San Manuel Smelter: 16,000 tons SO₂
3. For the 2013 through 2018 milestones, the maximum increase will be 30,000 tons SO₂.

(b) If Arizona or New Mexico determines that either smelter will resume operation by operating only a portion of the plant, the milestone adjustment in (a) will be reduced by a percentage to reflect current conditions. If the smelter resumes normal operations at a later date, the full adjustment described in (a) will be applied.

(c) If one or both smelters resume operations after going through new source review, the milestone adjustment will be based on the new permitted level for the source, but in no instance may the adjustment to the milestones exceed 22,000 tons SO₂ per year for the Hidalgo Smelter or 16,000 tons SO₂ per year for the San Manuel Smelter.

(d) If one or both smelters do not resume operation, Arizona and New Mexico will determine, based on the calculation procedures in 5.5.2.3.1.c(4) of this plan, the amount of source-specific set-aside that will be added to the milestone to account for capacity expansion at the remaining smelters. This set-aside will only be available for use if emissions from the copper smelters are above the baseline level listed in Table 5.5.2-7 in any particular year as a result of increased capacity. The increase to the milestone will be based on a smelter's proportional increase above its baseline sulfur input. The set-aside will be recalculated every year to reflect actual operations of the remaining copper smelters. The set-aside may not be traded under the backstop trading program.

Table 5.5.2-7: Preliminary Smelter-Specific Set Aside

Company / Smelter	Baseline Sulfur Input	Baseline Allocation	Smelter-specific Set-aside
BHP San Manuel	417,200 tons	16,000 tons SO ₂	1,500 tons SO ₂
Asarco Hayden	235,000 tons	23,000 tons SO ₂	3,000 tons SO ₂
Phelps Dodge Chino	212,800 tons	16,000 tons SO ₂	3,000 tons SO ₂
Phelps Dodge Hidalgo	256,800 tons	22,000 tons SO ₂	4,000 tons SO ₂
Phelps Dodge Miami	208,700 tons	8,000 tons SO ₂	2,000 tons SO ₂
Kennecott Oregon Copper Corporation, Smelter and Refinery	340,259 tons	1,000 tons SO ₂	100 tons SO ₂
TOTAL	1,670,769 tons	86,000 tons SO₂	13,600 tons SO₂

(4) Other Milestone Adjustments

(a) All other milestone adjustments will require a SIP revision. Section 5.5.2.3.1.c(3) of this plan outlines adjustments to be made to the emissions inventory to ensure a consistent comparison to the milestones. These adjustments will be incorporated into the milestones every five years as part of the periodic implementation plan revisions required by 40 CFR 51.309(d)(10). Adjustments to the milestones must be tracked in the annual emissions report in c(2) below.

(b) Within ninety days of the periodic Implementation Plan revision incorporating adjustments based on section 5.5.2.3.1.c(3), the Department must provide notice to sources whose records were used to calculate the adjustments. Such notice must include the date of the SIP revision reflecting the milestone adjustment to sources whose records were used as the basis for the milestone adjustment and state that the source must retain the record at least five years from the date of the SIP revision or ten years from the date of establishing the record, whichever is longer.

b. Regional Program Administration

(1) Pre-trigger tracking of regional SO₂ emissions.

The Department will work cooperatively with the states and tribes that are participating in the SO₂ Milestones and Backstop Trading Program to ensure that an emission tracking system for the regional SO₂ inventory is developed and maintained. The Department is responsible for all regional program administration functions as described in this plan. The Department will perform these functions using the Western Regional Air Partnership (WRAP) as the Department's agent. The WRAP compiled the SO₂ emission inventories that were used during the development of the Annex, and the WRAP continues to refine and improve the overall tracking system for regional haze. The WRAP will maintain the pre-trigger emissions tracking functions outlined in this plan for the foreseeable future. If the WRAP is no longer able to

fulfill this function, then the Department will ensure that other arrangements are made, either through a different regional organization or through a contractor, to maintain the SO₂ tracking system that is described in this plan. The Department is responsible for all regional program administration functions as described in this plan. The Department will perform these functions through the WRAP, as the Department's agent. The WRAP has no authority to make regulatory determinations. The WRAP has limited authority under this plan to perform tracking and accounting functions, prepare reports, and perform other administrative functions as directed by the Department. The Department will work expeditiously to correct any problems if the WRAP fails to perform any of the functions described in this plan in a timely manner.

(2) Designation of the Tracking System Administrator

If the backstop trading program is triggered due to an exceedance of the SO₂ milestones as outlined in section 5.5.2.3.1 of this plan, the Department will work cooperatively with the other participating states and tribes to designate one Tracking System Administrator (TSA). The TSA will be designated as expeditiously as possible, but no later than six months after the program trigger date. In addition, before the TSA is designated, the Department will have entered into a binding contract with the TSA that will require the TSA to perform all TSA functions described in this plan. The Department has sufficient authority under ORS chapters 468 and 468A to ensure that the TSA carries out its functions in this plan.

(3) Information Provided by other States and Tribes

The Department will accept the emission inventory and permitting information provided by the other participating states and tribes in order to determine the milestone value and program trigger if such other states and tribes have provided proper documentation and followed the public notification process in their federally approved implementation plans.

c. Determination of Program Trigger

(1) Until the program has been triggered, and source compliance is required under the backstop trading program, the Department will submit an annual emissions report to the WRAP and all participating states and tribes by September 30 of each year. The report will document actual sulfur dioxide emissions during the previous calendar year for all sources subject to the requirements of OAR 340-214-0400 to OAR 340-214-0430, Sulfur Dioxide Milestone Emission Inventory. The first report for calendar year 2003 will be submitted by September 30, 2004. The Department will prepare the supporting documentation that is included with the annual emissions report as noted in (2) and (3) below.

(2) The annual emissions report for Oregon will include a source emissions change report that contains the following information:

(a) Identification of any new sources that were not contained in the previous calendar year's emissions report and an explanation of why the source is now included in the program;

(b) Identification of any sources that were included in the previous year's report and are no longer included in the program and an explanation of why this change has occurred; and

(c) An explanation for emissions variations at any applicable source that exceed +/- 20 percent from the previous year.

(3) The annual emissions report for Oregon will include a proposed emissions adjustment as described in (a) through (d) below to ensure a consistent comparison to the milestones.

(a) Changes in flow rate measurement methods. Actual emission inventories for utilities that use EPA's Reference Method 2F, 2G, or 2H to measure stack flow rate will be adjusted to be comparable with the flow rate assumptions that were used in 1999, the base year inventory for the Annex. The adjustment may be calculated using any of the following three methods, and emissions for the year 2018 will not be adjusted.

(i) Directly determine the difference in flow rate through a side-by-side comparison of data collected with the new and old flow reference methods during a relative accuracy test audit (RATA) test.

(ii) Compare the annual average heat rate using Acid Rain heat input data (MMBtu) and total generation (MWHrs) as reported to the federal Energy Information Administration (EIA). Under this approach, the flow adjustment factor will be calculated using the following ratio:

$$\frac{\text{Heat input/MW for first full year of data using new flow rate method}}{\text{Heat input/MW for last full year of data using old flow rate method}}$$

(iii) Compare the standard CFM per MW before and after the new flow reference method based on CEMs data submitted in the Acid Rain Program, as follows:

$$\frac{\text{SCF/Unit of Generation for first full year of data using new flow rate method}}{\text{SCF/Unit of Generation for last full year of data using old flow rate method}}$$

(b) Changes in emission monitoring or calculation methods. Actual emission inventories for sources that change the method of monitoring or calculating their emissions will be adjusted to be comparable to the emission monitoring or calculation method that was used in the base year inventory for the Annex (1999 for utilities and 1998 for all other sources).

(c) Changes due to enforcement actions.

(i) Adjustments due to enforcement actions arising from settlements. Adjustments to the milestones must be made, as specified in Section 5.5.2.3.1(c)(3)(a) and (b), if:

(A) An agreement to settle an action is reached between the parties to the action if the action arose from allegations that an owner or operator of an emissions unit at a source in the program failed to comply with applicable regulations that were in effect during the base year;

- (B) The alleged failure to comply with applicable regulations affects the assumptions that were used in calculating the source's base year and forecasted sulfur dioxide emissions; and
- (C) The settlement includes or recommends an adjustment to the milestones.

(ii) Adjustments due to enforcement actions arising from administrative or judicial orders. If a final administrative or judicial order does not include a reforecast of the source's baseline, the Department must evaluate whether a reforecast of the source's baseline emissions is appropriate.

(iii) Adjustments for enforcement actions. Based on Section 5.5.2.3.1(c)(3)(a) and (b), the milestone must be decreased by an appropriate amount based on a reforecast of the source's decreased sulfur dioxide emissions. The adjustments do not become effective until after the source has reduced its sulfur dioxide emissions as required in the settlement agreement or administrative or judicial order. All adjustments based upon enforcement actions must be made in the form of an implementation plan revision that complies with the procedural requirements of 40 CFR 51.102 and 51.103.

(iv) Documentation of adjustments for enforcement actions. In the periodic plan revision required under 40 CFR 51.309(d)(10), the Department will include the following documentation of any adjustment due to an enforcement action:

- (A) Identification of each source under the Department's jurisdiction that has reduced sulfur dioxide emissions pursuant to a settlement agreement or an administrative or judicial order;
- (B) For each source identified, a statement indicating whether the milestones were adjusted in response to the enforcement action;
- (C) Discussion of the rationale for the Department's decision to adjust or not to adjust the milestones; and
- (D) If extra SO₂ emissions reductions (over and above those reductions needed for compliance with the applicable regulations) were part of an agreement to settle an action, a statement indicating whether such reductions resulted in any adjustment to the milestones or allowance allocations and a discussion of the rationale for the Department's decision on any such adjustment.

(4) The annual sulfur dioxide milestone and emissions report for Oregon will document any adjustments that should be made to the milestone for the previous year, as described in (a).

(a) The Department will document the submittal date of this Implementation Plan to implement the regional WEB Trading Program, and the approval date by the EPA Administrator, if applicable.

(5) The Department will retain emission inventory records for non-utilities from 1996 and 1998 until the year 2018 to ensure that changes in emissions monitoring techniques can be tracked.

(6) Compilation of Reports

(a) The WRAP will compile the annual emissions reports submitted by all participating states and tribes into a draft regional emissions report for sulfur dioxide. The WRAP will follow

additional quality assurance procedures developed by states and tribes to identify possible errors in the emissions data, including screening for missing or added sources, name changes, and significant changes in reported emissions. Any questions or anomalies regarding Oregon's report will be referred back to the Department for resolution before WRAP submits the draft regional emission report.

(b) By December 31 of each year, the WRAP will submit the draft regional emission and milestone report to all participating states and tribes and will post the report on the WRAP's web page. The report will include the following information for all states and tribes that have a federally approved implementation plan:

- (i) Actual regional sulfur dioxide emissions (tons/year).
- (ii) Adjustments to account for:
 - (A) changes in flow rate measurement methods,
 - (B) changes in emissions monitoring or calculation methods, or
 - (C) enforcement actions or settlement agreements as a result of enforcement actions.
- (iii) Average adjusted emissions for the last three years (if applicable) for comparison to the regional milestone.
- (iv) Regional milestone adjustments to account for participation by eligible states and tribes and the future operation of smelters in Arizona and New Mexico.

WRAP will also prepare a separate report including information from the states and tribes that have submitted implementation plans that are still under review by the EPA.

(7) The Department will evaluate the draft regional emissions report and propose a draft determination that the sulfur dioxide milestone either has been met in the region, or has been exceeded. If the TSA has not submitted a draft regional emissions and milestone report to the Department by the December 31 deadline for any year, the Department will prepare the report for that year based upon the annual emissions reports submitted by all participating states and tribes to the WRAP for that year. The Department will modify the data in these annual emissions reports or use data where such report(s) have not been submitted, based upon direction received from the EPA.

(8) The Department will advertise availability of the draft regional emissions report and notify the public of the draft determination by publishing a notice in the Oregon Bulletin and by mail to interested persons and legislators. A 30-day public comment period will be established. The Department will also submit the draft determination to EPA for review and comment.

(9) The Department will consider any comments received during the comment period and will submit a copy of all comments and response to comments to the WRAP and all participating states and tribes.

(10) The WRAP will compile the comments and responses from all participating states and tribes and prepare a draft final regional emissions report. The report will be submitted to the states and tribes that are participating in the program and, if necessary, will propose a common program trigger date.

(11) The Department will review and approve the final regional emissions report. The Department will then submit this report to the EPA along with a final determination that the milestone either has been met in the region, or that the milestone has been exceeded and the WEB Trading Program has been triggered in Oregon. This final determination will be submitted to the EPA by the end of March, fifteen months following the milestone year. The first determination will be submitted by March 31, 2005 for the 2003 milestone. If the milestone has been exceeded, the common trigger date proposed in the regional report will become the program trigger date for purposes of implementing the WEB Trading Program. If the Department must establish the program trigger date without a regional emissions and milestone report prepared by the WRAP, the date will be March 31 of the applicable year.

(12) The Department will publish a notice of the final determination in the Oregon Bulletin and in newspapers of general circulation throughout the state of Oregon. This notice will include the milestone and the final annual regional SO₂ emissions for that year. If the milestone has been exceeded, the notice will specify the program trigger date and the first year that WEB sources must be in compliance with the WEB Trading Program provisions as outlined in OAR 340-228-0510.

d. Year 2013 Assessment

(1) Initial Assessment in 2013 Periodic SIP Review.

(a) The Department will work cooperatively with the WRAP and other participating states and tribes to develop a projected emission inventory for SO₂ through the year 2018 using the 2010 regional inventory as a baseline. This projected inventory will be included in the 2010 annual emission and milestone report that will be completed in March 2012, as outlined in section 5.5.2.3.1.c of this plan.

(b) The Department will evaluate the projected inventory and, based upon this information, assess the likelihood of meeting the regional milestone for the year 2018. The Department will include this assessment as part of Oregon's progress report that must be submitted by December 31, 2013, as required by 40 CFR 51.309 (d)(10).

(2) Regional Emissions Report for 2012.

(a) The Department will prepare an SO₂ emissions report for the year 2012 by September 30, 2013, as described in section 5.5.2.3.1.c (1) of this plan. The Department will include a list of all known projects in Oregon that are anticipated to affect SO₂ emissions in 2018. This may include permitted projects, projects that are still in the planning stage, or projections from the affected sources of anticipated emissions in 2018. The status of these projects will be described to provide a better understanding of the degree of certainty that individual projects will be completed by 2018.

(b) The WRAP will compile the information from all participating states and tribes, prepare draft SO₂ inventory projections for the year 2018, and estimate the effect of known future

projects on SO₂ emissions. Projected 2018 emissions will be compared to the 2018 milestone. This information will be included in the draft regional emissions report for 2012 that will be submitted to the Department by December 31, 2013, as outlined in section 5.5.2.3.1.c(5) of this plan. The draft report will be posted on the WRAP website for a period of public review and comment for not less than 30 days.

(3) Consensus Decision

The Department will meet with the participating states and tribes in March 2014 to discuss any comments received on the 2018 emission projections in the draft report. The participating states and tribes will decide, through a consensus process, whether an early trigger of the WEB Trading Program is necessary to meet the SO₂ emission reduction goals in 2018.

(4) Early Trigger

If the participating states and tribes unanimously decide in the March 2014 meeting that an early trigger of the backstop trading program is necessary, the Department will trigger the WEB Trading Program, and the timing of various program elements will be adjusted as follows to ensure that the WEB Trading Program is in place in 2018. The date of the consensus decision by the participating states and tribes to voluntarily trigger the WEB trading program will become the program trigger date.

(a) Allowances for 2018 will be distributed to WEB sources by January 1, 2015.

(b) The first control period will be the year 2018. WEB sources will need to demonstrate at the end of the first control period that they have enough allowances to cover their SO₂ emissions in 2018.

(5) Public Notice

The Department will publish notice of the decision in the Oregon Bulletin and in newspapers of general circulation throughout Oregon. If applicable, the notice will include a statement that the WEB Trading Program is in effect and will specify the program trigger date.

e. Special Penalty Provisions for the 2018 Milestone

If the WEB Trading Program is triggered as outlined in Oregon SIP Section 5.5.2.3 and the first control period will not occur until after the year 2018, a penalty will be assessed for the exceedance of the 2018 milestone.

(1) The Department will allocate allowances to all WEB sources using the methods established in the 2013 SIP revision described in section 5.5.2.3.4 of this plan. WEB sources will have the option of buying and selling allowances during a two-month allowance transfer period as provided in OAR 340-228-0520(1)(c).

(2) At the end of this two-month allowance transfer period, compliance with the allowance limitation will be determined as provided in OAR 340-228-0510. Penalties will be assessed for SO₂ emissions that are greater than the allowance limitation for each WEB source as provided in OAR 340-228-0510(3) and (4). However, notwithstanding OAR 340-228-0510(1) through (3), SO₂ emissions in the year 2018 for each WEB source will be determined in accordance with the Sulfur Dioxide Milestone Inventory requirements of OAR 340-214-0400 through OAR 340-214-0430.

(3) The 2018 special penalty provision will continue to be applied each year after 2018 until the 2018 milestones have been achieved.

5.5.2.3.2 Pre-Trigger Emissions Tracking Requirements

a. SO₂ Emission Inventory

40 CFR 51.309 sets forth emissions inventory requirements for tracking compliance with the SO₂ milestones. OAR 340-214-0400 to OAR 340-214-0430 has been adopted to supplement Oregon's inventory requirements to satisfy the needs of this program.

(1) Applicability. The Sulfur Dioxide Emission Inventory requirements of OAR 340-214-0400 to OAR 340-214-0430 require all stationary sources with actual emissions of 100 tons per year or more of SO₂ in the year 2000 or in any subsequent year to submit an annual inventory of SO₂ emissions, beginning with the 2003 emission inventory. A source that meets these criteria that then emits less than 100 tons/year in a later year must still submit an SO₂ inventory for tracking compliance with the regional SO₂ milestones until 2018 or until the WEB Trading Program has been fully implemented and emissions tracking is occurring under OAR 340-228-0490, whichever is earlier.

(2) OAR 340-214-0400 to OAR 340-214-0430 contains enforceable conditions requiring WEB sources to:

(a) submit an annual inventory of SO₂ emissions;

(b) use appropriate emission factors and estimating techniques and document the emissions monitoring/estimation methodology used;

(c) include emissions from start up, shut down, and upset conditions in the annual total inventory;

(d) use 40 CFR Part 75 methodology for reporting emissions for all sources subject to the federal acid rain program;

(e) include the rate and period of emissions, the specific installation that is the source of the air pollution, composition of air contaminant, type and efficiency of the air pollution control equipment and other information necessary to quantify operation and emissions, and to evaluate pollution control; and

(f) retain records for a minimum of ten years from the date of establishment, or if the record was the basis for an adjustment to the milestone, 5 years after the date of an implementation plan revision, whichever is longer.

(3) The Department will assure the quality of the submitted inventory data as outlined in the Inventory Preparation Plan. The Department will screen the inventories to identify changes in emission measurement techniques that would require an inventory and milestone adjustment as outlined in Section 5.5.2.3.a (3)

(4) The Department will retain historical emission inventory records for non-utilities (1996 and 1998) that may affect milestone calculations under Section 5.5.2.3.1.c (3) and allocation decisions under Section 5.5.2.3.3.a of this plan until the year 2018 to ensure that changes in emissions monitoring techniques can be tracked.

b. Development of Emissions Tracking System

The Department will work cooperatively with the states and tribes that are participating in the WEB Trading Program to ensure that an emissions tracking system for the regional SO₂ inventory is developed and maintained.

c. Periodic Audit of Pre-Trigger Emission Tracking Database

(1) During the pre-trigger phase when the Department is tracking compliance with the regional SO₂ milestones, the Department will work cooperatively with the participating states and tribes to ensure that an independent audit of the tracking database is conducted to ensure that the WRAP is accurately compiling the regional emissions report. The first audit will occur during the year 2006 and will review data collected during the first two years of the program. Subsequent audits will occur in 2011 (which will cover emissions years 2005-2009) and 2016 (which will cover emissions years 2010-2014).

(2) The primary focus of the audit will be the process that is used to compile the regional inventory from the data provided by each state and tribe and the tracking of accumulated changes during the period between SIP revisions. The audit will also review the accuracy and integrity of the regional reports that are used to determine compliance with the milestones. The audit is not intended to be a full review of Oregon's process for compiling and reporting SO₂ emissions, but it will include a broad review of Oregon's inventory management and quality assurance systems (*i.e.*, presence and exercise of systems to assure data quality and integrity).

(3) The audit will discuss the uncertainty of emissions calculations and whether this uncertainty is likely to affect the annual determination of whether the milestone is exceeded. The audit will identify any recommended changes to emissions monitoring, calculation methods, or data quality assurance systems. The audit will also review and recommend any changes to improve the administrative process for collecting the annual emissions data at the state and tribal level, compiling a regional emission inventory, and making the annual determination of whether the WEB Trading Program has been triggered.

(4) Changes to the WEB trading program, including any changes to the milestones, due to the results of these periodic audits will be submitted to EPA as a SIP revision as part of the five-year SIP review required by 40 CFR 51.309(d)(10).

(5) The Department will respond to comments and provide notice of the availability of the final audit report. The Department will submit the final audit report to EPA's regional office.

5.5.2.3.3 Western Backstop Trading Program Requirements

a. Initial Allocation of SO₂ Allowances

(1) Draft Allocation Report.

Within six months of the program trigger date, as outlined in section 5.5.2.3.1.c(11) of this plan, the Department will submit a draft allocation report to all participating states and tribes and to the Tracking System Administrator. This report will contain the following information:

(a) List of all WEB sources in Oregon as defined in OAR 340-228-400 through OAR 340-228-0530. The list will group the sources into two categories:

(i) Category 1: WEB sources that commenced operation before January 1, 2003. These sources will receive a floor allocation and are eligible for the reducible portion of the allocation.

(ii) Category 2. WEB sources that commenced operation on January 1, 2003 or a later date. These sources will receive a floor allocation, but are not eligible for the reducible allocation. The floor allocation for Category 2 sources will be deducted from the new source set-aside.

WEB sources that have received a retired source exemption under OAR 340-228-0430(5) will be included in the allocation process in the same manner as WEB sources that are currently operating. However, sources that were permanently shut down before the program trigger date are not considered WEB sources under OAR 340-228-0430(1) and will not be included in the allocation process.

(b) Floor allocation for all WEB sources in Oregon.

(i) For non-utility category 1 WEB sources, the floor allocation is as established in the WRAP Report *Market Trading Forum Non-Utility Sector Allocation Final Report from the Allocations Working Group* by E.H. Pechan, November 2002.³ If any additional category 1 sources are identified, the Department will calculate a floor allocation using the methodology outlined in the E.H. Pechan Report.

³ See #7, Oregon Section 309 Reference Materials - Applicable WRAP Reports and Documents. See also WRAP website at <http://www.wrapair.org/309/index.htm>

(ii) For utility category 1 WEB sources, the floor will be calculated by first assigning a “clean unit” emission rate to each unit. The clean unit emission rate will then be multiplied by an annual heat input (MMBtu) that represents a realistic upper bound for the unit.

Note: The floor level approach described above is designed to address equity issues regarding the allocation process for utilities. The Department is participating in ongoing discussions with the other participating states, tribes, and regional stakeholders to ensure that all equity issues have been addressed.

Principles

- Each unit will have enough allowances to operate as a clean source and at an operating rate (capacity factor) that is a realistic upper bound for the unit.
- There will not be significant winners and losers in this process.
- The focus is on a fair approach that is applied equally to all sources rather than on state and tribal budgets.
- The allocation process will use data that reflect current conditions, including current monitoring methodologies.

Equity Issues

- Sources that are currently burning very low sulfur coal may see changes in their supply in the future. Historic actual emissions may not reflect future operations.
- Sources that are currently operating at a low utilization may not reach full capacity in the future. Assumptions about growth that are realistic on the regional level may provide an advantage to some sources and provide inadequate allowances for other sources.
- Some utility units in the region are not BART-eligible and are operating at a low level of control for SO₂. The relative responsibility of BART-eligible vs. non-BART-eligible is a consideration in the process.
- Sources that are operating at a high level of control are already bearing the cost of control, and this affects their ability to compete in the market.
- Sources that have no SO₂ controls are facing a large expense that could affect their ability to continue to operate.
- Emission rate disparities exist throughout the region.

(iii) For category 2 WEB sources, the floor allocation will be the lower of the permitted SO₂ annual emissions for the WEB source or SO₂ annual emissions calculated based on a level of control equivalent to BACT and assuming 100% utilization of the WEB source.

(c) A list of certified early reductions expressed as tons of SO₂. Early reductions will be calculated and certified as follows:

(i) Any WEB source that installs control technology and accepts new permit emission limits that are, for a non-utility source, below its floor as established in this section or, for a utility source, below BACT, may apply for an early reduction credit as outlined in OAR 340-228-0460(5). The credit will be available for reductions that occur between January 1, 2003 and the program trigger year. The application must show that the floor was calculated in a manner that is consistent with the monitoring requirements in OAR 340-228-0480, and the new permit must contain monitoring requirements that are consistent with OAR 340-228-0480. The credits that accumulate from the time the new controls come on line until the program trigger date will be allocated to the WEB source over a 10 year period. The use of early reduction credits in any control period is limited to no more than five percent, systemwide, of the existing available allowances, as provided in Section 5.5.2.3.3.a(2)(f) of this plan.

(ii) The Department will review the application and certify early reductions for each full year between 2003 and the program trigger year that meet the requirements of OAR 340-228-0460(5) and this plan.

(iii) The source's certified early reductions will be summed for all years to obtain the total certified early reductions for each source.

(d) A list of all renewable energy facilities in Oregon that began operation after October 1, 2000 and the MW of installed nameplate capacity for each of these resources. Renewable energy credits will be granted at a rate of 2.5 tons per MW and will accumulate from the beginning of the facility's operation. Their use in any control period is limited to no more than five percent, systemwide, of the existing available allowances, as provided in Section 5.5.2.3.3.a(2)(g) of this plan.

(e) Historical SO₂ emissions data for all Category 1 sources for the purposes of calculating the reducible allocation.

(i) For utilities, the average SO₂ emissions of the years 2000-2002. Another time period may be used for individual emission units if needed to be representative of normal operating conditions.

(ii) For non-utilities, the average of SO₂ emissions reported in the years 1996 and 1998.

(f) Changes due to enforcement actions or settlement agreements as a result of enforcement actions. The adjustment will be determined in accordance with Section 5.5.2.3.1(c)(3)(c) of this plan. The difference between the WEB source's allocations before and after the enforcement action will be removed from the allocation pool.

(2) Compiled Allocation Report

The Tracking System Administrator will compile the information provided by all participating states and tribes into a draft regional allocation report and submit the draft regional report to all participating states and tribes for review and comment thirty days after receiving the preliminary allocation reports. The draft report will include a proposed budget for each state and tribe and the proposed allocation for each WEB source in Oregon.

The following methodology for calculating the proposed regional allocation for utilities and non-utilities is based on the assumption that the states of Arizona, Oregon, New Mexico, Utah, and Wyoming are the only participating states in the WEB Trading Program. These five states are actively pursuing a SIP under section 309 of the Regional Haze Rule, and it is unlikely that any other states will be able to develop a SIP under section 309 by the December 31, 2002 deadline. The Department will work closely with the other four states that are developing Section 309 SIPs to ensure that the regional allocation is distributed consistently and fairly and to address any change in status that may affect this process. Additionally, the State of Oregon will use the same regional allocations methodology as the other participating 309 states to allocate allowances to the sources in Oregon. Tribal nations may participate in the program at a later date under the provisions of the Tribal Authority Rule. There are currently four category 1 sources operating on tribal lands under the jurisdiction of three tribal nations. The following methodology will remain unchanged if any of these tribal nations opt in to the program at a later date because the allocation for any of the four existing tribal sources will be covered by the opt-in adjustment for the tribe, and the allocation for any new sources will be covered by the regional new-source set-aside.

- (a) Table 5.5.2-8 shows the calculation of the available allocation for existing sources. The base milestone for the 5-state region calculated in accordance with section 5.5.2.3.1.a(2) of this plan is the starting point. The base milestone does not include the smelter set-aside. 20,000 tons of SO₂ is then subtracted for a tribal set-aside.

Table 5.5.2-8. Utility/Non-utility Split

	Base Milestone from Table 5.5.2-5	Tribal Set-Aside	New Source Set-aside	Remaining Allocation	Utility Portion	Non-utility portion
2003	446,904	20,000	6,390	420,514	275,027	145,488
2004	446,904	20,000	6,390	420,514	275,027	145,488
2005	446,904	20,000	6,390	420,514	275,027	145,488
2006	446,904	20,000	6,390	420,514	275,027	145,488
2007	446,904	20,000	6,390	420,514	275,027	145,488
2008	447,014	20,000	12,902	414,112	275,636	138,476
2009	447,123	20,000	12,902	414,221	275,708	138,513
2010	447,333	20,000	12,902	414,331	275,782	138,549
2011	447,333	20,000	12,902	414,331	275,782	138,549
2012	447,333	20,000	12,902	414,331	275,782	138,549
2013	435,455	20,000	19,370	396,085	259,171	136,914

2014	423,676	20,000	19,370	384,306	251,463	132,843
2015	411,898	20,000	19,370	372,528	243,757	128,771
2016	411,898	20,000	19,370	372,528	243,757	128,771
2017	411,898	20,000	19,370	372,528	243,757	128,771
2018	309,087	20,000	19,370	269,717	155,367	114,350

(b) Table 5.5.2.-8 shows the new source set-aside for the 5-state region.

(i) The new source set-aside is calculated by subtracting the new source set-aside adjustment listed in Table 5.5.2-9 for all states and tribes that do not have a federally approved Implementation Plan for the WEB trading program under 40 CFR 51.309 as of the program trigger date from the maximum possible set-aside for each of the first five years of the trading program.

Table 5.5.2-9: New Source Set-Aside Adjustment

	2003 - 2007	2008 - 2012	2013 - 2018
Maximum Possible Set-Aside	9,000	18,000	27,000
State or Tribe	Adjustment (tons/yr SO₂)		
1. Arizona	1,757	3,596	5,437
2. California	559	1,039	1,532
3. Colorado	1,480	2,945	4,364
4. Idaho	270	496	721
5. Nevada	302	618	1,011
6. New Mexico	1,267	2,512	3,889
7. Oregon	393	795	1,075
8. Utah	640	1,293	1,949
9. Wyoming	2,333	4,706	7,020
10. Tribes	No adjustment needed	No adjustment needed	No adjustment needed

(ii) Subtract the floor allocation for all WEB sources in the region that were identified as Category 2 from the new source set-aside for the 5-state region to determine the available allocation for new sources that begin operation after the program trigger date. The allocation process for these new sources is described in section 5.5.2.3.3.c of this plan.

Example calculation of the new source set-aside.

The example uses the following assumptions:

- (i) Emissions exceed the milestones based on an average of the years 2003-2005.
- (ii) The program trigger date is March 31, 2007.

- (iii) The first 5 years of the program are 2011-2015.
- (iv) Five states are participating in the program (AZ, NM, OR, UT, WY).
- (v) New sources that commenced operation between January 1, 2003 and the program trigger date have a total floor allocation of 6,000.

	2011	2012	2013	2014	2015
Maximum Possible Set-Aside	18,000	18,000	27,000	27,000	27,000
5-State Adjustment	- 5,098	-5,098	-7,628	-7,628	-7,628
Floor for Category 2 Sources	-6,000	-6,000	-6,000	-6,000	-6,000
Remaining New Source Set-aside	6,902	6,902	13,372	13,372	13,372

(c) The remaining allocation shown in Table 5.5.2-8 is available for distribution to category 1 sources. The final two columns in Table 5.5.2-8 split this remaining allocation into a utility allocation and a non-utility allocation. Apply any milestone adjustments due to the smelter set-aside as outlined in section 5.5.2.3.1(a)(3) to the non-utility allocation listed in Table 5.5.2-8.

(d) Subtract the floor allocations for all category 1 utility and non-utility sources in the region from the utility allocation or the non-utility allocation.

(e) Calculate the early reduction allocation.

(i) Divide the number of certified early reduction credits for all WEB sources in the region by ten.

(ii) Add the utility allocation for 2018 to the non-utility allocation for 2018 and then multiply this total by 0.05.

(iii) If the product of paragraph (i) is no more than the product of paragraph (ii), the product of paragraph (i) is the early reduction allocation, and each source is allocated ten percent of its early reduction credits.

(iv) If the product of paragraph (i) is more than the product of paragraph (ii), the early reduction allocation for the region is the product of paragraph (ii). To determine a source's allocation, divide the product of paragraph (ii) by 0.10 times the total number of early reduction credits and apply that ratio to the early reduction credits claimed by the source.

(v) Split the regional early reduction allocation based on the ratio of utility to non-utility allocations in 2018 and subtract the early reduction allocation from the utility and non-utility allocation totals.

(vi) The early reduction allocation will be calculated in a similar manner for the second five-year allocation period under this program. It will then be discontinued for any future allocation periods.

(g) Calculate the regional renewable energy allocation.

(i) Add together the reported MW of installed nameplate capacity for renewable energy facilities reported by the participating states and tribes and then multiply this number by 2.5.

(ii) Add the utility allocation for 2018 to the non-utility allocation for 2018 and then multiply this total by 0.05.

(iii) If the product of paragraph (i) is no more than the product of paragraph (ii), the product of paragraph (i) is the renewable energy allocation.

(iv) If the product of paragraph (i) is greater than or equal to the product of paragraph (ii), the renewable energy allocation for the region is the product of paragraph (ii). To determine a source's allocation, divide the product of paragraph (ii) by the total number of renewable energy credits and apply that ratio to the early reduction credits claimed by the source.

(v) Split the regional renewable energy allocation based on the ratio of utility to non-utility allocations in 2018 and subtract the renewable energy allocation from the utility and non-utility allocation totals.

(g) Any remaining allowances in the utility allocation or the non-utility allocation after subtracting the early reduction allocation and the renewable energy allocation is considered the reducible allocation and will be assigned to Category 1 sources.

(i) For non-utility sources, add together the historic SO₂ emissions in accordance with section 5.5.2.3.3(a)(1)(e) of this plan for all Category 1 non-utility sources in the region to determine an historic emissions total. Determine a percent contribution of SO₂ emissions for each WEB source to the historic emissions total. Multiply the non-utility reducible allocation calculated in paragraph (h) by the percent contribution for each WEB source to determine a reducible allocation for each WEB source.

(ii) For utility sources, the reducible allocation will be distributed to sources that emitted above their floor in the baseline period (2000 through 2002) based on their percentage of total floor emissions for sources emitting above the floor times the number of reducible allowances available for the first five years of the WEB Trading Program. The number of allowances for any source receiving a reducible allocation may not exceed a recent historic emission rate times a heat input that represents a realistic upper bound for the unit.

Note: The approach for distributing the reducible utility allocation described above is designed to address equity issues regarding the allocation process for utilities. The Department is participating in ongoing discussions with the other participating states, tribes, and regional stakeholders to ensure that all equity issues have been addressed. The principles and equity issues that are under discussion are listed in section 5.5.2.3.3(a)(1)(b)(ii) of this plan.

(h) Add together the floor allocation, early reduction allocation, renewable energy resource allocation, and reducible allocation for each WEB source and each renewable energy source to determine the proposed allocations for the first five years of the WEB Trading Program.

(i) Add together the proposed allocations for all of the WEB sources in the jurisdiction of each participating state and tribe to determine a draft SO₂ allowance budget for each state and tribe.

(j) The total allowances allocated each year will not exceed the milestone established for that year.

(3) Public Comment Period

The Department will publish notice of availability of the draft regional allocation report in newspapers of general circulation throughout Oregon. A minimum 30-day public comment period will be established, and a hearing will be held during the comment period. The Department will consider the comments and will revise the draft report as needed.

(4) Proposed Changes Submitted to Tracking System Administrator

The Department will submit proposed changes to the budget and source allocations to the Tracking System Administrator within sixty days of receipt of the draft regional allocation report.

(5) Compilation of Changes

The Tracking System Administrator will compile the proposed changes and submit a final draft regional allocation report to the Department for approval within 30 days of receiving the recommended changes.

(6) Final Regional Allocation Report

The Department will review the final regional allocation report and determine the budget for Oregon and allocations for WEB sources within Oregon in accordance with the provisions of this plan within thirty days of receipt of the final draft allocation report. The Department will submit the budget and allocations for all WEB sources in Oregon to EPA and notify the Tracking System Administrator that the WEB source allocations should be recorded in the allowance tracking system.

(7) The Department will notify all WEB sources within Oregon of the number of allowances that have been recorded in their compliance account. The notice will include a warning to the WEB sources that reported annual sulfur dioxide emissions may change due to the implementation of new monitoring methodologies as required by OAR 340-228-0480. Allocations for the first five years of the program will not be adjusted to account for changes due to the new monitoring methodology. However, allocations during the next five-year distribution will be adjusted as needed to account for paper changes in emissions due to changes in monitoring methodology.

b. Distribution of Allowances for Future Control Periods.

By December 1 of the year five years after the initial allocation, the Department will follow the process outlined in section 5.5.2.3.3.a of this plan to distribute allowances for the next five-year period. This process will continue every five years until allowances have been allocated through the year 2018.

c. Distribution of the New Source Allocation

(1) The new source set-aside will be available for two categories of sources.

(a) A new WEB source is eligible to receive an annual allocation equal to the annual sulfur dioxide limit in the source's approval order, beginning with the first full year of operation and in accordance with the provisions of OAR 340-228-0460(6).

(b) An existing WEB source that has increased production capacity through a new approval order issued under OAR 340-224 is eligible to receive an allocation from the new source set-aside equal to:

(i) the permitted annual sulfur dioxide emissions limit for a new unit; or

(ii) the permitted annual SO₂ emission increase for the WEB source due to the replacement of an existing unit with a new unit or the modification of an existing unit that increased production capacity of the WEB source.

The allocation from the new source set-aside in the first year of operation will be adjusted to account for the number of days that the source is operating in that first year.

EXAMPLE. A new unit with a nameplate capacity of 400 MW is constructed at a power plant with two existing units with nameplate capacities of 400 MW and 300 MW. The two existing units install SO₂ controls and reduce emissions to meet PSD requirements for the construction of the new unit. In this example, the source would continue to receive a floor and a reducible allocation for each of the existing units. It also would be eligible to receive an allocation from the new source set-aside for the new unit. Even though total SO₂ emissions will decrease at this plant due to the construction of the new unit, the allowances allocated to the source will increase to reflect the increase in production capacity of 400 MW of electricity. If the new unit comes on line on July 1, the allocation for the first year will be reduced by 50 percent because the unit was operational for half of the year.

(2) Allocations from the new source set-aside will remain constant for the applicable WEB source and will be made on an annual basis by March 31 of each year for the current control period. When the next five-year allocation block is distributed as outlined in section 5.5.2.3.3.b of this plan, all sources with an allocation under the new source set-aside will receive a five-year allocation block from the new source set-aside and will continue to receive this allocation in future five-year allocation blocks.

(3) Owners or operators of new WEB sources or modified WEB sources that meet the eligibility requirements of (1) may apply for an allocation from the new source set-aside by submitting a written request to the Department as outlined in Section OAR 340-228-0460(6).

(4) The Department will review the application for an allocation from the new source set-aside for accuracy and completeness and notify the source of the Department's intent to distribute allocations from the regional new source set-aside, pending verification that allowances are available in the new source set-aside account. The Department will forward the request to the Tracking System Administrator.

(5) The Tracking System Administrator will document the date that it receives the request. Requests for allocation of allowances from the new source set-aside will be processed in the order received. The Tracking System Administrator will deduct the number of allowances requested from the regional new source set-aside that was established by the participating states and tribes and will record an equal number of allowances in the source's compliance account for each remaining year of the five-year period. The Tracking System Administrator will then send written notification to the source and to the Department that the allowances have been recorded in the source's compliance account.

(6) If there are insufficient allowances remaining in the new source set-aside to fulfill the request, the source must purchase the allowances required to demonstrate compliance. Any eligible WEB source that does not receive an allocation from the new source set-aside because the set-aside was depleted will be first in line to receive an allocation when the new source set-aside is increased in the next five-year period as outlined in Table 5.5.2-10 of this plan. If there is more than one such source, their allocation requests will be processed in the order they were received by the Tracking System Administrator.

(7) A source that has received a retired source exemption and continues to receive an allocation as a retired WEB source is ineligible to receive an allocation from the new source set-aside.

d. Regional Tribal Set-aside

(1) Each year after the program is triggered, 20,000 allowances will exist as a tribal set-aside.

(2) The tribal caucus of the WRAP has stated its intent to determine the means for distributing the allowances among the tribes by one year after the program trigger date. The Department understands that there will be a process that will meet the tracking and data security requirements of the allowance tracking system by which a tribe will move its set-aside allowances into the trading program for the purposes of trading.

(3) The Department recognizes that the tribal set-aside allowances are bonus allowances for the tribes and, as such, are separate and in addition to any allowances included in a tribal budget or the new source set-aside as outlined in the allocation report that is prepared in accordance with section 5.5.2.3.3.a(6) of this plan.

e. Distribution of Allowances for Opt-in Sources.

The WRAP Market Trading Forum recommended including provisions in this plan that allow smaller sources to opt in to the program. Opt-in sources may provide a more cost-effective way to reduce overall regional SO₂ emissions and, therefore, may strengthen the market incentives of this program. While the benefits of allowing sources to opt in to the program are important, the program must also provide safeguards to ensure that the integrity of the program is not affected. For example, it would be counter productive to allow sources that were already planning to shut down to opt in to the program and then sell allowances to an existing source. In this example, regional emissions could slowly creep upward in a manner that is inconsistent with the goals of the SO₂ milestones.

The Department has deferred including provisions for opt-in sources until a future SIP revision. This will allow time to thoroughly consider how to provide the flexibility and potential benefits to the market by expanding the program while also ensuring that the SO₂ emission reduction goals are maintained.

f. WEB Allowance Tracking System (WEB ATS)

Section 51 CFR 309(h)(4)(v) requires a centralized system for the tracking of allowances and emissions. The centralized system will be referred to as the WEB Allowance Tracking System (WEB ATS). The WEB ATS must provide that all necessary information regarding emissions, allowances, and transactions is publicly available in a secure, centralized database. The ATS must ensure that each allowance is uniquely identified, allow for frequent updates, and include enforceable procedures for recording data.

The Department will work cooperatively with other states and tribes participating in the WEB Trading Program to designate this system. The Department will be responsible for ensuring that all the ATS provisions are completed as described in this plan.

The ATS will not exist unless the program is triggered. Before implementing the WEB Trading Program, a separate emissions tracking database will be employed to track the ongoing emissions of sources emitting SO₂ at amounts equal to or greater than 100 tons per year. The emissions tracking database, used to track and measure SO₂ emissions against the milestones, will still exist once the WEB Trading Program is triggered; however, it will become incorporated into the SO₂ Allowance Tracking System. Both the emissions tracking database and the ATS will be centralized systems with data posted in a format, including an electronic, Web-based program, and available to all persons.

The participating states and tribes will contract with a common Tracking System Administrator to service and maintain the WEB ATS. It is envisioned that the ATS will require the use of a contracted consultant or database design engineer to create a secure, efficient and transparent tracking system. Because all states and tribes participating in the program will use the ATS program, the design will require a uniform approach and level of security that will satisfy regional needs and concerns as well as meet the electronic, Web-based, access needs and security provisions. Due to the dynamic needs of the marketplace, the ATS will require a

database that will reflect the current status of allowances and allowance transactions. The ATS will be operational within one year after the program trigger date.

Specifications of the WEB ATS, such as emissions tracking, recording allowance transactions, account management, system integrity, and transparency are outlined in an appendix to this plan. The appendix and related Sections of OAR 340-228-0400 through OAR 340-228-0530 detail how a WEB source will register for the ATS and how the source will, through an account representative, establish accounts, transfer allowances, and track unused allowances from a previous year. The account representative will also look to the appendix to determine the appropriate interface with the ATS.

Neither the Department nor the TSA will adjudicate any dispute between the parties concerning the authorization of any Account Representative with regard to any of the Account Representative's representations, actions, inactions, or submissions.

As an example of how the WEB ATS will generally function once the WEB Trading Program is triggered, a WEB source will have its allowance allocation determined. At the same time, the WEB source's Account Representative will register for the ATS under OAR 340-228-0450, and a compliance account will be established under OAR 340-228-0470. Each allowance will be assigned a serial number. The allowance serial number will be used by the WEB ATS to track allowance allocations, transfers (OAR 340-228-0490), deductions, and to account for any unused allowances from a previous year (OAR 340-228-0500). The serial number will also be assigned each allowance recorded in a general account, which is an account for allowances that are not held to meet program compliance requirements. Furthermore, the ATS will track tribal allowance set-asides and new source allowance set-asides not yet assigned to either a compliance or general account.

It is important to note that while an effort has been made in this plan to provide a design for and an operational understanding of the ATS, the components of the ATS will need to be examined and possibly altered upon each required SIP revision.

g. Allowance Transfers

40 CFR 51.309(h)(4)(viii) requires the Implementation Plan to include provisions for detailing the process for transferring allowances between parties. Transfers are defined as the conveyance from one account to another account (compliance account or general account) of one or more allowances by whatever means, including but not limited to purchase, trade, or gift in accordance with the procedures established in OAR 340-228-0490. This includes transfer of allowances for the purpose of retirement. Once an allowance is retired, it is no longer available for transfer to or from any account. Allowances may be purchased by any party for the purpose of retirement.

The Tracking System Administrator will have specific recording requirements involving transfers. These required procedures will be detailed in the service contract and will include the following activities.

(1) Recording of Allowance Transfers

Within five business days of receiving an allowance transfer, except when the transfer does not meet the requirements of OAR 340-228-0490, the Tracking System Administrator will record an allowance transfer by moving each allowance from the transferor account to the transferee account as specified by the request, provided that:

- (a) The transfer is correctly submitted; and
- (b) The transferor account includes each allowance identified in the transfer.

Any allowance transfer that is submitted for recording after the allowance transfer deadline and that includes any allowances allocated for a control period before or the same as the control period to which the allowance transfer deadline applies will not be recorded until after the compliance account reconciliation is completed.

If an allowance transfer submitted for allowance transfer recording fails to meet the requirements of OAR 340-228-0490, the Tracking System Administrator will not record such transfer.

(2) Notification of the Recording of Allowance Transfers

The Tracking System Administrator has specific responsibilities involving the notification of the recording of any transferred allowances, including the failure to record any transfer of allowances. Again, these required procedures will be outlined in the service contract but must include the following.

(a) Within five business days of the recording of an allowance transfer, the Tracking System Administrator will notify the Account Representatives of both the transferor and transferee accounts and make the transfer information publicly available on the Internet.

(b) Within five business days after receiving an allowance transfer that fails to meet the requirements of OAR 340-228-0490, the Tracking System Administrator will notify the Account Representatives of both accounts of the decision not to record the transfer and the reasons for not recording the transfer.

h. Use of Allowances from a Previous Year

(1) Background

51 CFR 309(h)(4)(ix) allows states to include in the implementation plan provisions for banking unused allowances from a previous year. The unused allowances may be kept for use in future years in accordance with OAR 340-228-0500 and describe the restrictions on the use of the allowances in accordance with OAR 340-228-0500. The federal rule requires that allowances kept for use in future years may be used in calendar year 2018 only to the extent that the implementation plan guarantees that such allowances will not interfere with achieving the 2018 milestone as outlined in Table 5.5.2-4 of this plan and adjusted according to the

provisions of section 5.5.2.3.1.a (2) and (3). OAR 340-228-0500 addresses this requirement by prohibiting the use of allowances allocated for the years 2003-2017 after the year 2017. This provision ensures that actual emissions will be less than the 2018 milestone because only allowances allocated for the year 2018 could be used to show compliance in that year. The provision also maintains flexibility by resetting the baseline to the year 2018 and then allowing sources to once again use extra allowances to show compliance in any future year. This flexibility is important for sources that have variable operations because the source may build up a reserve of unused allowances for use in a high production year.

The Annex explains the benefits of allowing the WEB source to use unused allowances from previous years, including increased flexibility and early reduction stimulus. The risk of allowing allowances to be carried over from a previous year is the possible increase in emissions in later years as the unused allowances are withdrawn for compliance.

Because the regional haze SIP is based on reasonable progress requirements related to remedying or preventing any future visibility impairment, it is important to assure that using these allowances will not interfere with attaining or maintaining any reasonable progress goals. The safeguard for mitigating this type of risk is termed "flow control," which is described below.

(2) Flow Control Provisions

At the end of each control period, WEB sources may transfer allowances in and out of their compliance account for a period of 60 days to ensure that the account will contain enough allowances to cover SO₂ emissions during the previous year. At the end of the sixty-day transfer period, allowances will be deducted from the compliance account of each WEB source in an amount equal to the sulfur dioxide emissions of that source during the control period.

After the deductions have been completed, the Tracking System Administrator will perform the following calculations and prepare a report according to section 5.5.2.3.3.k(b) of this plan.

(a) Determine the total number of allowances remaining in the allowance tracking system that were allocated for the just-completed control period and all previous control periods.

(b) If the number calculated in (a) exceeds 10 percent of the milestone for the next control period, then the flow control procedures in OAR 340-228-0500 will be triggered for that next control period. These flow control provisions will discourage the excessive use of allowances that were allocated for an earlier control period without establishing an absolute limit on their use. WEB sources will maintain the option of using allowances allocated for an earlier control period but will be required to use two allowances for each ton of SO₂ emissions. Flow control operates as follows:

(i) The flow control ratio is calculated by multiplying 0.1 times the milestone for the next control period and then dividing that number by the total number of unused allowances remaining in the system.

(ii) To calculate the number of prior-year allowances that can be used without restriction by a source for the next control period, the TSA will multiply the prior-year allowances by the flow control ratio. The resulting number of allowances may be used on a one-to-one ratio to show compliance with the source's emission limitation.

(iii) The remaining prior-year allowances may be used on a two-to-one ratio to show compliance. Thus, WEB sources will maintain the option of using allowances allocated for an earlier control period but must use two of those allowances for each ton of SO₂ emissions.

Example: On March 1, 2010 (the compliance transfer deadline for the 2009 control period), the Tracking System Administrator deducts allowances from the compliance account for each WEB source to cover 2009 SO₂ emissions from that source. After completing these deductions, the TSA reports the following information:

Total number of allowances still in the system for the years 2003 – 2009 = 75,000

2010 milestone (5-state, no smelter) = 508,223

Percent of milestone = 14.75 %

Because the number of allowances not used in previous control periods is greater than 10% of the milestone, flow control procedures are triggered. In the annual report required in 5.5.2.3.1(1), the TSA will then calculate the flow control ratio for 2010:

$0.1 \times 2010 \text{ Milestone} \div \text{prior year allowances} = \text{flow control ratio}$

$20.1 \times 508,223 \div 75,000 = 0.67$

On March 1, 2011 (the compliance transfer deadline for the 2010 control period), the TSA will apply the 2010 flow control ratio before deducting allowances from each WEB source's compliance account

WEB Source A

2010 Allowances = 1,000

Remaining Prior Year Allowances = 500

2010 Emissions = 1,400

In this example, the TSA would multiply the prior year allowances by 0.67 to determine the number of prior year allowances that could be used without restriction, at a one-to-one ratio. This would equal 335. The remaining prior year allowances would then be used at a 2:1 ratio. 130 allowances would be needed to cover the remaining 65 tons of SO₂ emissions. The TSA would therefore deduct a total of 1,465 allowances (1,000 + 335 + 130) to cover 1,400 tons of SO₂ emissions.

i. Monitoring/Recordkeeping section

(1) For WEB sources subject to 40 CFR Part 75, the TSA will use data that has been quality assured and finalized by the EPA.

(2) The data will be verified and submitted to the emissions tracking database as soon as reasonably feasible after annual emissions are reported by the WEB sources. The Department

will review the data and modify the timelines, as necessary, according to the monitoring protocols.

j. Compliance and Penalties

(1) Compliance

When a WEB source exceeds its allowance limitation, the Department will require the Tracking System Administrator to deduct allowances from the following year's allocation in an amount equal to two times the WEB source's emissions of SO₂ in excess of its allowance limitation. This deduction will be made from the WEB source's compliance account after deductions for compliance under OAR 340-228-0510. If sufficient allowances do not exist in the compliance account for the next control period to cover this amount, the Department will require the Tracking System Administrator to deduct the required number of allowances, regardless of the control period for which they were allocated, whenever the allowances are recorded in the account.

(2) Penalties

The amount of the penalty will be evaluated at each five-year SIP review and adjusted so that penalties per ton exceed the expected cost of allowances to ensure that this remains a stringent penalty. OAR 340-228-0510(3)(b) establishes a penalty for each ton of emissions above the source's allowance limitation, in accordance with OAR 340, Division 12. This is in addition to the two allowances from the next year's allocation to be deducted from the account for each one allowance of exceedance. For a violation of any provision of the market trading program, each day of excess emissions during the control period is a separate violation under Oregon's rule, and each ton of excess emissions is a separate violation.

k. Periodic Evaluation of the Trading Program

(1) Annual Report

(a) Beginning one year after compliance with the trading program is required, the Tracking System Administrator will provide to the Department an annual report containing the following information:

- (i) The level of compliance program-wide;
- (ii) A summary of the use and transfer of allowances, both geographically and temporally;
- (iii) A source-by-source accounting of allocations compared to emissions;
- (iv) A report on the use of unused allowances from a previous year in order to determine whether these emissions have or have not contributed to emissions in excess of the cap; and

(v) The total number of WEB sources participating in the trading program and any changes to eligible sources, such as retired sources or sources that emit more than 100 tons of SO₂ after the program trigger date.

(b) Within 10 months after the allowance transfer deadline for each control period when compliance with the trading program is required, the Tracking System Administrator will prepare a draft report that lists:

(i) the total number of allowances deducted for the control period,

(ii) the total number of allowances remaining in the Allowance Tracking System allocated for that control period and any earlier control period,

(iii) a proposed determination that flow control procedures either have or have not been triggered for the next control period, and calculated according to Section 5.5.2.3.3.d(2) of this State Implementation Plan.

(c) The Department will evaluate the draft report and propose a determination that flow control procedures either have or have not been triggered for the next control period.

(d) The Department will publish notice of availability of the draft report in newspapers of general circulation throughout Oregon and hold a 30-day public comment period.

(e) After the comment period, the Department will make a final determination that the flow control procedures either have or have not been triggered for the next control period. If the flow control procedures have been triggered, the Department will notify all WEB sources in Oregon that flow control procedures will be in effect during the next control period.

(2) Five-year Evaluation

(a) The Department will work cooperatively with other participating states and tribes to conduct an audit of the WEB Trading Program no later than three years following the first full year of the trading program and at least every five years thereafter. This evaluation does not replace the implementation plan assessments in 2008, 2013, and 2018 as required by the regional haze regulations. The evaluation will be conducted by an independent third party and include an analysis of:

(i) Whether the total actual emissions could exceed the values in Table 5.5.2-4 of this Implementation Plan even though sources comply with their allowances;

(ii) Whether the program achieved the overall emission milestone it was intended to reach;

(iii) The effectiveness of the compliance, enforcement, and penalty provisions;

(iv) A discussion of whether states and tribes have enough resources to implement the WEB Trading Program;

- (v) Whether the trading program resulted in any unexpected beneficial effects or any unintended detrimental effects;
 - (vi) Whether the actions taken to reduce sulfur dioxide have led to any unintended increases in other pollutants;
 - (vii) Whether any changes are needed in emissions monitoring and reporting protocols or in the administrative procedures for program administration and tracking;
 - (viii) The effectiveness of the provisions for interstate trading and whether any procedural changes are needed to make the interstate nature of the program more effective; and
 - (ix) The integrity of the emissions and allowance tracking system, including whether the procedures for recording transactions are adequate, the procedures are being followed and in a timely manner, the information on sources' emissions are accurately recorded, the emissions and allowance tracking system has procedures in place to ensure that the transactions are valid, and back-up systems are in place to account for problems with loss of data.
- (b) The public will have an opportunity to participate in this trading program evaluation.
 - (c) In the event that any audit results in recommendations for program revisions, the State of Oregon, in consultation with the WRAP, will make appropriate modifications to this plan. The State of Oregon will revise this plan if the program is not meeting its emission reduction goals.
 - (d) The Department will submit a copy of the report to EPA Region X.

I. Retired Source Exemption

OAR 340-228-0430(5) outlines the procedure that a WEB source must follow to receive a retired source exemption. The exemption allows a source to continue receiving an allocation, but exempts the source from monitoring and recordkeeping requirements that would serve no useful function for a source that has ceased operations. The Department will notify the source of its obligation to apply for a retired source exemption when the permit is cancelled or relinquished.

To receive a retired source exemption, the source must submit a request for the exemption to the Department. The Department will review this request and notify the source within sixty days of receipt of the request whether the retired source exemption has been granted or rejected. If the Department rejects the request for exemption, the notification will explain why.

The TSA will record an allocation to a WEB source that has received a retired source exemption. However, the allowances will be recorded in a general account rather than a compliance account for the source.

A WEB source that is permanently retired and that does not request a retired source exemption will forfeit all abandoned allowances in that source's compliance account, as outlined in OAR 340-228-0430(5)(e). The forfeited allowances will not be redistributed to other sources but will be permanently retired from the Allowance Tracking System, as outlined in OAR 340-228-0490(3). During the next five-year allowance distribution period, the retired source will not receive an allocation, and the allowances that would have been distributed to that source will be added to the new source set-aside.

m. Integration into Permits

40 CFR §51.309 requires that the requirements for emissions reporting and for the trading program be incorporated into a permit that is enforceable as a practical matter by EPA and by citizens to the extent permitted by the Act. It is expected that all WEB sources will, at least initially, be subject to Oregon's Title V permitting requirements. Under OAR 340, Division 218, Oregon's delegated Title V permitting program, the pre- and post-trigger requirements of the market trading program meet the definition of "applicable requirements" and will be incorporated into each source's Title V permit. OAR 340-228-0530 requires that any source that for any reason and at any time is not required to have a permit under OAR 340, Division 218 must obtain a New Source Review permit pursuant to OAR 340-224 that incorporates the same requirements. Both types of permits are federally enforceable by EPA.

5.5.2.3.4 2013 SIP Revision; Backstop for beginning of second planning period

In addition to the requirements of 40 CFR § 51.309(d)(10), the periodic SIP revision due in 2013 will contain:

- a. Source specific allocations for all WEB sources in Oregon for the year 2018; and
- b. Either the provisions of a program designed to achieve reasonable progress for stationary sources of SO₂ beyond the 2018 or a commitment to submit a SIP revision containing the provisions of such a program no later than December 31, 2016. The program will ensure that the requirements of 40 CFR § 51.309 for the first planning period are achieved, including requirements that cannot be measured until after 2018, such as the determination of compliance with the 2018 milestone.

This 2013 SIP revision will provide certainty to sources regarding their potential liability under the special penalty provisions for the year 2018 outlined in Section 5.5.2.3.1.e of this plan. The calculation of these allocations is delayed until 2013 to provide certainty about the number of sources that would qualify as WEB sources at that time; the allocations needed for new sources in the region; and the magnitude of renewable energy development and early reductions that would need to be included in the allocation process. It is difficult to estimate the impact of these factors in 2003 because many things may change during the next 10 years.

If the 2018 milestone is not met, the starting point for the next planning period will be the 2018 milestones, not actual emissions in 2018.

5.5.2.4 Mobile Source Strategy

5.5.2.4.1 Regulatory History and Requirements

In its June 1996 Report, the GCVTC recommended EPA move forward on new national vehicle emission and fuel standards to reduce emissions from mobile sources. The GCVTC also recommended other regional and local strategies be considered to manage mobile source emissions. One of the local strategies was to establish emission budgets for those pollutants in urban areas shown to significantly contribute to visibility impairment in any of the 16 GCVTC Class I areas. The budget caps were to be set at the 2005 emission levels.

When EPA finalized the Regional Haze Rule in July 1999, the rule acknowledged the GCVTC recommendations related to national vehicle emission and fuel standards. EPA included a status of planned actions on those recommendations as of July 1999 (Preamble to the regional haze rule, 64 FR 35753). EPA noted these new measures were over and above those included in the Regional Haze Rule for mobile sources that simply required a cap on emissions in significantly contributing urban areas at the 2005 level. EPA also indicated that emission reductions resulting from new standards adopted after the Regional Haze Rule was approved would be creditable toward reasonable progress. EPA also committed to work with the states if new national standards impacted the efficacy of regional or local strategies.

After the Regional Haze Rule was finalized, EPA established new standards for on-road vehicle emission and fuel standards. As a result, current mobile source emission projections developed by WRAP for the GCVTC Transport Region indicate overall mobile source emissions will decline continuously from 2003 through the end of the SIP planning period in 2018, which is more than the level of emission reductions that EPA approved to meet reasonable progress. In addition, new standards for off-road vehicles were proposed by EPA on April 15, 2003, and are expected to be finalized by the end of 2003, which will further reduce overall mobile source emissions.

In April 2003, the WRAP approved a recommendation for EPA to eliminate the current requirements related to mobile source emission significance determination and budgets in 40 CFR 309(d)(5)(ii) and (iii), and replacing those requirements with a new requirement focused on tracking mobile source emission reductions resulting from national standards to assure reasonable progress. This action was based on the finding that emissions of all pollutants from on-road and off-road mobile sources are expected to decline significantly through 2018 except for sulfur dioxide from non-road sources. If EPA adopts new low-sulfur standards for off-road mobile sources then off-road mobile source sulfur dioxide emissions would also decline continuously through 2018.

Appendix D8-4 contains EPA's proposed amendments to 40 CFR 51.309(d)(5), published July 3, 2003, in 68 FR 39888.

5.5.2.4.2 Mobile Source Strategy Elements

a. Inventory of Current and Projected Emissions from Mobile Sources

Pursuant to 40 CFR 51.309(d)(5)(i), the State of Oregon, in collaboration with the WRAP, assembled a comprehensive statewide inventory of mobile source emissions. This emission inventory is shown below in Table 5.5.2-10, and projects a continuous decrease in statewide mobile source emissions from 2003 to 2018. It should be noted that 2018 is the lowest level of emissions, rather than 2005 or another year, as originally estimated by the GCVTC. This emission reduction is documented in Chapter 5 of the WRAP TSD. This substantial reduction of projected mobile source emissions from 2003 to 2018 is due to the adoption of new on-road vehicle emission and fuel standards by EPA.

Table 5.5.2-10: Oregon Total Mobile Source (on-road & non-road) Emission Projections, 2003 and 2018 (tons per day)

Pollutant	2003	2018*	% change
VOC	333.5	156.5	53%
NOx	678	393.3	42%
PM2.5	20.8	16.1	23%
SO ₂	44.7	25.5	43%
Totals	1077	591.4	41%

* 2018 emissions are lowest for all pollutants between 2003-2018

b. Determination of Significance of Oregon Urban Area Mobile Source Emissions

Pursuant to 40 CFR 51.309(d)(5)(ii) and (iii), the State of Oregon determined that mobile source emissions from any area of the state do not contribute significantly to visibility impairment in any of the 16 GCVTC Class I areas. This determination is based on a continuous decline in mobile source emissions from 2003-2018. The determination of significance requirement in Section 309(d)(5)(ii) was based on modeling performed in 1994-1995 by the GCVTC, which showed mobile source emissions reaching a low point in 2005, then increasing across the region. The WRAP determined, using updated mobile source emissions models (both on-road and off-road) and new federal engine and fuel standards, that total mobile source emissions will continue to steadily decline through 2018. (This is also described in Chapter 5 of the WRAP TSD.) The State of Oregon will be using the emissions data management system (EDMS) developed by the WRAP to track on-road and off-road mobile source emissions, and include the status of such in future SIP periodic reports. In addition, WRAP is coordinating a regional effort to evaluate and encourage demonstration projects and retrofit programs to reduce on-road and off-road emissions during the phase-in periods of the federal standards.

c. Programs to Reduce Mobile Source Emissions

The State of Oregon relies on efforts of EPA to reduce emissions from mobile sources through the national programs for vehicle emissions and fuel standards. Actions taken by EPA have resulted, or will result, in significant mobile source emission reductions that will positively impact visibility in the 16 GCVTC Class I areas and additional Class I areas. Additionally, in Oregon there are several control measures and requirements in place in urban areas to attain and maintain the NAAQS that reduce mobile source emissions and thereby contribute to improvement of visibility in Class I areas. Section 5.5.2.8 and Appendix D8-7 of this implementation plan describe these elements as they relate to the requirement in 40 CFR 51.309(d)(9) regarding the implementation of "Additional GCVTC Recommendations".

d. Progress Reports

Pursuant to 40 CFR 51.309(d)(5)(iv), the State of Oregon will submit progress reports in 2008, 2013 and 2018 on the implementation of regional and local mobile source strategies recommended by the GCVTC. See Section 5.5.2.8 and Appendix D8-7 of this implementation plan regarding the implementation of additional GCVTC recommendations under 40 CFR 51.309(d)(9). Included in these progress reports will be an update on the continuous decline in mobile source emissions as identified in Table 5.5.2-12, and an update on existing or any proposed federal programs to reduce mobile source emissions that could result in visibility improvements in the 16 Class I areas and other Class I areas in the West.

5.5.2.5 Fire Program Strategy

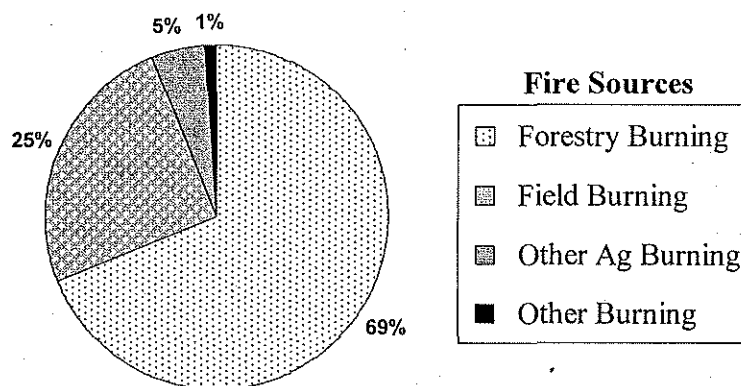
5.5.2.5.1 Regulatory History and Requirements

In its 1996 final report, the GCVTC recognized that past land management practices, including decades of fire suppression, have led to an increase of accumulated forest fuels. Fire is a component of most natural ecosystems in the West and must be a component of processes to meet land management, human health and visibility objectives. The GCVTC recognized that prescribed fire and wildfire levels are projected to increase significantly for decades to come, and that programs to minimize emissions and visibility impacts, and to educate the public, should be implemented. WRAP modeling shows that increases in prescribed fire in the future to restore forest health and reduce the incidence and severity of wildfires will have an adverse impact on visibility. See Chapter 6 of the WRAP TSD for further details.

The Regional Haze Rule contains five requirements related to Fire under 40 CFR 51.309(d)(6): (1) document that all federal, state and private prescribed fire programs in the state evaluate and address the degree of visibility impairment from smoke in their planning and application; (2) establish a statewide inventory and emissions tracking system for volatile organic compounds, nitrogen oxides, elemental and organic carbon, and fine particle emissions; (3) identify a plan for removing any administrative barriers to the use of alternatives to burning; (4) adopt an Enhanced Smoke Management Program that considers visibility as well as health and nuisance objectives, and reduces visibility impacts; and (5) adopt Annual Emission Goals to minimize emissions increases from fire to the maximum extent feasible.

The fire strategy included in this implementation plan focuses on reducing emissions from both prescribed fire (forestry burning) and agricultural field burning to minimize visibility impacts in the 16 Class I areas of the Colorado Plateau. As indicated in Figure 5.5.2-2, emissions from these two activities are the dominant source of open burning in Oregon.

**Figure 5.5.2-2: Major Sources of Fire Emissions in Oregon
(1999 emissions, tons per year)**



The fire strategy applies to federal, state, and private lands in the state where concentrated burning presently occurs, and where smoke management programs have already been adopted

by the state to control the burning and minimize air quality impacts. Other areas in the state where low concentrations of burning take place are not part of the fire strategy in the 2003 SIP, but will be evaluated as part of the SIP revisions in 2008 in order to address "other" Class I areas, including those in Oregon. This evaluation will include identifying any additional measures needed to minimize visibility impacts in Oregon and neighboring state Class I areas.

Appendix D8-5 of this implementation provides additional information on fire emissions and programs in the state, and how they satisfy the rule requirements for fire.

5.5.2.5.2 Prescribed Fire Program Evaluation

Pursuant to 40 CFR 51.309(d)(6)(i), the State of Oregon has evaluated all Federal, State, and private prescribed fire programs in the state, based on the potential to contribute to visibility impairment in the 16 Class I areas of the Colorado Plateau, and how visibility protection from smoke is addressed in planning and operation. The State of Oregon has also evaluated whether these prescribed fire programs contain the following seven elements, as specified by rule: actions to minimize emissions; evaluation of smoke dispersion; alternatives to fire; public notification; air quality monitoring; surveillance and enforcement; and program evaluation. This evaluation focused on agricultural and forestry burning smoke management programs. A complete description of this evaluation is provided in Appendix D8-5 of this implementation plan.

5.5.2.5.3 Emission Inventory and Tracking System

Pursuant to 40 CFR 51.309(d)(6)(ii), the State of Oregon, starting in 2004, will employ an emissions inventory and tracking system for fire sources, that will include the following pollutants: volatile organic compounds, nitrogen oxides, elemental and organic carbon, and fine particulate.

For consistency, the State of Oregon will use the emissions tracking system developed by the WRAP Fire Emissions Joint Forum, in the *WRAP Policy on Fire Tracking Systems (FTS)*. The FTS identifies a process for gathering the essential post-burn activity information necessary to consistently calculate emissions and uniformly assess fire impact on regional haze on an annual basis. The FTS will be the basis for creating a fire emissions inventory within the State of Oregon, to be in conjunction with the WRAP's Emissions Data Management System (EDMS), which is a larger and more comprehensive emissions tracking and forecasting system developed by the WRAP for point, area, biogenic, and mobile sources. Fire emission inventory updates will be provided in future progress reports as part of the reasonable progress demonstration specified in 40 CFR 51.309(d)(10)(i). See Appendix D8-5 of this implementation plan for further information on the WRAP FTS and WRAP EDMS, and how these will be used for fire emission inventory and tracking in Oregon.

5.5.2.5.4 Identification and Removal of Administrative Barriers

Under 40 CFR 51.309(d)(6)(iii), states are required to identify and remove administrative barriers to the use of non-burning alternatives, wherever feasible. The State of Oregon has

evaluated the administrative barriers that currently exist in the state for agricultural burning and prescribed fire (forestry burning). This evaluation and the strategy that has been developed are described in detail in Appendix D8-5 of this implementation plan. As explained in this appendix, the strategy developed by Oregon focuses on non-burning alternatives to prescribed fire (forestry burning). For agricultural burning, the use of non-burning alternatives are being actively pursued and successfully implemented in the state, due in large part to a state law related to Willamette Valley field burning. This is described further in Appendix D8-5.

5.5.2.5.5 Enhanced Smoke Management Program

Pursuant to 40 CFR 51.309(d)(6)(iv), the State of Oregon evaluated the existing smoke management programs in the state to determine if these programs meet this rule requirement, based on the WRAP *Enhanced Smoke Management Programs for Visibility Policy*. This policy (referred to as the WRAP ESMP) takes the position that there are nine elements of an enhanced smoke management program that are necessary to meet the requirements of the rule; the first seven of these are listed in 40 CFR 51.309(d)(6)(i). The WRAP ESMP provides states with an equitable and practical method for implementing an enhanced smoke management program. Under the rule, an enhanced smoke management program shall consider efficiency, economics, law, emission reduction opportunities, land management objectives, and reduction of visibility impacts. Appendix D8-5 summarizes the WRAP ESMP, and describes how agricultural and prescribed burning smoke management programs in the state meet the policy and the rule requirements.

5.5.2.5.6 Annual Emission Goal

Pursuant to 40 CFR 51.309(d)(6)(v), efforts will be made within the State of Oregon to minimize emission increases in fire to the maximum extent feasible, through the use of annual emission goals, in accordance with the WRAP *Annual Emission Goals for Fire Policy*. The State of Oregon intends to use this policy to quantify the emission reduction techniques that are being used within the state on a project-specific basis to reduce the total amount of emissions being generated from areas where prescribed fire is being used. Appendix D8-5 summarizes the WRAP *Annual Emission Goals for Fire Policy* and describes how it will be used to provide annual emission goal estimates for prescribed fire in the state. As explained in Appendix D8-5, emission increases in prescribed fire are expected in Oregon and nationally under the National Fire Plan, in order to restore forest ecosystem health. In regards to agricultural burning, no emission increases are expected, due primarily to state law which prevents any increase in Willamette Valley field burning, the largest source of agricultural burning in the state.

5.5.2.6 Assessment of Emissions from Paved and Unpaved Road Dust

5.5.2.6.1 Regulatory History and Requirements

The GCVTC believed that dust emissions from paved and unpaved roads were generally near-field transport issues rather than long-range transport issues, especially with respect to larger, coarse materials that settle out of the atmosphere before being transported long distances. The GCVTC recommended additional studies to ascertain this fact since the state of the science for characterizing the emissions and transport of road dust was limited. Additionally, the GCVTC recognized that based on projected population growth and increases in vehicle miles traveled, there was the potential for significant increases in on-road emissions and for these emissions to contribute to regional haze.

The Regional Haze Rule (40 CFR 51.309(d)(7)) requires states to assess the impact of dust emissions from paved and unpaved roads on regional haze in the 16 Class I areas located on the Colorado Plateau in the first implementation plans due December 2003. The WRAP analyzed this issue, including efforts to improve methods for estimating road dust emission inventories as applied to regional scale modeling and characterization of the transport and deposition processes. Results of WRAP modeling work has demonstrated road dust is not a significant contributor to visibility impairment in the 16 Class I areas on the basis of regional transport. For further information on road dust emissions and impacts, see Chapter 7 of the WRAP TSD.

5.5.2.6.2 Road Dust Strategy Elements

a. Assessment of Paved and Unpaved Road Dust Emissions

Pursuant to 40 CFR 51.309(d)(7), an assessment was made by the WRAP of the impact of dust emissions from paved and unpaved roads from transport region states on the 16 Class I areas of the Colorado Plateau. A complete description of this assessment is provided in Chapter 7 of the WRAP TSD.

b. Contribution to Visibility Impairment Finding

Pursuant to 40 CFR 51.309(d)(7), the State of Oregon, in collaboration with other states through the WRAP, has determined that based on the results of the above assessment on road dust emissions, that they are not a significant contributor to regional haze visibility impairment within the Colorado Plateau 16 Class I areas. Based on these findings, no emission management strategies have been identified. The technical and policy foundation for this determination can be found in Chapter 7 of the WRAP TSD.

c. Tracking of Road Dust Emissions

The State of Oregon, with assistance from the WRAP, shall track road dust emissions and provide an update on paved and unpaved road dust emissions trends, including any new information regarding WRAP modeling results of road dust impacts on visibility in the Colorado Plateau 16 Class I areas, as part of the periodic implementation plan revisions

required under 40 CFR 51.309(d)(10). The tracking of road dust emissions shall utilize the WRAP EDMS, as described in Chapter 7 of the WRAP TSD.

5.5.2.7 Pollution Prevention Strategy

5.5.2.7.1 Regulatory History and Requirements

The GCVTC's 1996 recommendations for improving regional haze included the need to combine cost-effective pollution control strategies with a greater emphasis on pollution prevention, including low or zero emission technologies and energy conservation. The Commission found that there was a high potential for energy efficiency and promotion of the use of renewable resources for energy production. One of the GCVTC recommendations was a goal that renewable energy should comprise 10 percent of the regional power needs by 2005 and 20 percent by 2015. The GCVTC identified strategies to help achieve this renewable energy goal.

The Regional Haze Rule requires a detailed assessment of pollution prevention programs and activities in each state, and an estimate of emission reductions and visibility improvements that could result from these programs and activities. This requirement is only for an assessment - it does not require a state to adopt any specific pollution prevention-related strategies or regulations for regional haze.

The following table summarizes the pollution prevention requirements in 40 CFR 51.309(d)(8) and the elements described Section 5.5.2.7.2 below.

Table 5.5.2-11: Regional Haze Rule Pollution Prevention Rule Requirements and Section 5.5.2.7.2 Elements

Rule Citation	Rule Summary	SIP Section
309(d)(8)(i)	1. An initial summary of all air pollution prevention programs currently in place.	5.5.2.7.2(a)
	2. An inventory of all renewable energy capacity and production in use or planned as of 2002 (expressed in megawatts and megawatt-hours).	5.5.2.7.2(b)
	3. Total energy generation capacity and production for the state.	5.5.2.7.2(c)
	4. Percent of total energy generation capacity and production that is derived from renewable energy.	5.5.2.7.2(d)
	5. The state's anticipated contribution toward the 10/20 goals (based on the programs and policies each state relies on to achieve its renewable goals).	5.5.2.7.2(e)
309(d)(8)(ii)	6. Programs providing incentives to reward efforts that go beyond compliance and/or achieve early compliance with air pollution related requirements.	5.5.2.7.2(f)
309(d)(8)(iii)	7. Programs to preserve and expand energy conservation efforts.	5.5.2.7.2(g)
309(d)(8)(iv)	8. An identification of specific areas where renewable energy has the potential to supply power where it is now lacking and	5.5.2.7.2(h)

	where renewable energy is most cost-effective.	
309(d)(8)(v)	9. Projections of the short- and long-term emissions reductions, visibility improvements, cost savings, and secondary benefits associated with the renewable energy goals, energy efficiency and air pollution prevention activities.	5.5.2.7.2(i)
309(d)(8)(vi)	10. A description of the programs relied on to achieve the state's contribution toward the 10/20 goals and a demonstration of the progress made toward achievement of the renewable energy goals in the years 2003, 2008, 2013, and 2018. This description must include documentation of the potential for renewable energy resources, the percentage of renewable energy associated with new power generation projects implemented or planned and the renewable energy generation capacity and production.	5.5.2.7.2(j)

Much of the work related to pollution prevention has been conducted by the WRAP's Air Pollution Prevention Forum (AP2). This work is described in Appendix D8-6. The AP2 Forum's workplan called for the forum to:

- Examine barriers restricting the penetration of renewable energy, energy efficient technologies, and adoption of energy efficient practices in the Transport Region;
- Identify and evaluate economic incentives, legislative actions, and regulatory policies that will increase investments in renewable energy and energy efficiency, including actions currently underway in the Grand Canyon Visibility Transport Region; and
- Recommend market-based incentives and public policies that will support increased investment in renewable energy within the Grand Canyon Visibility Transport Region and improve the efficiency of the region's energy production and end-use sectors.

The AP2 Forum developed recommendations over a three-year period through a stakeholder-based consensus process supported, in part, by nationally recognized renewable energy and energy efficiency experts, including the National Renewable Energy Laboratory. The Forum and workgroups held more than 11 meetings and workshops to examine barriers and identify policies that would lead to increased investment in renewable energy and energy efficiency in the Grand Canyon Visibility Transport Region. The Forum also commissioned ICF Consulting Group to analyze the potential emissions reductions, energy cost savings, and secondary environmental and economic benefits of meeting the Grand Canyon Visibility Transport Commission's 10/20 goal and implementing a suite of cost-effective energy efficiency programs and policies the AP2 Forum identified as "best practices" for the region.

5.5.2.7.2 Pollution Prevention Strategy Elements

a. Summary of Pollution Prevention programs

Pursuant to 40 CFR 51.309(d)(8)(i) regarding pollution prevention programs currently in place, the state of Oregon is providing an initial summary of pollution prevention programs that

correspond to electricity consumption, as this sector accounts for the single largest reduction in air pollution compared to other pollution prevention programs in Oregon. A list of pollution prevention programs associated with energy conservation is provided in Table 5.5.2-12 below. A list of pollution prevention programs that are associated with renewable energy is provided in Table 5.5.2-13 below.

b. Renewable Energy capacity and production in use or planned as of 2002

40 CFR 51.309(d)(8)(i) requires an inventory of all renewable generation capacity and production in use or planned as of the year 2002 (expressed in megawatts and megawatt hours), the total energy generation capacity and production in Oregon, and the percent of the total that is renewable. A list of renewable energy *generation* projects that physically exist in Oregon is provided in Appendix D8-6 of this implementation plan. It is important to note that the amount of renewable energy *generated* is greater than the amount of renewable energy *consumed* in Oregon. Also, this inventory does not include approximately 8,667 MW of capacity that is generated as hydroelectricity, primarily from six dams on the Columbia and Snake Rivers. Additional information on other renewable energy projects that are planned, “small” renewable installations, and references to wind, solar, and biomass narratives for Oregon are also provided in Appendix D8-6.

c. Total energy generation capacity and production

See Section 5.5.2.7.2(d) below.

d. Percent of total energy generation and capacity derived from Renewable Energy

For this implementation plan, the total energy use and percent of the total that is renewable in Oregon is based on energy *consumption*. The information to fulfill this requirement is provided in Section 5.5.2.7.2(j) below, which also documents the percent of renewable energy associated with new power projects implemented or planned, and the renewable energy generation capacity and production in use and planned, pursuant to 40 CFR 51.309(d)(8)(vi).

e. Anticipated contribution toward the Renewable Energy goals for 2005 and 2015

Pursuant to 40 CFR 51.309(d)(8)(i), Oregon’s anticipated contribution toward meeting the GCVTC renewable energy goals for 2005 and 2015 is presented in Section 5.5.2.7.2(j) below, which also addresses the requirement to document the potential for renewable energy resources, pursuant to 40 CFR 51.309(d)(8)(vi).

f. Incentive programs

Pursuant to 40 CFR 51.309(d)(8)(ii), programs to provide incentives that reward efforts to go beyond compliance and/or achieve early compliance with air pollution related requirements in Oregon are often integrated with other pollution reduction programs associated with water and land. A summary of these programs and projects in Oregon are described in the *Oregon State Agency Sustainability Report*, provided in Appendix D8-6 of this implementation plan.

g. Programs that preserve and expand Energy Conservation efforts

Pursuant to 40 CFR 51.309(d)(8)(iii), Table 5.5.2-12 identifies programs in Oregon that preserve and expand energy conservation. Summaries of these energy conservation programs, including web links, are provided in Appendix D8-6 of this implementation plan.

Table 5.5.2-12: Oregon's Energy Conservation Programs

Policies, Rules and Regulations
1. System Benefits Charge
2. Energy-efficient State Buildings
3. Residential Building Code
4. Commercial Building Code
5. Biennial Energy Plan
Incentive Programs
1. Residential Energy Tax Credit
2. Business Energy Tax Credit
3. Small Scale Energy Loan Program
4. State Home Oil Weatherization Program
5. Energy Conservation Lender's Credit
6. Bonneville Power Administration and Consumer-Owned Utilities
7. Northwest Energy Efficiency Alliance
Outreach and Education
1. Energy Awareness Campaign
2. Telecommuting
3. Energy Efficient Manufactured Homes

The Oregon Office of Energy estimates that state programs are saving about 600,000 MWh per year through energy conservation programs. If this pace is maintained from 2002 through 2015, the reduction in use in 2015 will be 6.4 million MWh. If these programs were not in place, the forecast of electricity sales for 2015 would be 10 percent higher.

h. Potential for Renewable Energy

Pursuant to 40 CFR 51.309(d)(8)(iv), areas where the potential for renewable energy to supply power and where renewable energy is most cost-effective are illustrated by maps and described in a number of reports provided in Appendix D8-6 of this implementation plan. Of note is the Western Systems Coordinating Council Map of Principal Transmission Lines, dated January 1, 2002, of the western grid system that shows areas in Oregon that do not have access to electricity, and could benefit from renewable power alternatives. In general, extending conventional power to areas outside of a one-half mile distance from existing distribution lines is cost prohibitive.

i. Projections of Renewable Energy goals, Energy Efficiency and pollution prevention activities

Pursuant to 40 CFR 51.309(d)(8)(v), regional projections of the short and long term emissions reductions, visibility improvements, cost savings, and secondary benefits associated with “renewable energy goals, energy efficiency and pollution prevention activities” are presented for the nine transport region states collectively in the report *Economic Assessment of Implementing the 10/20 goals and Energy Efficiency Recommendations*, prepared by ICF Consulting for the WRAP.⁴ The ICF report did not include projections for individual states. At this time there is no reliable means to make renewable generation goal projections for individual states. Forecasts of program performance are uncertain, and “309 states” do not know if the 9 state transport region will achieve the regional goals of 10 percent of energy from new renewable by 2005 and 20 percent by 2015.

Although only five states may end up as 309 states, efforts from other 308 states in the transport region will contribute to the GCVTC 10/20 goals. California and Nevada are aggressively pursuing renewable resources. Nevada's renewable portfolio standard (RPS) requires utilities in the State to obtain 5 percent of their electricity from renewable resources by next year. In 2000 California electricity sales were 48 percent of sales in the nine state transport region. California recently adopted a Renewable Portfolio Standard (the RPS statutory requirements of Senate Bill 1078 and Senate Bill 1038 took effect January 1, 2003 and are codified in Public Utilities Code (PUC) sections 399.11 through 399.15, and sections 381, 383.5, and 445, respectively). SB 1078 establishes an RPS program that requires retail electricity sellers, such as investor-owned utilities (IOUs), to increase the renewable content of their electricity deliveries by one percent per year over a baseline level to be determined by the California PUC. Retail sellers must meet a target of 20 percent renewable content in their electricity portfolio by December 31, 2017. SB 1038 revises the structure and funding allocation for the Energy Commission's Renewable Energy Program, linking payments made to new renewable electricity generating facilities to the RPS, with the goal of increasing the amount of renewable generation in California.

The 309 States will report on regional progress for the nine state transport region in their 2008 submittals, as required under 40 CFR 51.309(d)(8)(vi).

Projections of visibility improvements for the 16 Class I areas on the Colorado Plateau are provided in Table 5.5.2-15 and Table 5.5.2-16 in Section 5.5.2.9 of this implementation plan. These projections include the combined effects of all measures in this SIP, and from contributions of the other 309 states, including air pollution prevention programs. Although emission reductions and visibility improvements from air pollution prevention programs are expected at some level, they were not explicitly calculated because the resolution of the regional air quality modeling system is not currently sufficient to show any significant visibility

⁴ See #16, Oregon Section 309 Reference Materials - Applicable WRAP Reports and Documents. See also WRAP website at <http://www.wrapair.org/309/index.htm>

changes resulting from the marginal nitrogen oxide emission reductions described above for air pollution prevention programs.

j. Demonstration of progress in achieving the GCVTC Renewable Energy goal

Pursuant to 40 CFR 51.309(d)(8)(vi), Table 5.5.2-13 identifies the programs relied upon in Oregon to achieve the State’s contribution toward the GCVTC goal that renewable energy comprise 10 percent of the regional power needs by 2005 and 20 percent by 2015. Summaries of these programs, including web links are provided in Appendix D8-6 of this implementation plan.

Table 5.5.2-13: Oregon’s Renewable Resource Programs

Policies, Rules and Regulations	Financial Incentives
1. System Benefits Charge	1. Residential Energy Tax Credit
2. Utility Green Power Options	2. Business Energy Tax credit
3. Power Source Disclosure	3. Small Scale Energy Loan program
4. Utility Integrated Resource Plans	4. Property Tax Exemptions
5. Siting of Renewable Resource Facilities	5. Bonneville Power Administration and Consumer Owned Utilities
6. Net Metering	
7. Biennial Energy Plan	

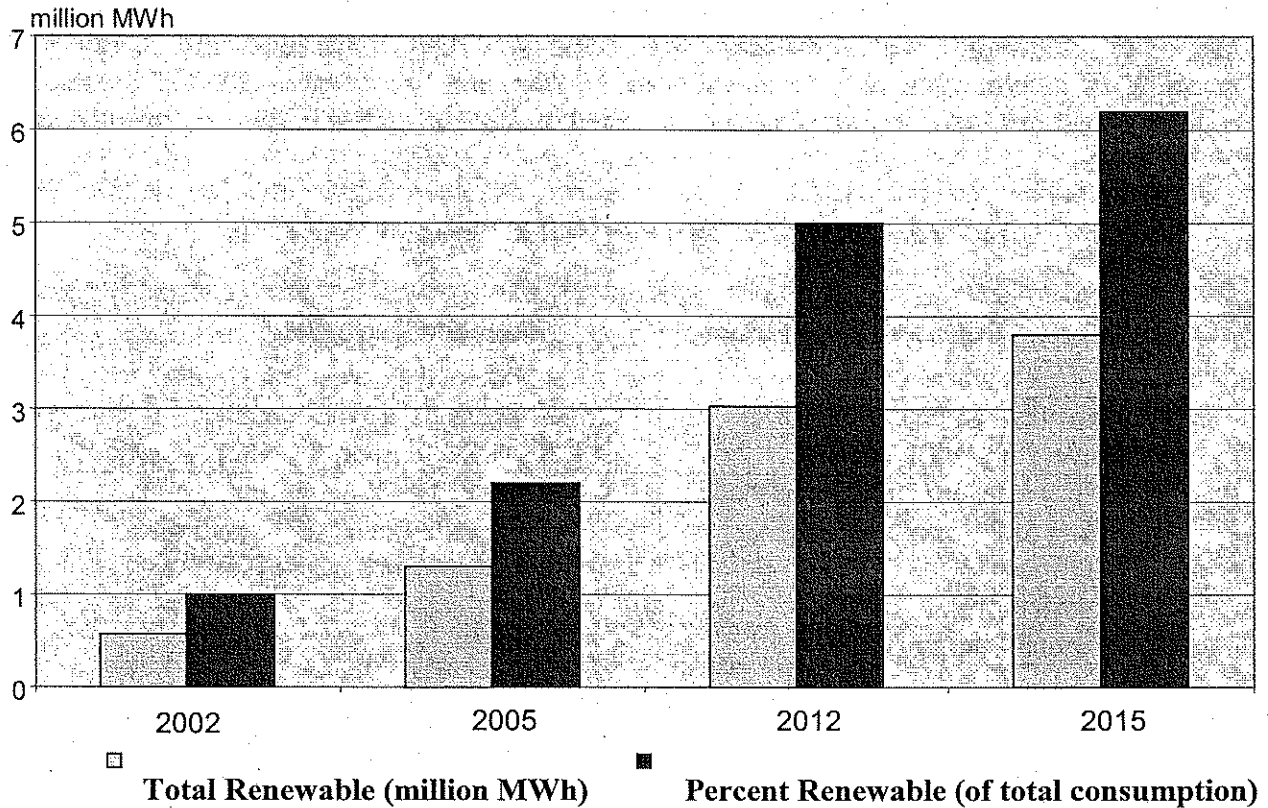
The programs described in Table 5.5.2-13 also demonstrate Oregon’s progress toward achievement of the renewable energy goals for 2003. The information provided in Section 5.5.2.7.2(i) also support Oregon’s commitment towards progress. Further progress demonstrations will be submitted to EPA as part of a revised Oregon SIP in the years 2008, 2013, and 2018, as provided in Section 5.5.2.7.2(k) below.

As previously noted in 5.5.2.7.2(d), Oregon’s projected contribution towards the goal of the GCVTC that renewable energy comprise 10 percent of the regional power needs by 2005 and 20 percent by 2015 is based on *consumption* of electricity in Oregon, which is consistent with how renewable contributions will be projected by the other 309 states.

The Energy Trust of Oregon (ETO) administers the renewable portion of the public purpose charge that tracks and projects renewable energy use in Oregon. The ETO forecasts that roughly 5 percent of Oregon’s consumption of electricity will be supplied by renewables in 2012, or about 3.03 million MWh of renewable power. For 2002 Oregon used 570,000 MWh of electricity from renewable energy sources, about 1 percent of use. A linear extrapolation of these values would indicate 1.3 million MWh of renewable power use for Oregon in 2005 and 3.8 million MWh in 2015. Figure 5.5.2-3 below shows Oregon’s renewable energy growth projections.

Note that the potential renewable resource forecast provided in this section also addresses the requirements pursuant to 40 CFR 51.309(d)(8)(i), as presented in Section 5.5.2.7.2(a) and 5.5.2.7.2(e) above.

Figure 5.5.2-3: Oregon Renewable Energy Projections



Regarding new power projects, Oregon electricity load has increased approximately 2 percent per year since 1990. If Oregon load continues to grow at the same pace of 2 percent per year until 2015, new renewable power generation will meet about 25 percent of load growth from 2002 to 2005 and 23 percent of load growth 2002 to 2015. PacifiCorp's January 24, 2003, Integrated Resource Plan indicates that significant amounts of wind power are cost-effective relative to gas-fired and coal-fired power. If this proves true, Oregon's use of renewable power will likely exceed these forecasts.

k. Future progress reports

Pursuant to 40 CFR 51.309(d)(8)(vi), the State of Oregon shall submit progress reports in 2008, 2013, and 2018, describing the state's contribution toward meeting the GCVTC renewable energy goals. Information consistent with 5.5.2.7.2(i) and 5.5.2.7.2(j) above, regarding further progress demonstrations, will be provided as part of a revised Oregon SIP in the years 2008, 2013, and 2018. To the extent that it is not feasible for Oregon to meet its contribution to these goals, Oregon shall identify what measures were implemented to achieve its contribution, and explain why meeting its contribution was not feasible.

5.5.2.8. Additional Grand Canyon Visibility Transport Commission Recommendations

5.5.2.8.1 Regulatory History and Requirements

The GCVTC's recommendations are found in the June 1996 final report *Recommendations for Improving Western Vistas*, on pages 28-65. Not all the recommendations were included in the Regional Haze Rule when it was adopted. Some of the recommendations were intended as a general list of options, with no expectation that any geographic area would implement all of them. The GCVTC pointed out in its' 1996 report that:

“Some of the Commission's recommendations ask the EPA to take specific **actions** or institute particular **programs**, in cooperation with the tribes, states and federal agencies as implementing bodies. Other recommendations provide a range of potential policy or strategy **options for consideration** by the EPA and implementing entities. As the EPA develops policies and takes actions based on this report, this distinction between "actions" and "options" should be maintained with diligence. That is, recommendations intended as policy options should not become mandated actions or regulatory programs.” [Bold emphasis in original.]

The Regional Haze Rule requires states to determine if any of the other GCVTC recommendations not originally included in Section 309 can be “practically” included in their regional haze SIP.⁵ These other recommendations included some suggested technical and administrative actions that may not be viable or appropriate for a state to address, such as regional haze impacts caused by international transport of emissions from Mexico and Canada. It does not require adoption of any control measures unless the state determines they are appropriate. States must conduct this evaluation and submit a report to EPA and the public again in 2008, 2013, and 2018, showing there has been an evaluation of these additional recommendations, and “progress toward developing and implementing policy or strategy options recommended in the Commission Report”.

5.5.2.8.2 Strategy for Implementing Additional GCVTC Recommendations

a. Evaluation of Additional Recommendations

Pursuant to 40 CFR 51.309(d)(9), the State of Oregon has evaluated the “additional” recommendations of the Grand Canyon Visibility Transport Commission, to determine if any of these recommendations can be practicably included in this implementation plan. Oregon reviewed the Commission's 1996 report *Recommendations for Improving Western Vistas*, Section III, pages 28-65, to identify those recommendations that were not incorporated into Section 309 of the Regional Haze Rule. This evaluation is described in a report entitled *2003 Progress Report on Implementation of Additional Recommendations of the Grand Canyon*

⁵ It should be noted neither the regulatory language nor the preamble of the Regional Haze Rule identify these additional recommendations.

Visibility Transport Commission, Oregon Department of Environmental Quality. This progress report is provided in Appendix D8-7 of this implementation plan.

b. Implementation of Additional Recommendations

Based on the evaluation made by the State of Oregon, as described in *Progress Report on Implementation of Additional Recommendations of the Grand Canyon Visibility Transport Commission, Oregon Department of Environmental Quality*, no additional measures have been identified as being practicable or necessary to demonstrate reasonable progress.

However, it should be noted that there are several on-going emission reduction programs being implemented in Oregon that likely have regional haze benefits. These include: (1) emission growth limits within urban areas under the Plant Site Emission Limitation rules; (2) attainment and maintenance plans for communities that do not meet National Ambient Air Quality Standards; (3) specific emission standards for numerous industrial sources, such as waste incinerators, pulp mills, board product industries, etc.; (4) motor vehicle inspection and maintenance programs; (5) open burning rules; and (6) residential woodstove requirements. In addition, the provisions of the Intergovernmental Review (A-95) Process give the Department the opportunity to review proposed federal projects to ensure that environmental (e.g. visibility) impacts will not occur.

c. Future progress reports

Pursuant to 40 CFR 51.309(d)(9), the state of Oregon shall provide a progress report in 2008, 2013, and 2018 that contains an evaluation in accordance with sections (a) and (b) above. This progress report will be concurrent with the periodic implementation plan revisions required under 40 CFR 51.309(d)(10).

5.5.2.9 Projection of Visibility Improvement from Section 309 Control Strategies

5.5.2.9.1 Regulatory History and Requirements

The Regional Haze Rule requires a projection of visibility improvement for the 16 Class I areas of the Colorado Plateau, based on application of the strategies required under Section 309. The projection of visibility improvement needs to show the improvement in visibility from 1996 (the baseline year) to 2018, for the best and worst 20% days.

The WRAP has performed extensive analysis and modeling in order to determine the impact of the 309 strategies on regional haze in the 16 Class I areas of the Colorado Plateau. This work was performed by several contractors under the direction of various technical and policy forums of the WRAP. This work began with development of a comprehensive emissions inventory throughout the region for all categories of sources. In addition, econometric models and new technology profiles were used to project changes in those emissions over time expected from implementation of current requirements under the CAA, and programs contained in the long-term strategy for regional haze. The WRAP Regional Modeling Center used the CMAQ model to project aerosol concentrations and visibility at each of the 16 Class I areas based on these emission inventories.

5.5.2.9.2 Projected Visibility Improvement

a. Emission Inventory Methodology and Scope

The WRAP emission inventories used for the projection of visibility included the following pollutants:

- Volatile Organic Compounds (VOCs)
- Oxides of Nitrogen (NO_x)
- Carbon Monoxide (CO)
- Sulfur Dioxide (SO₂)
- Particulate Matter smaller than 10 microns (PM₁₀)
- Particulate Matter smaller than 2.5 microns (PM_{2.5})
- Ammonia (NH₃)

The geographic domain for the inventory included the 22 states west of the Mississippi River, and portions of Mexico and Canada. A detailed base year emission inventory was developed for 1996 and included emissions from all of the following categories of sources:

- Stationary Point Sources
- Mobile Sources
- Area Sources
- Biogenic Sources

In addition, a projected emission inventory for the year 2018 was developed from the base 1996 inventory and other information related to growth and technology issues. A detailed discussion of the emission inventories and projections is contained at the beginning of Chapter 1 of the WRAP TSD.

Projected Changes in Emissions for 9 GCVTC States

Table 5.5.2-14 shows the emissions change projected from 1996 to 2018 for the nine GCVTC states, including Oregon. Emissions of sulfur dioxide are expected to decrease by 22% by 2018. This reduction is due primarily to the regional strategy for stationary sources of sulfur dioxide described in Section 5.5.2.3. Also, emissions of nitrogen oxides and volatile organic compounds are expected to decline by 32% and 30%, respectively, due to the implementation of new federal engine standards and fuel standards, as described in the Mobile Source Strategy in Section 5.5.2.4.2.

Table 5.5.2-14: Summary of Expected Emissions Changes from 1996 to 2018 for the Nine GCVTC States (in 000's per year)

Year	VOC	NOx	SO ₂	PM2.5*	CM
1996	3,325.3	3,952.1	1,036.3	1,196.7	1,170.6
2018**	2,339.2	2,691.8	808.9	1,228.3	1,198.4
% Change	-30%	-32%	-22%	3%	2%

*PM2.5 includes organic carbon, elemental carbon, and fine soils/dusts.

**2018 represents application of Section 309 regional haze strategies and programs

b. Projected Changes in Visibility

This projection of visibility improvement covers the 16 Class I areas of the Colorado Plateau, as defined in 40 CFR 51.309(b)(1).

Pursuant to 40 CFR 51.309(d)(2), Tables 5.5.2-15 and 5.5.2-16 below indicate the projected visibility improvement in deciviews for each of the 16 Class I areas, from the baseline year of 1996 through December 31, 2018. This projection was made for the 20% worst days and 20% best days, and is expressed in deciview (dV). The technical work was conducted by the WRAP, which evaluated the visibility improvements resulting from the application of the regional haze control strategies and programs. Chapter 2 and Appendix A of the WRAP TSD describes the control strategies and programs modeled for improvement of visibility by 2018. Appendix D8-8 of this implementation plan contains the technical information from Chapter 2 of the WRAP TSD.

Table 5.5.2-15: Projected Visibility Improvement at the 16 Colorado Plateau Class I Areas in 2018 on the Average 20% Worst Days, resulting from implementation of “All §309 Control Strategies”.

		Modeling Results Deciviews			
Colorado Plateau Class I Area	State	<u>1997-2001 Monitoring Data</u> (20% Worst Days' Visibility - deciviews)	<u>2018 Base Case</u> (20% Worst Days' Visibility for all controls “on the books” as of 2002)	<u>2018 Scenario 1</u> (20% Worst Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Base Smoke Management)	<u>2018 Scenario 2</u> (20% Worst Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Optimal Smoke Management)
Grand Canyon National Park	AZ	12.30	11.62	11.56	11.51
Mount Baldy Wilderness	AZ	14.30	12.22	12.02	11.96
Petrified Forest National Park	AZ	13.00	11.99	11.82	11.74
Sycamore Canyon Wilderness	AZ	15.40	11.63	11.51	11.48
Black Canyon of the Gunnison NP Wilderness	CO	11.30	10.90	10.76	10.60
Flat Tops Wilderness	CO	10.50	11.04	10.91	10.73
Maroon Bells Wilderness	CO	10.60	11.15	10.00	10.84
Mesa Verde National Park	CO	13.10	12.24	12.03	11.84
Weminuche Wilderness	CO	10.60	11.19	10.99	10.84
West Elk Wilderness	CO	11.30	11.08	10.89	10.72
San Pedro Parks Wilderness	NM	10.70	12.33	12.12	11.71
Arches National Park	UT	12.10	12.41	12.29	12.15
Bryce Canyon National Park	UT	11.80	12.26	12.24	11.95
Canyonlands National Park	UT	12.10	12.41	12.31	12.18
Capital Reef National Park	UT	12.10	12.51	12.49	12.36
Zion National Park	UT	13.60	12.13	12.09	12.03

Table 5.5.2-16: Projected Visibility Improvement at the 16 Colorado Plateau Class I Areas in 2018, on the Average 20% Best Visibility Days, resulting from implementation of “All §309 Control Strategies”.

Colorado Plateau Class I Area	State	Modeling Results (deciviews)			
		<u>1997-2001 Monitoring Data</u> (20% Best Days' Visibility - deciviews)	<u>2018 Base Case</u> (20% Best Days' Visibility for all controls “on the books” as of 2002)	<u>2018 Scenario 1</u> (20% Best Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Base Smoke Management)	<u>2018 Scenario 2</u> (20% Best Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Optimal Smoke Management)
Grand Canyon National Park	AZ	4.80	4.76	4.72	4.64
Mount Baldy Wilderness	AZ	5.50	5.49	5.46	5.36
Petrified Forest National Park	AZ	6.50	5.18	5.14	5.10
Sycamore Canyon Wilderness	AZ	6.30	4.85	4.82	4.75
Black Canyon of the Gunnison NP Wilderness	CO	4.60	3.89	3.83	3.75
Flat Tops Wilderness	CO	3.10	3.96	3.90	3.81
Maroon Bells Wilderness	CO	3.10	3.90	3.85	3.80
Mesa Verde National Park	CO	5.50	4.40	4.38	4.33
Weminuche Wilderness	CO	3.10	3.89	3.83	3.74
West Elk Wilderness	CO	4.60	3.97	3.92	3.82
San Pedro Parks Wilderness	NM	4.00	5.59	5.51	5.36
Arches National Park	UT	5.50	4.85	4.72	4.61
Bryce Canyon National Park	UT	4.30	3.91	3.92	3.89
Canyonlands National Park	UT	5.60	4.87	4.76	4.67
Capital Reef National Park	UT	5.60	4.85	4.85	4.75
Zion National Park	UT	5.90	3.81	3.79	3.75

5.5.2.10 Periodic Implementation Plan Revisions

5.5.2.11.1 Regulatory History and Requirements

The Regional Haze Rule requires states to submit progress reports in the form of SIP revisions in 2008, 2013 and 2018. The SIP revisions must comply with the procedural requirements of 40 CFR 51.102 for public hearings and 51.103 for submission of plans.

5.5.2.10.2 Periodic Progress Reports for demonstrating Reasonable Progress

Pursuant to 40 CFR 51.309(d)(10)(i), the State of Oregon shall submit to EPA, as a SIP revision, periodic progress reports for the years 2008, 2013, and 2018 for the purpose of demonstrating reasonable progress in Class I areas within Oregon, and Class I areas outside Oregon that are affected by emissions from Oregon. This demonstration may be conducted by the WRAP, with assistance from Oregon, and shall address the elements listed under 40 CFR 51.309(d)(10)(i)(A) through (G), as summarized below:

1. Implementation status of 2003 SIP measures;
2. Summary of emissions reductions;
3. Assessment of most/least impaired days;
4. Analysis of emission reductions by pollutant;
5. Significant changes in anthropogenic emissions;
6. Assessment of 2003 SIP sufficiency; and
7. Assessment of visibility monitoring strategy.

5.5.2.10.3 Actions to be taken concurrent with Periodic Progress Reports

Pursuant to 40 CFR 51.309(d)(10)(ii), the State of Oregon shall take one of the following actions based upon information contained in each periodic progress report:

- (1) Provide a negative declaration statement to EPA saying that no implementation plan revision is needed if reasonable progress is being made, in accordance with section 5.5.2.10.2 above;
- (2) If the state finds that the implementation plan is inadequate to ensure reasonable progress due to emissions from outside the state, Oregon shall notify EPA and the other contributing state(s), and initiate efforts through a regional planning process to address the emissions in question. The State of Oregon shall identify in the next progress report the outcome of this regional planning effort, including any additional strategies that were developed to address the plan's deficiencies;
- (3) If the state finds that the implementation plan is inadequate to ensure reasonable progress due to emissions from another country, Oregon shall notify EPA and provide information on the impairment being caused by these emissions; or

- (4) If the state finds that the implementation plan is inadequate to ensure reasonable progress due to emissions from within Oregon, Oregon shall develop additional strategies to address the plan deficiencies and revise the implementation plan no later than one year from the date that the progress report was due.

5.5.2.11 State Planning/Interstate Coordination and Tribal Implementation

5.5.2.11.1 Regulatory History and Requirements

The Regional Haze rule allows States to participate in regional planning efforts, such as the Western Regional Air Partnership, in developing their 309 SIPs. The interstate strategies that are developed need to document each state's contribution to visibility impairment to the 16 Class I areas, how coordination between state plans will be accomplished, and how compliance will be determined. It also allows states to develop their own programs without relying on a regional entity like the WRAP.

The Rule also clarifies that all tribes within transport region have the option to implement Section 309, not just those who were originally members of the GCVTC. The Tribal Authority Rule (40 CFR part 49) gives tribes in the transport region the option of implementing 51.308 or 51.309.

5.5.2.11.2 Participation in Regional Planning and Coordination

Pursuant to 40 CFR 51.309(d)(11), the State of Oregon has participated in regional planning and coordination with other states in developing its emission reduction strategies under 40 CFR 51.309, related to protecting the 16 Class I areas of the Colorado Plateau. This participation was through the Western Regional Air Partnership.

5.5.2.11.3 Applicability to Tribal Lands

Pursuant to 40 CFR 51.309(d)(12), and in accordance with the Tribal Authority Rule, the Tribe whose lands are located in Oregon have the option to develop a regional haze TIP for their lands to assure reasonable progress in the 16 Class I areas of the Colorado Plateau. As such, no provisions of this chapter of the implementation plan shall be construed as being applicable to tribal lands.

5.5.2.12 Declaration for “Other” Class I Areas

5.5.2.12.1 Regulatory History and Requirements

Section 309 (a) of the Regional Haze Rule requires that the first SIP due in December 2003 address the 16 Class I areas of the Colorado Plateau. The “other” Class I areas within the nine transport region states do not need to be addressed until the 2008 SIP submittal. Section 51.309(g)(1) requires each 309 State make a declaration as to whether it will address other Class I areas within the state under Section 308 or 309.

5.5.2.12.1 308/309 Declaration

Pursuant to 40 CFR 51.309(g)(1), the State of Oregon declares it will follow Section 309(g)(2) and (3) in developing an implementation plan for the 12 Class I areas in Oregon, to be submitted by December 31, 2008. These Class I areas are as follows:

1. Mt. Hood Wilderness Area
2. Mt. Jefferson Wilderness Area
3. Mt. Washington Wilderness Area
4. Three Sisters Wilderness Area
5. Diamond Peak Wilderness Area
6. Crater Lake National Park
7. Mountain Lakes Wilderness Area
8. Gearhart Mountain Wilderness Area
9. Kalmiopsis Wilderness Area
10. Strawberry Mountain Wilderness Area
11. Eagle Cap Wilderness Area
12. Hells Canyon Wilderness Area

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-1
Regional Haze Definitions

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-1 Regional Haze Definitions

The following definitions apply to this implementation plan, and can be separated into four categories: (A) general definitions from Section 301(40 CFR 51.301) related to visibility, some of which were added or revised upon adoption of the Regional Haze Rule in 1999; (B) general definitions from Section 309 (40 CFR 51.309) that apply to that section only; (C) specific definitions related to the requirements for stationary sources, under Section 5.5.2.3 of this implementation plan; and (D) specific definitions for the fire program strategy, under Section 5.5.2.5 of this implementation plan.

A. General Definitions from Section 301 related to Visibility:

1. **BART-eligible source** means an existing stationary facility as defined in this section.
2. **Best Available Retrofit Technology (BART)** means an emission limitation based on the degree of reduction achievable through the application of the best system of continuous emission reduction for each pollutant, which is emitted by an existing stationary facility. The emission limitation must be established, on a case-by-case basis, taking into consideration the technology available, the costs of compliance, the energy and non-air quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.
3. **Deciview** means a measurement of visibility impairment. A deciview is a haze index derived from calculated light extinction, such that uniform changes in haziness correspond to uniform incremental changes in perception across the entire range of conditions, from pristine to highly impaired. The deciview haze index is calculated based on the following equation (for the purposes of calculating deciview, the atmospheric light extinction coefficient must be calculated from aerosol measurements):

$$\text{Deciview haze index} = 10 \ln_e (b_{\text{ext}}/10 \text{ Mm}^{-1}).$$

Where b_{ext} = the atmospheric light extinction coefficient, expressed in inverse megameters (Mm^{-1}).

4. **Existing stationary facility** means any of the following stationary sources of air pollutants, including any reconstructed source, which was not in operation prior to August 7, 1962, and was in existence on August 7, 1977, and has the potential to emit 250 tons per year or more of any air pollutant. In determining potential to emit, fugitive emissions, to the extent quantifiable, must be counted.

Fossil-fuel fired steam electric plants of more than 250 million British thermal units per hour heat input,
Coal cleaning plants (thermal dryers),

Kraft pulp mills,
Portland cement plants,
Primary zinc smelters,
Iron and steel mill plants,
Primary aluminum ore reduction plants,
Primary copper smelters,
Municipal incinerators capable of charging more than 250 tons of refuse per day,
Hydrofluoric, sulfuric, and nitric acid plants,
Petroleum refineries,
Lime plants,
Phosphate rock processing plants,
Coke oven batteries,
Sulfur recovery plants,
Carbon black plants (furnace process),
Primary lead smelters,
Fuel conversion plants,
Sintering plants,
Secondary metal production facilities,
Chemical process plants,
Fossil-fuel boilers of more than 250 million British thermal units per hour heat input,
Petroleum storage and transfer facilities with a capacity exceeding 300,000 barrels,
Taconite ore processing facilities,
Glass fiber processing plants, and
Charcoal production facilities.

5. **Federal Class I area** means any Federal land that is classified or reclassified Class I.
6. **Federal Land Manager** means the Secretary of the department with authority over the Federal Class I area (or the Secretary's designee) or, with respect to Roosevelt-Campobello International Park, the Chairman of the Roosevelt-Campobello International Park Commission.
7. **Federally enforceable** means all limitations and conditions which are enforceable by the Administrator under the Clean Air Act including those requirements developed pursuant to 40 CFR Parts 60 and 61, requirements within any applicable State Implementation Plan, and any permit requirements established pursuant to 40 CFR 52.21 of this chapter or under regulations approved pursuant to CFR Parts 51, 52, or 60.
8. **Implementation plan** means, for the purposes of this part, any State Implementation Plan, Federal Implementation Plan, or Tribal Implementation Plan.
9. **Indian tribe or tribe** means any Indian tribe, band, nation, or other organized group or community, including any Alaska Native village, which is federally recognized as

eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

10. ***In existence*** means that the owner or operator has obtained all necessary preconstruction approvals or permits required by Federal, State, or local air pollution emissions and air quality laws or regulations and either has (1) begun, or caused to begin, a continuous program of physical on-site construction of the facility or (2) entered into binding agreements or contractual obligations, which cannot be cancelled or modified without substantial loss to the owner or operator, to undertake a program of construction of the facility to be completed in a reasonable time.
11. ***Least impaired days*** means the average visibility impairment (measured in deciviews) for the twenty percent of monitored days in a calendar year with the lowest amount of visibility impairment.
12. ***Major stationary source and major modification*** mean major stationary source and major modification, respectively, as defined in 40 CFR 51.166.
13. ***Mandatory Class I Federal Area*** means any area identified in 40 CFR Part 81, Subpart D.
14. ***Most impaired days*** means the average visibility impairment (measured in deciviews) for the twenty percent of monitored days in a calendar year with the highest amount of visibility impairment.
15. ***Natural conditions*** includes naturally occurring phenomena that reduce visibility as measured in terms of light extinction, visual range, contrast, or coloration.
16. ***Potential to emit*** means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. Secondary emissions do not count in determining the potential to emit of a stationary source.
17. ***Reasonably attributable*** means attributable by visual observation or any other technique the state deems appropriate.
18. ***Reasonably attributable visibility impairment*** means visibility impairment that is caused by the emission of air pollutants from one, or a small number of sources.
19. ***Regional haze*** means visibility impairment that is caused by the emission of air pollutants from numerous sources located over a wide geographic area. Such sources include, but are not limited to, major and minor stationary sources, mobile sources, and area sources.

20. *State* means "State" as defined in section 302(d) of the CAA.
21. *Stationary Source* means any building, structure, facility, or installation, which emits or may emit any air pollutant.
22. *Visibility impairment* means any humanly perceptible change in visibility (light extinction, visual range, contrast, coloration) from that which would have existed under natural conditions.

B. Definitions from Section 309 related to Regional Haze:

1. *16 Class I areas* means the following mandatory Class I Federal areas on the Colorado Plateau: Grand Canyon National Park, Sycamore Canyon Wilderness, Petrified Forest National Park, Mount Baldy Wilderness, San Pedro Parks Wilderness, Mesa Verde National Park, Weminuche Wilderness, Black Canyon of the Gunnison Wilderness, West Elk Wilderness, Maroon Bells Wilderness, Flat Tops Wilderness, Arches National Park, Canyonlands National Park, Capital Reef National Park, Bryce Canyon National Park, and Zion National Park.
2. *Transport Region State* means one of the States that is included within the Transport Region addressed by the Grand Canyon Visibility Transport Commission (Arizona, California, Colorado, Idaho, Nevada, New Mexico, Oregon, Utah, and Wyoming).
3. *Commission Report* means the report of the Grand Canyon Visibility Transport Commission entitled "Recommendations for Improving Western Vistas," dated June 10, 1996.
4. *Fire* means wildfire, wildland fire (including prescribed natural fire), prescribed fire, and agricultural burning conducted and occurring on Federal, State, and private wildlands and farmlands.
5. *Milestone* means the maximum level of annual regional sulfur dioxide emissions for a given year, assessed annually consistent with paragraph (h)(2) of this section beginning in the year 2003.
6. *Mobile Source Emission Budget* means the lowest level of VOC, NO_x, SO₂, elemental and organic carbon, and fine particles which are projected to occur in any area within the transport region from which mobile source emissions are determined to contribute significantly to visibility impairment in any of the 16 Class I areas.
7. *Geographic enhancement* means a method, procedure, or process to allow a broad regional strategy, such as a milestone or backstop market trading program designed to achieve greater reasonable progress than BART for regional haze, to accommodate BART for reasonably attributable impairment.

8. ***BHP San Manuel*** means: (i) The copper smelter located in San Manuel, Arizona which operated during 1990, but whose operations were suspended during the year 2000, (ii) The same smelter in the event of a change of name or ownership.
9. ***Phelps Dodge Hidalgo*** means: (i) The copper smelter located in Hidalgo, New Mexico which operated during 1990, but whose operations were suspended during the year 2000, (ii) The same smelter in the event of a change of name or ownership.

C. Definitions for the Sulfur Dioxide Milestones and Backstop Trading Program in Section 5.5.2.3 of this plan.

1. ***Account Certificate of Representation*** means the completed and signed submission required to designate an Account Representative for a WEB source or an Account Representative for a general account.
2. ***Account Representative*** means the individual who is authorized through an Account Certificate of Representation to represent owners and operators of the WEB source with regard to matters under the WEB Trading Program or, for a general account, who is authorized through an Account Certificate of Representation to represent the persons having an ownership interest in allowances in the general account with regard to matters concerning the general account.
3. ***Act*** means the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.*
4. ***Actual Emissions*** means total annual SO₂ emissions as reported to the executive secretary in accordance with the requirements OAR 340-214-0400 through 340-214-0430, as applicable.
5. ***Allocate*** means to assign allowances to a WEB source in accordance with Sections 5.9.2.3.3.a. through 5.5.2.3.3.e of this plan.
6. ***Allowance*** means the limited authorization under the WEB Trading Program to emit one ton of SO₂ during a specified control period or any control period thereafter subject to the terms and conditions for use of unused allowances as established by OAR 340-228-0400 through 340-228-0530.
7. ***Allowance limitation*** means the tonnage of SO₂ emissions authorized by the allowances available for compliance deduction for a WEB source for a control period under OAR 340-228-0510(1) on the allowance transfer deadline for that control period.
8. ***Allowance Tracking System*** means the system where allowances under the WEB Trading Program are recorded, held, transferred and deducted.
9. ***Allowance Tracking System account*** means an account in the Allowance Tracking System established for purposes of recording, holding, transferring, and deducting allowances.

10. **Compliance account** means an account established in the Allowance Tracking System under OAR 340-228-0470(1) for the purpose of recording allowances that a WEB source might hold to demonstrate compliance with its allowance limitation.
11. **Control period** means the period beginning January 1 of each year and ending on December 31 of the same year, inclusive.
12. **Emissions tracking database** means the central database where SO₂ emissions for WEB sources as recorded and reported in accordance with OAR 340-228-0400 through 340-228-0530 are tracked to determine compliance with allowance limitations.
13. **Emission Unit** means any part of a stationary source, which emits or has the potential to emit any pollutant subject to regulation under the Clean Air Act.
14. **EPA Administrator** means the Administrator of the United States Environmental Protection Agency or the Administrator's duly authorized representative.
15. **Existing source** means a stationary source that commenced operation before the Program Trigger Date.
16. **Floor allocation** means the amount of allowances set by the executive secretary in accordance with this Plan that represents the minimum necessary for a source to operate under stringent control assumptions.
17. **General account** means an account established in the Allowance Tracking System under OAR 340-228-0470 for the purpose of recording allowances held by a person that are not to be used to show compliance with an allowance limitation.
18. **Milestone** means the maximum level of stationary source regional sulfur dioxide emissions for each year from 2003 to 2018, established according to the procedures in Section 5.5.2.3.1 of this plan.
19. **New WEB Source** means a WEB source that commenced operation on or after the Program Trigger Date.
20. **New Source Set-aside** means a pool of allowances that are available for allocation to new WEB sources and modified WEB sources that have increased capacity in accordance with the provisions of Section 5.5.2.3.3.c of this plan.
21. **Opt-in** means to choose to participate in the WEB Trading Program by following the procedures in OAR 340-228-0430(4) and to comply with the terms and conditions of the OAR 340-228-0400 through 340-228-0530.

22. **Program Trigger Date** means the date that the executive secretary determines that the WEB Trading Program has been triggered in accordance with the provisions of Section 5.5.2.3.1.b of this plan.
23. **Reducible allocation** means the amount of allowances set by the executive secretary in accordance with Section 5.5.2.3.3.a(2)(i) of this plan that represents, for each source, emissions in excess of the floor allocation that shall be reduced over time as the regional milestone is decreased.
24. **Renewable Energy Facility** means a facility that generates electricity by non-nuclear and non-fossil technologies that results in low or no air emissions. The term includes electricity generated by wind energy technologies; solar photovoltaic and solar thermal technologies; geothermal technologies; technologies based on landfill gas and biomass sources, and new low-impact hydropower that meets the Low-Impact Hydropower Institute criteria. Biomass includes agricultural, food and wood wastes. For the purposes of this Plan, a renewable energy facility does not include pumped storage or biomass from municipal solid waste, black liquor, or treated wood.
25. **Retired source** means a WEB source that has received a retired source exemption as provided in OAR 340-228-0430(5).
26. **Stationary source** means any building, structure, facility or installation that emits or may emit any air pollutant subject to regulation under the Clean Air Act.
27. **Ton** means 2000 pounds and, for any control period, any fraction of a ton equaling 1000 pounds or more shall be treated as one ton and any fraction of a ton equaling less than 1000 pounds shall be treated as zero tons.
28. **Tracking System Administrator** means the person designated by the executive secretary as the administrator of the WEB Allowance Tracking System and the emission tracking database.
29. **Tribal Set-Aside** means a 20,000-ton SO₂ WEB allowance allocated to tribes on an annual basis. The tribes will decide how to distribute the allowances in the set-aside among tribes in the region. The set-aside is intended to ensure equitable treatment for tribal economies and to prevent barriers to economic development.
30. **Trigger** refers to the activation of the WEB Trading Program for SO₂ in accordance with Section 5.5.2.3.1 of this plan.
31. **WEB source** means a stationary source that meets the applicability requirements of OAR 340-228-0430.
32. **WEB Trading Program** refers to the Western Backstop (WEB) Trading Program Rule, OAR 340-228-0400 through 340-228-0530, that shall be triggered as a backstop in

accordance the provisions in Section 5.5.2.3.1 of this plan to ensure that regional SO₂ emissions are reduced.

33. ***Western Regional Air Partnership (WRAP)*** means the collaborative effort of tribal governments, state governments, and federal agencies to promote and monitor implementation of recommendations from the Grand Canyon Visibility Transport Commission authorized under Section 169B(f) of the Clean Air Act, and to address other common Western regional air quality issues.

D. Definitions for the Fire Program Strategy in Section 5.5.2.5 of this plan.

1. ***Fire*** means any wildfire, wildland fire, prescribed fire, and agricultural burning that is conducted on Federal, State, and private wildlands and farmlands. Except where “prescribed fire” is noted, the term “fire” shall apply to the sources identified herein.
2. ***Land Manager*** means any federal, state, local, or private entity that owns, administers, directs, oversees or controls the use of public or private land, including the application of fire to the land.
3. ***Prescribed fire*** or ***prescribed burn*** means any fire ignited by management actions to meet specific objectives, such as achieving resource benefits.
4. ***Wildland Fire Used for Resource Benefits*** means naturally ignited wildland fire that is managed to accomplish specific pre-stated resource management objectives in predefined geographic areas.

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Appendix D8-2
Clean Air Corridor Strategy
Support Analysis

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-2 Clean Air Corridor Strategy Support Analysis

As described in Section 5.5.2.1 of this implementation plan, the identification of the Clean Air Corridor (see Figure 5.5.2.1) and the information related to patterns of growth inside and outside the Clean Air Corridor, is based on Chapter 3 of the WRAP TSD, and the *WRAP Policy on Clean Air Corridors*.

This appendix contains two elements. The first is a description of the Emissions Data Management System (EDMS), from Chapter 3 of the WRAP TSD, that the WRAP will use to track emissions within the Clean Air Corridor, in accordance with the requirement in 51.309(d)(3) for comprehensive emissions tracking. As specified in Section 5.5.2.1.3, Oregon will provide annual emission inventory data for use in the WRAP EDMS. The second is the *WRAP Policy on Clean Air Corridors* that supports the Clean Air Corridor identified in Figure 5.5.2-1 and the strategy elements identified in Section 5.5.2.3 of this implementation plan.

1. Description of WRAP Emission Data Management System (EDMS) (from Chapter 3 of the WRAP TSD).

Emissions tracking for CAC using the WRAP Emissions Data Management System

The preamble of the Regional Haze Rule defines a CAC as “a region that generally brings clean air to a receptor region”, and also says, “the requirement to track emissions will enable states to quickly determine if changes in patterns of emissions will reduce the number of clean air days (defined as the average of the 20% clearest days) in any of the 16 Class I areas.” The actual requirements state that the §309 SIP or TIP must describe and provide for implementation of comprehensive emission tracking strategies for CAC to ensure that the visibility does not degrade on the least-impaired days at any of the 16 Class I areas.

Using the most recent emission inventory data available through the Emissions Data Management System (EDMS), WRAP will produce a report for each five-year implementation plan revision (2007-8, 2013, and 2018) on the current and projected emissions in the CAC and in areas surrounding the corridor and compare these emissions to a 1996 baseline, as part of a larger source apportionment exercise managed by the Technical Oversight Committee (described in the next section).

The EDMS will have the capability to produce the following special reports in tabular and simple plots (i.e. bar graph and pie chart) formats and allow queries of the same information including presentation in GIS format, in addition to the standard reports:

- A summary report of the annual summed total emissions for all six source categories and all of the pollutants by county/state and tribal lands, as well as for the entire CAC.
- A summary report of the annual summed total emissions for all six source categories and all of the pollutants for the same types of political boundaries surrounding the CAC.

- A summary report of the comparison of the annual summed total emissions for all six source categories and all of the pollutants for the same types of political boundaries, as well as the entire CAC and the corresponding base year total emissions.

The EDMS to be developed is described in a draft technical report to the Emissions Forum: *Needs Assessment for Evaluation and Design of an Emissions Data Reporting, Management, and Tracking System*, (EA Engineering, Science, and Technology, June 26, 2003).

Process to analyze emissions growth in, and surrounding, the CAC

As part of the next round of analysis and preparation for regional haze SIPs due in 2007-08, the Technical Oversight Committee will be conducting 2 separate visibility source apportionment exercises (described in the WRAP 2003-08 Strategic Plan), integrating analytical results from aerosol and meteorological monitoring, air quality modeling, and preparation of emissions inventories. These source apportionment exercises will identify the source regions and categories causing visibility impairment at Class I areas. As part of those source apportionment exercises, the TOC will analyze the changes in emissions for the counties and tribal lands in the CAC, as well as those surrounding the CAC. Better emissions inventory data expected to be available each time, as the TOC iterates through these two exercises. Specific results from each of the source apportionment exercises will address emissions growth both inside and surrounding the CAC, as well as the impact on visibility at affected Class I areas.

2. WRAP Policy on Clean Air Corridors, approved by the WRAP Board, November 13, 2002.

I. Summary of WRAP Policy

1. Pursuant to 40 CFR 51.309(d)(3), the WRAP directs its Technical Oversight Committee (TOC) to track emissions and to describe the tracking process in such a way that can be included in state and tribal implementation plans. At a minimum, using the most recent state emission inventories available, the TOC should produce a report for each five-year implementation plan revision on the current and projected emissions in the clean air corridor and in areas outside the corridor and compare these emissions to a 1996 baseline for purposes of this section.
2. Pursuant to 40 CFR 51.309(d)(3)(i), the WRAP identifies one clean air corridor as shown in Figure 1. The counties within the corridor are listed in Table 1. For ease of administration, the corridor's boundary follows county lines.
3. Pursuant to 40 CFR 51.309(d)(3)(ii), the WRAP has examined patterns of growth in the corridor and finds that they are not causing significant emission increases that could have or are having visibility impacts at one or more of the 16 Class I areas. Nor, at this time, are such emission increases expected during the first planning period (2003-2018). Analyses performed by the Grand Canyon Visibility Transport Commission found that an increase of 25% in weighted emissions would result in a 0.7 dv reduction in visibility, whereas the weighted emission increase expected by 2018 is only 4%.

4. Pursuant to 40 CFR 51.309(d)(3)(iii), the WRAP has examined emissions growth in areas outside the corridor and finds that significant emissions growth is not occurring that could begin or is beginning to impair the quality of the air in the corridor and thereby lead to visibility degradation for the least impaired days in one or more of the 16 Class I areas.
5. Since impairment of air quality in clean air corridors has not been identified pursuant to 40 CFR 51.309(d)(3)(ii) and (iii), the WRAP finds no requirement under 40 CFR 51.309(d)(3)(iv) for further visibility impact analysis or additional emission reduction measures until at least the next SIP revision (2008). However, the WRAP encourages its appropriate technical activities – such as the Causes of Haze report – to take into account the assessment and protection of clean air corridors.
6. Pursuant to 40 CFR 51.309(d)(3)(v), the WRAP finds no other clean air corridors beyond the corridor identified in Figure 1.

II. Clean Air Corridors, the Clean Air Act, and the Regional Haze Rule

The Clean Air Act Amendments of 1990 specifically require that visibility transport commissions, including the Grand Canyon Visibility Transport Commission (“Commission”), address “the establishment of clean air corridors, in which additional restrictions on increases in emissions may be appropriate to protect visibility in affected Class I areas.”⁶ The Clean Air Act also requires protection of clean air corridors in a less direct way. The Act establishes as a national goal the prevention of any future impairment of visibility in mandatory Class I areas. As a measure of progress towards this goal, the U.S. Environmental Protection Agency (EPA) has established a criteria of no degradation on the 20% cleanest days. Such days on the Colorado Plateau are usually dominated by northwest winds, hence defining a corridor to the northwest that must be protected to meet the broader visibility goal of the Clean Air Act.

In its regional haze rule, the EPA provides more specificity on the requirements to protect clean air corridors, based largely on the recommendations of the Commission. The preamble of the rule defines a clean air corridor as “a region that generally brings clean air to a receptor region” The preamble also says, “the requirement to track emissions will enable states to quickly determine if changes in patterns of emissions will reduce the number of clean air days (defined as the average of the 20% clearest days) in any of the 16 Class I areas.” The actual requirements of the rule are found in 40 CFR 51.309(d)(3):

The [state implementation] plan must describe and provide for implementation of comprehensive emission tracking strategies for clean-air corridors to ensure that the visibility does not degrade on the least-impaired days at any of the 16 Class I areas. The strategy must include:

- (i) An identification of clean-air corridors. The EPA will evaluate the State’s identification of such corridors based upon the reports of the Commission’s Meteorology Subcommittee and any future updates by a successor organization.

⁶ 42 U.S.C. 2169B(d)(2)(A).

- (ii) Within areas that are clean-air corridors, an identification of patterns of growth or specific sites of growth that could cause, or are causing, significant emissions increases that could have, or are having, visibility impairment at one or more of the 16 Class I areas.
- (iii) In areas outside of clean-air corridors, an identification of significant emissions growth that could begin, or is beginning, to impair the quality of air in the corridor and thereby lead to visibility degradation for the least-impaired days in one or more of the 16 Class I areas.
- (iv) If impairment of air quality in clean air corridors is identified pursuant to §§51.309(d)(3)(ii) and (iii), an analysis of the effects of increased emissions, including provisions for the identification of the need for additional emission reductions measures, and implementation of the additional measures where necessary.
- (v) A determination of whether other clean air corridors exist for any of the 16 Class I areas. For any such clean air corridors, an identification of the necessary measures to protect against future degradation of air quality in any of the 16 Class I areas.

These requirements do not apply to states submitting state implementation plans (SIPs) under §308 of the rule. However, such states should provide the data necessary for other states to comply and should make a good faith effort to protect the integrity of clean air corridors.

III. The Commission's Findings and Recommendations

The Commission found that clean air corridors exist and that, generally, clean air comes to the Colorado Plateau from the northwest.⁷ The Commission determined that one such corridor covers southern Utah, eastern Oregon, southwestern Idaho, and major portions of Nevada. This corridor was identified by the Commission's Meteorology Subcommittee, which examined the size and boundaries of the corridor under varying assumptions about the number of days defined as clean and the amount of protection to be afforded.⁸

Related work by Green et. al.⁹ identifies three factors that explain why air from the northwest is clean when it arrives at the Colorado Plateau: low emissions of air pollutants, enhanced dispersion of the air pollutants due to higher average ventilation (wind speed multiplied by mixing depth), and increased removal of pollutants due to precipitation. Although the corridor is mostly arid, the cleanest days occur most frequently in the winter, when there is more precipitation than average. Green et al., nonetheless, conclude that the most important factor at the south rim of the Grand Canyon for most weather conditions is the low emissions of pollutants in the area to the northwest.

⁷ Grand Canyon Visibility Transport Commission. Recommendations for Improving Western Vistas. Western Governors' Association. Denver, CO. June 1996.

⁸ Meteorological Subcommittee, Grand Canyon Visibility Transport Commission. Clean Air Corridors: A Framework for Identifying Regions that Influence Clean Air on the Colorado Plateau. Denver, CO. August 1995.

⁹ Green, M. C.; Pitchford, M. L.; and Ashbaugh, L.L. Identification of Candidate Clean Air Corridors for the Colorado Plateau. J. Air & Waste Manage. Assoc. 1996. 46(5), 446.

In addition to identifying a clean air corridor, the Commission projected emissions growth within the corridor through 2040 and found that growth is not expected to have a perceptible negative impact on the cleanest days on the Colorado Plateau. Specifically, a working group within the Meteorology Subcommittee used results from the IAS model (the model used to project visibility impacts in other Commission work) to estimate the emissions increase from 1990 that would be necessary to cause a perceptible decrease in visibility on the Plateau.¹⁰ The working group found that increasing emissions by 25% within the corridor would result in an average change of 0.7 deciviews (dv), which would be imperceptible to most people under most conditions, while a 100% increase in emissions within the corridor would result in a change of 2.5 dv.¹¹ This estimate was not based on a specific boundary for the corridor but rather on the general understanding of a corridor to the northwest of the Plateau. The implication, nonetheless, is that a 25% increase in emissions within the corridor could be considered a level of growth that would not impact visibility.

Using one of the proposed corridor alignments examined by the Meteorology Subcommittee – a corridor that would protect the 30% cleanest days on the Colorado Plateau, adjusted to account for emissions density and IAS region boundaries – BBC Research & Consulting conducted an economic and demographic assessment of the corridor to determine whether emissions would increase 25% by 2040. The assessment found that emissions are not expected to increase 25% by 2040.¹² Specifically, BBC used a weighting scheme defined in the IAS model to account for the varying effects of different pollutants on visibility. Total weighted emissions of elemental carbon, nitrogen oxides, organic carbon, particulate matter, reactive organic gases, and sulfur oxides in 1990 were 52,073 VEEU tons.¹³ A 25% increase would yield 65,092 VEEU tons. BBC projected that emissions in the corridor would increase to 55,047 VEEU tons by 2040, thus leaving an ample margin of safety of 10,054 VEEU tons.¹⁴

As a result of these analyses, the Commission recommended that no targeted policies or regulatory programs to control emissions growth were needed at that time, but that a regional tracking and accounting system be implemented to make sure that the frequency of clear days does not decrease at the 16 Class I areas and that the Commission's assumptions about increased emissions are proven reliable. The Commission recommended that, within areas that are sources of clean air, the tracking and accounting system should identify patterns of growth that have a negative impact on visibility and that, in areas outside the clean air corridors, the tracking and accounting system should identify significant emissions growth that begins to impair the quality of air in the corridor.

¹⁰ Marc Pitchford. Oral communication. October 3, 2002. Participants on the working group included Dr. Pitchford, Dr. William Malm, and Dr. Ivar Tombach.

¹¹ BBC Research & Consulting, Inc., for the Operations Committee of the Grand Canyon Visibility Transport Commission. Clean Air Corridor: An Economic Perspective. Denver, CO. November 1995. Page III-2:6.

¹² BBC report, page III-5

¹³ Visibility Equivalency Emission Units

¹⁴ BBC report, page III-6.

IV. WRAP Policy

A. EMISSIONS TRACKING – §309(d)(3)

The WRAP directs its Technical Oversight Committee (TOC) to track emissions and to describe the tracking process in such a way that can be included in state and tribal implementation plans. At a minimum, using the most recent state emission inventories available, the TOC should produce a report for each five-year implementation plan revision on the current and projected emissions in the clean air corridor and in areas outside the corridor and compare these emissions to a 1996 baseline for purposes of this section.

The tracking described above is intended to ensure that any unexpected changes are identified. This tracking would coincide with the periodic SIP revisions required in 2008, 2013, and 2018. States and tribes already prepare inventories at least every three years to meet federal requirements and will prepare detailed inventories annually for sources of sulfur dioxide of 100 tons per year or greater for compliance with the stationary source provisions of §309.¹⁵ The WRAP will use these state and tribal data for tracking emissions in general and can summarize emissions for the counties and tribal lands within the corridor and for areas outside the corridor for use by states and tribes as they revise their regional haze SIPs every five years. Further information on tracking point sources and area sources is provided below.

POINT SOURCES. Any new, large source will be required to undergo a Prevention of Significant Deterioration review and an Air Quality Related Values analysis before receiving an air quality permit and will also be subject to New Source Performance Standards and other requirements, giving the public, states, tribes, and federal land managers ample opportunity to evaluate any possible visibility impacts on the 16 Class I areas. Thus, it is unlikely that point sources will lead to a 25% increase and even less likely that a trend in that direction would go unnoticed.

AREA AND MOBILE SOURCES. Population and economic growth is expected to be slow in the corridor, holding down emissions from area and mobile sources within the corridor. Federal standards recently promulgated for on-road sources and additional ones pending for non-road sources are expected to reduce emissions from both of these source categories during the first planning period of the implementation plans (2018). However, emissions from prescribed burning are expected to increase and, depending on the location of the burns, could affect visibility in the 16 Class I areas. It is hard to predict how great the effect will be on clean days, but it is not expected to be severe. For one, prescribed fires generally occur in the spring and fall, whereas most clear days occur in the winter. In addition, prescribed fires are much less intense than wild fires. Nonetheless, careful fire emissions tracking is warranted and is being developed under separate WRAP policy and technical efforts.

¹⁵ Also see Western Regional Air Partnership. Voluntary Emissions Reduction Program for Major Industrial Sources of Sulfur Dioxide in Nine Western States and a Backstop Market Trading Program, An Annex to the Report of the Grand Canyon Visibility Transport Commission. Denver, CO. September 29, 2000.

B. BOUNDARY OF THE CLEAN AIR CORRIDOR – §309(d)(3)(i)

The WRAP identifies one clean air corridor as shown in Figure 1. The counties within the corridor are listed in Table 1. For ease of administration, the corridor's boundary follows county lines.

The WRAP adopts this boundary based on a balancing of demographic, economic, and air quality impact analyses performed on this corridor and their subsequent review and consensus-based approval by the Commission. The boundary identified is a slight modification of the boundary defined in the BBC report described above. The grid cells in the air quality analyses did not follow state or county boundaries, and for ease of administration the WRAP has removed small areas of southern Washington and southwestern Montana from the corridor. These small areas are far from the Colorado Plateau and unlikely to affect the Class I areas on the Plateau. In contrast, counties have been added to the corridor that were not originally included in the boundary defined in the BBC report. These include Box Elder, Tooele, and Grand Counties in Utah, Wasco and Sherman Counties in Oregon, and Cassia and Lemhi Counties in Idaho.

C. IDENTIFICATION OF EMISSIONS INCREASES – §309(d)(3)(ii) and (iii)

Pursuant to 40 CFR 51.309(d)(3)(ii), the WRAP has examined patterns of growth in the corridor and finds that they are not causing significant emission increases that could have or are having visibility impacts at one or more of the 16 Class I areas. Nor, at this time, are such emission increases expected during the first planning period (2003-2018). Analyses performed by the Grand Canyon Visibility Transport Commission found that an increase of 25% in weighted emissions would result in a 0.7 dv reduction in visibility, whereas the weighted emission increase expected by 2018 is only 4%.

Patterns of growth in the corridor are first examined by comparing 1990 emissions (those used in the Commission's final report) to 1996 emissions (the most recent comprehensive data set). This comparison is not easily made because emissions were aggregated into different categories. Nonetheless, it appears that emissions in 1996 were only slightly higher than in 1990. In the clean air corridor 73,637 tons of SO₂ were emitted in 1990 and 73,756 were emitted in 1996; 232,704 tons of NO_x were emitted in 1990 and 256,762 were emitted in 1996. In addition, the WRAP examined data from IMPROVE monitors and found that none of the seven long-term sites showed any significant decrease in visibility on the cleanest days for the period from 1988 through 1998.¹⁶

The WRAP is recommending, as part of this policy, that future clean air corridor analyses use a baseline year of 1996 to quantify emission increases. The first reason for this recommendation is that the 1996 inventory has been more carefully assembled than the 1990 inventory. The second reason is that future inventories are more likely to be structured like the 1996 inventory, thereby facilitating comparison. In addition, the most recent and comprehensive projection of emissions (discussed below) is based on the 1996 inventory, not the 1990 inventory.

¹⁶ EPA. Visibility in Mandatory Federal Class I Areas (1994-1998), A Report to Congress. EPA-452/R-01-008.

The WRAP also examined emission projections. These are used as a means to identify potential future increases that should be more carefully tracked and to identify preventive measures that could be implemented in a timely fashion. Table 2 summarizes the projected change in emissions between 1996 and 2018. PM₁₀ and PM_{2.5} emissions are expected to increase about 7% and 18%, respectively. NO_x and VOC emissions, however, are expected to decrease about 15% and 26%, respectively. SO₂ emissions are expected to increase about 5% within the corridor, even with the declining milestones of the backstop emissions trading program. Overall, SO₂ emissions are expected to decline by 17% in the 13-state contiguous WRAP region by 2018,¹⁷ and the fact that the projections show a 5% increase in SO₂ within the clean air corridor is a result of non-road mobile sources using high-sulfur diesel fuel. This source of sulfur dioxide is expected to be drastically reduced (e.g., from a fuel sulfur content of 3,000 ppm to 15 ppm) before 2018 according to announcements by EPA to develop new engine certification and fuel standards for non-road vehicles and equipment. Thus, 5% should be viewed as an upper bound on the possible increase of SO₂.

Since different pollutants have different impacts on visibility, the WRAP estimated a weighted emissions increase according to the VEEU system used by the Commission. As shown in Table 3, the weighted increase is expected to be 4%, substantially less than the 25% increase thought to be necessary to achieve an impact that may be perceptible. It is also worth noting the safety margins included within this analysis – the fact that the BBC corridor protects 30% of the clean days, not 20%; the benefits of new non-road mobile source standards; and the uncertainty in where additional electricity generating capacity will be located.

Pursuant to 40 CFR 51.309(d)(3)(iii), the WRAP has examined emissions growth in areas outside the corridor and finds that significant emissions growth is not occurring that could begin or is beginning to impair the quality of the air in the corridor and thereby lead to visibility degradation for the least impaired days in one or more of the 16 Class I areas.

The WRAP sees two purposes for emissions tracking in areas outside the corridor: first, to determine if such emissions are degrading visibility in the corridor, which may potentially affect one or more of the 16 Class I areas; and second, to compensate for any uncertainties in establishing the boundary of the corridor, such as those relating to computed air mass trajectories or introduced by aligning the corridor with county boundaries. Again, SO₂ emissions are expected to decline throughout the WRAP region. Emissions of other pollutants are also expected to decline. All visibility-impairing pollutants from on-road mobile sources, with the exception of some minor ammonia emissions, are expected to decline substantially. And all visibility impairing pollutants from non-road mobile sources are expected to decline, especially in areas upwind of the corridor. This decline would be greatly enhanced if the EPA promulgates stricter standards for non-road engines and fuel, as it has announced to do. Also, NO_x and PM from existing stationary sources remains to be addressed in future implementation plans by 2008 under Sections 308 and 309 of the regional haze rule. Finally, all states will have to implement measures to achieve reasonable progress in other Class I areas by 2008. Such measures are

¹⁷ WRAP Emissions Inventory Forum. 2018-1996 Difference: Actual to Control Spreadsheet. WRAP Web Site. September 25, 2002.

likely to "overlap" the clean air corridor and areas outside the corridor in such a way that provide further protection to the 16 Class I areas on the 20% cleanest days.

D. IF IMPAIRMENT OF AIR QUALITY IN THE CORRIDOR IS IDENTIFIED – §309(d)(3)(iv)

Since impairment of air quality in clean air corridors has not been identified pursuant to 40 CFR 51.309(d)(3)(ii) and (iii), the WRAP finds no requirement under 40 CFR 51.309(d)(3)(iv) for further visibility impact analysis or additional emission reduction measures until at least the next SIP revision (2008). However, the WRAP encourages its appropriate technical activities – such as the Causes of Haze report – to take into account the assessment and protection of clean air corridors.

The rule specifies that if impairment of air quality in the clean air corridor is identified, the plan must include "an analysis of the effects of increased emissions, including provisions for the identification of the need for additional emission reduction measures, and implementation of the additional measures if necessary." For reasons stated above, the WRAP finds no need at this time for additional emission reduction measures.

The periodic WRAP inventories to be produced by the TOC, as instructed above, will identify growth in emissions, and the periodic updates to the WRAP Causes of Haze report will help identify any effect on visibility that may result from such emissions increases. Should any effects be identified, the WRAP will conduct an analysis to determine the sources of impairment within six months of completion of the inventory indicating the increase. Additional control measures that may be warranted would be developed within another six months. The criteria the states and tribes would follow in making this determination are (a) the location of the significant emissions growth, (b) type of source activity causing the emissions growth, and (c) the appropriate control measure for the source(s) based on feasibility, cost, and anticipated visibility benefits. Any necessary additional control measures would be added in the next five-year SIP revision.

E. DO OTHER CORRIDORS EXIST? – §309(d)(3)(v)

The WRAP finds no other clean air corridors beyond the corridor identified in Figure 1.

The regional haze rule requires that implementation plans identify whether any other clean air corridors exist for any of the 16 Class I areas. The WRAP finds no such areas other than the corridor to the northwest of the Colorado Plateau identified in Figure 1. The WRAP recognizes, however, that additional work to identify clean air corridors may be needed. For example, several monitors have recently been installed at Class I areas on the Plateau which were not previously monitored. These may generate a slightly different set of 20% cleanest days and a slightly different set of back trajectories on those days, especially at sites furthest to the north and east. This may result in a broader or separate corridor. Such analysis should be performed when sufficient data are available. Adequate monitoring data could be available by 2004, and analysis of those data could be published by the WRAP as part of its Causes of Haze report.

V. Conclusion

The bottom line is that, while the area to the northwest of the Colorado Plateau delivers clean air to the Plateau on the cleanest days, emissions from throughout much of the region affect the Class I areas on the Plateau. Thus, emissions throughout the WRAP region will be tracked carefully. Ongoing WRAP efforts to improve the quality of inventories and the models used to make projections, and to produce a periodic Causes of Haze report, will bring increased understanding of the role that clean air corridors play in protecting the cleanest days. In the final analysis, the indicator of success or failure will be whether the measured light extinction at the Class I areas on the Colorado Plateau improves or declines on the cleanest days. Any indication of deterioration on the cleanest days should trigger an immediate investigation of the cause, as well as efforts to correct the problem.

Figure 1. Clean Air Corridor Endorsed by the WRAP

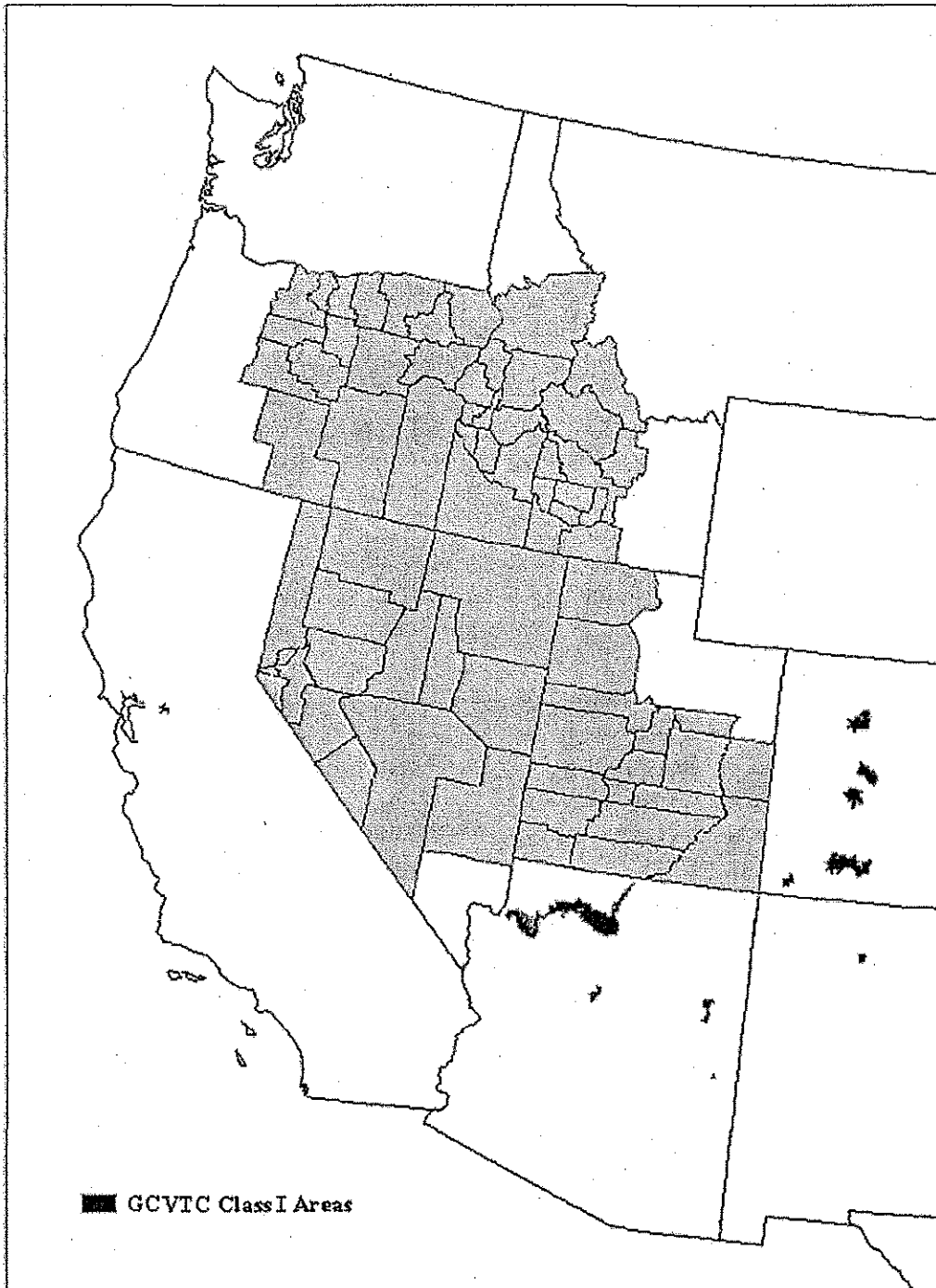


Table 1. Counties Within the Clean Air Corridor Endorsed by the WRAP.

<u>State</u>	<u>County</u>	<u>State</u>	<u>County</u>
Idaho	Ada	Oregon	Grant
Idaho	Adams	Oregon	Harney
Idaho	Blaine	Oregon	Jefferson
Idaho	Boise	Oregon	Lake
Idaho	Butte	Oregon	Malheur
Idaho	Camas	Oregon	Morrow
Idaho	Canyon	Oregon	Sherman
Idaho	Cassia	Oregon	Umatilla
Idaho	Custer	Oregon	Union
Idaho	Elmore	Oregon	Wallowa
Idaho	Gem	Oregon	Wasco
Idaho	Gooding	Oregon	Wheeler
Idaho	Idaho	Utah	Beaver
Idaho	Jerome	Utah	Box Elder
Idaho	Lemhi	Utah	Carbon
Idaho	Lincoln	Utah	Emery
Idaho	Minidoka	Utah	Garfield
Idaho	Owyhee	Utah	Grand
Idaho	Payette	Utah	Iron
Idaho	Twin Falls	Utah	Juab
Idaho	Valley	Utah	Kane
Idaho	Washington	Utah	Millard
Nevada	Churchill	Utah	Piute
Nevada	Douglas	Utah	San Juan
Nevada	Elko	Utah	Sanpete
Nevada	Esmeralda	Utah	Sevier
Nevada	Eureka	Utah	Tooele
Nevada	Humboldt	Utah	Washington
Nevada	Lander	Utah	Wayne
Nevada	Lincoln		
Nevada	Lyon		
Nevada	Mineral		
Nevada	Nye		
Nevada	Pershing		
Nevada	Storey		
Nevada	Washoe		
Nevada	White Pine		
Nevada	Carson City		
Oregon	Baker		
Oregon	Crook		
Oregon	Deschutes		
Oregon	Gilliam		

Table 2. Changes in Clean Air Corridor Emissions (Assuming SO₂ Milestones Are Met).

		Point	Area	On Road	Non Road	Paved	Unpaved	Total
SO ₂	1996	51,413	9,260	2,065	10,838	0	0	73,576
	2018	45,330	10,614	413	21,596	0	0	77,954
	2018-1996	-6,082	1,354	-1,652	10,758	0	0	4,378
NO _x	1996	85,782	12,935	93,581	64,462	0	0	256,762
	2018	109,863	17,576	28,692	62,557	0	0	218,689
	2018-1996	24,080	4,641	-64,889	-1,905	0	0	-38,072
PM ₁₀	1996	27,055	142,776	3,872	5,952	5,740	47,733	233,128
	2018	32,748	154,966	2,640	6,763	12,402	38,828	248,347
	2018-1996	5,692	12,190	-1,232	811	6,662	-8,904	15,219
PM _{2.5}	1996	11,987	41,595	3,495	5,487	1,435	7,160	71,160
	2018	14,583	52,069	2,058	6,228	3,101	5,824	83,863
	2018-1996	2,595	10,474	-1,438	740	1,665	-1,336	12,702
VOC	1996	5,993	95,921	69,899	38,535	0	0	210,349
	2018	7,921	95,515	22,651	29,233	0	0	155,321
	2018-1996	1,927	-406	-47,248	-9,301	0	0	-55,029

Table 3. Total Change in Emissions Weighted to Reflect Relative Impact on Visibility.

	SO ₂	NO _x	PM10	PM2.5	VOC	EC*	OC*	Total	Change
1996									
VEEU	5,445	1,746	1,958	932	294	902	856	12,133	--
2018									
VEEU	5,769	1,487	2,086	1,099	217	985	935	12,578	4%

* Estimates of elemental and organic carbon, EC and OC, were not available to the CAC Work Group for the 1996 and 2018 emission inventories. Values for this analysis were derived from the estimates of EC and OC for the 1990 inventory of the 9 GCVTC states. The method used was to take the proportion of EC to fine and coarse particulates (PM_{2.5} + PM₁₀) in the 1990 inventory and use that same proportion to calculate an EC value for the 1996, 2018, and 2018 milestone inventories. The same method was used for OC.

** VEEU – Visibility Equivalency Emission Units (Used in the GCVTC IAS Model.)

VEEU weights

PM _{2.5}	PM ₁₀	NO _x	VOC	SO ₂	EC	OC
0.0131	0.0084	0.0068	0.0014	0.0740	0.6497	0.2466

Each category in the inventory is multiplied by these factors to create the VEEU-weighted inventory.

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-3
Proposed Administrative Rules for the
Stationary Source Strategy

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-3
Proposed Administrative Rules for the Stationary Source Strategy
OAR 340-214-0400 through 340-214-0430
OAR 340-228-400 through 340-228-530

Included in this proposed rulemaking are two proposed supporting rules associated with the stationary source strategy in Oregon Regional Haze Plan. The first is *Sulfur Dioxide Emission Inventory* (OAR 340-214-0400 through 340-214-0430), which clarify existing requirements related to reporting SO₂ emissions to DEQ under the Regional Haze Plan. (Note that no additional reporting is being proposed.) The second is the *Western Backstop Sulfur Dioxide Trading Program* (OAR 340-228-0400 to OAR 340-228-0530), which are requirements for an emissions trading program that will be implemented only if regional SO₂ milestones are not achieved. Under the federal Regional Haze rule, states are required to have this backup program in place when they adopt their Section 309 plans. Current projections indicate the SO₂ emissions in the West are well below the regional SO₂ milestones and are continuing to decline. Therefore, implementation of this backup program is unlikely.

Oregon Administrative Rules
DEPARTMENT OF ENVIRONMENTAL QUALITY

DIVISION 214

Sulfur Dioxide Emission Inventory

340-214-0400

Purpose

The purpose of OAR 340-214-0400 through 340-214-0430 is to establish consistent monitoring, recordkeeping, and reporting requirements for stationary sources in Oregon to determine whether sulfur dioxide emissions remain below the sulfur dioxide milestones established in the State Implementation Plan, section 5.5.2.3.1.a, incorporated by reference in OAR 340-200-0040.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-214-0410

Applicability

(1) OAR 340-214-0410 through OAR 340-214-0430 apply to all stationary sources with actual sulfur dioxide emissions of 100 tons per year or more in calendar year 2000 or any subsequent calendar year.

(2) Any source that triggers applicability and then emits less than 100 tons per year in any subsequent year remains subject to the requirements of OAR 340-214-0410 to OAR 340-214-0430 until 2018 or until the first control period under the Western Backstop Sulfur Dioxide Trading Program as established in OAR 340-228-0510(1)(a), whichever is earlier.

(3) Sources that emit less than 100 tons per year of sulfur dioxide in all years (2003 through 2018) are not subject to OAR 340-214-0420 through 0430.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-214-0420

Annual Sulfur Dioxide Emission Report

(1) The owner or operator must:

(a) Submit a report of actual annual SO₂ inventory emissions;

(b) Use appropriate emission factors and estimating techniques and document the emissions monitoring/estimation methodology used;

(c) Include emissions from start up, shut down, and upset conditions in the annual total inventory;

(d) Use 40 CFR Part 75 methodology for reporting emissions for all sources subject to the federal acid rain program; and

(e) Maintain all records used in the calculation of the emissions, including but not limited to the following:

(A) Amount and type of fuel combusted

(B) Percent sulfur content of fuel and how the content was determined

(C) Quantity of product produced

(D) Emissions monitoring data

(E) Operating data

(F) How the emissions are calculated;

(G) If the emissions increased or decreased by twenty percent or more from a previous year, then the owner or operator must include in their annual emissions report an explanation of why this occurred.

(f) Maintain records of any physical changes to facility operations or equipment, or any other changes (e.g. raw material or feed) that may affect the emissions projections as established in the State Implementation Plan.

(g) Retain records for a minimum of ten years from the date of establishment, or if the record was the basis for an adjustment to the milestone, 5 years after the date of an implementation plan revision, whichever is longer. (2) Smelters must submit an annual report of sulfur input, in tons/year

(2) The owner or operator must report emissions for the year 2003 by May 15, 2004 and annually thereafter.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-214-0430

Changes in Emission Measurement Techniques

The owner or operator that uses a different emission monitoring or calculation method than was used to report their sulfur dioxide emissions (1999 for utilities and 1998 for all other sources) under OAR 340-214-0114 must indicate this in the annual emission report, adjust their reported emissions to be comparable to the emission monitoring or calculation method that was used in 1999 or 1998. The calculations that are used, so that the Department can ensure consistent comparison to the regional SO₂ milestones, as described in State Implementation Plan Section 5.5.2.3.2 a.(3). to make this adjustment must be included with the annual emission report under OAR 340-214-0420.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

DIVISION 228

Western Backstop Sulfur Dioxide Trading Program

340-228-0400

Purpose

(1) OAR 340-228-0400 through OAR 340-228-0530 implement the Western Backstop (WEB) Sulfur Dioxide (SO₂) Trading Program provisions in accordance with the federal Regional Haze Rule, 40 CFR 51.309 (2003), and Section 5.5.2.3 of the State Implementation Plan, titled "Sulfur Dioxide Milestones and Backstop Trading Program," incorporated under OAR 340-200-0040.

(2) Nothing in OAR 340-228-0400 through OAR 340-228-0530 waives any requirement otherwise in effect or subsequently required under another program, including Rules governing new sources.

340-228-0410

Definitions

The definitions in OAR 340-200-0020 and this rule apply to OAR 340-228-0400 through OAR 340-228-0530. If the same term is defined in this rule and OAR 340-200-0020, the definition in this rule applies to OAR 340-228-0400 through OAR 340-228-0530.

(1) "Account Certificate of Representation" means the completed and signed submission required to designate an Account Representative for a WEB source or an Account Representative for a general account.

(2) "Account Representative" means the individual who is authorized through an Account Certificate of Representation to represent owners and operators of the WEB source with regard to matters under the WEB Trading Program or, for a general account, who is authorized through an Account Certificate of Representation to represent the persons having an ownership interest in allowances in the general account with regard to matters concerning the general account.

(3) "Actual Emissions" means total annual SO₂ emissions determined in accordance with OAR 340-228-0480, or determined in accordance with SO₂ emission inventory requirements of OAR 340-214-0400 through OAR 340-214-0430 for sources that are not subject to OAR 340-228-0480.

(4) "Allocate" means to assign allowances to a WEB source through State Implementation Plan section 5.5.2.3.3.a.

(5) "Allowance" means the limited authorization under the WEB Trading Program to emit one ton of SO₂ during a specified control period or any control period thereafter subject to the terms and conditions for use of unused allowances as established by OAR 340-228-0400 through OAR 340-228-0530.

(6) "Allowance Limitation" means the tonnage of SO₂ emissions authorized by the allowances available for compliance deduction for a WEB source for a control period under OAR 340-228-0510(1) on the allowance transfer deadline for that control period.

(7) "Allowance Tracking System" means the system where allowances under the WEB Trading Program are recorded, held, transferred, and deducted.

(8) "Allowance Tracking System account" means an account in the Allowance Tracking System established for purposes of recording, holding, transferring, and deducting allowances.

(9) "Allowance transfer deadline" means the deadline established in OAR 340-228-0490(2) when allowances must be submitted for recording in a WEB source's compliance account in order to demonstrate compliance for that control period.

(10) "Compliance account" means an account established in the Allowance Tracking System under OAR 340-228-0470(1) for the purpose of recording allowances that a WEB source might hold to demonstrate compliance with its allowance limitation.

(11) "Compliance certification" means a submission to the Department by the Account Representative as required under OAR 340-228-0510(2) to report a WEB source's compliance or noncompliance with this rule.

(12) "Control period" means the period beginning January 1 of each year and ending on December 31 of the same year, inclusive.

(13) "Emission unit" means any part of a stationary source that emits or would have the potential to emit any pollutant submitted to regulations under the Clean Air Act.

(14) "Emissions tracking database" means the central database where SO₂ emissions for WEB sources as recorded and reported in accordance with OAR 340-228-0400 through OAR 340-228-0530 are tracked to determine compliance with allowance limitations.

(15) "Existing source" means a stationary source that commenced operation before the Program Trigger Date.

(16) "Fugitive emissions" are those emissions that could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening.

(17) "General account" means an account established in the Allowance Tracking System under OAR 340-228-0470 for the purpose of recording allowances held by a person that are not to be used to show compliance with an allowance limitation.

(18) "Milestone" means the maximum level of stationary source regional sulfur dioxide emissions for each year from 2003 to 2018, established according to the procedures in State Implementation Plan Section 5.5.2.3.1.

(19) "New WEB Source" means a WEB source that commenced operation on or after the Program Trigger Date.

(20) "New Source Set-aside" means a pool of allowances that are available for allocation to new sources in accordance with the provisions of State Implementation Plan Section 5.5.2.3.3.a(2).

(21) "Owner or operator" means any person who is an owner or who operates, controls or supervises a WEB source and includes but is not be limited to any holding company, utility system, or plant manager.

(22) "Potential to emit" means the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, will be treated as part of its design if the limitation is enforceable by the EPA Administrator.

(23) "Program trigger date" means the date that the Department determines that the WEB Trading Program has been triggered in accordance with the State Implementation Plan Section 5.5.2.3.1(1)(b).

(24) "Program trigger years" means the years shown in Table 5.5.2-4, column 3, of the State Implementation Plan for the applicable milestone if the WEB Trading Program is triggered as described in State Implementation Plan Section 5.5.2.3.1 c.

(25) "Renewable Energy Resource" means a resource that generates electricity by non-nuclear and non-fossil technologies that results in low or no air emissions. The term includes electricity generated by wind energy technologies; solar photovoltaic and solar thermal technologies; geothermal technologies; technologies based on landfill gas and biomass sources; **waste-to-energy facilities that meet maximum achievable control technology (MACT) requirements**, and new low-impact hydropower that meets the Low-Impact Hydropower Institute criteria.

Biomass includes agricultural, food and wood wastes. The term does not include pumped storage, or biomass from municipal solid waste, black liquor, or treated wood.

(26) "Retired source" means a WEB source that has received a retired source exemption as provided in OAR 340-228-0430(4).

(27) "Serial number" means, when referring to allowances, the unique identification number assigned to each allowance by the Tracking Systems Administrator, in accordance with OAR 340-228-0460(2).

(28) "SO₂ emitting unit" means any equipment that is located at a WEB source and that emits SO₂.

(29) "Stationary source" means any building, structure, facility or installation that emits or may emit any air pollutant subject to regulation under the Clean Air Act.

(30) "Submit" means to send to the appropriate authority under the signature of the Account Representative. For purposes of determining when something is submitted, an official U.S. Postal Service postmark or equivalent electronic time stamp will establish the date of submittal.

(31) "Ton" means 2000 pounds. For any control period, any fraction of a ton equaling 1000 pounds or more will be treated as one ton, and any fraction of a ton equaling less than 1000 pounds will be treated as zero tons.

(32) "Tracking System Administrator" means the person designated by the Department as the administrator of the Allowance Tracking System and the emission tracking database.

(33) "WEB source" means a stationary source that meets the applicability requirements of OAR 340-228-0430.

(34) "Web Trading Program" means OAR 340-228-0400 through 340-228-0530, the Western Backstop SO₂ Trading Program, triggered as a backstop in accordance with the provisions in the SO₂ Milestones and Backstop Trading Program Implementation Plan, if necessary, to ensure that regional SO₂ emissions are reduced.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0420

WEB Trading Program Trigger

(1) OAR 340-228-0400 through OAR 340-228-0530 becomes effective on the program trigger date established by the procedures outlined in the SO₂ Milestones and Backstop Trading Program Implementation Plan.

(2) Exception. Special Penalty Provisions for Year 2018, OAR 340-228-0520 becomes effective on January 1, 2018 and remains effective until the requirements of OAR 340-228-0520 have been met.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0430

WEB Trading Program Applicability

(1) General Applicability. Except as provided in section (2) of this rule, OAR 340-228-0400 through OAR 340-228-0530 apply to any stationary source or group of stationary sources that are located on one or more contiguous or adjacent properties and that are under the control of the same person or persons under common control, belong to the same industrial grouping, and are described in subsections (a) through (c) of this section. A stationary source or group of stationary sources is considered part of a single industrial grouping if all of the pollutant emitting activities at such source or group of sources on contiguous or adjacent properties belong to the same Major Group (i.e., all have the same two-digit code) as described in the Standard Industrial Classification Manual, 1987.

(a) All BART-eligible sources as defined in 40 CFR 51.301 (2003) that are BART-eligible due to SO₂ emissions.

(b) All stationary sources not meeting the criteria of subsection (a) of this rule that have actual SO₂ emissions of 100 tons or more per year in the program trigger years or any subsequent year. The fugitive emissions of a stationary source are not considered in determining whether the source is subject to OAR 340-228-0400 through OAR 340-228-0530 unless the source belongs to one of the following categories of stationary source:

(i) Coal cleaning plants (with thermal dryers);

(ii) Kraft pulp mills;

(iii) Portland cement plants;

(iv) Primary zinc smelters;

(v) Iron and steel mills;

(vi) Primary aluminum ore reduction plants;

(vii) Primary copper smelters;

(viii) Municipal incinerators capable of charging more than 250 tons of refuse per day;

(ix) Hydrofluoric, sulfuric, or nitric acid plants;

(x) Petroleum refineries;

(xi) Lime plants;

(xii) Phosphate rock processing plants;

(xiii) Coke oven batteries;

(xiv) Sulfur recovery plants;

(xv) Carbon black plants (furnace process);

(xvi) Primary lead smelters;

(xvii) Fuel conversion plants;

(xviii) Sintering plants;
(xix) Secondary metal production plants;
(xx) Chemical process plants;
(xxi) Fossil-fuel boilers (or combination thereof) totaling more than 250 million British thermal units per hour heat input;
(xxii) Petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels;
(xxiii) Taconite ore processing plants;
(xxiv) Glass fiber processing plants;
(xxv) Charcoal production plants;
(xxvi) Fossil-fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input; or
(xxvii) Any other stationary source category, that is being regulated under Section 111 or 112 of the Act as of August 7, 1980.

(c) A new source that begins operation after the program trigger date and has the potential to emit 100 tons or more of SO₂ per year.

(2) The Department may determine on a case-by-case basis, with concurrence from the EPA Administrator, that a source is not a WEB source if the source:

(a) had actual sulfur dioxide emissions of 100 tons or more in a single year and in each of the previous five years had actual SO₂ emissions of less than 100 tons per year, and

(A)(i) the emissions increase that was caused by a sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner and that the source took timely and reasonable action to minimize the temporary emission increase. A temporary emission increase due to poor maintenance or careless operation does not meet the criteria of this section; and

(ii) has corrected the failure of air pollution control equipment, process equipment, or process by the time of the Department's determination under this section; or

(B) had to switch fuels or feedstocks on a temporary basis as a result of an emergency situation or unique and unusual circumstances besides the cost of such fuels or feedstocks.

(3) Duration of Applicability. Except as provided for in section (4) of this rule, once a source is subject to the WEB Trading Program (OAR 340-228-0400 through OAR 340-228-0530), it is subject to the requirements every year thereafter.

(4) Retired Source Exemption

(a) Application. Any WEB that is permanently retired must apply for a retired source exemption. The WEB source may only be considered permanently retired if all SO₂ emitting units at the source are permanently retired. The application must contain the following information:

(A) Identification of the WEB source, including the plant name and an appropriate identification code in a format specified by the Department.

(B) Name of Account Representative.

(C) Description of the status of the WEB source, including the date that the WEB source was permanently retired.

(D) Signed certification that the WEB source is permanently retired and will comply with the requirements of section (4) of this rule.

(E) Verification that the WEB source has a general account where any unused allowances or future allocations will be recorded.

(b) Notice. The retired source exemption becomes effective when the Department notifies the source that the Department has granted the retired source exemption.

(c) Responsibilities of Retired Sources:

(A) A retired source is exempt from OAR 340-228-0480 and OAR 340-228-0510, except as provided below.

(B) A retired source may not emit any SO₂ after the date the Department issues a retired source exemption.

(C) A WEB source must submit SO₂ emissions reports, as required by OAR 340-228-0480 for any time period the source was operating before the effective date of the retired source exemption. The retired source is subject to the compliance provisions of OAR 340-228-0510, including the requirement to hold allowances in the source's compliance account to cover all SO₂ emissions before the date the source was permanently retired.

(D) A retired source that is still in existence but no longer emitting SO₂ must, for a period of five years from the date the records are created, retain records demonstrating the effective date of the retired source exemption for purposes of this rule.

(d) Resumption of Operations

(A) Before resuming operation, the retired source must submit registration materials as follows:

(i) If the source is required to obtain a new source review permit or operating permit under OAR Chapter 340, Division 224 or OAR Chapter 340, Division 218, before resuming operation, then registration information as described in OAR 340-228-0450(1) and a copy of the retired source exemption must be submitted with the application required under Chapter 340, Division 224 or OAR Chapter 340, Division 218.

(ii) If the source does not meet the criteria under subparagraph (i) of this rule, then registration information as described in OAR 340-228-0450 and a copy of the retired source exemption must be submitted to the Department at least ninety days before the source resumes operation.

(B) The retired source exemption automatically expires on the day the source resumes operation.

(e) Loss of Future Allowances. A WEB source that is permanently retired and that does not apply to the Department for a retired source exemption within ninety days of the date that the source is permanently retired forfeits any unused and future allowances. The Tracking System Administrator must retire the abandoned allowances.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0440

Account Representative for WEB Sources

(1) Each WEB source must identify one Account Representative and may also identify an alternate Account Representative who may act on behalf of the Account Representative. Any representation, action, inaction, or submission by the alternate Account Representative will be deemed to be a representation, action, inaction, or submission by the Account Representative.

(2) Identification and Certification of an Account Representative.

(a) The Account Representative and any Alternate Account Representative must be appointed by an agreement that makes the representations, actions, inactions, or submissions of the Account Representative and any alternate binding on the owners and operators of the WEB source.

(b) The Account Representative must submit to the Department and the Tracking System Administrator a signed and dated Account Certificate of Representation (Certificate) that contains the following elements:

(A) Identification of the WEB source by plant name, state and an appropriate identification code in a format specified by the Department;

(B) The name, address, e-mail (if available), telephone, and facsimile number of the Account Representative and any alternate;

(C) A list of owners and operators of the WEB source;

(D) Information to be part of the emission tracking system database in accordance with the State Implementation Plan. The Department will specify specific data elements that are consistent with the data system structure, including basic facility information that appears in other reports and notices submitted by the WEB source, such as county location, industrial classification codes, and similar general facility information.

(E) The following certification statement: "I certify that I was selected as the Account Representative or alternate Account Representative, as applicable, by an agreement binding on the owners and operators of the WEB source. I certify that I have all the necessary authority to carry out my duties and responsibilities under the WEB Trading Program on behalf of the owners and operators of the WEB source, and that each such owner and operator will be fully bound by my representations, actions, inactions, or submissions and by any decision or order issued to me by the Department regarding the WEB Trading Program."

(c) Once the Department receives the complete Certificate, the Account Representative and any alternate Account Representative represents and, by his or her representations, actions, inactions, or submissions, legally binds each owner and operator of the WEB source in all matters pertaining to the WEB Trading Program. Any order issued by the Department regarding the WEB Trading Program is binding on the owners and operators, subject to the provisions of ORS chapter 183.

(d) No WEB Allowance Tracking System account may be established for the WEB source until the Tracking System Administrator has received a complete Certificate. Once the account is established, the Account Representative must make all submissions concerning the account, including the deduction or transfer of allowances.

(3) Requirements and Responsibilities

(a) The Account Representative's responsibilities include, but are not limited to, transferring allowances; submitting monitoring plans, registrations, certification applications, SO₂ emissions data, and compliance reports as required by OAR 340-228-0400 through OAR 340-228-0530; and representing the source in all matters pertaining to the WEB Trading Program.

(b) Each submission under this program must be signed and certified by the Account Representative for the WEB source. Each submission must include the following truth and accuracy certification statement by the Account Representative: "I am authorized to make this submission on behalf of the owners and operators of the WEB source for which the submission is made. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(4) Changing the Account Representative or Owners and Operators

(a) Changing the Account Representative or the Alternate Account Representative. The Account Representative or alternate Account Representative may be changed at any time by sending a complete superseding Certificate to the Department and the Tracking System Administrator under OAR 340-228-0440(2)(b). The change will be effective when the Tracking System Administrator receives it. Notwithstanding any such change, all representations, actions,

inactions, and submissions by the previous Account Representative or alternate before the Tracking System Administrator receives the superseding Certificate are binding on the new Account Representative and the owners and operators of the WEB source.

(b) Changes in Owners and Operators

(A) Within thirty days of any change in the owners and operators of the WEB source, including the addition of a new owner or operator, the Account Representative must submit a revised Certificate amending the list of owners and operators to include such change.

(B) If a new owner or operator of a WEB source is not included in the list of owners and operators submitted in the Certificate, such new owner or operator is subject to and bound by the Certificate, the representations, actions, inactions, and submissions of the Account Representative of the WEB source, and the decisions, orders, actions, and inactions of the Department as if the new owner or operator were included in the list.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0450
Registration

(1) Deadlines

(a) Each source that is a WEB source on or before the Program Trigger Date must register by submitting the initial Certificate required in OAR 340-228-0440(2) to the Department no later than 180 days after the program trigger date.

(b) Any existing source that becomes a WEB source after the program trigger date must register by submitting the initial Certificate required in OAR 340-228-0440(2) to the Department no later than September 30 of the year following the inventory year in which the source exceeded the emission threshold.

(c) Any new WEB source must register by submitting the initial Certificate required in OAR 340-228-0440(2) to the Department before commencing operation.

(2) Any allocation, transfer or deduction of allowance to or from the compliance account of a WEB source does not require revision of the WEB source's operating permit.

(3) Whether or not a WEB source is not required to have a permit under OAR 340-218 or OAR 340-224 at any time after this Rule is effective, it must at all times possess a permit that includes the requirements of OAR 340-228-0400 through OAR 340-228-0530. If it does not possess a Title V permit under this rule, it must satisfy this paragraph's requirements by obtaining or modifying a permit under OAR Chapter 340, Division 216, to incorporate the requirements of OAR 340-228-0400 through OAR 340-228-0530. The source must at all times possess a permit that includes these requirements.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EOC under OAR 340-200-0040.]

340-228-0460

Allowance Allocations

(1) The Tracking System Administrator must record the allowances for each WEB source in the compliance account for a WEB source after the Department allocates the allowances under Section 5.5.2.3.3(a) of the State Implementation Plan. If applicable, the Tracking System Administrator must record a portion of the SO₂ allowances for a WEB source in a WEB source's special reserve compliance account assigned to the Department to account for any allowances to be held by the Department in accordance with OAR 340-228-0480(1)(b).

(2) The Tracking System Administrator must assign a serial number to each allowance in accordance with State Implementation Plan Section 5.5.2.3.3(f).

(3) All allowances must be allocated, recorded, transferred, or used as whole allowances. To determine the number of whole allowances, the number of allowances must be rounded down for decimals less than 0.50 and rounded up for decimals of 0.50 or greater.

(4) An allowance is not a property right. It is a limited authorization to emit one ton of SO₂ for the purpose of meeting the requirements of this Rule. No provision of this WEB Trading Program or other law should be construed to limit the authority of the United States or the Department to terminate or limit such authorization.

(5) Early Reduction Bonus Allocation. Any WEB source that reduces its permitted annual SO₂ emissions to a level that is below the floor level allocation established for that source in State Implementation Plan Section 5.5.2.3.3.a between 2003 and the program trigger year may apply to the Department for an early reduction bonus allocation. The application must be submitted no later than ninety days after the Program Trigger Date. Any WEB source that applies and receives early reduction bonus allocations must retain the records referenced below for a minimum of five years after the early reduction bonus allowance is certified in accordance with Section 5.5.2.3.3(a)(c) of the State Implementation Plan. The application for an early reduction bonus allocation must contain the following information:

(a) Copies of all permits or other enforceable documents that include annual SO₂ emissions limits for the WEB source during the period the WEB source was generating the early reductions. Such permits or enforceable documents require monitoring for SO₂ emissions that meets the requirements in OAR 340-228-0480(1)(a) and OAR 340-228-0480(1)(c).

(b) Copies of emissions monitoring reports for the period the WEB source was generating the early reductions that document the actual annual SO₂ emissions and demonstrates that the actual annual SO₂ emissions were below the floor level allocation established for that source in Section 5.5.2.3.3.a of the State Implementation Plan.

(c) Demonstration that the floor level established for the source in accordance with Section 5.5.2.3.3.a of the State Implementation Plan was calculated using data that are consistent with the new monitoring methodology. If new monitoring techniques will change the floor level for the source, then a demonstration of the new floor level based on new monitoring techniques must be included in the application.

(6) Request for allowances for new WEB sources or modified WEB Sources.

(a) A new WEB source or an existing WEB source that has increased production capacity through a permitted change in operations OAR 340, Division 224 may apply to the Department for an allocation from the new source set-aside, as outlined in Section 5.5.2.3.3.c. of the State Implementation Plan.

(A) A new WEB source is eligible to apply for an annual allocation equal to the permitted annual SO₂ emission limit for that source after the source has commenced operation.

(B) An existing WEB source is eligible to apply for an annual allocation equal to the permitted annual SO₂ emission limit for that source that is attributable to any amount of production capacity that is greater than the permitted production capacity for that source as of January 1, 2003.

(C) A source that has received a retired source exemption under OAR 340-228-0430(4) is not eligible to apply for an allocation from the new source set-aside.

(b) The application for an allocation from the new source set-aside must contain the following information:

(A) for an existing WEB source, documentation of the production capacity before and after the new permit;

(B) for new WEB sources, documentation of the actual date and a copy of the permit.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0470

Establishment of Accounts

(1) Allowance Tracking System Accounts. All WEB sources must open a compliance account. Any person may open a general account for the purpose of holding and transferring allowances. In addition, if a WEB source conducts monitoring under OAR 340-228-480(1)(b), the WEB source must open a special reserve compliance account for allowances associated with units monitored under those provisions. Allowances may not be transferred out of the special reserve account by the WEB source or account representative. The Department shall allocate allowances to the account in accordance with OAR 340-228-0480(1)(b)(E) and all such allowances for each control period shall be retired each year for compliance in accordance with OAR 340-228-0510.

To open either type of account, an application that contains the following information must be submitted to the TSA.

(a) The Account Representative's name, mailing address, e-mail address, telephone number, and facsimile number. For a compliance account, include a copy of the Account Certificate of Representation of the Account Representative and any alternate as required in OAR 340-228-0440(2)(b). For a general account, include the Account Certificate of Representation of the Account Representative and any alternate as required in OAR 340-228-0470(3)(b).

(b) The WEB source or organization name;

(c) The type of account to be opened; and

(d) A signed certification of truth and accuracy by the Account Representative according to OAR 340-228-0440(3)(b) for compliance accounts and certification of truth and accuracy by the Account Representative according to OAR 340-228-0470(4) for general accounts.

(2) Account Representative for General Accounts. For a general account, one Account Representative must be identified and an alternate Account Representative may be identified and may act on behalf of the Account Representative. Any representation, action, inaction, or submission by the alternate Account Representative is a representation, action, inaction, or submission by the Account Representative.

(3) Identification and Certification of an Account Representative for General Accounts

(a) The Account Representative must be appointed by an agreement that makes the representations, actions, inactions, or submissions of the Account Representative binding on all persons who have an ownership interest with respect to allowances held in the general account.

(b) The Account Representative must submit to the Tracking System Administrator a signed and dated Account Certificate of Representation (Certificate) that contains the following elements:

(A) The name, address, e-mail (if available), telephone, and facsimile number of the Account Representative and any alternate;

(B) The organization's name;

(C) The following certification statement: "I certify that I was selected as the Account Representative or alternate Account Representative, as applicable, by an agreement binding on all persons who have an ownership interest in allowances in the general account with regard to matters concerning the general account. I certify that I have all the necessary authority to carry out my duties and responsibilities under the WEB Trading Program on behalf of said persons, and that each such person will be fully bound by my representations, actions, inactions, or submissions and by any decision or order issued to me by the Department regarding the general account."

(c) When the Department receives the complete Certificate, the Account Representative represents and, by his or her representations, actions, inactions, or submissions, legally binds each person who has an ownership interest in allowances held in the general account with regard to all matters concerning the general account. Such persons will be bound by any decision or order issued by the Department.

(d) A WEB Allowance Tracking System general account may not be established until the Tracking System Administrator has received a complete Certificate. Once the account is established, the Account Representative must make all submissions concerning the account, including the deduction or transfer of allowances.

(4) Requirements and Responsibilities for General Accounts. Each submission for the general account must be signed and certified by the Account Representative for the general account. Each submission must include the following truth and accuracy certification statement by the Account Representative: "I am authorized to make this submission on behalf of all person who have an ownership interest in allowances held in the general account. I certify under penalty of law that I have personally examined and am familiar with the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment."

(5) Changing the Account Representative. The Account Representative or alternate Account Representative may be changed at any time by sending a complete superseding Certificate to the Department and the Tracking System Administrator, according to OAR 340-228-0470(3)(b). The change will take effect when the Department receives the Certificate. Notwithstanding any such change, all representations, actions, inactions, and submissions by the previous Account Representative or alternate before the Department receives the superseding Certificate are binding on the new Account Representative and all persons having ownership interest with respect to allowances held in the general account.

(6) Changes to the Account. Any change to the information required in the application for an existing account under OAR 340-228-0470(1) requires a revision of the application.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0480

Monitoring, Recordkeeping and Reporting

(1) General Requirements on Monitoring Methods

(a) For each SO₂ emitting unit at a WEB source the owner or operator must comply with the following, as applicable, to monitor and record SO₂ mass emissions:

(A) If a unit is subject to 40 CFR Part 75 (2003) under a requirement separate from the WEB Trading Program, the unit must meet the requirements contained in Part 75 with respect to monitoring, recording and reporting SO₂ mass emissions.

(B) If a unit is not subject to 40 CFR Part 75 (2003) under a requirement separate from the WEB Trading Program, a unit must use one of the following monitoring methods, as applicable:

(i) A continuous emission monitoring system (CEMS) for SO₂ and flow that complies with all applicable monitoring provisions in 40 CFR Part 75;

(ii) If the unit is a gas- or oil-fired combustion device, the excepted monitoring methodology in Appendix D to 40 CFR Part 75, or, if applicable, the low mass emissions (LME) provisions (with respect to SO₂ mass emissions only) of section 75.19 of 40 CFR Part 75; or

(iii) One of the optional WEB protocols, if applicable, in Appendix A to this Rule; or

(iv) A monitoring plan for site-specific monitoring that the source submits for approval by the Department and by the U.S. Environmental Protection Agency in accordance with OAR 340-228-0480(8)(e).

(C) A permanently retired unit is not required to monitor under this rule if such unit was permanently retired and had no emissions for the entire period for which the WEB source implements this paragraph (C) of this rule and the Account Representative certifies in accordance with OAR 340-228-0510(2) that these conditions were met. In the event that a permanently retired unit recommences operation, the WEB source shall meet the requirements of this rule in the same manner as if the unit was a new unit.

(b) Notwithstanding OAR 340-228-0480(1)(a), the owner or operator of a unit that meets one of the conditions of OAR 340-228-0480(1)(b)(A) may elect to have the provisions of this OAR 340-228-0480(1)(b) apply to that unit.

(A) Any of the following units may implement OAR 340-228-0480(1)(b):

(i) Any smelting operation where all of the emissions from the operation are not ducted to a stack; or

(ii) Any flare, except to the extent such flares are used as a fuel gas combustion device at a petroleum refinery.

(iii) Any other type of unit without add-on SO₂ control equipment, if no control level was assumed for the WEB source in establishing the floor level (and reducible allocation) provided in Section 5.5.2.3.3.a of the State Implementation Plan.

(B) For each unit covered by OAR 340-228-0480(1)(b), the Account Representative must submit a notice to request that OAR 340-228-0480(1)(b) applies to one or more SO₂ emitting units at a WEB source. The notice must be submitted in accordance with the compliance dates specified in

OAR 340-228-0480(6)(a) and include the following information (in a format specified by the Department with such additional, related information as may be requested):

(i) A notice of all units at the applicable source, specifying which of the units are covered by OAR 340-228-0480(1)(b);

(ii) Consistent with the emission estimation methodology used to determine the floor level (and reducible allocation) for the source in accordance with State Implementation Plan Section 5.5.2.3.3.a, the portion of the WEB source's overall allowance allocation that is attributable to any unit(s) covered by OAR 340-228-0480(1)(b); and

(iii) An identification of any such units that are permanently retired.

(C) For each new unit at an existing WEB source for which the owner or operator seeks to comply with this OAR 340-228-0480(1)(b) and for which the Account Representative applies for an allocation under the new source set-aside provisions of OAR 340-228-0460(6), the Account Representative must submit a modified notice under OAR 340-228-0480(1)(b)(B) that includes such new SO₂ emitting unit(s). The modified notice must be submitted in accordance with the deadlines in OAR 340-228-0480, but no later than the date on which a request is submitted under OAR 340-228-0460(6) for allocations from the set-aside.

(D) The Department will evaluate the information submitted by the WEB source in paragraphs (B) and (C) of this subsection and may issue a notice to the source to exclude any units that do not qualify under OAR 340-228-0480(1)(b) or to adjust the portion of allowances attributable to units that do qualify to be consistent with the emission estimation methodology used to establish the floor level and reducible allocation for the source.

(E) The Department will allocate allowances equal to the adjusted portion of the WEB source's allowances under paragraphs (B), (C), and (D) of this subsection in a special reserve compliance account, provided that no such treatment of the WEB source's allocation will be required for any unit that is permanently retired and had no emissions for the entire period for which the WEB source implements subsection (b) of this rule and the Account Representative certifies in accordance with OAR 340-228-0510 that these conditions were met. In the event that a permanently retired unit recommences operation, the WEB source shall meet the requirements of this OAR 340-228-0480 in the same manner as if the unit was a new unit.

(F) The Account Representative for a WEB source must submit an annual emissions statement for each unit under OAR 340-228-0480(1)(b) pursuant to OAR 340-228-0480(8). The WEB source must maintain operating records sufficient to estimate annual emissions in a manner consistent with the emission estimation methodology used to establish the floor level (and reducible allocation) for the source. In addition, if the estimated emissions from all such units at the WEB source are greater than the allowances for the current control year held in the special reserve account under OAR 340-228-0480(1)(b)(E) for the WEB source, the Account Representative must report the extra amount as part of the annual report for the WEB source under OAR 340-228-0510 and be required to use other allowances in the standard compliance account to account for such emissions, in accordance with OAR 340-228-0510.

(G) The remaining provisions of OAR 340-228-0480 do not apply to units covered by this subsection except where otherwise noted.

(H) A WEB source may modify the monitoring for an SO₂ emitting unit by using monitoring under OAR 340-228-0480(1)(a), but any such monitoring change must take effect on January 1 of the next compliance year. In addition, the Account Representative must submit an initial monitoring plan at least 180 days before the date on which the new monitoring will take effect and a detailed monitoring plan in accordance with OAR 340-228-0480(2). The Account Representative must also submit a revised notice under OAR 340-228-0480(1)(b)(B) with the initial monitoring plan.

(c) For any monitoring method that the owner or operator uses under this rule (including OAR 340-228-0480(1)(a)(B)) the owner or operator (and, as applicable, the Account Representative) must install, certify, and operate such monitoring in accordance with this rule and record and report the data from such monitoring as required in this rule. In addition, the owner or operator (and, as applicable, the Account Representative) may not:

(A) Except for an alternative approved by the U.S. EPA Administrator for a WEB source that implements monitoring under OAR 340-228-0480(1)(a)(A), use an alternative monitoring system, alternative reference method, or another alternative for the required monitoring method without having obtained prior written approval in accordance with OAR 340-228-0480(8)(e) (relating to petitions);

(B) Operate an SO₂ emitting unit so as to discharge, or allow to be discharged, SO₂ emissions to the atmosphere without accounting for these emissions in accordance with the applicable provisions of this rule;

(C) Disrupt the approved monitoring method or any portion thereof and thereby avoid monitoring and recording SO₂ mass emissions discharged into the atmosphere, except for periods of recertification or periods when calibration, quality assurance testing, or maintenance is performed in accordance with the applicable provisions of this rule; or

(D) Retire or permanently discontinue use of an approved monitoring method, except under one of the following circumstances:

(i) During a period when the unit is exempt from the requirements of this rule, including retirement of a unit as addressed in OAR 340-228-0480(1)(a)(3);

(ii) The owner or operator is monitoring emissions from the unit with another certified monitoring method approved under this rule for use at the unit that provides data for the same parameter as the retired or discontinued monitoring method; or

(iii) The Account Representative notifies the Department of the date of certification testing of a replacement monitoring system in accordance with this rule, and the owner or operator recertifies

thereafter a replacement monitoring system in accordance with the applicable provisions of this rule.

(2) Monitoring Plan

(a) General Provisions. The owner or operator of an SO₂ emitting unit that uses a monitoring method under OAR 340-228-0480(1)(a)(A) must meet the following requirements:

(A) Prepare and submit to the Department an initial monitoring plan for each monitoring method that the owner or operator uses to comply with this rule. In accordance with OAR 340-228-0480(2)(c), the plan must contain sufficient information on the units involved, the applicable method, and the use of data derived from that method to demonstrate that all unit SO₂ emissions are monitored and reported. The plan must be submitted in accordance with the compliance deadlines specified in OAR 340-228-0480(6).

(B) Prepare, maintain and submit to the Department a detailed monitoring plan before the first day of certification testing, in accordance with the compliance deadline specified in OAR 340-228-0480(5). The plan must contain the applicable information required by OAR 340-228-0480(2)(d). The Department may require that the monitoring plan (or portions thereof) be submitted electronically. The Department also may require that the plan be submitted on an ongoing basis in electronic format as part of the quarterly report submitted under OAR 340-228-0480(8)(a) of this Rule or resubmitted separately within 30 days after any change is made to the plan in accordance with OAR 340-228-0480(2)(a)(C).

(C) Whenever the owner or operator makes a replacement, modification, or change in one of the systems or methodologies provided for in OAR 340-228-0480(1)(a)(B), including a change in the automated data acquisition and handling system or in the flue gas handling system, that affects information reported in the monitoring plan (e.g., a change to serial number for a component of a monitoring system), then the owner or operator must update the monitoring plan in accordance with the compliance deadline specified in OAR 340-228-0480(5).

(b) The owner or operator of an SO₂ emitting unit that uses a method under OAR 340-228-0480(1)(a)(A) (a unit subject to 40 CFR Part 75 (2003) under a program other than this WEB Trading Program) must meet the requirements of OAR 340-228-0480(2)(a)-(f) by preparing, maintaining, and submitting a monitoring plan in accordance with the requirements of 40 CFR Part 75 (2003), provided that the owner or operator also submits the entire monitoring plan to the Department upon request.

(c) Initial Monitoring Plan. The Account Representative must submit an initial monitoring plan for each SO₂ emitting unit (or group of units sharing a common methodology) that, except as otherwise specified in the permit monitoring requirements that, except as otherwise specified in an applicable provision in Appendix A, contains the following information:

(A) For all SO₂ emitting units involved in the monitoring plan:

(i) Plant name and location [street address, legal address, county, city];

(ii) Plant and unit identification numbers assigned by the Department;

(iii) Type of unit (or units for a group of units using a common monitoring methodology);

(iv) Identification of all stacks or pipes associated with the monitoring plan;

(v) Types of fuel(s) fired (or sulfur containing process materials used in the SO₂ emitting unit) and the fuel classification of the unit if combusting more than one type of fuel and using a 40 CFR Part 75 (2003) methodology;

(vi) Type(s) of emissions controls installed or to be installed, including specifications of whether such controls are pre-combustion, post-combustion, or integral to the combustion process;

(vii) Maximum hourly heat input capacity, or process throughput capacity, if applicable;

(viii) Identification of all units using a common stack; and

(ix) Indication of whether any stack identified in the plan is a bypass stack.

(B) For each unit and parameter required to be monitored, identification of monitoring methodology information monitoring methodology, monitor locations, substitute data approach for the methodology, and general identification of quality assurance procedures. If the proposed methodology is a site-specific methodology submitted pursuant to OAR 340-228-0480(1)(a)(B)(iv), the description under this paragraph must describe fully all aspects of the monitoring equipment, installation locations, operating characteristics, certification testing, ongoing quality assurance and maintenance procedures, and substitute data procedures.

(C) If the WEB source intends to petition for a change to any specific monitoring requirement otherwise required under OAR 340-228-0480, such petition may be submitted as part of the initial monitoring plan.

(D) The Department may issue a notice of approval or disapproval of the initial monitoring plan based on the compliance of the proposed methodology with the requirements for monitoring in this rule.

(d) Detailed Monitoring Plan. The Account Representative must submit a detailed monitoring plan that, except as otherwise specified in an applicable provision in Appendix A, contains the following information:

(A) Identification and description of each monitoring component (including each monitor and its identifiable components, such as analyzer and/or probe) in a CEMS (e.g., SO₂ pollutant concentration monitor, flow monitor, moisture monitor), a 40 CFR Part 75, Appendix D monitoring system (e.g., fuel flowmeter, data acquisition and handling system), or a protocol in or a protocol in Appendix A., including:

(i) Manufacturer, model number, and serial number;

(ii) Component/system identification code assigned by the facility to each identifiable monitoring component, such as the analyzer and/or probe;

(iii) Designation of the component type and method of sample acquisition or operation (e.g., in situ pollutant concentration monitor or thermal flow monitor);

(iv) Designation of the system as a primary or backup system;

(v) First and last dates the system reported data;

(vi) Status of the monitoring component; and

(vii) Parameter monitored.

(B) Identification and description of all major hardware and software components of the automated data acquisition and handling system, including:

(i) Hardware components that perform emission calculations or store data for quarterly reporting purposes (provide the manufacturer and model number); and

(ii) Software components (provide the identification of the provider and model/version number).

(C) Explicit formulas for each measured emissions parameter, using component/system identification codes for the monitoring system used to measure the parameter that links the system observations with the reported concentrations and mass emissions. The formulas must contain all constants and factors required to derive mass emissions from component/system code observations and an indication of whether the formula is being added, corrected, deleted, or is unchanged. The owner or operator of a low mass emissions unit for which the owner or operator is using the optional low mass emissions excepted methodology in 40 CFR section 75.19(c) (2003) is not required to report such formulas.

(D) for units with flow monitors only, include the inside cross-sectional area (ft²) at flow monitoring location.

(E) If using CEMS for SO₂ and flow, for each parameter monitored, include the scale, maximum potential concentration (and method of calculation), maximum expected concentration (if applicable) (and method of calculation), maximum potential flow rate (and method of calculations), span value, full-scale range, daily calibration units of measure, span effective date/hour, span inactivation date/hour, indication of whether dual spans are required, default high range value, flow rate span, and flow rate span value and full scale value (in scfh) for each unit or stack using SO₂ or flow component monitors.

(F) If the monitoring system or excepted methodology provides for use of a constant, assumed, or default value for a parameter under specific circumstances, then include the following information for each value of such parameter:

(i) Identification of the parameter;

(ii) Default, maximum, minimum, or constant value, and units of measure for the value;

(iii) Purpose of the value;

(iv) Indicator of use during controlled/uncontrolled hours;

(v) Types of fuel;

(vi) Source of the value;

(vii) Value effective date and hour;

(viii) Date and hour value is no longer effective (if applicable); and

(ix) For units using the excepted methodology under 40 CFR section 75.19 (2003), the applicable SO₂ emission factor.

(G) Unless otherwise specified in section 6.5.2.1 of Appendix A to 40 CFR Part 75 (2003), for each unit or common stack on which hardware CEMS are installed:

(i) The upper and lower boundaries of the range of operation (as defined in section 6.5.2.1 of Appendix A to 40 CFR Part 75), or thousand of lb/hr of steam, or ft/sec (as applicable);

(ii) The load or operating level(s) designated as normal in section 6.5.2.1 of Appendix A to 40 CFR Part 75, or thousands of lb/hr of steam, or ft/sec (as applicable);

(iii) The two load or operating levels (i.e., low, mid, or high) identified in section 6.5.2.1 of Appendix A to 40 CFR Part 75 as the most frequently used;

(iv) The date of the data analysis used to determine the normal load (or operating) level(s) and the two most frequently-used load (or operating) levels; and

(v) Activation and deactivation dates when the normal load or operating level(s) change and are updated.

(H) For each unit that is complying with 40 CFR Part 75 (2003) for which the optional fuel flow-to-load test in section 2.1.7 of appendix D to 40 CFR Part 75 is used:

(i) The upper and lower boundaries of the range of operation (as defined in section 6.5.2.1 of Appendix A to 40 CFR Part 75), expressed in thousand of lb/hr of steam;

(ii) The load level designated as normal, pursuant to section 6.5.2.1 of Appendix A to 40 CFR Part 75, expressed in thousands of lb/hr of steam; and

(iii) The date of the load analysis used to determine the normal load level.

(I) Information related to quality assurance testing, including (as applicable): identification of the test strategy; protocol for the relative accuracy test audit; other relevant test information; calibration gas levels (percent of span) for the calibration error test and linearity check; calculations for determining maximum potential concentration, maximum expected concentration (if applicable), maximum potential flow rate, and span;

(J) If applicable, apportionment strategies under 40 CFR sections 75.10 through 75.18 (2003).

(K) Description of site locations for each monitoring component in a monitoring system, including schematic diagrams and engineering drawings and any other documentation that demonstrates each monitor location meets the appropriate siting criteria. For units monitored by a continuous emission monitoring system, diagrams must include:

(i) A schematic diagram identifying entire gas handling system from unit to stack for all units, using identification numbers for units, monitor components, and stacks corresponding to the identification numbers provided in the initial monitoring plan and OAR 340-228-0480(2)(d)(A) and (C). The schematic diagram must depict the height of any monitor locations. Comprehensive and/or separate schematic diagrams must be used to describe groups of units using a common stack.

(ii) Stack and duct engineering diagrams showing the dimensions and locations of fans, turning vanes, air preheaters, monitor components, probes, reference method sampling ports, and other equipment that affects the monitoring system location, performance, or quality control checks.

(L) A data flow diagram denoting the complete information handling path from output signals of CEMS components to final reports.

(e) In addition to supplying the information in OAR 340-228-0480(2)(c) and (d), the owner or operator of an SO₂ emitting unit using either of the methodologies in OAR 340-228-0480(1)(a)(B)(ii) must include the following information in its monitoring plan for the specific situations described:

(A) For each gas-fired or oil-fired SO₂ emitting unit for which the owner or operator uses the optional protocol in appendix D to 40 CFR Part 75 for SO₂ mass emissions, the Account Representative must include the following information in the monitoring plan:

(i) Parameter monitored;

(ii) Type of fuel measured, maximum fuel flow rate, units of measure, and basis of maximum fuel flow rate (i.e., upper range value or unit maximum) for each fuel flowmeter;

(iii) Test method used to check the accuracy of each fuel flowmeter;

(iv) Submission status of the data;

(v) Monitoring system identification code;

(vi) The method used to demonstrate that the unit qualifies for monthly GCV sampling or for daily or annual fuel sampling for sulfur content, as applicable;

(vii) A schematic diagram identifying the relationship between the unit, all fuel supply lines, the fuel flowmeter(s), and the stack(s). The schematic diagram must depict the installation location of each fuel flowmeter and the fuel sampling location(s). Comprehensive and/or separate schematic diagrams will be used to describe groups of units using a common pipe;

(viii) For units using the optional default SO₂ emission rate for "pipeline natural gas" or "natural gas" in appendix D to 40 CFR Part 75 (2003), the information on the sulfur content of the gaseous fuel used to demonstrate compliance with either section 2.3.1.4 or 2.3.2.4 of appendix D to 40 CFR Part 75;

(ix) For units using the 720 hour test under section 2.3.6 of appendix D to 40 CFR Part 75 to determine the required sulfur sampling requirements, report the procedures and results of the test; and

(x) For units using the 720 hour test under section 2.3.5 of appendix D to 40 CFR Part 75 to determine the appropriate fuel gross calorific value (GCV) sampling frequency, report the procedures used and the results of the test.

(B) For each SO₂ emitting unit for which the owner or operator uses the low mass emission excepted methodology of section 75.19 to 40 CFR Part 75, the Account representative must include the following information in the monitoring plan that accompanies the initial certification application:

(i) The results of the analysis performed to qualify as a low mass emissions unit under 40 CFR section 75.19(c) (2003). This report must include either the previous three years actual or projected emissions. The following items must be included:

(I) Current calendar year of application;

(II) Type of qualification;

(III) Years one, two, and three;

(IV) Annual measured, estimated, or projected SO₂ mass emissions for years one, two, and three; and

(V) Annual operating hours for years one, two, and three.

(ii) A schematic diagram identifying the relationship between the unit, all fuel supply lines and tanks, any fuel flowmeter(s), and the stack(s). Comprehensive separate schematic diagrams must be used to describe groups of units using a common pipe;

(iii) For units which use the long term fuel flow methodology under 40 CFR section 75.19(c)(3) (2003), a diagram of the fuel flow to each unit or group of units and a detailed description of the procedures used to determine the long term fuel flow for a unit or group of units for each fuel combusted by the unit or group of units;

(iv) A statement that the unit burns only gaseous fuel(s) and/or fuel oil and a list of the fuels that are burned or a statement that the unit is projected to burn only gaseous fuel(s) and/or fuel oil and a list of the fuels that are projected to be burned;

(v) A statement that the unit meets the applicability requirements in 40 CFR 75.19(a) and (b) with respect to SO₂ emissions; and

(vi) Any unit historical actual, estimated and projected SO₂ emissions data and calculated SO₂ emissions data demonstrating that the unit qualifies as a low mass emissions unit under 40 CFR 75.19(a) and (b).

(C) For each gas-fired unit the Account Representative will include the following in the monitoring plan: current calendar year, fuel usage data as specified in the definition of gas-fired in 40 CFR section 72.2 (2003), and an indication of whether the data are actual or projected data.

(f) The specific elements of a monitoring plan under OAR 340-228-0480(2) must not be part of an operating permit for a WEB source issued in accordance with Title V of the Clean Air Act, and modifications to the elements of the plan must not require a permit modification.

(3) Certification/Recertification

(a) All monitoring systems are subject to initial certification and recertification testing as specified in 40 CFR Part 75 (2003) or Appendix A to this Rule as applicable. Certification or recertification of a monitoring system by the U.S. Environmental Protection Agency for a WEB source that is subject to 40 CFR Part 75 under a requirement separate from this division constitutes certification under the WEB Trading Program.

(b) The owner or operator of an SO₂ emitting unit not otherwise subject to 40 CFR Part 75 that monitors SO₂ mass emissions in accordance with 40 CFR Part 75 to satisfy the requirements of this rule must perform all of the tests required by that regulation and must submit the following to the Department:

(A) A test notice not later than 21 days before the certification testing of the monitoring system, provided that the Department may establish additional requirements for adjusting test dates after

this notice as part of the approval of the initial monitoring plan under OAR 340-228-0480(2)(c); and

(B) An initial certification application within 45 days after testing is complete. A monitoring system will be considered provisionally certified while the application is pending.

(c) A monitoring system is provisionally certified while the application is pending, and the system shall be deemed certified if the Department does not approve or disapprove the system within six months after the date on which the application is submitted.

(d) Whenever an audit of any monitoring certified under OAR 340-228-0400 through OAR 340-228-0530, and a review of the initial certification or recertification application, reveal that any system or component should not have been certified or recertified because it did not meet a particular performance specification or other requirement of OAR 340-228-0400 through OAR 340-228-0530, both at the time of the initial certification or recertification application submission and at the time of the audit, the Department will issue a notice of disapproval of the certification status of such system or component. For the purposes of this subsection, an audit shall be either a field audit of the facility or an audit of any information submitted to the Department regarding the facility. By issuing the notice of disapproval, the certification status is revoked prospectively, and the data measured and recorded shall not be considered valid quality-assured data from the date of issuance of the notification of the revoked certification status until the date and time that the WEB source completes subsequently approved initial certification or recertification tests in accordance with the procedures in OAR 340-228-0480(3). The WEB source shall apply the substitute data procedures in OAR 340-228-0480(5)(b) to replace, prospectively, all of the invalid, non-quality-assured data for each disapproved system or component.

(4) Ongoing Quality Assurance and Quality Control. The WEB source must satisfy the applicable quality assurance and quality control requirements contained in 40 CFR Part 75 (2003) or, if the WEB source is subject to a WEB protocol in Appendix A, the applicable quality assurance and quality control requirements in Appendix A on and after the date that certification testing commences.

(5) Substitute Data Procedures

(a) For any period after certification testing is complete in which quality-assured, valid data are not being recorded by a monitoring system certified and operating in accordance with OAR 340-228-0400 through 0530, missing or invalid data must be replaced with substitute data in accordance with 40 CFR Part 75 (2003) or, if the WEB source is subject to a WEB protocol in Appendix A, with substitute data in accordance with Appendix A.

(b) For an SO₂ emitting unit that does not have a certified (or provisionally certified) monitoring system in place as of the beginning of the first control period for which the unit is subject to the WEB Trading Program, the owner or operator must:

(A) If the owner or operator will use a CEMS to comply with OAR 340-228-0400 through OAR 340-228-0530, substitute the maximum potential concentration of SO₂ for the unit and the maximum potential flow rate, as determined in accordance with 40 CFR Part 75 (2003). The procedures for conditional data validation under 40 CFR section 75.20(b)(3) may be used for any monitoring system under this Rule that uses these 40 CFR Part 75 procedures, as applicable;

(B) If the owner or operator will use the 40 CFR Part 75 Appendix D methodology, substitute the maximum potential sulfur content, density, or gross calorific value for the fuel and the maximum potential fuel flow rate, in accordance with section 2.4 of Appendix D to 40 CFR Part 75;

(C) If the owner or operator will use the 40 CFR Part 75 low mass emissions units, substitute the SO₂ emission factor required for the unit as specified in 40 CFR section 75.19 and the maximum rated hourly heat input, as defined in 40 CFR section 72.2.

(D) If using a protocol in Appendix A to this Rule, follow the procedures in the applicable protocol.

(6) Compliance Deadlines

(a) The initial monitoring plan must be submitted by the following dates:

(A) For each source that is a WEB source on or before the Program Trigger Date, the monitoring plan must be submitted 180 days after such Program Trigger Date.

(B) For any existing source that becomes a WEB source after the Program Trigger Date, the monitoring plan must be submitted by September 30 of the year following the inventory year in which the source exceeded the emissions threshold.

(C) For any new WEB source, the monitoring plan must be included with the permit application for New Source Review.

(b) A detailed monitoring plan under OAR 340-228-0480(2)(b) must be submitted no later than 45 days prior to commencing certification testing in accordance with (c) below.

(c) Emission monitoring systems must be installed, operational and meet all of the certification testing requirements of this OAR 340-228-0480 (including any referenced in Appendix A) by the following dates:

(A) For each source that is a WEB source on or before the Program Trigger Date, two years before the start of the first control period as described in OAR 340-228-0510.

(B) For any existing source that becomes a WEB source after the Program Trigger Date, one year after the due date for the monitoring plan OAR 340-228-0480(6)(a)(B).

(C) For any new WEB source (or any new unit at a WEB source under OAR 340-228-0480 (c)(A) or (c)(B)), the earlier of 90 unit operating days or 180 calendar days after the date the new source commences operation.

(d) The owner or operator must submit test notices and certification applications in accordance with the deadlines set forth in OAR 340-228-0480(3)(b).

(e) For each applicable control period, the WEB source must submit each quarterly report under OAR 340-228-0480(8) by no later than 30 days after the end of each calendar quarter and must submit the annual report under OAR 340-228-0480(8) no later than 60 days after the end of each calendar year.

(7) Recordkeeping

(a) Except as provided in OAR 340-228-0480(7)(b), the WEB source must keep copies of all reports, registration materials, compliance certifications, sulfur dioxide emissions data, quality assurance data, and other submissions under OAR 340-228-0400 through OAR 340-228-0530 for a period of five years. In addition, the WEB source shall keep a copy of all Account Certificates of Representation for the duration of the program. Unless otherwise requested by the WEB source and approved by the Department, the copies must be kept on site.

(b) The WEB source must keep records of all operating hours, quality assurance activities, fuel sampling measurements, hourly averages for SO₂, stack flow, fuel flow, or other continuous measurements, as applicable, and any other applicable data elements specified in this rule or in Appendix A to this Rule. The WEB source must maintain the applicable records specified in 40 CFR Part 75 for any SO₂ emitting unit that uses a Part 75 monitoring method to meet the requirements of this rule.

(8) Reporting

(a) Quarterly Reports. For each SO₂ emitting unit, the Account Representative must submit a quarterly report within thirty days after the end of each calendar quarter. The report must be in a format specified by the Department to include hourly and quality assurance activity information and must be submitted in a manner compatible with the emissions tracking database designed for the WEB Trading Program. If the owner or operator submits a quarterly report under 40 CFR Part 75 to the U.S. EPA Administrator, no additional report under this paragraph (a) are required; provided, however, that the Department may require that a copy of that report (or a separate statement of quarterly and cumulative annual SO₂ mass emissions) be submitted separately to the Department.

(b) Annual Report. Based on the quarterly reports, each WEB source must submit an annual statement of total annual SO₂ emissions for all SO₂ emitting units at the source. The annual report must identify total emissions for all units monitored in accordance with OAR 340-228-0480(1)(a) and the total emissions for all units with emissions estimated in accordance with OAR 340-228-0480(1)(b). The annual report must be submitted within 60 days after the end of a control period.

(c) If the Department so directs, that any monitoring plan, report, certification or recertification, or emissions data required to be submitted under this rule, will be submitted to the Tracking System Administrator.

(d) The Department may review and reject any report submitted under this OAR 340-228-0480(7) that contains errors or fails to satisfy the requirements of this rule, and the Account Representative must resubmit the report to correct any deficiencies.

(e) Petitions. A WEB source may petition for an alternative to any requirement specified in OAR 340-228-0480(1)(a)(B). The petition requires approval by the Department and the U.S. EPA Administrator. Any petition submitted under this paragraph must include sufficient information for evaluating the petition, including, at a minimum, the following information:

(A) Identification of the WEB source and applicable SO₂ emitting unit(s);

(B) A detailed explanation of why the proposed alternative is being suggested in lieu of the requirement;

(C) A description and diagram of any equipment and procedures used in the proposed alternative, if applicable;

(D) A demonstration that the proposed alternative is consistent with the purposes of the requirement for which the alternative is proposed is consistent with the purposes of OAR 340-228-0400 through OAR 340-228-0530, and that any adverse effect of approving such alternative will be *de minimis*; and

(E) Any other relevant information that the Department may require.

(f) Consistency of Identifying Information. For any monitoring plans, reports, or other information submitted under OAR 340-228-0400 through OAR 340-228-0530, the Account Representative must ensure that, where applicable, identifying information is consistent with the identifying information provided in the most recent certificate of representation for the WEB source submitted under OAR 340-228-0440.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0490

Allowance Transfers

(1) Procedure. To transfer allowances, the Account Representative must submit the following information to the Tracking System Administrator:

(a) The transfer account number(s) identifying the transferor account;

(b) The transfer account number(s) identifying the transferee account;

(c) The serial number of each allowance to be transferred; and

(d) The transferor's Account Representative's name, signature, and the date of submission.

(2) Allowance Transfer Deadline. The allowance transfer deadline is midnight Pacific Standard Time March 1 of each year (or if this date is not a business day, midnight of the first business day thereafter) following the end of the control period. By this time, the transfer of the allowances into the WEB source's compliance account must be correctly submitted to the Tracking System Administrator in order to demonstrate compliance under OAR 340-228-0510(1) for that control period.

(3) Retirement of Allowances. To permanently retire allowances, the transferor's account representative must submit the following information to the Tracking System Administrator:

(a) The transfer account number(s) identifying the transferor account;

(b) The serial number of each allowance to be retired; and

(c) The transferor's Account Representative's name, signature, and the date of submission accompanied by a signed statement acknowledging that each retired allowance is no longer available for future transfers from or to any account.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0500

Use of Allowances from a Previous Year

(1) Any allowance that is held in a compliance account or general account remains in the account until the allowance is either deducted in conjunction with the compliance process or transferred to another account.

(2) In order to demonstrate compliance under OAR 340-228-0510(1) for a control period, WEB sources may use allowances allocated for that control period or any previous year. Because all allowances held in a special reserve compliance account for a WEB source that monitors certain units in accordance with OAR 340-228-0480(1)(b) will be deducted for compliance for each control period, no banking of such allowances for use in a subsequent year is permitted by OAR 340-228-0400 through OAR 340-228-0530.

(3) If flow control procedures for the current control period have been triggered as outlined in Section 5.5.2.3.3(h)(2) of the State Implementation Plan, then the use of allowances that were allocated for any previous year will be limited as follows:

(a) The number of allowances that are held in each compliance account and general account as of the allowance transfer deadline for the immediately previous year and that were allocated for any previous year will be determined by the Department.

(b) The number determined in OAR 340-228-0500(3)(a) will be multiplied by the flow control ratio established in accordance with Section 5.5.2.3.3(k)(1) of the State Implementation Plan to determine the number of allowances that were allocated for a previous year that can be used without restriction for the current control period.

(c) Allowances that were allocated for a previous year in excess of the number determined in OAR 340-228-0500(3)(b) may also be used for the current control period. If such allowances are used to make a deduction, two allowances must be deducted for each deduction of one allowance required under OAR 340-228-0510.

(4) Special provisions for the year 2018. After the Department has determined compliance with the 2017 allowance limitation in accordance with OAR 340-228-0510(1), allowances allocated for any year before 2018 may not be used for determining compliance with the 2018 allowance limitation or any future allowance limitation.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0510

Compliance

(1) Compliance with Allowance Limitations

(a) The WEB source must hold allowances, in accordance with OAR 340-228-0510(1)(b) and OAR 340-228-0500, as of the allowance transfer deadline in the WEB source's compliance account, (together with any current control year allowances held in the WEB source's special reserve compliance account under OAR 340-228-0480(1)(b)) in an amount not less than the total SO₂ emissions for the control period from the WEB source, as determined under the monitoring and reporting requirements of OAR 340-228-0480.

(A) For each source that is a WEB source on or before the Program Trigger Date, the first control period is the calendar year that is six years following the calendar year for which SO₂ emissions exceeded the milestone in accordance with procedures in Section 5.5.2.3.1 of the State Implementation Plan.

(B) For any existing source that becomes a WEB source after the Program Trigger Date, the first control period is the calendar year that is four years following the inventory year in which the source became a WEB source.

(C) For any new WEB source after the Program Trigger Date, the first control period is the first full calendar year that the source is in operation.

(D) If the WEB Trading Program is triggered in accordance with the year 2013 review procedures in section 5.5.2.3.1(d) of the State Implementation Plan, the first control period for each source that is a WEB source on or before the Program Trigger Date is the year 2018.

(b) An allowance may be deducted from the WEB source's compliance account only if:

(A) the allowance was allocated for the current control period or meets the requirements in OAR 340-228-0500 for use of allowances from a previous control period, and

(B) the allowance was held in the WEB source's compliance account as of the allowance transfer deadline for the current control period, or the allowance was transferred into the compliance account by an allowance transfer correctly submitted for recording by the allowance transfer deadline for the current control period.

(c) Compliance with allowance limitations must be determined as follows:

(A) The total annual SO₂ emissions for all SO₂ emitting units at the source that are monitored under OAR 340-228-0480(1)(b), as reported by the source in OAR 340-228-0480(8)(b) or (d), and recorded in the emissions tracking database shall be compared to the allowances held in the source's special reserve compliance account as of the allowance transfer deadline for the current control period, adjusted in accordance with OAR 340-228-0500. If the emissions are equal to or less than the allowances in such account, all such allowances shall be retired to satisfy the obligation to hold allowances for such emissions. If the total emissions from such units exceeds the allowances in such special reserve account, the WEB source shall account for such excess emissions in the following paragraph (A) of this subsection.

(B) The total annual SO₂ emissions for all SO₂ emitting units at the source that are monitored under OAR 340-228-0480(1)(a), as reported by the source in OAR 340-228-0480(8)(b) or (d), and recorded in the emissions tracking database, together with any excess emissions as calculated in the preceding paragraph (A) of this subsection, shall be compared to the allowances held in the source's compliance account as of the allowance transfer deadline for the current control period, adjusted in accordance with OAR 340-228-0500.

(d) Deduction of Allowances.

Other than allowances in a special reserve compliance account for units monitored under OAR 340-228-0480(1)(b) to the extent consistent with OAR 340-228-0500, allowances must be deducted for a WEB source for compliance with the allowance limitation as directed by the WEB source's Account Representative. Deduction of any other allowances as necessary for compliance with the allowance limitation must be on a first-in, first-out accounting basis in the order of the date and time of their recording in the WEB source's compliance account, beginning with the allowances allocated to the WEB source and continuing with the allowances transferred to the WEB source's compliance account from another compliance account or general account. The allowances held in a special reserve compliance account pursuant to OAR 340-228-0480(1)(b) shall be deducted as specified in OAR 340-228-0510(1)(c)(A).

(e) SO₂ emissions violations by a source subject to (c) and (d) of this rule:

(A) Each ton of SO₂ by a source in excess of its allowance limitation for a control period is a violation.

(B) Each day of the control period is a separate violation, and each ton of SO₂ emissions in excess of a source's allowance limitation is a separate violation.

(2) Certification of Compliance

(a) For each control period in which a WEB source is subject to the allowance limitation, the Account Representative of the source must submit to the Department a Compliance Certification report for the source.

(b) The Compliance Certification report must be submitted no later than the allowance transfer deadline of each control period and must contain the following:

(A) Identification of each WEB source;

(B) At the Account Representative's option, the serial numbers of the allowances that are to be deducted from a source's compliance account for compliance with the allowance limitation; and

(C) The Compliance Certification report according to OAR 340-228-0510(2)(c).

(c) In the Compliance Certification report, the Account Representative must certify, based on reasonable inquiry of those persons with primary responsibility for operating the WEB source in compliance with the WEB Trading Program, whether the WEB source for which the compliance certification is submitted was operated in compliance with the requirements of the WEB Trading Program applicable to the source during the control period covered by the report, including:

(A) Whether the WEB source operated in compliance with the SO₂ allowance limitation;

(B) Whether SO₂ emissions data was submitted to the Department in accordance with OAR 340-228-0480(8) and other applicable requirements, for review, revision as necessary, and finalization;

(C) Whether the monitoring plan for the WEB source has been maintained to reflect the actual operation and monitoring of the source and contains all information necessary to attribute SO₂ emissions to the source, in accordance with OAR 340-228-0480(1);

(D) Whether all the SO₂ emissions from the WEB source, were monitored or accounted for either through the applicable monitoring or through application of the appropriate missing data procedures;

(E) If applicable, whether any SO₂ emitting unit for which the WEB source is not required to monitor in accordance with OAR 340-228-0480(1)(a)(C) remained permanently retired and had no emissions for the entire applicable period; and

(F) Whether there were any changes in the method of operating or monitoring the WEB source that required monitor recertification. If there were any such changes, the report must specify the nature, reason, and date of the change, the method to determine compliance status subsequent to the change, and specifically, the method to determine SO₂ emissions.

(3) Penalties for any WEB source exceeding its allowance limitations

(a) Allowance deduction penalties

(A) An allowance deduction penalty will be assessed equal to two times the number of the WEB source's tons of SO₂ emissions in excess of its allowance limitation for a control period, determined in accordance with OAR 340-228-0510(1). Allowances allocated for that control period in the amount of the allowance deduction penalty will be deducted from the source's compliance account. If the compliance account does not have sufficient allowances allocated for that control period, the required number of allowances will be deducted from the WEB source's compliance account regardless of the control period for which they were allocated, once allowances are recorded in the account.

(B) Any allowance deduction required under OAR 340-228-0510(1)(c) will not affect the liability of the owners and operators of the WEB source for any fine, penalty, or assessment or their obligation to comply with any other remedy for the same violation as ordered under the Clean Air Act, implementing regulations, or applicable state or tribal law. Accordingly, a violation can be assessed each day of the control period for each ton of SO₂ emissions in excess of its allowance limitation or for each other violation of OAR 340-228-0400 through OAR 340-228-0530.

(4) Enforcement

(a) WEB Source liability for non-compliance. In addition to any allowance deduction, a WEB source that violates any requirement of this rule, including those listed under (1)(e) of this section, is subject to civil and criminal penalties, including but not limited to penalties under ORS 468, 468A, the Clean Air Act, and under OAR 340-012.

(b) General liability

(A) Any provision of the WEB Trading Program that applies to a source or an Account Representative also applies to the owners and operators of such source.

(B) Any person who violates any requirement or prohibition of the WEB Trading Program is subject to enforcement pursuant to OAR 340, Division 12.

(C) Any person who knowingly makes a false material statement in any record, submission, or report under this WEB Trading Program is subject to criminal enforcement pursuant to ORS 468.953.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0520

Special Penalty Provisions for 2018 Milestone

(1) If the WEB Trading Program is triggered as outlined in Section 5.5.2.3.1 of the State Implementation Plan, and the first control period will not occur until after the year 2018, the following provisions will apply for the 2018 emissions year.

(a) All WEB sources will register, and will open a compliance account within 180 days after the Program Trigger Date, in accordance with OAR 340-228-0450(1) and OAR 340-228-0470.

(b) The Tracking System Administrator will record the allowances for the 2018 control period for each WEB source in the source's compliance account once the Department allocates the 2018 allowances under Section 5.5.2.3.3(a) of the State Implementation Plan.

(c) The allowance transfer deadline is midnight Pacific Standard Time on May 30, 2021. WEB sources may transfer allowances as provided in OAR 340-228-0490(1) until the allowance transfer deadline.

(d) A WEB source must hold allowances allocated for 2018 including those transferred into the compliance account or a special reserve account by an allowance transfer correctly submitted by the allowance transfer deadline, in an amount not less than the WEB source's total SO₂ emissions for 2018. Emissions will be determined using the pre-trigger monitoring provisions in Section 5.5.2.3.2 of the State Implementation Plan, and OAR 340-214-0400 through OAR 340-214-0530.

(e) An allowance deduction and penalty for violation of SO₂ allowance limitation will be assessed and levied in accordance with OAR 340-228-0500(4), OAR 340-228-0510(1)(d) and (e), and OAR 340-228-0510(3) and (4), except that SO₂ emissions will be determined under OAR 340-228-0520(1)(d).

(2) If the program has been triggered and OAR 340-228-0520(1) is implemented, the provisions of OAR 340-228-0520(3) will apply for each year after the 2018 emission year until:

(a) The first control period under the WEB trading program; or

(b) The Department determined, in accordance with section 5.5.2.3.1(c)(10) of the Implementation Plan, that the 2018 SO₂ milestone has been met.

(3) If OAR 340-228-0520(1) was implemented, the following will apply to each emissions year after the 2018 emissions year:

(a) The Tracking System Administrator will record the allowances for the control period for the specific year for each WEB source in the source's compliance account once the Department allocates the allowances under Section 5.5.2.3.3.a of the State Implementation Plan.

(b) The allowance transfer deadline is midnight Pacific Standard Time on March 1 of each year (or if this date is not a business day, midnight of the first business day thereafter) following the end of the specific emissions year. WEB sources may transfer allowances as provided in OAR 340-228-0490(1) until the allowance transfer deadline.

(c) A WEB source must hold allowances allocated for that specific emissions year, or any year after 2018, including those transferred into the compliance account by an allowance transfer correctly submitted by the allowance transfer deadline, in an amount not less than the WEB source's total SO₂ emissions for the specific emissions year. Emissions are determined using the pre-trigger monitoring provisions in Section 5.5.2.3.2 of the State Implementation Plan, and OAR 340-214-0400 through 0530.

(d) An allowance deduction and penalty for violation of SO₂ allowance limitation will be assessed and levied in accordance with OAR 340-228-0500(4), OAR 340-228-0510(1)(d) and (e), and OAR 340-228-0510(3) and (4), except that SO₂ emissions shall be determined under OAR 340-228-0520(3)(c).

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

340-228-0530

Integration into Permits

Any WEB source that is not subject to OAR 340, Division 218 at any time after OAR 340-228-0400 through OAR 340-228-0530 becomes effective must obtain a permit under OAR 340, Division 216 or modify an existing permit issued under that division that incorporates the requirements of OAR 340-228-0400 through OAR 340-228-0530.

[NOTE: This rule is included in the State of Oregon Clean Air Act Implementation Plan as adopted by the EQC under OAR 340-200-0040.]

APPENDIX A: WEB MODEL RULE MONITORING PROTOCOLS

Protocol WEB-1: SO₂ Monitoring of Fuel Gas Combustion Devices

1. Applicability

(a) The provisions of this protocol are applicable to fuel gas combustion devices at petroleum refineries.

(b) Fuel gas combustion devices include boilers, process heaters, and flares used to burn fuel gas generated at a petroleum refinery.

(c) Fuel gas means any gas which is generated and combusted at a petroleum refinery. Fuel gas does not include: (1) natural gas, unless combined with other gases generated at a petroleum refinery, (2) gases generated by a catalytic cracking unit catalyst regenerator, (3) gases generated by fluid coking burners, (4) gases combusted to produce sulfur or sulfuric acid, or (5) process upset gases generated due to startup, shutdown, or malfunctions.

2. Monitoring Requirements

(a) Except as provided in paragraphs (b) and (c) of this Section 2, fuel gas combustion devices shall use a continuous fuel gas monitoring system (CFGMS) to determine the total sulfur content (reported as H₂S) of the fuel gas mixture prior to combustion, and continuous fuel flow meters to determine the amount of fuel gas burned.

(1) Fuel gas combustion devices having a common source of fuel gas may be monitored for sulfur content at one location, if monitoring at that location is representative of the sulfur content of the fuel gas being burned in any fuel gas combustion device.

(2) The CFGMS shall meet the performance requirements in Performance Specification 2 in Appendix B to 40 CFR Part 60, and the following:

(i) Continuously monitor and record the concentration by volume of total sulfur compounds in the gaseous fuel reported as ppmv H₂S.

(ii) Have the span value set so that the majority of readings fall between 10 and 95% of the range.

(iii) Record negative values of zero drift.

(iv) Calibration drift shall be 5.0% of the span.

(v) Methods 15A, 16, or approved alternatives for total sulfur, are the reference methods for the relative accuracy test. The relative accuracy test shall include a bias test in accordance with paragraph 4(c) of this section.

(3) All continuous fuel flow meters shall comply with the applicable provisions of Appendix D to 40 CFR Part 75.

(4) The hourly mass SO₂ emissions shall be calculated using the following equation:

$$E = (C_s)(Q_f)(K)$$

where: $E = \text{SO}_2$ emissions in lbs/hr
 $C_s = \text{Sulfur content of the fuel gas as H}_2\text{S (ppmv)}$
 $Q_f = \text{Fuel gas flow rate (scfh)}$
 $K = 1.660 \times 10^{-7} \text{ (lb/scf)/ppmv}$

(b) In place of a CFGMS in paragraph (a) of this Section 2, fuel gas combustion devices having a common source of fuel gas may be monitored with an SO₂ CEMS and flow CEMS at only one location, if the CEMS monitoring at that location is representative of the SO₂ emission rate (lb SO₂/scf fuel gas burned) of all applicable fuel gas combustion devices. Continuous fuel flow meters shall be used in accordance with paragraph (b), and the fuel gas combustion device monitored by a CEMS shall have separate fuel metering.

(1) Each CEMS for SO₂ and flow shall comply with the operating requirements, performance specifications, and quality assurance requirements of 40 CFR Part 75.

(2) All continuous fuel flow meters shall comply with the applicable provisions of Appendix D to 40 CFR Part 75.

(3) The SO₂ mass emissions for all the fuel gas combustion devices monitored by this approach shall be determined by the ratio of the amount of fuel gas burned by the CEMS-monitored fuel gas combustion device to the total fuel gas burned by all applicable fuel gas combustion devices using the following equation:

$$E_t = (E_m)(Q_f)/(Q_m)$$

where: $E_t = \text{Total SO}_2$ emissions in lbs/hr from applicable fuel gas combustion devices.
 $E_m = \text{SO}_2$ emissions in lbs/hr from the CEMS-monitored fuel gas combustion device.
 $Q_f = \text{Fuel gas flow rate (scfh) from applicable fuel gas combustion devices.}$
 $Q_m = \text{Fuel gas flow rate (scfh) from the CEMS-monitored fuel gas combustion device.}$

(c) In place of a CFGMS in paragraph (a) of this section, fuel gas combustion devices having a common source of fuel gas may be monitored with an SO₂ - diluent CEMS at only one location, if the CEMS monitoring at that location is representative of the SO₂ emission rate (lb SO₂/mmBtu) of all applicable fuel gas combustion devices. If this option is selected, the owner or operator shall conduct fuel gas sampling and analysis for gross calorific value (GCV), and shall use continuous fuel flow metering in accordance with paragraph (a) of this Section 2, with separate fuel metering for the CEMS-monitored fuel gas combustion device.

(1) Each SO₂-diluent CEMS shall comply with the applicable provisions for SO₂ monitors and diluent monitors in 40 CFR Part 75, and shall use the procedures in section 3 of Appendix F to Part 75 for determining SO₂ emission rate (lb/mmBtu) by substituting the term SO₂ for NO_x in that section.

(2) All continuous fuel flow meters and fuel gas sampling and analysis for GCV to determine the heat input rate from the fuel gas shall comply with the applicable provisions of Appendix D to 40 CFR Part 75.

(3) The SO₂ mass emissions for all the fuel gas combustion devices monitored by this approach shall be determined by the ratio of the fuel gas heat input to the CEMS-monitored fuel gas combustion device to the total fuel gas heat input to all applicable fuel gas combustion devices using the following equation:

$$E_t = (E_m)(H_t)/(H_m)$$

where:

- E_t = Total SO₂ emissions in lbs/hr from applicable fuel gas combustion devices.
- E_m = SO₂ emissions in lb/mmBtu from the CEMS - monitored fuel gas combustion device.
- H_t = Fuel gas heat input (mmBtu/hr) from applicable fuel gas combustion devices.
- H_m = Fuel gas heat input (mmBtu/hr) from the CEMS - monitored fuel gas combustion device.

3. Certification/Recertification Requirements

All monitoring systems are subject to initial certification and recertification testing as follows:

(a) The owner or operator shall comply with the initial testing and calibration requirements in Performance Specification 2 in Appendix B of 40 CFR Part 60 and paragraph 2 (a)(2) of this section for each CFGMS.

(b) Each CEMS for SO₂ and flow or each SO₂-diluent CEMS shall comply with the testing and calibration requirements specified in 40 CFR Part 75, section 75.20 and Appendices A and B, except that each SO₂-diluent CEMS shall meet the relative accuracy requirements for a NO_x-diluent CEMS (lb/mmBtu).

(c) A continuous fuel flow meter shall comply with the testing and calibration requirements in 40 CFR Part 75, Appendix D.

4. Quality Assurance/Quality Control Requirements

- (a) A quality assurance/quality control (QA/QC) plan shall be developed and implemented for each CEMS for SO₂ and flow or the SO₂-diluent CEMS in compliance with Appendix B of 40 CFR Part 75.
- (b) A QA/QC plan shall be developed and implemented for each continuous fuel flow meter and fuel sampling and analysis in compliance with Appendix B of 40 CFR Part 75.
- (c) A QA/QC plan shall be developed and implemented for each CFGMS in compliance with sections 1 and 1.1 of Appendix B of 40 CFR Part 75, and the following:
- (1) Perform a daily calibration error test of each CFGMS at two gas concentrations, one low level and one high level. Calculate the calibration error as described in Appendix A to 40 CFR Part 75. An out of control period occurs whenever the error is greater than 5.0% of the span value.
 - (2) In addition to the daily calibration error test, an additional calibration error test shall be performed whenever a daily calibration error test is failed, whenever a monitoring system is returned to service following repairs or corrective actions that may affect the monitor measurements, or after making manual calibration adjustments.
 - (3) Perform a linearity test once every operating quarter. Calculate the linearity as described in Appendix A to 40 CFR Part 75. An out of control period occurs whenever the linearity error is greater than 5.0 percent of a reference value, and the absolute value of the difference between average monitor response values and a reference value is greater than 5.0 ppm.
 - (4) Perform a relative accuracy test audit once every four operating quarters. Calculate the relative accuracy as described in Appendix A to 40 CFR Part 75. An out of control period occurs whenever the relative accuracy is greater than 20.0% of the mean value of the reference method measurements.
 - (5) Using the results of the relative accuracy test audit, conduct a bias test in accordance with Appendix A to 40 CFR Part 75, and calculate and apply a bias adjustment factor if required.

5. Missing Data Procedures

- (a) For any period in which valid data are not being recorded by an SO₂ CEMS or flow CEMS specified in this section, missing or invalid data shall be replaced with substitute data in accordance with the requirements in Subpart D of 40 CFR Part 75.
- (b) For any period in which valid data are not being recorded by an SO₂-diluent CEMS specified in this section, missing or invalid data shall be replaced with substitute data on a

rate basis (lb/mmBtu) in accordance with the requirements for SO₂ monitors in Subpart D of 40 CFR Part 75.

(c) For any period in which valid data are not being recorded by a continuous fuel flow meter or for fuel gas GCV sampling and analysis specified in this section, missing or invalid data shall be replaced with substitute data in accordance with missing data requirements in Appendix D to 40 CFR Part 75.

(d) For any period in which valid data are not being recorded by the CFGMS specified in this section, hourly missing or invalid data shall be replaced with substitute data in accordance with the missing data requirements for units performing hourly gaseous fuel sulfur sampling in section 2.4 of Appendix D to 40 CFR Part 75.

6. Monitoring Plan and Reporting Requirements

In addition to the general monitoring plan and reporting requirements of Section I of this Rule, the owner or operator shall meet the following additional requirements:

(a) The monitoring plan shall identify each group of units that are monitored by a single monitoring system under this Protocol WEB-1, and the plan shall designate an identifier for the group of units for emissions reporting purposes. For purpose of submitting emissions reports, no apportionment of emissions to the individual units within the group is required.

(b) If the provisions of paragraphs 2(b) or (c) are used, provide documentation and an explanation to demonstrate that the SO₂ emission rate from the monitored unit is representative of the rate from non-monitored units.

Protocol WEB-2: Predictive Flow Monitoring Systems for Kilns with Positive Pressure Fabric Filter

1. Applicability

The provisions of this protocol are applicable to cement kilns or lime kilns that (1) are controlled by a positive pressure fabric filter, and (2) have operating conditions upstream of the fabric filter that the WEB source documents would reasonably prevent reliable flow monitor measurements.

2. Monitoring Requirements

(a) A cement or lime kiln with a positive pressure fabric filter shall use a predictive flow monitoring system (PFMS) to determine the hourly kiln exhaust gas flow.

(b) A PFMS is the total equipment necessary for the determination of exhaust gas flow using process or control device operating parameter measurements and a conversion equation, a graph, or computer program to produce results in cubic feet per hour.

(c) The PFMS shall meet the following performance specifications:

(1) The PFMS must allow for the automatic or manual determination of failed monitors. At a minimum a daily determination must be performed.

(2) The PFMS shall have provisions to check the calibration error of each parameter that is individually measured. The owner or operator shall propose appropriate performance specifications in the initial monitoring plan for all parameters used in the PFMS comparable to the degree of accuracy required for other monitoring systems used to comply with this Rule. The parameters shall be tested at two levels, low: 0 to 20% of full scale, and high: 50 to 100% of full scale. The reference value need not be certified.

(3) The relative accuracy of the PFMS must be < 10.0% of the reference method average value, and include a bias test in accordance with paragraph 4(c) of this section.

3. Certification Requirements

The PFMS is subject to initial certification testing as follows:

(a) Demonstrate the ability of the PFMS to identify automatically or manually a failed monitor.

(b) Provide evidence of calibration testing of all monitoring equipment. Any tests conducted within the previous 12 months of operation that are consistent with the QA/QC plan for the PFMS are acceptable for initial certification purposes.

(c) Perform an initial relative accuracy test over the normal range of operating conditions of the kiln. Using the results of the relative accuracy test audit, conduct a bias test in accordance with Appendix A to 40 CFR Part 75, and calculate and apply a bias adjustment factor if required.

4. Quality Assurance/Quality Control Requirements

A QA/QC plan shall be developed and implemented for each PFMS in compliance with sections 1 and 1.1 of Appendix B of 40 CFR Part 75, and the following:

(a) Perform a daily monitor failure check.

(b) Perform calibration tests of all monitors for each parameter included in the PFMS. At a minimum, calibrations shall be conducted prior to each relative accuracy test audit.

(c) Perform a relative accuracy test audit and accompanying bias test once every four operating quarters. Calculate the relative accuracy (and bias adjustment factor) as described in Appendix A to 40 CFR Part 75. An out of control period occurs whenever the flow relative accuracy is greater than 10.0% of the mean value of the reference method.

5. Missing Data

For any period in which valid data are not being recorded by the PFMS specified in this section, hourly missing or invalid data shall be replaced with substitute data in accordance with the flow monitor missing data requirements for non-load based units in Subpart D of 40 CFR Part 75.

6. Monitoring Plan Requirements

In addition to the general monitoring plan requirements of Section I of this Rule, the owner or operator shall meet the following additional requirements:

(a) The monitoring plan shall document the reasons why stack flow measurements upstream of the fabric filter are unlikely to provide reliable flow measurements over time.

(b) The initial monitoring plan shall explain the relationship of the proposed parameters and stack flow, and discuss other parameters considered and the reasons for not using those parameters in the PFMS. The [state or tribe] may require that the subsequent monitoring plan include additional explanation and documentation for the reasonableness of the proposed PFMS.

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-4
Mobile Source Strategy Support Material

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-4 Mobile Source Strategy Support Material

In accordance with Section 5.5.2.4 of this implementation plan, the following is EPA's proposal to eliminate the current requirements for mobile source emission significance determination and budgets under 40 CFR 309(d)(5)(ii) and (iii), and replace with a new requirement to track mobile source emission reductions. This action is based on a determination by the WRAP that mobile source emissions mobile sources in general are expected to continuously decline between 2003 and 2018, rather than 2005, as anticipated by the GCVTC in 1996.

1. EPA's proposed revisions to Section 309 Mobile Source requirements (68 FR 39888, July 3, 2003): *Revisions to the Regional Haze Rule To Correct Mobile Source Provisions in Optional Program for Nine Western States and Eligible Indian Tribes Within That Geographic Area.*

Subpart P—Protection of Visibility

Section 51.309 is amended by revising paragraphs (b)(6) and (d)(5)(i), deleting paragraphs (d)(ii) and (d)(iii), and renumbering (d)(iv) to (d)(ii), to read as follows:

§ 51.309 Requirements related to the Grand Canyon Visibility Transport Commission.

(b)(6) *Continuous decline in total mobile source emissions* means that the projected level of emissions from mobile sources of each listed pollutant in 2008, 2013, and 2018, are less than the projected level of emissions from mobile sources of each listed pollutant for the previous period (*i.e.*, 2008 less than 2003; 2013 less than 2008; and 2018 less than 2013).

(d)(5)(i) Statewide inventories of onroad and nonroad mobile source emissions of VOC, NOX, SO₂, PM_{2.5}, elemental carbon, and organic carbon for the years 2003, 2008, 2013, and 2018.

(A) The inventories must demonstrate a continuous decline in total mobile source emissions (onroad plus nonroad; tailpipe and evaporative) of VOC, NOX, PM_{2.5}, elemental carbon, and organic carbon, evaluated separately. If the inventories show a continuous decline in total mobile source emissions of each of these pollutants over the period 2003–2018, no further action is required as part of this plan to address mobile source emissions of these pollutants. If the inventories do not show a continuous decline in mobile source emissions of one or more of these pollutants over the period 2003–2018, the plan submission must provide for an implementation plan revision by no later than December 31, 2008 containing any necessary long-term strategies to achieve a continuous decline in total mobile source emissions of the pollutant(s), to the extent practicable, considering economic and technological reasonableness and federal preemption of vehicle standards and fuel standards under title II of the CAA.

(B) The plan submission must also provide for an implementation plan revision by no later than December 31, 2008 containing any long-term strategies necessary to reduce emissions of SO₂

from nonroad mobile sources, consistent with the goal of reasonable progress. In assessing the need for such long-term strategies, the State may consider emissions reductions achieved or anticipated from any new Federal standards for sulfur in nonroad diesel fuel.

(ii) [*text of (iv) retained same as before*] [FR Doc. 03-16923 Filed 7-2-03; 8:45 am]

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-5
Fire Source Strategy
Support Analysis

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-5 Fire Source Strategy Support Analysis

Section 5.5.2.5 of this implementation plan contains the fire strategy to address the requirements under 40 CFR 51.309(d)(6). This strategy focuses on reducing emissions from prescribed fire and agricultural burning in Oregon. Recognizing that the purpose of Section 309, as stated in 40 CFR 51.309(a), is to minimize visibility impacts of the 16 Class I areas of the Colorado Plateau, the fire strategy for Oregon is primarily a continuation of current state smoke management programs, rather than developing new ones. Much of this has to do with the great distance of Oregon fire sources from the Colorado Plateau, and documentation that identifies Oregon as a "Clean Air Corridor", as described in Section 5.5.2.1 of this implementation plan.

This appendix provides additional information on the fire program elements described in Section 5.5.2.5. The following elements are described below:

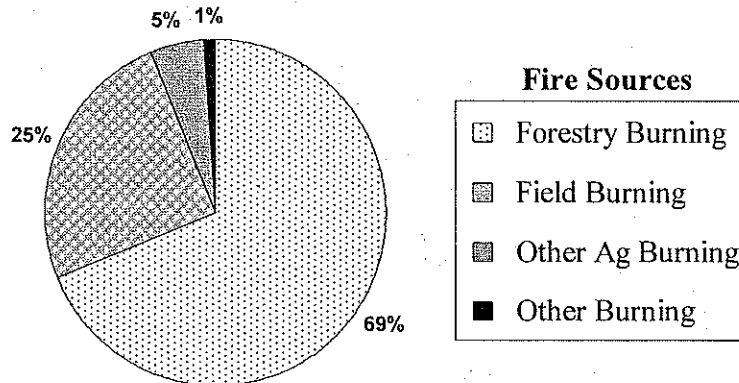
- 5.5.2.5.2 Fire Program Evaluation
- 5.5.2.5.3 Emission Inventory and Tracking System
- 5.5.2.5.4 Identification and Removal of Administrative Barriers
- 5.5.2.5.5 Enhanced Smoke Management Program
- 5.5.2.5.6 Annual Emission Goal

1. Fire Program Evaluation

40 CFR 51.309(d)(i) requires documentation that all federal, state, and private smoke management programs have a mechanism in place for evaluating and addressing the degree of visibility impairment from smoke in their planning and application. This rule also requires an evaluation whether smoke management program in the state contain the following seven components: (1) actions to minimize emissions; (2) evaluation of smoke dispersion; (3) alternatives to fire; (4) public notification; (5) air quality monitoring; (6) surveillance and enforcement; and (7) program evaluation.

As shown in Figure 1, prescribed fire (forestry burning) and agricultural field burning are the dominant fire sources in the state, representing 69 and 25 percent, respectively. Other agricultural burning and open burning (mostly domestic or backyard burning) are considerably less, representing only 5 and 1 percent. The forestry burning occurs statewide, except for the remote desert region of southern Oregon. The agricultural field burning is concentrated in specific locations, with the majority in the Willamette Valley, and smaller amounts in central and eastern Oregon. Other agricultural burning is intermittent in rural areas around the state, whereas backyard and other open burning is near more urbanized areas, mostly in Western Oregon.

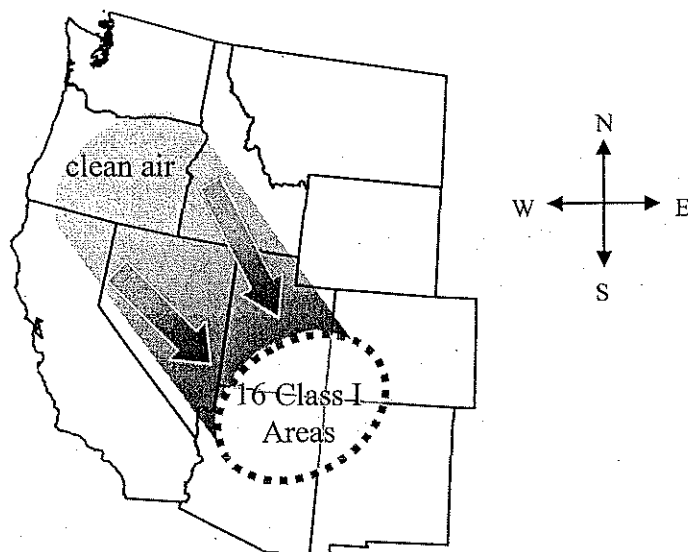
**Figure 1: Major Sources of Fire Emissions in Oregon
(1999 emissions, tons per year)**



Due to the relatively large amounts of prescribed fire and agricultural field burning, this burning is controlled through smoke management programs. The prescribed fire is controlled under a statewide smoke management program operated by the Oregon Department of Forestry. The majority of field burning is in the Willamette Valley, and is controlled under a smoke management program operated by the Oregon Department of Agriculture. These programs operate under the same smoke management objectives of minimizing smoke impacts in populated areas by conducting the burning under optimum smoke dispersion conditions.

As specified in Section 5.5.2.5.2 of this implementation plan, Oregon has evaluated these smoke management programs based on their potential to contribute to visibility impairment in the 16 Class I areas of the Colorado Plateau. Recognizing that Oregon is approximately 500-600 miles from the nearest Class I area in the Colorado Plateau, it is not expected that any of this burning would have an impact on these Class I areas at any measurable level. More significantly, meteorological work conducted by the GCVTC Meteorological Subcommittee and more recently by the WRAP related to clean air corridors has shown that when regional transport winds and air movement are coming from the northwest (i.e., from Oregon to the Colorado Plateau), this results in the best visibility days in the Colorado Plateau Class I areas. This is indicated in Figure 2 below, and described in further detail in Section 5.5.2.1.2 and Appendix D8-2. In addition, there does not appear to be any evidence or findings by the GCVTC or the WRAP that Oregon fire sources on a given day contribute to visibility impairment in the 16 Class I areas. Even if such evidence did exist, the State of Oregon does not believe the meteorological tools and capabilities exist to accurately project long-range smoke transport over 500 miles and predict visibility impact in these Class I areas.

Figure 2. Transport of “clean air” from Oregon to the Colorado Plateau, as basis for the Clean Air Corridor



The evaluation of state-run smoke management programs related to the seven components listed above was conducted by Oregon. This evaluation is presented under the discussion of Enhanced Smoke Management Program below.

2. Emission Inventory and Tracking System

Under 40 CFR 51.309(d)(ii), states must have a process in place for gathering the essential post-burn activity information to support emissions inventory and tracking systems for the five major pollutant types (VOC, NO_x, elemental and organic carbon, and fine particulate).

As indicated in Section 5.5.2.5.3, the State of Oregon will use the *WRAP Policy on Fire Tracking Systems (FTS)* developed by the Fire Emissions Joint Forum, for estimating and tracking emissions originating from prescribed fire and agricultural field burning conducted under the smoke management programs described above. Oregon DEQ will have assistance from the Oregon Department of Forestry and Oregon Department of Agriculture in obtaining the necessary post-burn activity information to calculate emissions using the WRAP FTS. This information consists of seven components: (1) date of burn, (2) burn location, (3) area of burn, (4) fuel type, (5) pre-burn fuel loading, (6) type of burn, and (7) “anthropogenic” or “natural” classification. The FTS will be used in conjunction with the WRAP’s Emissions Data Management System (EDMS), which is a larger and more comprehensive emissions tracking and forecasting system developed by the WRAP for point, area, biogenic, and mobile sources. The WRAP will be developing further guidance for states on how to establish quality assurance methods and the format for submitting FTS information to the WRAP. The EDMS, as it relates to tracking fire emissions, is described in Chapter 6 of the TSD Report.

3. Identification and Removal of Administrative Barriers

Under 40 CFR 51.309(d)(iii) state must identify a formal process that will be followed to identify and remove existing administrative barriers to the use of non-burning alternatives. As described in Section 5.5.2.5.4, the State of Oregon has developed a strategy that focuses on prescribed fire (forestry burning). This strategy identifies a process by which administrative barriers will be overcome, in part by promoting the use of non-burning alternatives to prescribed fire by using a WRAP document entitled *Nonburning Alternatives for Vegetation and Fuel Management*.

The *Nonburning Alternatives for Vegetation and Fuel Management* document was prepared for the WRAP Fire Emissions Joint Forum, and is a comprehensive reference manual of alternatives to prescribed fire that states can use for meeting the requirement of developing alternatives to prescribed fire. It evaluates non-burning vegetative management options, includes a "decision-tree" for considering treatment options, and identifies potential markets and funding sources for utilizing forest materials. It also describes how to develop a successful strategy for vegetation and fuel load management. This document is designed to provide landowners and land managers with a comprehensive list of viable options, and decision makers with the tools necessary to develop realistic non-burning strategies.

The State of Oregon intends to use this WRAP document as a reference guide in state and land-manager decision-making processes for evaluating non-burning alternatives for prescribed fire. Oregon DEQ is currently working with the Oregon Department of Forestry to develop guidance for incorporating this document into the daily operation of the Oregon Smoke Management Program, in accordance with the "Operational Guidance for the Oregon Smoke Management Program, Directive 1-4-1-601". This directive states that the policy of the State Forester is to "minimize emissions from prescribed burning, where appropriate, by encouraging: cost effective utilization of forest residue; alternatives to burning; and alternative burning practices".

Incorporating the WRAP *Nonburning Alternatives for Vegetation and Fuel Management* document into the Oregon Smoke Management Program will occur as part of periodic review process now being conducted by the Oregon Department of Forestry and Oregon DEQ. This periodic review is expected to be completed in early 2004. Once completed, Oregon DEQ will provide EPA Region X with supplemental information to this implementation plan that describes the actual process by which non-burning alternatives will be promoted under the Oregon Smoke Management Program using the WRAP *Nonburning Alternatives for Vegetation and Fuel Management*.

Currently, the Oregon Department of Forestry, under OAR 629-043-0043, and in cooperation with state and federal land managers and private land owners, is required to develop and apply Best Available Technology (BAT) related to prescribed burning. BAT elements include research to improve wood residue utilization and marketing, mechanical site preparation, techniques to reduce fuel loading such as chipping and yarding, and incentives for fuel removal such as tax credits. Efforts to implement BAT in Oregon are also encouraged and supported by the USDA Forest Service, Bureau of Land Management, and National Park Service. In addition to BAT, the Forest Practices Act also encourages utilization of residue, fuel reduction measures, low

emission-producing burning methods and alternate treatment practices that are consistent with the purposes of the Act.

As indicated in Section 5.5.2.5.4, the State of Oregon determined that for agricultural field burning, non-burning alternatives are being actively pursued and successfully implemented. This is especially true in for agricultural field burning in the Willamette Valley, where state law (ORS 468A.555) mandates a research and development program to seek, develop and promote viable alternatives to agricultural field burning. This includes a tax credit program for pollution control facilities for alternatives to burning (ORS 468.150). To date these programs have made major strides in finding viable alternatives, such as straw marketing to Japan and other countries, minimum tillage, and less-than-annual burning. A major reduction in the number of acres that can be burned has also occurred since the early 1990's, also as a result of state law (ORS 468A.610). As a result, there has been a significant increase in the use of alternatives, both in the Willamette Valley and other areas of the state. This high use of alternatives is expected to continue into the future.

4. Enhanced Smoke Management Program

40 CFR 51.309(d)(iv) requires that state implementation plans provide for enhanced smoke management programs, based on the criteria of efficiency, economics, law, emission reduction opportunities, land management objectives, and reduction of visibility impacts. As described in Section 5.5.2.5.5, the State of Oregon evaluated the existing smoke management programs in the state using the WRAP *Enhanced Smoke Management Programs for Visibility Policy*. This policy (referred to as the WRAP ESMP) identifies nine elements that are needed in an enhanced smoke management program to meet the requirements of the rule. The first seven elements are listed under 40 CFR 51.309(d)(i), while the last two are listed in the WRAP ESMP: (1) actions to minimize emissions; (2) evaluation of smoke dispersion; (3) alternatives to fire; (4) public notification; (5) air quality monitoring; (6) surveillance and enforcement; (7) program evaluation; (8) burn authorization; and (9) regional coordination.

The State of Oregon evaluated the Oregon Department of Forestry Smoke Management Program for prescribed burning, and the Oregon Department of Agriculture Field Burning Program. These two state-run smoke management programs control all of the prescribed fire and the majority of the agricultural field burning, as described under the Fire Program Evaluation section above. The following is an assessment of how both of these smoke management programs address the nine elements in the WRAP ESMP.

(1) Actions to Minimize Fire Emissions

Oregon Department of Forestry Smoke Management Program:

In 1992, the Oregon Department of Forestry (ODF) adopted the "Operational Guidance for the Oregon Smoke Management Program, Directive 1-4-1-601", which includes actions to minimize prescribed fire emissions in all areas of the state. The directive states that the policy of the State Forester is to "minimize emissions from prescribed burning, where appropriate, by encouraging: cost effective utilization of forest residue; alternatives to

burning; and alternative burning practices". The directive also states that ODF will encourage landowners to "burn only those units that must be burned to achieve the landowners' objectives", to burn during time periods when fuels have relatively high fuel moistures (which results in fewer emissions), and encourage to use of mass ignition methods to help reduce emissions.

In addition to this directive, there is a Memorandum of Understanding between the US Forest Service and Oregon DEQ that limits the amount of prescribed burning in Northeastern Oregon on an annual basis. This limit is 15,000 tons of PM10, and has been in effect since 1994, for the purpose of minimizing fire emissions associated with increased prescribed burning to address forest health, in four national forests in this region of the state. This burning is also controlled under the ODF Smoke Management Program.

Oregon Department of Agriculture Field Burning Program:

Willamette Valley growers utilize many different techniques to minimize emissions from field burning. Rapid ignition for open burning requires all sides of the field to be ignited as rapidly as practicable to maximize plume rise. Oregon Administrative Rules (OAR) 603-077-0110. Growers must ensure field residue is dry and in good burning condition. Growers may sanitize fields by propane flaming (OAR 603-077-0145). Prior to propane flaming, loose straw is removed from the field and the stubble cut close to the ground to prevent sustained open fire and reduce emissions.

(2) Evaluation of Smoke Dispersion

Oregon Department of Forestry Smoke Management Program:

The ODF program determines appropriate conditions for prescribed burning throughout the state in order to avoid smoke impacts in populated areas. Appropriate conditions are determined based on evaluation of daily weather forecasts and existing air quality. ODF employs meteorologists who develop forecasts, burning instructions and advisories using national, regional and local weather forecast models and data to determine dispersion conditions. Smoke dispersal conditions are determined for each area of the state, considering factors such as wind direction, wind speed, mixing height, and dispersion index.

Oregon Department of Agriculture Field Burning Program:

This program employs a full-time meteorologist to monitor and forecast smoke dispersal conditions. The meteorologist uses a variety of standard meteorological tools to evaluate atmospheric conditions and their suitability for open field burning. Conventional surface weather reports and rawinsonde observations are used to develop a snapshot of atmospheric conditions. In addition, the program utilizes pilot reports, a vertical sounder near Newport and information from the WSR88-D Doppler radar in Portland. These data are supplemented with strategically located wind monitoring sites maintained by Oregon DEQ. At periodic intervals, program personnel release pilot balloons at different locations in the Willamette

Valley which are optically tracked to measure wind speed and direction from the surface to approximately 6000 feet above ground.

In addition to the observed data, the meteorologist also looks at a variety of computer models or simulations of the atmosphere to determine what will happen in the future. Primary models used include the University of Washington's MM5 model, the National Centers for Environmental Prediction's (NCEP) Rapid Update Cycle model (RUC) and NCEP's Eta model.

All of this information is assessed by the program meteorologist to make recommendations to decision-makers regarding the appropriateness of open field burning on any given day.

(3) Alternatives to Fire

Oregon Department of Forestry Smoke Management Program:

As stated above, the Operational Guidance for the Oregon Smoke Management Program, Directive 1-4-1-601 encourages "cost effective utilization of forest residue; alternatives to burning; and alternative burning practices". New or improved harvesting techniques that reduce the need for burning are communicated to landowners by ODF, as appropriate.

Under OAR 629-043-0043, and in cooperation with state and federal land managers and private land owners, ODF is required to develop and apply Best Available Technology (BAT) related to prescribed burning. BAT elements include research to improve wood residue utilization and marketing, mechanical site preparation, techniques to reduce fuel loading such as chipping and yarding, and incentives for fuel removal such as tax credits.

ODF is also a member of the Wildland Fire Research and Development Collaboratory, which was recently formed to exchange information related to research and development activities associated with prescribed fire, and to "serve as a catalyst for accelerating the transfer of technology from the research community to the operational community." Alternatives to fire are expected to be one of the topics included in this effort.

Oregon Department of Agriculture Field Burning Program:

Oregon Revised Statutes (ORS) 468A.585 requires the Oregon Department of Agriculture (ODA) to conduct a program to research and develop alternatives to field burning. ODA and the Oregon Seed Council (OSC) have entered into a Memorandum of Understanding that consolidates field burning alternative research proposals and grass seed production research management proposals. A committee made up of representatives of sponsoring organizations and agencies decide how research funds are allocated based on the merit of each researcher's proposal.

In the 2002-2003 fiscal year, \$280,300.00 of research funding was distributed by ODA and OSC. Some of the research projects funded in 2002-2003 include: (1) a new approach to enhance weed control during grass seed establishment; (2) comparison of the impacts of

thermal and non-thermal residue management strategies on abundance and management of insect pests associated with Kentucky bluegrass in eastern and central Oregon; and (3) weed management in grass seed production.

(4) Public Notification of Burning

Oregon Department of Forestry Smoke Management Program:

ODF maintains a web site <http://www.odf.state.or.us/> that provides considerable information pertaining about the smoke management program and prescribed burning activity in the state.

1. Daily burning forecasts and instructions
2. Daily planned and accomplished burning activity
3. Registered burn information
4. Past years' burning activity
5. Public information newsletter about prescribed burning
6. The Smoke Management Plan requirements
7. Activities of the Smoke Management advisory committee

Oregon Department of Agriculture Field Burning Program:

Information about this program is available from many sources. ODA has a web page <http://oda.state.or.us/nrd/smoke/index.html> that provides detailed information about the program on a variety of topics and frequently asked questions. It also provides the public with the ability to "self-subscribe" to email weather and burn notifications, updated daily and when there is burning activity. An annual "Field Burning Summary" is also available on the website.

ODA provides two complaint lines (geographically located), allowing the public instant access to the ODA if there is a smoke impact occurring. If a complaint is called in after hours, or if ODA representatives are unavailable, the call will be directed into voicemail. An ODA employee will contact the caller if requested. ODA also maintains a "media line", allowing the media instant access to the department and pertinent, up-to-date burn statistics. All acreage burned, number of complaints, and any smoke impacts are provided to the Oregon Governor's office in a weekly "Governor's Report".

(5) Air Quality Monitoring

Oregon Department of Forestry Smoke Management Program:

ODF uses a variety of sources of information to monitor air quality and track smoke impacts. Air quality monitoring data collected by Oregon DEQ is accessed and evaluated for impacts. Data from a cooperative nephelometer network established by the US Forest Service is used to determine air quality levels and any intrusions that may be occurring. Airport weather observations and pilot reports are also used to determine smoke movement and visibility. Web cameras are monitored to ascertain visual air quality and smoke movement. Aircraft observations are used during periods of special concern to track smoke movement and to

determine burns that may be creating undesirable impacts. Fire lookouts are also utilized to determine smoke movement. Public calls about smoke help determine smoke impacts in areas where monitoring data is not available.

Oregon Department of Agriculture Field Burning Program:

ODA uses a variety of methods to monitor smoke impacts. Oregon DEQ nephelometer sites are located near populated areas of the Willamette Valley, and are used by ODA to monitor field burning activity. These monitors provide near real-time information on smoke impacts as they are occurring. In addition, ODA field personnel (inspectors, burn coordinators, and the program team leader) travel throughout the Willamette Valley to visually monitor smoke movement. These personnel maintain radio contact with each other and with office staff (including the meteorologist) in Salem. Changes in wind direction or in the rise characteristics of smoke plumes can be instantly assessed and field burning modified or stopped if the situation warrants. Smoke impact is also monitored via the complaint lines. Citizens can call local phone numbers in Salem and Eugene and report smoke intrusions. These calls are answered by smoke management program personnel if possible, if not they go to an answering machine and are evaluated and responded to as soon as staff workload permits.

(6) Surveillance and Enforcement

Oregon Department of Forestry Smoke Management Program:

ORS 477.515 requires that burning permits be obtained prior to burning. Violation of this statute by any individual may result in a legal citation and fine. Also, it is the policy of the State Forester to "achieve strict compliance with the smoke management plan, directive and instructions", as stated in the Operational Guidance for the Oregon Smoke Management Program, Directive 1-4-1-601.

Enforcement provisions in the directive state that "burning without a permit is a violation of ORS 477.515" on non-federal land. Also, since the Smoke Management Plan is already part of the Oregon State Clean Air Act Implementation Plan, violations of the Plan requirements on federal land are subject to federal enforcement action.

Oregon Department of Agriculture Field Burning Program:

The program is built on a foundation of cooperative compliance with rules governing open field burning. This compliance is supported by ODA enforcement rules (OAR 603-077-0175). Direct observation by ODA field personnel and others provide information of possible rule violations. Radio and cell phone communications facilitate the coordination among those actively involved in investigating possible rule infractions during burning periods. ODA staff and director evaluate the factors involved in each case and may assess warnings, notices of noncompliance, and civil penalties.

(7) Program Evaluation

Oregon Department of Forestry Smoke Management Program:

A standing Smoke Management Advisory Committee meets annually to review the previous year's smoke management activities and to provide input to ODF on program operations. A periodic review of the Plan is scheduled for every five years. The Plan is currently undergoing a complete review by a Committee consisting of individuals representing local and federal government, industry and environmental groups, and the general public.

Oregon Department of Agriculture Field Burning Program:

Program evaluation occurs in several ways. ODA conducts a review at the end of the burn season of the number and severity of field burning smoke impacts on the general public. This includes reviewing measured smoke impacts data from Oregon DEQ nephelometers located in the Willamette Valley, and reviewing all smoke intrusion complaint calls received via telephone, email, and regular mail. This information is compiled in an annual "Field Burning Summary" which is provided to Oregon DEQ and available to the general public.

During the burn season, ODA personnel work closely with the agricultural community. OSC invites ODA and growers to bi-weekly breakfast meetings to discuss field burning and smoke management issues. ODA attends and seeks input from growers during monthly Ag Fiber Association meetings throughout the year. ODA also works very closely with OSC to continually improve our operations with the agricultural community and the general public.

(8) Burn Authorization

Oregon Department of Forestry Smoke Management Program:

Under the program, the burn authorization process begins with the development and issuance of smoke management forecasts and burning instructions and advisories. Burning instructions must be strictly complied with, as described above. Local field personnel then evaluate the burning instructions and advisories in coordination with landowners who have burn units that may be in prescription and are ready for burning. Neighboring field offices may also be consulted to ensure that coordination takes place under burn scenarios where tonnage being burned may be limited in a given area. A burn might not occur if the local field administrator determines that a burn may not be advisable because of local factors, such as nearby burns being conducted, potential local smoke impacts, or adverse fire conditions. If a local burn manager would like to conduct a burn that is not within the burning instruction parameters, he/she must first obtain approval from the smoke management forecaster before proceeding.

Oregon Department of Agriculture Field Burning Program:

As previously described, ODA only allows field burning if weather conditions are favorable for avoiding smoke impacts in populated areas. Farmers obtain burn permits in their local fire protection district, and must monitor ODA radio broadcasts and pay close adherence to the burning authorized in these broadcasts. Meteorology varies in the Willamette Valley, and

burning is authorized in specific areas as conditions are appropriate. Special field burning zones have been established throughout the Valley. Burning is authorized based on an evaluation of the number of acres that can be burned in a certain zone within an allotted time period. Farmers must burn in accordance with the location, time, and acreage limit specified by ODA. Failure to adhere to this authorization is subject to enforcement action, as described above.

(9) Regional Coordination

Oregon Department of Forestry Smoke Management Program:

ODF burn information is available for other states or burning entities to review prior to the conduct of their operations. Also, ODF and the states of Washington and California maintain lines of communication on burning activity. ODF receives information from the Northeast Air Alliance in northern California about their planned activities. ODF also maintains communications with the Department of Agriculture regarding field burning activity to avoid any conflicts in burning schedules.

Coordination with other open burning in the Willamette Valley is enhanced by a contract between Oregon DEQ and ODF, under which ODF issues the daily open burning advisory between October 1 and June 15. Open burning and prescribed burning days are better managed through this coordination, resulting in less confusion for the public about burn days and better airshed management decisions.

Oregon Department of Agriculture Field Burning Program:

The ODA program is a cooperative effort between Oregon DEQ, the Oregon Department of Forestry, Oregon State University, OSC, approximately 60 local fire protection districts, and nearly 200 grass seed growers. ODA also has periodic contact with the Environmental Protection Agency Region X office. Due to distance and prevailing winds, smoke from field burning in the Willamette Valley rarely travels to neighboring states, making interstate coordination unnecessary.

5. Annual Emission Goal

Under 40 CFR 51.309(d)(6)(v), states must adopt a process for establishing annual emission goals (AEG) for fire sources (except wildfire) that will “minimize emission increases from fire to the maximum extent feasible”. As described in Section 5.5.2.5.6, the State of Oregon intends to use the WRAP *Annual Emission Goals for Fire Policy* to meet this requirement as it pertains to prescribed fire (forestry burning). Emission increases in prescribed fire are expected in Oregon and nationally under the National Fire Plan, in order to restore forest ecosystem health. In regards to agricultural burning, no emission increases are expected, due primarily to state law (ORS 468A.610) which prevents any increase in Willamette Valley field burning, the largest source of agricultural burning in the state.

The WRAP *Annual Emission Goals for Fire Policy* proposes the identification, use and tracking of emission reduction techniques (ERTs) to meet the annual emission goals requirement. It contains seven policy statements related to annual emission goals, including the following: (1) the minimum emission increase from fire can be accomplished through the optimal application of ERTs; (2) ERTs, such as biomass utilization prior to burning and increasing combustion efficiency, are proven methods of reducing fire emissions; (3) ERTs are control strategies to reduce smoke emission, distinct from non-burning alternatives or smoke management techniques; (4) the use of ERTs to meet the AEG requirement is subject to economic, safety, technical and environmental feasibility criteria, and land management objectives; and (5) states will need to develop a procedure for verifying the use of ERTs and for tracking the achievement of AEGs. The policy contains two options for how ERTs may be implemented, as well as an appendix with additional AEG and ERT guidance.

The State of Oregon intends to use the WRAP *Annual Emission Goals for Fire Policy* to meet the annual emission goal requirement. Oregon DEQ is currently working with the Oregon Department of Forestry to develop guidance for incorporating this policy into the daily operation of the Oregon Smoke Management Program, in accordance with the "Operational Guidance for the Oregon Smoke Management Program, Directive 1-4-1-601", as part of the periodic review of the Oregon Smoke Management Program currently underway. This periodic review is expected to be completed in early 2004. Once completed, Oregon DEQ will provide EPA Region X with supplemental information to this implementation plan that describes how ERTs will be tracked, quantified, and emission reductions estimated s in order to meet the annual emission goal requirement.

It is expected that some of the ERTs identified will include (1) evaluating changes in harvest diameter, (2) 1000-hour fuel moistures, and (3) fuel loading in various fuel size classes. The amount of fuels consumed is related to the amount of fuel available as well as the moisture regime under which the fuel is burned. Tracking these data parameters may help determine trends in the use of emission reduction techniques.

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-6
Pollution Prevention Strategy
Support Analysis

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-6 Pollution Prevention Report

The following is supporting documentation related to the Pollution Prevention Report described in Section 5.5.2.7 of this implementation plan. See also Chapter 8 of the WRAP TSD for regional modeling analysis related to the GCVTC 10/20 goals.

Below is a list of support documents, and the SIP section they are referenced:

1. List of Renewable Energy Generation Projects in use or planned as of the year 2002. See Section 5.5.2.7.2(a).
 2. Oregon State Agency Sustainability Report. See Section 5.5.2.7.2(f).
 3. Summary of Oregon Energy Conservation Programs. See Section 5.5.2.7.2(g), and Table 5.5.2-14.
 4. Maps and Reports on the potential for renewable energy to supply power and where renewable energy is most cost-effective, including the Western Systems Coordinating Council Map of Principal Transmission Lines, dated January 1, 2002. See Section 5.5.2.7.2(h).
 5. Summary of Oregon Renewable Resource Programs. See Section 5.5.2.7.2(j), and Table 5.5.2-15.
 6. Oregon statutes related to Pollution Prevention (not referenced in Section 5.5.2.7.2.)
 7. Summary of WRAP Air Pollution Forum Reports on Pollution Prevention. See Section 5.5.2.7.1)
-
1. **List of Renewable Energy Generation Projects in use or planned as of the year 2002. See Section 5.5.2.7.2(a).**

Renewable Energy Generating Projects in place or planned as of 2002

Large Renewable Generating Systems:

Generating systems of 3 kW or larger are listed in the included spreadsheet title Renewable Generation Projects in Oregon. The 41 MW Combine Hills wind project is expected to be on line by December 2003. Also, the Office of Energy has issued a draft proposed order on the Stateline Wind Project's application to increase electrical generating capacity by 184 MW by December 2005 (for a total of 307.6 MW in Oregon).

Small Renewable Energy Installations (under 3 kW):

Solar:

14 solar electric systems for businesses (as of year-end 2002)
225 solar electric systems for homes (as of year-end 2001; data for 2002 not yet complete)

Wind turbines:

6 systems for businesses (as of year-end 2002)
32 home systems
(Some turbines were installed in the 1980s and are likely no longer in operation.)

Hydro:

20 home systems
Most of the systems installed by businesses are larger than 3 kW.

Narratives:

Descriptions by resource are available on Oregon Office of Energy Web site:

Wind: <http://www.energy.state.or.us/renew/wind/windarea.htm>

Solar: <http://www.energy.state.or.us/renew/solar.htm>

Biomass: <http://www.energy.state.or.us/biomass/Resource.htm>

In addition, the *2001 Oregon Biomass Energy Book* by the Oregon Office of Energy provides a directory of the state's biomass projects, by type.

Geothermal: <http://www.energy.state.or.us/renew/geo.htm>

Hydro: <http://www.energy.state.or.us/renew/water.htm>

2. Oregon State Agency Sustainability Report. See Section 5.5.2.7.2(f).

Oregon State Agency Sustainability Report: a Summary of State Sustainability Projects Initiated May 2000 through December 2002. April 18, 2003.

Note: This report is available upon request to the Department.

3. Summary of Oregon Energy Conservation Programs. See Section 5.5.2.7.2(g), and Table 5.5.2-14.

Oregon's Energy Conservation Programs

Policies, Rules and Regulations:

System Benefits Charge (ORS 757.612 - <http://www.leg.state.or.us/ors/757.html>)

For 10 years beginning March 2002, Portland General Electric (PGE) and Pacific Power customers pay a 3 percent charge on their monthly bill for conservation and renewable

resource programs under Oregon's electric industry restructuring law. Most of the funds go toward conservation:

- 56.7 percent of the funds are for projects that save electricity, primarily in homes and businesses. The Energy Trust of Oregon administers the funds and the conservation programs formerly run by PGE and Pacific Power. (www.energytrust.org). Some of the program elements remain the same and some are new. Programs for homes cover weatherization, lighting, space and water heating systems, appliances and new construction. Programs for businesses cover operations and maintenance, industrial processes, and new construction and major remodeling. The Energy Trust also is conducting pilot programs focusing on specific technologies and markets. The goal of the organization's conservation programs is 300 average megawatts of savings by 2012 — nearly a third of the state's projected growth in electricity needs over the next decade. The Trust will soon begin offering programs for natural gas customers as well.

Eligible large customers can use a portion of their system benefits charge for their own conservation investments. The Oregon Office of Energy certifies the projects and tracks expenditures (www.energy.state.or.us/sb1149/Business/self-direct.htm).

- 10 percent of the funds are for energy conservation in school buildings. Savings may include natural gas and oil, as well as electricity. Education Service Districts administer the funds. The Office of Energy provides technical help (www.energy.state.or.us/sb1149/Schools/index.htm).
- 12 percent of the funds are for weatherizing homes of low-income households that heat with electricity. Oregon Housing and Community Services Department administers these funds (www.hcs.state.or.us/community_resources/energy_wx/index.html).

Energy-Efficient State Buildings (ORS 276.900 to 276.915 - <http://www.leg.state.or.us/ors/276.html>)

A 1990 Oregon law requires new state buildings and major renovations to be as energy-efficient as possible, within cost-effectiveness guidelines. The 2001 Legislature modified the law to require that the buildings be 20 percent more energy-efficient than required by state building code. The Office of Energy recommends savings measures to consider in the design and reviews the plans to ensure targets are achieved. Typical measures include energy efficiency improvements for windows, lighting, controls, and heating, ventilation and air conditioning equipment. Average energy savings exceed 20 percent.

The 2001 Legislature also added a requirement that existing state buildings reduce electricity use 10 percent by July 2003 compared to energy use in 2000. The Office of Energy is working with state agencies to achieve that goal.

Residential Building Code (ORS 455.020 - <http://www.leg.state.or.us/ors/455.html>)

In 1974, Oregon became the first state in the nation to implement a statewide building code that included energy standards. The standards have been updated several times since then. Additional improvements for space heating, cooling, ventilation, water heating, lighting and building envelope took effect in 2003. They will reduce energy use in new houses by 5 percent to 10 percent.

Commercial Building Code (ORS 455.110- <http://www.leg.state.or.us/ors/455.html>)

Energy standards became part of the state building code for commercial buildings in 1978. The standards address lighting, heat loss and gain of the building shell, and heating, ventilation and cooling systems. Changes that go into effect October 2003 are expected to increase energy savings by 5 percent to 10 percent.

Biennial Energy Plan (ORS 469.060 - <http://www.energy.state.or.us/pubs/Energy Plan-Final.pdf>)

The Office of Energy prepares a plan every two years that identifies trends in energy supply, demand, prices, conservation, renewable resources and nuclear safety; explains the key energy issues facing Oregon; and sets out a two-year action plan to clean up nuclear waste and ensure the state has an adequate supply of reliable and affordable energy through conservation and development of clean resources.

Incentive Programs:

Residential Energy Tax Credit (ORS 316.116 - <http://www.leg.state.or.us/ors/316.html>)

Homeowners and renters can get a state tax credit for eligible conservation investments:

- A tax credit based on energy savings and cost for highly energy-efficient refrigerators, clothes washers, dishwashers, and certain water heating, space heating, cooling and ventilation systems.
- Up to \$750 for alternative-fuel vehicles and \$750 for charging/fueling systems (a total of \$1,500 for hybrid gasoline-electric vehicles).
- Up to \$1,500 for fuel cells.

The credit may be taken in one year or carried forward for up to five years. Additions to systems in future years are eligible. A pass-through option allows another Oregon resident or business to claim the tax credit if they pay the applicant the value up-front. The Office of Energy administers the program (<http://www.energy.state.or.us/res/tax/taxcdt.htm>).

Oregonians have purchased more than 89,000 energy-efficient appliances and 500 alternative-fuel vehicles under the program as of year-end 2002. The program also is spurring the adoption of energy-efficient heating and cooling systems.

Business Energy Tax Credit (ORS 317.115 - <http://www.leg.state.or.us/ors/317.html>, ORS 469.185 to 469.225 - <http://www.leg.state.or.us/ors/469.html> and ORS 315.354 - <http://www.leg.state.or.us/ors/315.html>)

Business investments in energy conservation and less-polluting transportation fuels are eligible for a state tax credit worth 35 percent of eligible costs. For conservation projects, the energy savings must pay back the investment in one to 15 years.

The tax credit can be taken in one year for projects under \$20,000. For larger projects, the tax credit is taken over five years: 10 percent in the first and second years and 5 percent each year thereafter. The tax credit can be carried forward up to eight years. Schools, government agencies and other nonprofit organizations can use the program by finding a business partner to pass through the value of the tax credit. The Office of Energy administers the program (<http://www.energy.state.or.us/bus/tax/taxcdt.htm>).

About 5,000 business tax credits were awarded for conservation projects as of year-end 2002, and nearly 1,000 more were awarded for recycling projects that also save energy.

Small Scale Energy Loan Program (Oregon Constitution Article XI-J – <http://www.leg.state.or.us/orcons/orcons.html>)

Conservation investments are eligible for Oregon's Small Scale Energy Loan Program, created by the 1979 Legislature and approved by Oregon voters in 1980. Low-interest, fixed-rate, long-term loans are available for individuals, businesses, schools, special districts, governments, public corporations, cooperatives, tribes and nonprofit organizations. Loans range from \$20,000 to \$20 million.

Loans are funded by the periodic sale of state general obligation bonds. The program is self-supporting; borrowers pay administrative costs.

The Office of Energy administers the program (<http://www.energy.state.or.us/loan/selphme.htm>). Nearly 400 conservation projects have been financed through the program as of year-end 2002.

State Home Oil Weatherization Program (ORS 469.681, 469.710-720 - <http://www.leg.state.or.us/ors/469.html>)

The State Home Oil Weatherization (SHOW) Program ensures that households who heat with oil, propane or wood have incentives comparable to those who heat with electricity or natural gas. The program provides energy audits, loans and rebates to encourage households to weatherize their homes and improve the efficiency of their heating systems. More than 42,000 households have received energy audits through the program, and about a quarter have used the available incentives to install recommended conservation measures. The Office of Energy administers the program (<http://www.energy.state.or.us/res/weather/weahome.htm>).

Energy Conservation Lender's Credit (ORS 317.112 - <http://www.leg.state.or.us/ors/317.html>)

The commercial banks that provide the SHOW loans earn a tax credit that makes up the difference between the 6.5-percent interest rate provided to homeowners and the prevailing market rate.

Bonneville Power Administration and Consumer-Owned Utilities
(<http://www.bpa.gov/Energy/N/projects/>)

The Bonneville Power Administration provides power to Oregon's 36 consumer-owned utilities, and they offer conservation programs aided by two conservation incentives from the federal agency. One is a discount on wholesale power rates for utilities running qualifying conservation and renewable resource programs. Programs must be incremental to what the utility would have done without the discount, or in total they must account for more than 3 percent of its retail revenues. The second incentive is designed to achieve additional savings to ensure Bonneville achieves its share of the Northwest Power Planning Council's conservation target for the region. Under the augmentation program, utilities can submit for Bonneville's approval custom proposals tailored to their needs or use the agency's standard offer programs for residential and commercial/industrial markets.

Northwest Energy Efficiency Alliance (www.nwalliance.org)

The Northwest Energy Efficiency Alliance is a nonprofit group whose mission is to make affordable energy efficiency products and services available in the marketplace. The group works mainly with companies that make and sell energy-efficient products or offer energy efficiency services, rather than end users. The Alliance also promotes new technologies and supports training and information services. Oregon funds come from the Energy Trust and Bonneville Power Administration.

Outreach and Education:

Energy Awareness Campaign

The Office of Energy directs an annual multimedia campaign promoting the efficient use of energy in Oregon. Partners include the Energy Trust of Oregon, PGE, Pacific Power, NW Natural, Fred Meyer, Northwest Energy Efficiency Alliance and the Portland Office of Sustainable Development. Local utilities participate in Salem and Eugene. The fall program reaches a broad cross-section of Oregonians.

Telecommuting

The Office of Energy works with about 100 businesses a year to set up telecommuting programs for their employees. Staff provides on-site training for managers, technical help and incentives. An Internet-based training program for managers and telecommuters is being developed. The Office of Energy also helps establish technology centers that foster telecommuting.

Energy-Efficient Manufactured Homes

The Office of Energy works under a voluntary agreement with the manufactured home industry in the Northwest to build homes that use about half as much energy for heating as homes built to federal standards, on average. Under the agreement, Energy staff approves design plans, inspects homes at the plant, troubleshoots for homebuyers and manufacturers on any energy-related problems, and researches and tests new energy-efficient building practices and materials. About half of Oregonians buying a manufactured home have chosen to buy an energy-efficient model.

- 4. Maps and Reports on the potential for renewable energy to supply power and where renewable energy is most cost-effective, including the Western Systems Coordinating Council Map of Principal Transmission Lines, dated January 1, 2002. See Section 5.5.2.7.2(h).**

Renewable Energy Potential and Distribution Maps and Reports - Oregon

Maps and resource estimates for solar, wind, geothermal and biomass:

A map developed by Battelle National Laboratory, illustrates wind energy resources in Oregon by wind power class. (<http://rredc.nrel.gov/wind/pubs/atlas/maps/chap3/3-05m.html>)

The Northwestern Wind Resource Mapping Project has developed a series of wind resource maps for the region. These maps are based on a computer model that simulates complex meteorological phenomena.
(<http://www.windpowermaps.org/windmaps/states.asp#oregon>)

The *Renewable Energy Atlas of the West: A Guide to the Region's Resource Potential* is on line at www.EnergyAtlas.org.

Resource estimates for landfill gas potential:

A 1999 report by US EPA estimates that Oregon could develop an additional 23 MW of generating capacity beyond what's already been developed
(http://www.epa.gov/lmop/pdf/or_jan.pdf).

Estimates of low-impact hydro potential:

Because of severe limitations on sites that might meet Oregon's fish protection requirements, any low-impact hydro developed in the state would at best total in the tens of megawatts. The Northwest Power Planning Council assumes that any new low-impact hydro facilities would increase the total amount of hydropower serving the state, because it believes that de-ratings and retirements of existing facilities will be compensated by upgraded efficiency at remaining projects.

5. Summary of Oregon Renewable Resource Programs. See Section 5.5.2.7.2(j), and Table 5.5.2-15.

Oregon's Renewable Resource Programs

Policies, Rules and Regulations:

System Benefits Charge (ORS 757.612 - <http://www.leg.state.or.us/ors/757.html>)

For 10 years beginning March 2002, Portland General Electric (PGE) and Pacific Power customers pay a 3 percent charge on their monthly bills for conservation and renewable resource programs under Oregon's electric industry restructuring law. About 17 percent of the funds, estimated at \$10 million to \$13 million per year, are for projects that generate electricity from renewable resources.

The Energy Trust of Oregon administers the funds (www.energytrust.org). Its goal for renewable resources is that they supply 10 percent of the state's electricity needs by 2012, an eight-fold increase. To achieve that goal, at least 450 average megawatts of power from new renewable resources is needed — enough to meet more than half of the projected growth in state electricity use over the next decade. Projects already underway include a 41-megawatt wind plant, a 4.1-megawatt biogas generator at a dairy, an anemometer loan program for measuring wind resources, rebates and quality assurance for solar electric systems, a hydroelectric system to offset power use at a municipal water facility, and a microturbine demonstration project at a wastewater treatment plant.

Eligible large customers can use part of their system benefits charge, including the portion for renewable resources, for their own investments. The Oregon Office of Energy certifies the projects and tracks expenditures (www.energy.state.or.us/sb1149/Business/self-direct.htm).

Utility Green Power Options (ORS 757.603(2) - <http://www.leg.state.or.us/ors/757.html>)

Oregon's electric industry restructuring law requires that residential and small business customers of PGE and Pacific Power have at least one power option with significant new renewable resources. Since March 2002, customers have had three renewable resource options to choose from (http://www.portlandgeneral.com/home/products/power_options/ and <http://www.pacificpower.net/Article/Article22003.html>). By year-end 2002, more than 33,000 customers were supporting renewable resources through these programs.

One option provides energy from renewable resources each month in 100 kilowatt-hour blocks. PGE's program is called "Clean Wind"; Pacific Power's program is "Blue Sky." These programs also are available to large customers. The other two options, "Renewable Usage" and "Habitat," supply 100 percent of the customer's electricity use. "Habitat" includes a contribution for restoring salmon habitat. Green Mountain Energy Co. is currently providing green tags and marketing services for these options.

Consumer-owned utilities in the state also offer green power options. They include Eugene Water and Electric Board's Windpower option, the city of Ashland's Solar Pioneer Program, and power generated from landfill gas offered by member utilities of the Pacific Northwest Generating Cooperative. Salem Electric and Emerald PUD buy wind power on behalf of all customers from the Bonneville Power Administration.

Power Source Disclosure (ORS 757.659(3) - <http://www.leg.state.or.us/ors/757.html>)

Oregon's restructuring law requires PGE, Pacific Power and alternative electricity suppliers serving their customers to disclose their power sources and environmental impacts to help customers make informed choices. The Oregon Public Utility Commission prescribes the disclosure format. Nonresidential customers get the information with every bill; residential customers receive information quarterly. Pollutants covered include carbon dioxide, sulfur dioxide, nitrogen oxides and spent nuclear fuel.

Utility Integrated Resource Plans

Both PacifiCorp and PGE plan to acquire significant new generation resources under the integrated resource plans they recently filed with the Oregon Public Utility Commission. PacifiCorp's plan calls for 1,400 megawatts of wind power over 10 years (<http://www.pacificorp.com/File/File25682.pdf>). PGE will evaluate the cost and price volatility of renewable resource vs. natural gas facilities in its bidding process for new resources

(http://www.portlandgeneral.com/about_pge/regulatory_affairs/filings/2002_resource_plan.asp).

Siting of Renewable Resource Facilities (ORS 469.30010(a)(J) - <http://www.leg.state.or.us/ors/469.html> and OAR 345-015-0300 - http://arcweb.sos.state.or.us/rules/OARS_300/OAR_345/345_015.html)

The 2001 Legislature changed requirements for siting wind, geothermal and solar energy facilities to give developers a choice to use a local siting process or the consolidated state process if the average electric generating capacity is less than 35 megawatts within a single energy generation area. For larger renewable energy facilities where state siting is required, or when a developer chooses to use the state process, siting is expedited: The final order must be issued within six months of the filing of the application.

Net Metering (ORS 757.300 - <http://www.leg.state.or.us/ors/757.html>)

Oregon's net metering law in effect since September 1999 is for solar, wind, hydroelectric and fuel cell systems 25 kilowatts or less. Systems must meet national standards for safety and performance. All customer classes are eligible. Limits may be placed on net-metered systems after their installed capacity is one-half of 1 percent of the utility's single-hour peak load. The customer receives a generation credit automatically through the meter at the utility's retail rate for energy and delivery (unless the utility installs a second meter to measure how much power the customer produces). The utilities credit customers monthly at their avoided energy cost for any excess generation.

Biennial Energy Plan (ORS 469.060 - <http://www.energy.state.or.us/pubs/Energy Plan-Final.pdf>)

The Office of Energy prepares a plan every two years that identifies trends in energy supply, demand, prices, conservation, renewable resources and nuclear safety; explains the key energy issues facing Oregon; and sets out a two-year action plan to clean up nuclear waste and ensure the state has an adequate supply of reliable and affordable energy through conservation and development of clean resources.

Financial Incentives:

Residential Energy Tax Credit (ORS 316.116- <http://www.leg.state.or.us/ors/316.html>)

Homeowners and renters can get a state tax credit for renewable resource systems:

- Up to \$1,500 for solar and wind systems
- Up to \$900 for geothermal systems
- Up to \$1,500 for fuel cells (using renewable resources or conventional fuels)

The credit may be taken in one year or carried forward for up to five years. Additions to systems in future years are eligible. A pass-through option allows another Oregon resident or business to claim the tax credit if they pay the applicant the value up-front.

The Office of Energy administers the program (<http://www.energy.state.or.us/res/tax/taxcdt.htm>). More than 21,000 renewable energy systems for heating and power production have been installed under the program.

Business Energy Tax Credit (ORS 317.115 - <http://www.leg.state.or.us/ors/317.html>, ORS 469.185 to 469.225 - <http://www.leg.state.or.us/ors/469.html> and ORS 315.354 - <http://www.leg.state.or.us/ors/315.html>)

Business investments in renewable energy resources can earn a state tax credit worth 35 percent of eligible project costs. The tax credit may be taken in one year for projects under \$20,000. For larger projects, businesses take 10 percent of the credit in the first and second years and 5 percent each year thereafter.

Eligible costs for renewable resource projects are prorated if the payback is greater than 15 years, except the tax credit for solar energy systems is based on a 30-year payback. The tax credit can be carried forward up to eight years. Schools, government agencies and other nonprofit organizations can use the program by finding a business partner to pass through the value of the tax credit.

The Office of Energy administers the program (<http://www.energy.state.or.us/bus/tax/taxcdt.htm>). Businesses have invested in more than 500 renewable resource projects through the program as of year-end 2002.

Small Scale Energy Loan Program (Oregon Constitution Article XI-J – <http://www.leg.state.or.us/orcons/orcons.html>)

Renewable resource investments are eligible for Oregon's Small Scale Energy Loan Program, created by the 1979 Legislature and approved by Oregon voters in 1980. Low-interest, fixed-rate loans are available for individuals, businesses, schools, special

districts, governments, public corporations, cooperatives, tribes and nonprofit organizations. Loans range from \$20,000 to \$20 million. Terms range from five to 20 years.

Loans are funded by the periodic sale of state general obligation bonds. The program is self-supporting; borrowers pay administrative costs. The Office of Energy administers the program (<http://www.energy.state.or.us/loan/selphme.htm>). About 180 renewable resource projects have been financed as of year-end 2002.

Property Tax Exemption (ORS 307.175 - <http://www.leg.state.or.us/ors/307.html>)

Additional property value resulting from the installation of solar, geothermal, wind, water, fuel cell or methane gas energy systems for heating, cooling or generating electricity is exempt from state property tax until Dec. 31, 2012. The exemption is for end users and does not apply to property owned by the energy industry.

Bonneville Power Administration and Consumer-Owned Utilities

(http://www.bpa.gov/Energy/N/projects/cr_discount/index.shtml)

The Bonneville Power Administration provides power to Oregon's 36 consumer-owned utilities and to direct-service industrial customers (mostly aluminum smelters). Bonneville offers utilities a discount on wholesale power rates if they run qualifying conservation and renewable resource programs. Programs must be incremental to what the utility would have done without the discount, or in total they must account for more than 3 percent of its retail revenues. Eligible renewable resource programs include purchases of power or tradable certificates from renewable generating resources, including Bonneville's own Environmentally Preferred Power. Incentives for customers installing renewable energy systems under 25 kilowatts qualify as conservation programs.

6. Oregon statutes related to Pollution Prevention (not referenced in Section 5.5.2.7.2.)

The following is additional documentation related to Oregon state laws currently in place that support renewable energy and energy conservation. This documentation is available upon request to the Department.

1. Chapter 757 — Utility Regulation Generally
2. Chapter 469 — Energy Conservation
3. Chapter 315 — Personal and Corporate Income or Excise Tax Credits
4. Chapter 317 — Corporation Excise Tax
5. Chapter 317 — Corporation Excise Tax
6. Chapter 276 — Public Facilities

7. Summary of WRAP Air Pollution Forum Reports on Pollution Prevention. See Section 5.5.2.7.1)

The WRAP *Policy on Renewable Energy and Energy Efficiency as Pollution Prevention Strategies for Regional Haze* summarizes three years of stakeholder and consensus-based recommendations from the AP2. The policy reaffirms the findings of the GCVTC – that

energy efficiency measures and renewable energy goals could result in emissions reductions, improvements in visibility, energy costs savings, and secondary environmental and economic benefits. The WRAP policy provides a menu of individual policies and programs, various combinations of which would achieve the 10/20 renewable energy and energy efficiency goals, especially if implemented in a coordinated fashion among states and tribes. Specifically, ten recommendations are provided to promote renewable energy generation, and eight more are provided specifically for consideration by tribes. Similarly, seven recommendations are provided to promote energy efficiency, and eleven more are provided specifically for consideration by tribes. This policy will help states identify policies and programs within their state that are consistent with these recommendations, and that may be implemented or expanded to meet the 10/20 goals for regional renewable energy and energy efficiency.

Determining a State's Contribution to the GCVTC Regional Renewable Energy Goals. A discussion paper describing an approach for establishing a state's contribution by using the total electricity consumption within each state multiplied by the RE percentage target to yield each state's contribution in terms of MWh. This method bases a state's contribution on its share of overall regional electricity demand. This would be consistent with the principle that energy production, hence visibility degradation is driven by demand. States with higher demand and consumption, due to higher population, would have a greater share of contribution toward the RE goals. The discussion goes on to suggest an approach for crediting each state's programs against its contribution. Here, a program that induces increased RE production is counted, if the RE production occurs anywhere within the region. Several examples are provided to illustrate the concept. (See Appendix D8-6)

Recommendations of the Air Pollution Prevention Forum to Increase the Generation of Electricity from Renewable Resources presents a comprehensive state-by-state review of current energy production, consumption and existing RE policies, definition of Renewable Energy, a menu of potential additional RE projects and a recommended portfolio of projects states are required to include in their SIPs. The report provides detailed recommendations for state and federal programs to encourage increased RE production to displace potential new conventional energy production. Conclusions regarding most cost effective RE production projects, financial analysis, types of RE inducement policies are also included. (See Appendix D8-6)

Economic Assessment of Implementing the 10/20 Goals and Energy Efficiency Recommendations is a report prepared by ICF Consultants for the AP2 Forum which analyzes cost, emissions and regional economic impacts of meeting the 10-20 goals and implementing the energy efficiency recommendations. The report projects that with no additional efforts to promote renewable energy, (business as usual) the high technology costs for RE will not change significantly and that significant new additions to RE capacity will not occur. The report goes on to say that load reductions from energy efficiencies will continue. The economic impacts will not occur uniformly across the region. Some states will gain, some will not. Meeting the 10/20 goals and EE will likely increase annual region-wide electricity production costs by 1%-5%, and will mostly affect new gas generating capacity, rather than existing coal and oil power production. Some emission reductions should occur,

mostly CO₂ and NO_x. The overall effect on the regional economy is very limited and may produce some gains in employment and income.

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-7

Progress Report on Implementation of
Additional Recommendations of the Grand
Canyon Visibility Transport Commission,
Oregon Department of Environmental
Quality

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-7

Progress Report on Implementation of Additional Recommendations of the Grand Canyon Visibility Transport Commission, Oregon Department of Environmental Quality

The following is the 2003 *Progress Report on Implementation of Additional Recommendations of the Grand Canyon Visibility Transport Commission*, as required under 40 CFR 51.309(d)(9) of the federal Regional Haze Rule, and described in Section 5.5.2.8 of this implementation plan.

1. Regulatory History and Requirements.

The Grand Canyon Visibility Transport Commission's June 1996 final report includes additional recommendations that were intended as a range of options for consideration by states and local authorities. There was no expectation that all or any of these additional recommendations would be implemented. The GCVTC stated that:

“Some of the Commission's recommendations ask the EPA to take specific actions or institute particular programs, in cooperation with the tribes, states and federal agencies as implementing bodies. Other recommendations provide a range of potential policy or strategy options for consideration by the EPA and implementing entities. As the EPA develops policies and takes actions based on this report, this distinction between “actions” and “options” should be maintained with diligence. That is, recommendations intended as policy options should not become mandated actions or regulatory programs.”
Recommendations for Improving Western Vistas, Grand Canyon Visibility Transport Commission, Western Governors' Association. Denver CO, June 1996, page i.

Pursuant to 40 CFR 51.309(d)(9), Oregon has evaluated the additional recommendations of the Grand Canyon visibility Transport Commission to determine if any of these recommendations can be practicably included in the state implementation plan. Based on this evaluation, Oregon has identified the measures that it will implement at the state level to demonstrate reasonable progress.

2. Evaluation of Additional Recommendations for Inclusion in Oregon's Visibility Implementation Plan.

a. Recommendations that will be implemented through existing state programs.

1. *Establish economic incentives to encourage low-emission industries to locate in the transport region.*

The Oregon tax credit program could serve as an incentive to low-emission industries by providing tax credits for pollution control beyond regulatory requirements. The Department's Green Permit program also provides incentives to facilities performing above compliance levels.

2. *Develop emission fees programs.*

Oregon collects emission fees as part of its Operating Permit Program as required by 40 CFR part 70.

3. Support promotion of future ultra-low and zero-emission vehicles.

The Department has worked with public fleets statewide to assist with transitions to alternative fuels and hybrid vehicles. In addition to the federal tax deduction for low emission vehicles, Oregon provides state tax credits for both low emission vehicles and residential refueling or recharging facilities.

4. Support requirements for effective refueling vapor recovery systems.

Oregon requires Stage I vapor recovery in Portland, Medford and Salem (OAR 340-243-0010 through 0230), and requires Stage II vapor recovery in Portland (OAR 340-242-0500 through 0520).

5. Develop funding and other incentive-based programs to promote transportation mitigation projects.

The Department works in partnership with urban planning agencies and local governments to promote funding and incentives for bus, rail, bicycle and pedestrian projects and public outreach. In addition to increasing transit and multi-modal transportation, these partnerships have also supported increased housing and business density in areas served by transit, numerous conferences, and very high ridership on transit. The Portland SIP for ozone and carbon monoxide includes requirements for parking ratios.

6. Encourage sustainable community and economic development (multi-modal transportation options, reduce/eliminate entry and rate regulations for transit industry to promote greater competition, establish information clearinghouse about sustainable communities, etc.).

The Department is preparing to implement a recent Governor's Order on Sustainability, with a focus on reducing toxics and diesel emissions.

7. Establish retirement programs for high-emitting vehicles.

Through an EPA grant, the Department has been operating a voluntary retirement program for vehicles that cannot pass the vehicle inspection test. Participants can get a free yearlong transit pass, \$500 towards car-sharing programs or a bicycle.

8. Initiate public education programs for citizens regarding vehicle maintenance and air quality benefits.

In Portland and Medford the Department operates vehicle inspection programs. These programs provide information to citizens regarding vehicle maintenance and air quality benefits. In addition, the Department has been using voluntary remote sensing tests in many other communities to inform citizens about their vehicles' emissions, offering local tune-up discounts.

9. Institute "green pricing" labeling on products – including information about pollution potential, energy requirements and relative efficiency.

The Department relies on federal product ratings for energy efficiency and VOC content. The Oregon Ecological Business Certification designates businesses within the state that have met multi-media environmental criteria.

10. *Develop cooperative funding mechanisms between burners and regulatory agencies to implement better smoke management plans.*

The Oregon Smoke Management Plan addresses prescribed burning, seeking to minimize impacts in populated areas.

11. *Develop a public education program regarding the rule of fire in air quality (i.e. prescribed burns vs. wildfires).*

The Department maintains information about burning and air quality on its website: <http://www.deq.state.or.us/aq/burning/index.HTM>. The Department has rules on open burning (OAR 340-264-0010 through 0190). Through fact sheets and other publications, the Department encourages alternatives to open burning. Wood chippers are now eligible for the Department's tax credit program because they decrease emissions from open burning.

12. *Identify and promote specific pollution prevention programs.*

Section 5.5.2.7 of the Regional Haze SIP describes pollution prevention programs and strategies.

b. Recommendations that may be implemented through new or developing state programs.

1. *Support of regional use of cleaner burning fuels, including RFG and diesel, natural gas, electric and hydrogen.*

Since 2002, Oregon's Clean Diesel Initiative has promoted retrofitting with filters through outreach and a 35% tax credit. The Oregon Department of Environmental Quality has also been working toward securing ultra low sulfur diesel fuel for the state, administering grants for public fleet fuel subsidies, school bus replacement, and reduction options for non-road diesel engines. Additional work has commenced on reducing diesel vehicle idling.

c. Recommendations that will not be implemented by the Department.

1. *Support adoption of more effective 49-state low emissions vehicle (LEV) program in 2001 or federal Tier II standards in 2004.*

EPA has already acted in this area. Federal Tier II standards were promulgated by EPA (65 FR 6698) along with requirements that reduce the sulfur in gasoline beginning in 2004. These requirements are primarily responsible for WRAP modeling demonstrations that vehicle emissions will decline in the West, in spite of increases in population and vehicle miles traveled, and that those declines will continue beyond 2018, the end of the first planning period for regional haze.

2. *Establish mobile source emissions budgets for major urban areas that don't have ones to ensure protection of NAAQS, PSD increments and visibility in downwind areas.*

The need to implement this has been superseded by EPA's new rules to reduce vehicle emissions and reduce sulfur in gasoline, as explained in (1) above.

3. *Encourage EPA to adopt fuel standards and control strategies for diesel locomotives, marine vessels/pleasure craft, airplanes and federal vehicles because states are preempted from establishing their own standards.*

Oregon supports these measures through active participation in the air pollution officers associations STAPPA/ALAPCO and WESTAR.

4. *Establish clean fuel demonstration zones throughout the transport region.*

The Department is not considering this measure.

5. *Complete regional analysis of economic pricing and incentive programs to reduce reliance on vehicle use and better internalize the true cost of using vehicles.* The WRAP Mobile Sources Forum is pursuing this project and Oregon is an active participant in WRAP.

6. *Develop an emissions inspection program for on-road heavy-duty diesel vehicles.* In the past, the Department has investigated an on-road heavy-duty diesel inspection program, but there was not adequate political support for this strategy. The Department is not currently considering this measure. EPA has issued new requirements for diesel emissions and reducing sulfur in diesel fuel. This, combined with the Oregon Clean Diesel Initiative will reduce diesel emissions in Oregon.

7. *Study near-field and distant effects of road dust. If impacts are validated, develop performance standards.*

The effects of road dust have been studied by the WRAP for six years. WRAP has achieved a much better understanding of distant effects, and has found that they are minimal, as documented in the WRAP Technical Support Document for regional haze SIPs. Oregon supports continued WRAP investigation of near-field and distant effects. Oregon's PM SIPs for Klamath Falls, Lakeview and Medford contain road dust control measures.

8. *Implement park and wilderness planning processes to include reduction of emissions from human-caused sources.*

This recommendation is currently being implemented by federal and state land managers.

9. *Develop comprehensive emissions inventory for Mexican sources.*

Both WRAP and the Western Governor's Association have been working to improve Mexican emission inventory information.

10. *Develop regional and local mechanisms to address transboundary air quality issues, including potential funding from NAFTA.*

Oregon supports efforts by the Western Governors' Association to address transboundary issues.

11. *Identify and promote specific renewable energy programs.*

The Oregon Department of Energy conducts renewable energy programs.

12. Integrate pollution prevention and renewable energy concepts in education programs at all levels, including energy efficient technologies at schools.

The Oregon Department of Energy promotes energy efficiency in schools through a variety of services and programs.

3. Areas Within/Near Class I Areas.

The Grand Canyon Visibility Transport Commission's June 1996 final report includes recommendations regarding emissions within and near Class I Areas. Most of the recommendations in this section are for federal land managers, advising them to participate in planning for Class I areas, review permit applications and request emission reduction strategies for sources contributing to visibility impairment. The GCVTC recommended that regulatory agencies develop and maintain an emission inventory tracking and reporting program for each Class I area, and actively involve Class I area land managers throughout their planning processes.

Oregon supports the WRAP In and Near Forum's efforts to reduce emissions at National Parks and Wilderness Areas. WRAP will conduct a survey of park activities to quantify emissions and gather information regarding pollution prevention and minimization activities. WRAP will also investigate creative ways of funding identified emission reduction strategies and work with park managers to implement identified emission reduction strategies as soon as possible. For emission from nearby Communities, WRAP will focus on one local gateway community and conduct a demonstration project as a case study. This case study will include a workshop with local government to provide information about visibility protection, identify successful efforts, further involve federal land managers, encourage regulatory authorities to propose emission reduction strategies, and mitigate nearby source impacts on Class I areas. Finally, WRAP will work to determine the extent of in and near source impacts on visibility impairment.

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-8
Projection of Visibility Improvement
Support Documentation

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-8

Projection of Visibility Improvement Support Documentation

The following is supporting documentation related to the Projection of Visibility Improvement from Section 309 Control Strategies, in Section 5.5.2.9 of this implementation plan. This is an excerpt from Chapter 2 of the WRAP TSD report – Projection of Visibility - describing the technical work conducted by the WRAP in evaluating the visibility improvements the application of 309 strategies on regional haze in the 16 Class I areas of the Colorado Plateau.

Chapter 2 – Projection of Improvement (from WRAP TSD report).

Analysis of visibility improvement from Section 309 control strategies in 2018

Improvement in visibility for the 16 Colorado Plateau Class I areas was modeled for two scenarios.

Scenario 1 is designed to assess the effect of the GCVTC-recommended control strategies, comparing the 1996 modeled base case to the visibility improvement resulting from the implementation of the following GCVTC strategies: the SO₂ Annex Milestones, the regional pollution prevention program, maintenance of existing base smoke management (BSM) programs, and accounting for the 2018 base case emissions (known and adopted federal, tribal, state, and local control programs in the contiguous WRAP region). Visibility changes resulting from regional implementation of state pollution prevention programs were modeled by the Regional Modeling Center, as part of the other Section 309 control strategies. Visibility changes resulting from implementation of pollution prevention programs by individual states or tribes were not modeled. Emissions changes from state or tribal pollution prevention programs, and the resulting visibility changes are small, based on the regional pollution prevention emissions analysis, but are accounted for in the regional modeling.

Scenario 2 is designed to assess the effect of the implementation of Enhanced Smoke Management Programs (ESMP), as reflected in the Fire Emissions Joint Forum's 2018 Optimal Smoke Management (OSM) inventory. ESMPs were recommended by GCVTC and are required in Section 309. This scenario uses the emissions inventories from Scenario 1, except the OSM inventory was substituted for fire emissions. Thus, the results for Scenario 2 are a comparison of visibility changes resulting from emission reductions between the 2018 BSM and 2018 OSM fire inventories.

Modeling results projecting visibility improvement in 2018, resulting from implementation of the Section 309 Control Strategies, for the 16 Class I Areas on the Colorado Plateau

Using the procedures for projecting changes in visibility discussed in Chapter 1, visibility at the 16 Class I areas on the Colorado Plateau was estimated for the 2018 Scenario 1 and Scenario 2 control strategies. Tables 30 and 31 display the improvements in visibility from the 1997-2001 baseline period to 2018 under Scenario 1 and 2 conditions for the, respectively, Worst 20% and Best 20% visibility days.

On the average 20% Worst visibility days, projected improvement from 1997-2001 to 2018 Scenario 1 at the 16 Class I areas on the Colorado Plateau range from a maximum reduction of 3.89 dV at Sycamore Canyon National Park in Arizona to a maximum increase of 1.42 dV at San Pedro Parks Wilderness in New Mexico. On the Worst 20% days, Scenario 1 shows improving visibility at half and degradation in visibility for the other half of the 16 Colorado Plateau Class I areas. On the average 20% Best visibility days, projected change from 1997-2001 to 2018 Scenario 1 ranged from a maximum reduction of 2.11 dV at Zion National Park in Utah to a maximum increase of 1.51 dV at San Pedro Parks Wilderness Area in New Mexico. On the Best 20% days, Scenario 1 improves visibility conditions a ¾ of the Class I areas on the Colorado Plateau.

A comparison of the visibility estimates for 2018 Scenarios 1 and 2 at the 16 Class I areas on the Colorado Plateau for the Worst 20% (Table 30) and Best 20% (Table 31) days reveals that 2018 Scenario 2 always estimated reduced (improved) visibility as compared to 2018 Scenario 1. That is, the Optimal Smoke Management (OSM) programs produces visibility improvements over the Base Smoke Management (BSM) programs across all 16 Class I areas for both the Worst 20% and Best 20% days.

The reason why visibility is projected to improve in some areas and degrade in others is due to the assumptions regarding the growth of emissions and the implementation of all controls “on-the-books” in 2002, as well as artifacts of the June 2000 version of the EPA NONROAD model. Figure 23 displays the differences in SO₂ emissions between the 1996 and 2018 Base Case emissions scenarios. Due to the implementation of SO₂ controls on the Navajo and Mojave electrical generating units (EGUs) between 1996 and 2018, there are projected to be large reductions in SO₂ emissions in the counties in Arizona and Nevada that contain these two point sources. However, in many of the counties where there are not reductions in point source SO₂ emissions, SO₂ emissions are projected to increase. As discussed in more detail in Section 4, this is due in part to increased activity in nonroad mobile source equipment, the assumed continued use of high sulfur diesel fuel in nonroad sources and errors in the June 2000 NONROAD model that overstated nonroad equipment activity as well as SO₂ emissions from nonroad equipment.

The Class I areas where visibility is improved for the Worst 20% and Best 20% days (Tables 30 and 31) include ones in Arizona and southern Utah in close proximity of the large SO₂ reductions from controls on the Navajo EGU and downwind from the large SO₂ reductions at the Mojave EGU in southern Nevada and in California. Whereas, the Class I areas where visibility is projected to degrade are near counties where SO₂ emissions are estimated to increase due to the assumed increases in SO₂ emissions from the nonroad mobile source sector. For example, the San Pedro Parks Wilderness Area in New Mexico lies in and near counties that are projected to have increases in SO₂ emissions under the 2018 Base Case conditions, and it is not surprising that the modeling projects that visibility would degrade at this Class I area. Use of the corrected NONROAD model, accounting for potential low sulfur diesel regulations for nonroad sources, and account for other local (e.g., 8-hour ozone and fine particulate) and regional (e.g., CSI, regional transport rule) in the 2018 projections would like produce improvements at all 16 areas.

The results are presented next in Tables 30 and 31.

Table 30: Projected Visibility Improvement at the 16 Colorado Plateau Class I Areas in 2018 on the Average 20% Worst Days, resulting from implementation of “All §309 Control Strategies” 2018 Scenarios 1 and 2.

Colorado Plateau Class I Area	State	Modeling Results Deciviews			
		<u>1997-2001 Monitoring Data</u> (20% Worst Days' Visibility - deciviews)	<u>2018 Base Case</u> (20% Worst Days' Visibility for all controls “on the books” as of 2002)	<u>2018 Scenario 1</u> (20% Worst Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Base Smoke Management)	<u>2018 Scenario 2</u> (20% Worst Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Optimal Smoke Management)
Grand Canyon National Park	AZ	12.30	11.62	11.56	11.51
Mount Baldy Wilderness	AZ	14.30	12.22	12.02	11.96
Petrified Forest National Park	AZ	13.00	11.99	11.82	11.74
Sycamore Canyon Wilderness	AZ	15.40	11.63	11.51	11.48
Black Canyon of the Gunnison NP Wilderness	CO	11.30	10.90	10.76	10.60
Flat Tops Wilderness	CO	10.50	11.04	10.91	10.73
Maroon Bells Wilderness	CO	10.60	11.15	10.00	10.84
Mesa Verde National Park	CO	13.10	12.24	12.03	11.84
Weminuche Wilderness	CO	10.60	11.19	10.99	10.84
West Elk Wilderness	CO	11.30	11.08	10.89	10.72
San Pedro Parks Wilderness	NM	10.70	12.33	12.12	11.71
Arches National Park	UT	12.10	12.41	12.29	12.15
Bryce Canyon National Park	UT	11.80	12.26	12.24	11.95
Canyonlands National Park	UT	12.10	12.41	12.31	12.18
Capital Reef National Park	UT	12.10	12.51	12.49	12.36
Zion National Park	UT	13.60	12.13	12.09	12.03

Table 31: Projected Visibility Improvement at the 16 Colorado Plateau Class I Areas in 2018 on the Average 20% Best Visibility Days, resulting from implementation of “All §309 Control Strategies” 2018 Scenarios 1 and 2.

Colorado Plateau Class I Area	State	Modeling Results (deciviews)			
		<u>1997-2001 Monitoring Data</u> (20% Best Days' Visibility - deciviews)	<u>2018 Base Case</u> (20% Best Days' Visibility for all controls “on the books” as of 2002)	<u>2018 Scenario 1</u> (20% Best Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Base Smoke Management)	<u>2018 Scenario 2</u> (20% Best Days' Visibility for all §309 Control Strategies (SO ₂ Annex Milestones and Pollution Prevention) with Optimal Smoke Management)
Grand Canyon National Park	AZ	4.80	4.76	4.72	4.64
Mount Baldy Wilderness	AZ	5.50	5.49	5.46	5.36
Petrified Forest National Park	AZ	6.50	5.18	5.14	5.10
Sycamore Canyon Wilderness	AZ	6.30	4.85	4.82	4.75
Black Canyon of the Gunnison NP Wilderness	CO	4.60	3.89	3.83	3.75
Flat Tops Wilderness	CO	3.10	3.96	3.90	3.81
Maroon Bells Wilderness	CO	3.10	3.90	3.85	3.80
Mesa Verde National Park	CO	5.50	4.40	4.38	4.33
Weminuche Wilderness	CO	3.10	3.89	3.83	3.74
West Elk Wilderness	CO	4.60	3.97	3.92	3.82
San Pedro Parks Wilderness	NM	4.00	5.59	5.51	5.36
Arches National Park	UT	5.50	4.85	4.72	4.61
Bryce Canyon National Park	UT	4.30	3.91	3.92	3.89
Canyonlands National Park	UT	5.60	4.87	4.76	4.67
Capital Reef National Park	UT	5.60	4.85	4.85	4.75
Zion National Park	UT	5.90	3.81	3.79	3.75

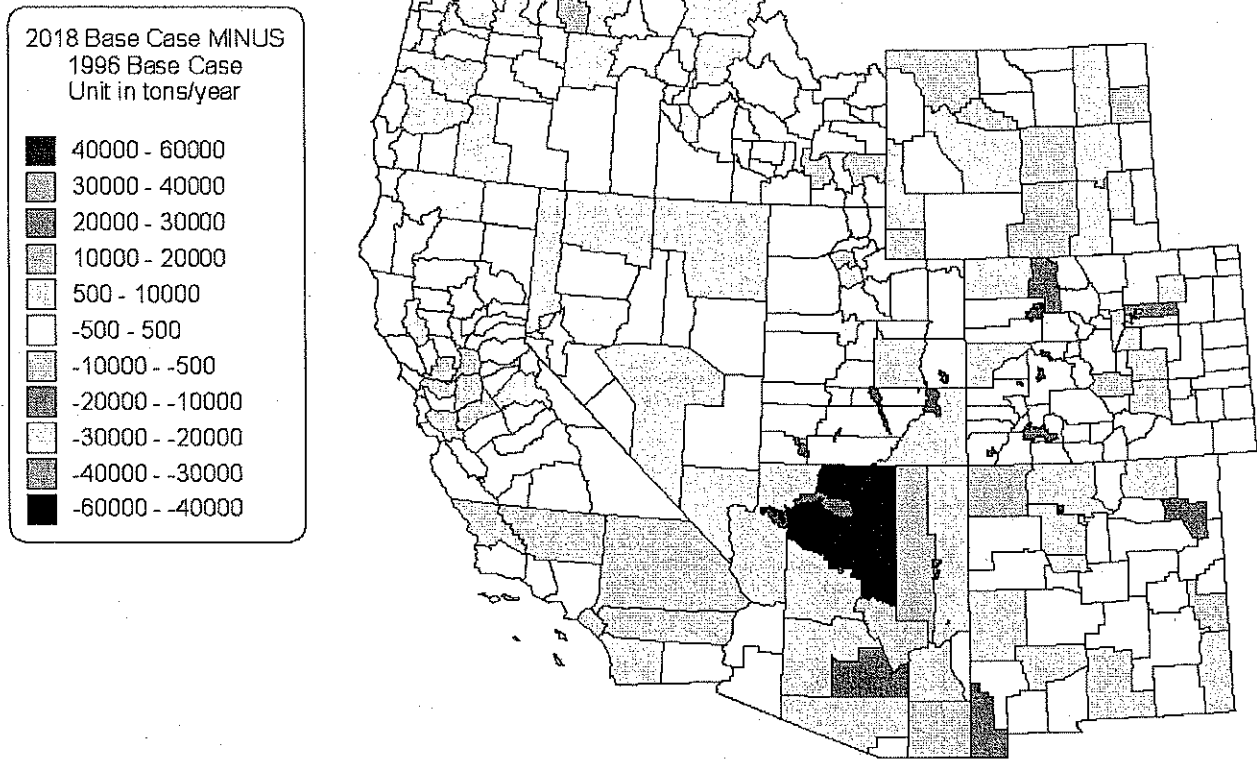


Figure 23: Differences in count average SO₂ emissions between the 1996 Base Case and the 2018 Base Case emissions scenarios.

Note: Tables 30 and 31 above are the same as Tables 5.5.2-17 and 5.5.2-18 contained in Section 5.5.2.9 of this implementation plan.

State Implementation Plan Revision
Adoption of Regional Haze Strategies in Oregon

Appendix D8-9
State of Oregon Clean Air Act
Implementation Plan
OAR 340-200-0040

Appendix to Section 5.5 of the
State Implementation Plan

Appendix D8-9
State of Oregon Clean Air Act Implementation Plan

The following is the citation of the administrative rule for the State of Oregon Clean Air Act Implementation Plan. Adoption of the Oregon Section 309 Regional Haze Plan amends OAR 340-200-0040.

DIVISION 200

**GENERAL AIR POLLUTION
PROCEDURES AND DEFINITIONS**

General

340-200-0040

State of Oregon Clean Air Act Implementation Plan

(1) This implementation plan, consisting of Volumes 2 and 3 of the State of Oregon Air Quality Control Program, contains control strategies, rules and standards prepared by the Department of Environmental Quality and is adopted as the state implementation plan (SIP) of the State of Oregon pursuant to the federal Clean Air Act, 42 U.S.C.A §§ 7401 to 7671q.

(2) Except as provided in section (3), revisions to the SIP will be made pursuant to the Commission's rulemaking procedures in division 11 of this chapter and any other requirements contained in the SIP and will be submitted to the United States Environmental Protection Agency for approval.

(3) Notwithstanding any other requirement contained in the SIP, the Department may:

(a) Submit to the Environmental Protection Agency any permit condition implementing a rule that is part of the federally-approved SIP as a source-specific SIP revision after the Department has complied with the public hearings provisions of 40 CFR 51.102 (July 1, 2002); and

(b) Approve the standards submitted by a regional authority if the regional authority adopts verbatim any standard that the Commission has adopted, and submit the standards to EPA for approval as a SIP revision.


[NOTE: Revisions to the State of Oregon Clean Air Act Implementation Plan become federally enforceable upon approval by the United States Environmental Protection Agency. If any provision of the federally approved Implementation Plan conflicts with any provision adopted by the Commission, the Department shall enforce the more stringent provision.]

Stat. Auth.: ORS 468.020

Stats. Implemented: ORS 468A.035

PRESENTATION HANDOUT

Proposed Oregon Regional Haze Plan

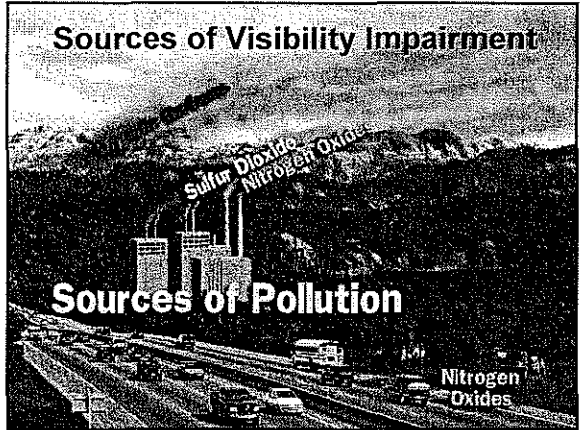
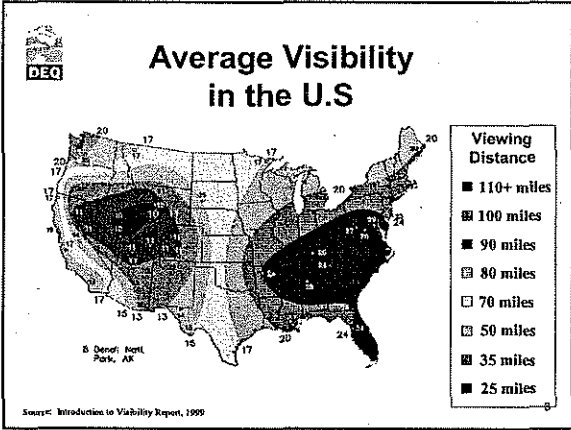
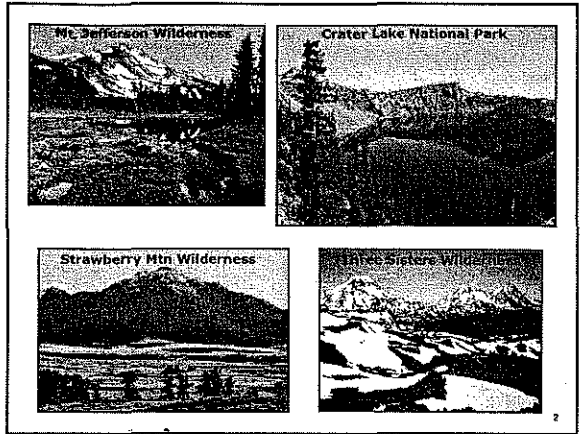



Agenda Item J, Rule Adoption:

Proposed Oregon Regional Haze Plan

Brian Finneran
Oregon DEQ Visibility Coordinator
December 5, 2003 EQC Meeting

1






1977 Clean Air Act

National Visibility Goal

Remedy any existing and prevent any future impairment of visibility from man-made emissions in "Class I areas".

➤ Required EPA to adopt visibility rules for Class I areas to meet national goal.

5

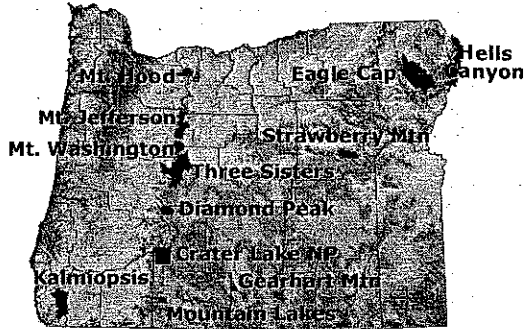


What is a Class I Area?

- National Parks & Wilderness Areas where visibility was identified as important value by Congress.
- Designated by Congress in 1977 for:
 - ✓ National Parks >5,000 acres
 - ✓ Wilderness areas >6,000 acres
- 156 Class I areas in the country.
- 12 Class I areas in Oregon.

6

Oregon's 12 Class I Areas



1990 Clean Air Act

- Focused on "regional haze".
- Gave EPA authority to establish visibility transport commissions.
- Required EPA to establish a visibility transport commission for the Grand Canyon & neighboring Class I areas.

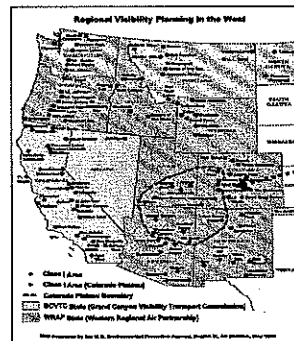


The Grand Canyon Visibility Transport Commission

- Formed in 1991 to study the regional haze problem 16 Class I areas in the Colorado Plateau of the Southwest.
- 9 western states, including Oregon identified as "Transport Region States" that affect visibility in the Colorado Plateau.



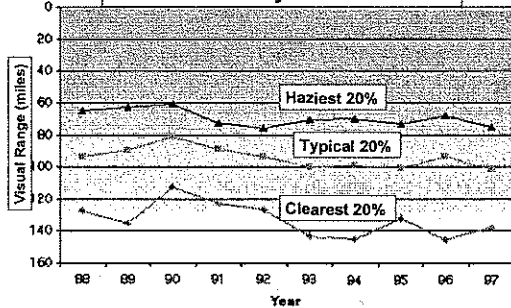
9 Transport Region States



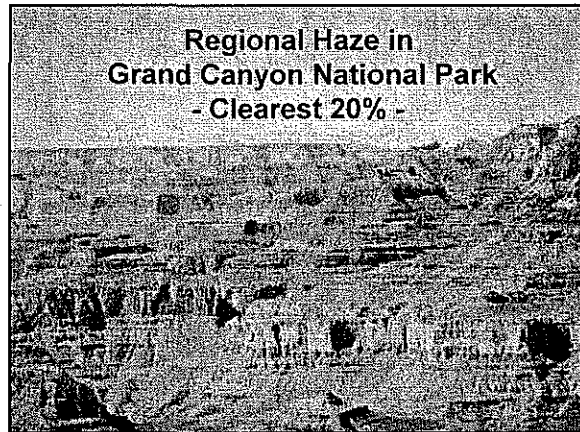
16 Class I areas of the Colorado Plateau

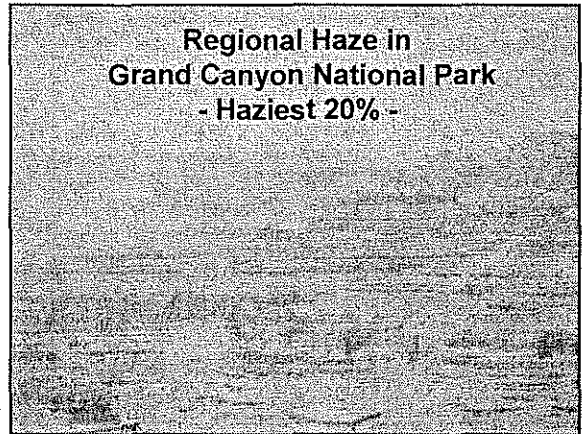
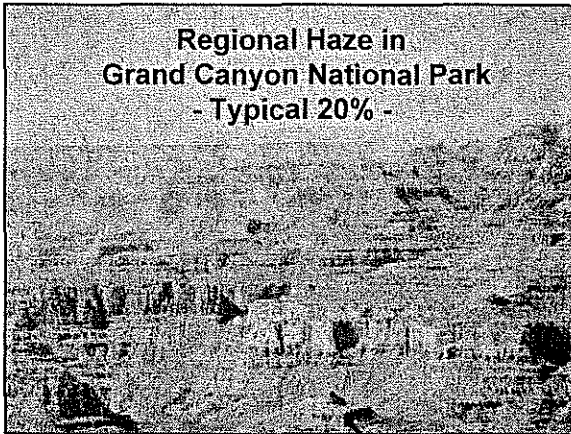



Grand Canyon NP Visibility Trends



Regional Haze in Grand Canyon National Park - Clearest 20% -






 **The GCVTC**

- Conducted 4 year study of regional haze.
- Identified strategies to address regional haze.
- ✓ Made recommendations that were later incorporated into EPA's Regional Haze Rule.

15


 **The Western Regional Air Partnership (WRAP)**

16

 **EPA's Regional Haze Rule**

- Adopted July 1999
- To improve visibility in all 156 Class I areas across the country.
- Requires visibility improvements of the 20% worst days AND no degradation of the 20% best days until 2064.

17

 **A 60-year Goal**

✓ Must show "reasonable progress" in meeting the national visibility goal

18



Two Paths for Regional Haze

Oregon has two choices for implementing:

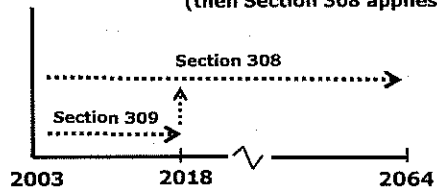
1. Section 308 – applies nationally
 - Requires developing new strategies.
2. Section 309 – a “short-term” option for 9 western states until 2018.
 - Incorporates GCVTC Recommendations

19



Timeframe of 308 vs. 309

- Section 308: to 2064
- Section 309: to 2018 (then Section 308 applies)



20



Summary of Key Differences

Section 308

- Applies nationally
- Covers 2000-2064
- Plans due 2005-2006, address all Class I areas
- Strategies unknown, evaluate all options
- Must demonstrate Reasonable Progress
- Requires BART

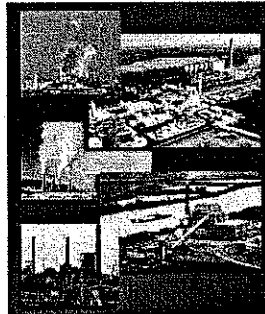
Section 309

- Option for Oregon.
- Covers 2000-2018
- Plans due 2003 address 16 Class I areas, others in 2008
- Strategies are known, based on GCVTC
- Meets Reasonable Progress
- Provides non-regulatory alternative to BART

21



What is BART?



Best Available Retrofit Technology

22



Section 309 Alternative to BART

1. Regional SO₂ Milestones

- A declining regional SO₂ emissions cap.
- Must be met collectively by 309 states.
- Requires tracking annual SO₂ emissions.

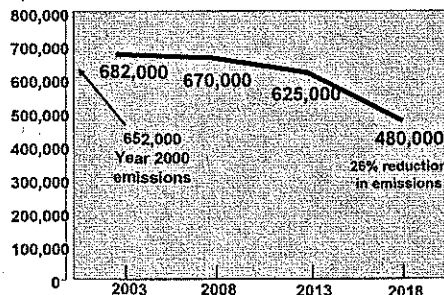
2. Emissions Trading Program

- Backup program if the SO₂ Milestones are not met.

23



SO₂ Milestones (tons per year) 2003-2018



24



Section 309 Requirements

How were SO2 Milestones calculated?

1. Reductions expected if BART was installed on applicable sources.
2. Known reductions, assumed retirements, modernization, technology improvements, operational adjustments, etc.
3. Growth allowance for new SO2 sources.
4. Uncertainty & headroom factored in.

25



Section 309 Requirements

- If the Backstop Emission Trading Program is needed, then...
 - States would issue SO2 Allowances to SO2 sources > 100 tons SO2
 - Specific requirements for monitoring, record keeping, reporting, and compliance
- ✓ Even if trading program is triggered, estimated to be half the cost of applying BART.

26



SIP due dates under Section 309

- December 2003 first Plan is due, but only needs to address each state impact on the 16 Class I areas of the Colorado Plateau.
- December 2008 second Plan is due. Will need to address all other Class I areas, much the same as under Sec. 308.

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308/309 Decision by 9 Eligible States

- ☛ Following 309:
 - Arizona, New Mexico, Wyoming and Utah
- ☛ Not following 309 (going 308):
 - California, Nevada, Idaho and Colorado

28



Oregon 308/309 Decision

DEQ conducted extensive public & stakeholder outreach Feb - April 2003:

- Held 4 informational meetings
 - Additional meetings with stakeholders (industry, agriculture, forestry)
 - Specifically asked for feedback on 308/309 option.
- ✓ Response strongly in favor of Section 309

29



Why we chose Section 309

- ✓ Clear public and stakeholder support
- ✓ The strategies went thru extensive stakeholder-consensus process
- ✓ Strategies are equitable & balanced
- ✓ 309 does not require all 9 states to participate to be effective
- ✓ Allows more time than Section 308 to address Oregon's 12 Class I areas

30



Review of the Proposed Oregon Regional Haze Implementation Plan

31



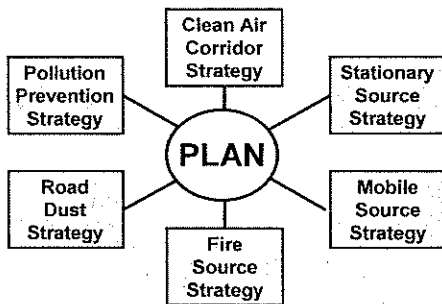
Oregon 309 Plan Summary

- Adopts the 309 strategies. This will:
 - ✓ Protect 20% cleanest days in the Colorado Plateau Class I areas.
 - ✓ Help improve 20% haziest days by Oregon participating in SO2 Milestones.
- Work for DEQ mostly improving emission inventories and tracking emissions.
- Overall, plan has little effect on Oregon sources.
- Next plan in 2008 - determine appropriate strategies for Oregon's Class I areas.

32



Review of Plan Strategies



33



Proposed Support Rules

For the Stationary Source Strategy

1st rule - clarifies SO2 reporting requirements for 100 ton sources to meet the SO2 Milestones.

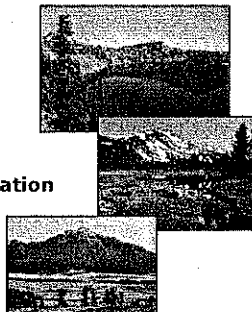
2nd rule - contains requirements for the Emissions Trading Program.

34



Conclusion

- Review of Public Comments
- DEQ Response to Comments
- DEQ Recommendation
- Questions?



35

State of Oregon
Department of Environmental Quality

Memorandum

Date: November 13, 2003
To: Environmental Quality Commission
From: Stephanie Hallock, Director *S. Hallock*
Subject: Agenda Item K, Rule Adoption: Rule Revisions Regarding Contested Case Hearings
December 5, 2003 EQC Meeting

Department Recommendation The Department recommends that the Environmental Quality Commission (EQC, Commission) adopt the proposed rule revisions as presented in Attachment A2 and summarized in Attachment A1.

Need for Rulemaking The 1999 Legislature enacted House Bill 2525 which created a Central Hearing Officer Panel housed within the Employment Department to conduct contested case hearings for all state agencies. Agencies covered by HB 2525 must comply with the Attorney General's Hearing Panel Rules (See OAR 137-003-0501 through -0700). Agencies cannot adopt procedural rules for contested case hearings unless the rules are required by state or federal law, the rules are specifically authorized by the Hearing Panel Rules, or the agency has been exempted from the Hearing Panel Rules. On July 21, 2003, the Attorney General's office adopted revisions to the Hearing Panel Rules.

Effect of Rule Because a number of the Department's rules are inconsistent with the recently adopted Hearing Panel rules, these proposed rules would align the Department's rules with those changes. Additionally, this proposal would adopt, into rule, certain policies that the Department has been following for contested case hearings and would align the Department's rules with the most recent version of the Attorney General's Hearing Panel Rules. By ensuring that the Department's rules accurately reflect the Hearing Panel Rules and Department policies, there will be less confusion for participants in contested case hearings.

Additionally, the proposed changes would allow the EQC to review all proposed orders issued by hearing officers, including, for example, orders regarding license revocations and appeals of permit issuance by the permittee. This rule change will align the Division 011 rules with proposed changes in Division 012. The Division 012 changes will allow an

Environmental Law Specialist to represent the Department in these matters. If the EQC did not review these orders, the review process for civil penalties and orders would be different than that for license revocations. Additionally, this will allow those affected by an order a chance to appeal a hearing officer decision without resorting to a costly appeal to the Court of Appeals.

Commission Authority	The Commission has authority to take this action under ORS 183.341 and 468.020.
Stakeholder Involvement	An advisory committee was not used to develop these rules since the majority of the changes are not significant and do not change current procedure. However, a draft of the rules was shared with the advisory group for the Division 012 Enforcement Rules, prior to the public comment period. Additionally, a copy of the public notice was sent to the advisory group. No comments were received.
Public Comment	A public comment period extended from August 18, 2003 to September 19, 2003 and included a public hearing in Portland. No public comments were received.
Key Issues Addressed	<p>Key issues were:</p> <ul style="list-style-type: none">• On July 21, 2003, the Attorney General's office adopted revisions to the Hearing Panel Rules. These proposed rule changes align the Department's procedural rules with the most recent changes adopted by the Attorney General.• Some of the Hearing Panel Rules allow an agency to set forth 'in writing' whether to provide a certain procedure or by whom a decision will be made. In the past, the Department has incorporated some of the procedures or decision-making authority into policies or into the contract with the Hearing Panel. For example, the Department has stated in its contract with the Hearing Panel that motions for discovery should be filed with the hearing officer. The proposed rule changes place into rule some of those policies and the decision-making authority.• The proposal incorporates into rule the rulings from various EQC decisions and case law. For example, in a recent case, the EQC determined that an employer is accountable for the acts of its employees under the legal theory of <i>respondeat superior</i>. The proposed rule changes place into rule this decision along with other decisions and case law.• Previously under OAR 340-011-0132, review of proposed orders by the EQC was limited to those orders issued by a hearing officer regarding

civil penalties. Review of all other orders from a contested case would go immediately to the Court of Appeals. This did not allow the Department an opportunity to appeal hearing officer decisions with which it did not agree. In addition, an appeal to the EQC may allow a party to avoid the time and expense of an appeal to the Court of Appeals. The changes in the proposed rule will allow the EQC to review all proposed orders issued by hearing officers, including, for example, orders regarding license revocations. The Department anticipates that the EQC will see fewer than 1 or 2 additional cases per biennium.

Next Steps Most of the changes proposed by this rule proposal are already being implemented either because they are set forth in the Hearing Panel Rules which are effective regardless of EQC action or because the process has already been established in Department policy, EQC decision or case law. Copies of Division 011 of the Department's rules are provided to all persons to whom a notice of contested case hearing is issued.

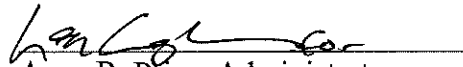
Attachments

- A. Proposed Rule Revisions
 - 1. Summary of Rule Revisions
 - 2. Proposed Rule Revisions
- B. Presiding Officer's Report on Public Hearings
- C. Relationship to Federal Requirements Questions
- D. Statement of Need and Fiscal and Economic Impact
- E. Land Use Evaluation Statement
- F. Division 012 Advisory Group Membership

Available Upon Request

- 1. Legal Notice of Hearing
- 2. Cover Memorandum from Public Notice
- 3. Hearing Panel Rules (OAR 137-003-0501 through 0700)
- 4. Attorney General's Administrative Law Manual
- 5. Internal Management Directive on Late Hearing Requests and Answers

Approved:


Anne R. Price, Administrator
Office of Compliance and Enforcement

Report Prepared By: Susan M. Greco
Phone: (503) 229-5152

**OUTLINE OF CHANGES PROPOSED IN RULE REVISIONS
REGARDING CONTESTED CASE HEARINGS
ATTACHMENT A-1**

340-011-0005 Definitions

Added definition of Respondent and Formal Enforcement Action from Division 012.

340-011-0500 Contested Case Proceedings Generally

Renumbered from 340-011-0098

Added provision that a Saturday, Sunday or legal holiday does not count as the final day for filing documents with the Department.

340-011-0505 Powers of the Director

Renumbered from 340-011-0136

Reworded for clarification

340-011-0510 Agency Representation by Environmental Law Specialist

Renumbered from 340-011-0103

Requires a hearing officer to allow the Department time to consult with the Attorney General's office if necessary.

340-011-0515 Authorized Representative of Respondent other than a Natural Person in a Contested Case Hearing

Renumbered from 340-011-0106

340-011-0520 Liability for Acts of a Respondent's Employee

Incorporates the Environmental Quality Commission's decision in Case no. WPM/SP-WR-00-009 into rule. The Environmental Quality Commission's decision determined that the established doctrine of *respondeat superior* (an employer is accountable for the acts of its employees) can be considered when applying the 'R' factor in the civil penalty formula.

340-011-0525 Service and Filing of Documents

Renumbered from 340-011-0097

Aligned rule with most recent version of Hearing Panel Rules (adopted July 12, 2003) which state that service is completed upon mailing.

340-011-0530 Requests for Hearing

Renumbered from 340-011-0107

Allows amended hearing requests as set forth in most recent version of Hearing Panel Rules.

Clarifies process for late hearing requests by placing current Department policy into rule. (See the Department of Environmental Quality, Office of Compliance and Enforcement's Internal Management Directive on Late Hearing Requests and Answers).

340-011-0535 Final Orders by Default

A portion of this rule was renumbered as 340-011-0136
Clarified procedure to be followed for entering a default order consistent with most recent version of Hearing Panel Rules.

340-011-0540 Consolidation or Bifurcation of Contested Case Hearings

Renumbered from 340-012-0035
Added that the Department may consolidate or bifurcate hearings involving the same facts or set of facts.

**340-011-0545 Burden and Standard of Proof in Contested Case Hearings;
Department Interpretation of Rules and Statutory Terms**

Placed common legal requirements regarding the burden and standard of proof into rule. (See Attorney General's Administrative Law Manual, pages 128-129).
Places the deference that a hearing officer must give to the Department's interpretation of terms in statutes or rules into rule. (See Attorney General's Administrative Law Manual, pages 166-169).

340-011-0550 Discovery

Places into rule provisions of the existing contract between the Department and Hearing Officer Panel regarding motions for discovery and forms of discovery allowed.

340-011-0555 Subpoenas

Incorporates a portion of the Rules of Civil Procedure for service of subpoenas.
Clarifies that fees and mileage due for an appearance under a subpoena can be paid either at the time of service of the subpoena or at the time of the hearing.

340-011-0560 Public Attendance at Contested Case Hearing

Renumbered from 340-011-0122
Reworded to clarify that the hearing officer has the authority to determine if the hearing should be closed to the public.

340-011-0565 Immediate Review by Agency

Renumbered from 340-011-0124
Motions for ruling on legal issues will now be allowed (See OAR 137-003-0640).

340-011-0570 Permissible Scope of Hearing

Renumbered from 340-011-0131
Clarifies language stating that a hearing officer cannot reduce a civil penalty below the amount established by the application of the civil penalty formula rule to the facts in the case.

340-011-0575 Review of Proposed Orders in Contested Cases

Renumbered from 340-011-0132
Revised language so that name of participant submitting a brief is clear.

Clarifies that the Commission has the authority to dismiss a petition if the person fails to file a brief.

Clarifies that petition requesting Commission review and briefs must be received to be considered filed.

Allows the Commission to review orders issued in a contested case for those issues other than civil penalties.

340-011-0580 Petitions for Reconsideration or Rehearing

States that a participant is not required to seek reconsideration or rehearing prior to appeal of a final order.

A petition for reconsideration or rehearing does not stay the effect of a final order.

Director has the authority to sign a final order regarding reconsideration or rehearing on behalf of the Commission which places into rule current Department policy.

340-011-0585 Petitions for a Stay of the Effect of a Final Order

Stays must accompany other petitions such as rehearing or reconsideration.

Director has the authority to sign a final order regarding stays on behalf of the Commission which places into rule current Department policy.

DIVISION 11

RULES OF GENERAL APPLICABILITY AND ORGANIZATION

Rules of Practice and Procedure

340-011-0005

Definitions

Unless otherwise defined in this division, the words and phrases used in this division have the same meaning given them in ORS 183.310, the Hearing Panel Rules, or the Model Rules or other divisions in Oregon Administrative Rules, Chapter 340, as context requires unless otherwise defined in this division.

- (1) "Commission" means the Environmental Quality Commission.
- (2) "Department" means the Department of Environmental Quality.
- (3) "Director" means the director of the department or the director's authorized delegates.
- (4) "Filing" means receipt in the office of the Director or other office of the Department. Such filing is adequate where filing is required of any document with regard to any matter before the Commission, Department or Director, except a claim of personal liability.
- (45) "Hearing Panel Rules" means the Attorney General's Rules, OAR 137-003-0501 through 137-003-0700.
- (56) "Model Rules" or "Uniform Rules" means the October 21, 2001 version of the Attorney General's Uniform and Model Rules of Procedure, OAR 137-001-0005 through 137-003-0500, excluding OAR 137-001-0008 through 137-001-0009, in effect as of August 15, 2003.
- (67) "Participant" means the respondent person served with notice under OAR 340-011-0097, a person granted either party or limited party status in the contested case under OAR 137-003-0535, an agency participating in the contested case under OAR 137-003-0540, and the department.
- (8) "Person" means any individual, partnership, corporation, association, governmental subdivision, public or private organization, or agency.
- (7) "Respondent" means the person to whom a formal enforcement action is issued.
- (8) "Formal Enforcement Action" has the same meaning as defined in OAR Chapter 340, Division 012.

Stat. Auth.: ORS 183.341 & ORS 468.020

Stats. Implemented: ORS 183.341

Hist.: DEQ 69(Temp), f. & ef. 3-22-74; DEQ 72, f. 6-5-74, ef. 6-25-74; DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 122, f. & ef. 9-13-76; DEQ 25-1979, f. & ef. 7-5-79; DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 10-1997, f. & cert. ef. 6-10-97; DEQ 3-1998, f. & cert. ef. 3-9-98; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00; DEQ 10-2002, f. & cert. ef. 10-8-02

Contested Cases

340-011-0097

Service of Written Notice

- (1) The Commission or Department perfects service of a notice of opportunity to request a contested case hearing when the notice is mailed to, or personally delivered to:
 - (a) The person; or
 - (b) Any other person designated by law as competent to receive service of a summons or notice for the person; or

- (c) Following appearance of counsel for the person, the person's counsel.
- (2) A person holding a license or permit issued by the Department or Commission or an applicant for a license or permit, will be conclusively presumed able to be served at the address given in the license or permit application, as it may be amended from time to time.
- (3) Service of written notice may be proven by a certificate executed by the person effecting service.
- (4) Regardless of other provisions in this rule, documents sent by the Department through the U.S. Postal Service by regular mail to a person's last known address, are presumed to have been received, subject to evidence to the contrary.

Stat. Auth.: ORS 183.335 & ORS 468.020

Stats. Implemented: ORS 183.341, ORS 183.413 & ORS 183.415

Hist.: DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 122, f. & ef. 9-13-76; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0098

Contested Case Proceedings Generally

Except as provided in OAR Chapter 340, Division 011, contested cases will be governed by the Hearing Panel Rules. In general, a contested case proceeding is initiated when an answer to a notice under OAR 340-011-0097 is received by the Department. The term "agency" generally will be interpreted to mean "Department". The term "decision maker" generally will be interpreted to mean "Commission."

Stat. Auth.: ORS 183.335 & ORS 468.020

Stats. Implemented: ORS 183.341, ORS 183.413 & ORS 183.415

Hist.: DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0103

Agency Representation by Enforcement Section

- (1) The Enforcement Section staff is authorized to appear on behalf of the Department in contested case hearings involving civil penalties or other orders issued under OAR Chapter 340, Division 012.
- (2) The Enforcement Section staff shall not present legal argument as defined under OAR 137-003-0545 on behalf of the Department in contested case hearings.

Stat. Auth.: ORS 183.335 & ORS 468.020

Stats. Implemented: ORS 183.450 & ORS 183.341

Hist.: DEQ 16-1991, f. & cert. ef. 9-30-91; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0106

Authorized Representatives of Parties in a Contested Case Hearing

Per ORS 183.457 and OAR 137-003-0555, a corporation, partnership, limited liability company, unincorporated association, trust and government body may be represented by either an attorney or an authorized representative in a contested case hearing before a hearing officer or the Commission.

Stat. Auth.: ORS 183.335 & ORS 468.020

Stats. Implemented: ORS 183.457

Hist.: DEQ 6-2002(Temp), f. & cert. ef. 4-24-02, thru 10-21-02; DEQ 10-2002, f. & cert. ef. 10-8-02

340-011-0107

Answer Required: Consequences of Failure to Answer

- (1) ~~Unless an answer is not required by statute or rule, or the requirement to file an answer is waived in the notice, a person who has been served with notice under OAR 340-011-0097 shall have 20 days from the date of mailing or personal delivery of the notice in which to file with the Department a written answer and a request for hearing unless another timeframe is required by statute or rule.~~
- (2) ~~In the answer, the person must admit or deny all factual matters and affirmatively allege any and all affirmative claims or defenses and the reasoning in support thereof. Except for good cause shown:
 - (a) ~~Factual matters not controverted will be presumed admitted;~~
 - (b) ~~Failure to raise a claim or defense will be presumed to be waiver of such claim or defense;~~
 - (c) ~~New matters alleged in the answer will be presumed to be denied unless admitted in subsequent pleading or stipulation by the Department or Commission; and~~
 - (d) ~~Subject to ORS 183.415(10) evidence will not be taken on any issue not raised in the notice and the answer unless such issue is specifically raised by a subsequent petitioner for party status and is determined to be within the scope of the proceeding.~~~~
- (3) ~~A late hearing request may be accepted by the Department if the Department determines that the cause for the late request was beyond the reasonable control of the person.~~
- (4) ~~In the absence of a timely answer, the Director on behalf of the Commission or Department may issue a default order and judgment, based upon a prima facie case made on the record.~~

~~Stat. Auth.: ORS 183.335 & ORS 468.020~~

~~Stats. Implemented: ORS 183.430 & ORS 183.435~~

~~Hist.: DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 122, f. & ef. 9-13-76; DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00~~

340-011-0122

Public Attendance at Contested Case Hearing

~~Contested case hearings before a hearing officer may be closed to the public upon the request of a participant in the contested case hearing.~~

~~Stat. Auth.: ORS 183.335 & ORS 468.020~~

~~Stats. Implemented: ORS 183.430 & ORS 183.435~~

~~Hist.: DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00~~

340-011-0124

Immediate Review by Agency; Motion for Ruling on Legal Issues

~~Immediate review by the agency and motions for ruling on legal issues will not be allowed. (See OAR 137-003-0580 or OAR 137-003-0640.)~~

~~Stat. Auth.: ORS 183.335 & ORS 468.020~~

~~Stats. Implemented: ORS 183.430 & ORS 183.435~~

~~Hist.: DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00~~

340-011-0131

Permissible Scope of Hearing

- (a) ~~The scope of a contested case hearing will be limited to those matters that are relevant and material to either proving or disproving the matters asserted in the Department's notice under OAR 340-011-0097. Equitable remedies will not be considered by a hearing officer.~~
- (b) ~~Under no circumstances will the hearing officer reduce or mitigate a civil penalty below the minimum established in the schedule of civil penalties contained in OAR Chapter 340, Division 12.~~

Stat. Auth.: ORS 183.335 & ORS 468.020

Stats. Implemented: ORS 183.430 & ORS 183.435

Hist.: DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00
340-011-0132

Alternative Procedure for Entry of a Final Order in Contested Cases Resulting from Appeal of Civil Penalty Assessments

(1) Commencement of Review by the Commission:

- (a) Copies of the hearing officer's Order will be served on each of the participants in accordance with OAR 340-011-0097. The hearing officer's Order will be the final order of the Commission unless within 30 days from the date of service, a participant or a member of the Commission files with the Commission and serves upon each participant a Petition for Commission Review. A proof of service should also be filed, but failure to file a proof of service will not be a ground for dismissal of the Petition.
- (b) The timely filing of a Petition is a jurisdictional requirement and cannot be waived.
- (c) The timely filing of a Petition will automatically stay the effect of the hearing officer's Order.
- (d) In any case where more than one participant timely serves and files a Petition, the first to file will be the Petitioner and the latter the Respondent.

(2) Contents of the Petition for Commission Review. A Petition must be in writing and need only state the participant's or a Commissioner's intent that the Commission review the hearing officer's Order.

(3) Procedures on Review:

- (a) **Petitioner's Exceptions and Brief:** Within 30 days from the filing of the Petition, the Petitioner must file with the Commission and serve upon each participant written exceptions, brief and proof of service. The exceptions must specify those findings and conclusions objected to, and also include proposed alternative findings of fact, conclusions of law, and order with specific references to the parts of the record upon which the Petitioner relies. Matters not raised before the hearing officer will not be considered except when necessary to prevent manifest injustice.
- (b) **Respondent's Brief:** Each participant will have 30 days from the date of filing of the Petitioner's exceptions and brief, in which to file with the Commission and serve upon each participant an answering brief and proof of service. If multiple Petitions have been filed, the Respondent must also file exceptions as required in (3)(a) at this time.
- (c) **Reply Brief:** Each participant will have 20 days from the date of filing of a Respondent's brief, in which to file with the Commission and serve upon each participant a reply brief and proof of service.
- (d) **Briefing on Commission Invoked Review:** When one or more members of the Commission wish to review a hearing officer's Order, and no participant has timely filed a Petition, the Chairman will promptly notify the participants of the issue that the Commission desires the participants to brief. The Chairman will also establish the schedule for filing of briefs. The participants must limit their briefs to those issues. When the Commission wishes to review a hearing officer's Order and a participant also requested review, briefing will follow the schedule set forth in subsections (a), (b), and (c) of this section.
- (e) **Extensions:** The Chairman or the Director, may extend any of the time limits contained in this rule except for the filing of a Petition under subsection (1) of this rule. Each extension request must be in writing and be served upon each participant. Any request for an extension may be granted or denied in whole or in part.
- (f) **Dismissal:** The Commission may dismiss any Petition if the Petitioner fails to timely file and serve any exceptions or brief required by this rule.

(g) Oral Argument: Following the expiration of the time allowed the participants to present exceptions and briefs, the Chairman will schedule the appeal for oral argument before the Commission.

(4) Additional Evidence: A request to present additional evidence will be submitted by motion and be accompanied by a statement specifying the reason for the failure to present the evidence to the hearing officer. If the Commission grants the motion or decides on its own motion that additional evidence is necessary, the matter will be remanded to a hearing officer for further proceedings.

(5) Scope of Review: The Commission may substitute its judgment for that of the hearing officer in making any particular finding of fact, conclusion of law, or order except as limited by OAR 137-003-0665.

Stat. Auth.: ORS 183.335 & ORS 468.020

Stats. Implemented: ORS 183.430 & ORS 183.435

Hist.: DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 115, f. & ef. 7-6-76; DEQ 25-1979, f. & ef. 7-5-79; DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0136

Powers of the Director

(1) The Director, on behalf of the Commission, may execute any written order which has been consented to in writing by the parties adversely affected thereby.

(2) The Director, on behalf of the Commission, may prepare and execute written orders implementing any action taken by the Commission on any matter.

(3) The Director, on behalf of the Commission, may prepare and execute orders upon default where:

(a) A person receiving notice under OAR 340-011-0097 has failed to timely request a hearing; or

(b) The person requesting the contested case hearing failed to appear at the hearing or informed either the hearing officer or the Department that he will not appear at the hearing; or

(c) The person receiving notice under OAR 340-011-0097 filed a timely request for a hearing but later informs the Department that he withdraws the request for a hearing

(4) Default orders will be issued only upon the making of a prima facie case on the record.

Stat. Auth.: ORS 183.335 & ORS 468.020

Stats. Implemented: ORS 183.464

Hist.: DEQ 122, f. & ef. 9-13-76; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0500 (renumbered from 340-011-0098)

Contested Case Proceedings Generally

(1) Except as otherwise provided in OAR Chapter 340, Division 011, contested cases will be governed by the Hearing Panel Rules. The term "agency" generally will be interpreted to mean "Department". The term "decision maker" generally will be interpreted to mean "Commission." The term "party" generally will be interpreted to mean "participant."

(2) In computing any period of time prescribed or allowed by this Division, the day of the act or event from which the designated period of time begins to run will not be included. The last day of the time period is included, unless it is a Saturday or a legal holiday (including Sunday), in which event the time period runs until the end of the next day that is not a Saturday or a legal holiday.

Stat. Auth.: ORS 183.341 & ORS 468.020

Stats. Implemented: ORS 183.341

340-011-0505 (renumbered from OAR 340-011-0136)

Powers of the Director

(1) The director, on behalf of the Commission, may execute

(a) any written order which has been consented to in writing by the participants;

(b) formal enforcement actions;

(c) orders upon default; and

(d) any other final order implementing any action taken by the Commission on any matter.

Stat. Auth.: ORS 183.335 and ORS 468.020

Stats. Implemented: ORS 468.045 and 468.130

Hist.: DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0510 (renumbered from 340-011-0103)

Agency Representation by Environmental Law Specialist

(1) Environmental Law Specialists and other department personnel as approved by the director, are authorized to appear on behalf of the department and commission in contested case hearings involving formal enforcement actions issued under OAR Chapter 340, Division 012.

(2) Environmental Law Specialists or other approved personnel may not present legal argument as defined under OAR 137-003-0545 on behalf of the department or commission in contested case hearings.

(3) When the department determines it is necessary to consult with the Attorney General's office, a hearing officer will provide a reasonable period of time for an agency representative to consult with the Attorney General's office and to obtain either written or oral legal argument, if necessary.

Stat. Auth.: ORS 183.341, ORS 183.452 & ORS 468.020

Stats. Implemented: ORS 183.452

Hist.: DEQ 16-1991, f. & cert. ef. 9-30-91; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0515 (renumbered from 340-011-0106)

Authorized Representative of Respondent other than a Natural Person in a Contested Case Hearing
A corporation, partnership, limited liability company, unincorporated association, trust and government body may be represented by either an attorney or an authorized representative in a contested case hearing before a hearing officer or the commission to the extent allowed by OAR 340-003-0555.

Stat. Auth.: ORS 183.341 & ORS 468.020

Stats. Implemented: ORS 183.457

Hist.: DEQ 6-2002(Temp), f. & cert. ef. 4-24-02, thru 10-21-02; DEQ 10-2002, f. & cert. ef. 10-8-02

340-011-0520

Liability for the Acts of a Respondent's Employees

A respondent is legally responsible for not only its direct acts but also the acts of its employee when the employee is acting within the scope of the employment relationship, regardless of whether the respondent expressly authorizes the act in question. The mental state ("R" factor under OAR 340-012-0045) of an employee can be imputed to the employer. Nothing in this rule prevents the department from issuing a formal enforcement action to an employee for violations occurring during the scope of the employee's employment.

Stat. Auth.: ORS 183.341 and ORS 468.020

Stat. Implemented: ORS 468.005, 468.130 and 468.140

340-011-0525 (renumbered from 340-011-0097)

Service and Filing of Documents

(1) Service of a formal enforcement action or other document by the department or commission can be made either personally, by certified mail or by regular mail. Service is perfected when received by the respondent, if by personal service, or when mailed, if sent by mail. Service may be made upon:

(a) The respondent;

(b) Any other person designated by law as competent to receive service of a summons or notice for the respondent; or

(c) The respondent's attorney or other authorized representative.

(2) A respondent holding a license or permit issued by the department or commission, or who has submitted an application for a license or permit, will be conclusively presumed able to be served at the address given in the license or permit application, as it may be amended from time to time.

(3) Service by regular mail may be proven by a certificate executed by the person effecting service.

(4) Regardless of other provisions in this rule, documents sent by the department or commission through the U.S. Postal Service by regular mail to a person's last known address are presumed to have been received, subject to evidence to the contrary.

Stat. Auth.: ORS 183.341 and ORS 468.020

Stats. Implemented: ORS 183.413 and ORS 183.415

Hist.: DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 122, f. & ef. 9-13-76; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0530 (renumbered from 340-011-0107)

Requests for Hearing

(1) Unless a request for hearing is not required by statute or rule, or the requirement to file a request for hearing is waived in the formal enforcement action, a respondent has 20 calendar days from the date of service of the formal enforcement action in which to file a written request for hearing unless another timeframe is allowed by statute or rule.

(2) The request for hearing must include a written response to the formal enforcement action that admits or denies all factual matters alleged therein, and alleges any and all affirmative defenses and the reasoning in support thereof. Factual matters not denied will be considered admitted, and failure to raise a defense will be a waiver of the defense. New matters alleged in the request for hearing are denied by the department unless admitted in subsequent stipulation.

(3) An amended request for hearing may be accepted by the department if the department determines that the filing of an amended request will not unduly delay the proceeding or unfairly prejudice the participants. The respondent must provide the department with a written explanation why an amended request for hearing is needed with the amended request for hearing.

(4) A late request for hearing may be accepted by the department if the department determines that the cause for the late request was beyond the reasonable control of the respondent. The respondent must provide the department with a written explanation why the request for hearing was not filed in a timely manner. If the respondent fails to provide the written explanation, the department cannot accept the late request for hearing. The department may require that the explanation be supported by an affidavit.

(5) The filing of a late request for hearing does not stay the effect of any final order.

(6) *The department will deny a late request for hearing that is filed more than 60 days after entry of a final order by default. A final order by default is considered entered when the order is signed by the director on behalf of the department or commission.*

Stat. Auth.: ORS 183.341 and ORS 468.020

Stats. Implemented: ORS 183.415, ORS 183.464, ORS 183.482 and ORS 183.484

Hist.: DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 122, f. & ef. 9-13-76; DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0535

Final Orders by Default

- (1) *The department may enter a final order by default on behalf of the commission, based upon a prima facie case made on the record, when respondent defaults as set forth in OAR 137-003-0670(1).*
- (2) *If the respondent has defaulted, the formal enforcement action states that the department's record to date will automatically become the contested case record upon default, and no further evidence is necessary to make a prima facie case of the facts alleged in the formal enforcement action, no contested case hearing will be conducted and the department will issue a final order by default.*
- (3) *If the respondent has defaulted and the department determines that evidence, besides that which is in the department's record to date, is necessary to make a prima facie case of the facts alleged in the formal enforcement action, the department will proceed to a contested case hearing for the purpose of establishing a prima facie case upon which the hearing officer may issue a proposed order by default.*
- (4) *If more than one respondent is named in the formal enforcement action and at least one respondent defaults as provided in section (1) of this rule, the department will issue a final order by default against the defaulting respondent. A hearing officer will conduct a contested case hearing, as necessary, for the respondents who did not default.*
- (5) *If the formal enforcement action states that a department or commission order becomes a final order unless a timely request for hearing is filed with the department, the order becomes final on the day after the last day that a timely request for hearing should have been filed. No further order need be served on the respondent.*

Stat. Auth.: ORS 183.335 and ORS 468.020

Stat. Impl.: ORS 183.415 and ORS 183.090

340-011-0540 (renumbered from 340-012-0035)

Consolidation or Bifurcation of Contested Case Hearings

Each and every violation is a separate and distinct violation, and in cases of continuing violations, each day's continuance is a separate and distinct violation. Proceedings for the assessment of multiple civil penalties for multiple violations may, however, be consolidated into a single proceeding or bifurcated into separate proceedings, at the department's discretion. Additionally, the department, at its discretion, may consolidate or bifurcate contested case hearings involving the same fact or set of facts constituting the violation.

Stat. Author ORS 183.341 and ORS 468.020

Stat. Implemented: ORS 183.415

340-011-0545

Burden and Standard of Proof in Contested Case Hearings; Department Interpretation of Rules and Statutory Terms

- (1) The participant who asserts a fact or position is the proponent of that fact or position and has the burden of presenting evidence to support that fact or position.*
- (2) All findings in a proposed or final order must be based on a preponderance of evidence in the record unless another standard is specifically required by statute or rule.*
- (3) In reviewing the department's interpretation of a department rule as applied in a formal enforcement action, a hearing officer must follow the department's interpretation if that interpretation is both plausible and reasonably consistent with the wording of the rule and the underlying statutes. The hearing officer may state, on the record, an alternative interpretation for consideration on appeal.*
- (4) With the exception of exact terms that do not require interpretation, a hearing officer shall give the department's interpretation of statutory terms the appropriate deference in light of the department's expertise with the subject matter, the department's experience with the statute, the department's involvement in the relevant legislative process, and the degree of discretion accorded the department by the legislature.*

Stat. Author ORS 183.341 and ORS 468.020

Stat. Implemented: ORS 183.450

340-011-0550

Discovery

- (1) Motions for discovery will only be granted if the motion establishes that:
 - (a) the participant seeking the information attempted to obtain the information through an informal process. If the participant is seeking information from a public agency, the participant must make a public record request prior to petitioning for discovery; and*
 - (b) the discovery request is reasonably likely to produce information that is generally relevant and necessary to the matters alleged in the formal enforcement action and the request for hearing or is likely to facilitate resolution of the case.**
- (3) A hearing officer is not authorized to order depositions or site visits unless the department authorizes the same in writing in the specific case.*

Stat. Author ORS 183.341 and ORS 468.020

Stat. Implemented: ORS 183.425, 183.440 and 183.450

340-011-0555

Subpoenas

- (1) Subpoenas for the attendance of witnesses or production of documents at a contested case hearing will be issued in accordance with OAR 137-003-0585.*
- (2) Copies of the subpoena must be provided to the hearing officer and all participants at the time of service to the person to whom the subpoena is issued.*
- (3) Service of a subpoena for the attendance of a witness must be completed by personal service unless the witness has indicated that he is willing to appear and the subpoena is mailed at least 10 days prior to the hearing. Personal service should be effected at least 7 days prior to the hearing.*
- (4) Service of a subpoena for the production of documents at a contested case hearing may be effected by regular mail provided that it is done sufficiently in advance of the hearing to allow reasonable time to produce the documents.*
- (5) Service of a subpoena for both the attendance of a witness and production of documents must be completed as provided under section (3) of this rule.*

(6) Any witness who appears at a hearing under a subpoena will receive fees and mileage as set forth in ORS 44.415(2). The fees and mileage must be paid by the participant for whom the subpoena was issued and may be paid at either the time of service of the subpoena or at the hearing.

Stat. Author ORS 183.341 and ORS 468.020

Stat. Implemented: ORS 183.425, 183.440 and 468.120

340-011-0560 (renumbered from 340-011-0122)

Public Attendance at Contested Case Hearing

A hearing officer may close a contested case hearing to the public upon the request of a participant in the contested case hearing.

Stat. Auth.: ORS 183.341 & ORS 468.020

Stats. Implemented: ORS 183.341

Hist.: DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0565 (renumbered from 340-011-0124)

Immediate Review by Agency

Immediate review by the agency is not allowed. (See OAR 137-003-0640.)

Stat. Auth.: ORS 183.341 & ORS 468.020

Stats. Implemented: ORS 183.341

Hist.: DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0570 (renumbered from 340-011-0131)

Permissible Scope of Hearing

(a) The scope of a contested case hearing will be limited to those matters that are relevant and material to either proving or disproving the matters alleged in formal enforcement action and request for hearing. Equitable remedies will not be considered by a hearing officer.

(b) The hearing officer may not reduce or mitigate a civil penalty below the amount established by the application of the civil penalty formula contained in OAR Chapter 340, Division 12.

Stat. Auth.: ORS 183.341 & ORS 468.020

Stats. Implemented: ORS 183.450 & ORS 468.130

Hist.: DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0575 (Renumbered from 340-011-0132)

Review of Proposed Orders in Contested Cases

(1) For purposes of this rule, filing means receipt in the office of the director or other office of the department.

(2) Following the close of the record for a contested case hearing, the hearing officer will issue a proposed order. The hearing officer will serve the proposed order on each participant.

(3) Commencement of Review by the Commission: The proposed order will become final unless a participant or a member of the commission files, with the commission, a Petition for Commission Review within 30 days of service of the proposed order. The timely filing of a Petition is a jurisdictional requirement and cannot be waived. Any participant may file a petition whether or not another participant has filed a petition.

(4) Contents of the Petition for Commission Review. A petition must be in writing and need only state the participant's or a commissioner's intent that the commission review the proposed order. Each

petition and subsequent brief must be captioned to indicate the participant filing the document and the type of document (for example: Respondents Exceptions and Brief; Department's Answer to Respondent's Exceptions and Brief).

(5) Procedures on Review:

(a) Exceptions and Brief: Within 30 days from the filing of a petition, the participant(s) filing the petition must file written exceptions and brief. The exceptions must specify those findings and conclusions objected to, and also include proposed alternative findings of fact, conclusions of law, and order with specific references to the parts of the record upon which the participant relies. The brief must include the arguments supporting these alternative findings of fact, conclusions of law and order. Failure to take an exception to a finding or conclusion in the brief, waives the participant's ability to later raise that exception.

(b) Answering Brief: Each participant, except for the participant(s) filing that exceptions and brief, will have 30 days from the date of filing of the exceptions and brief under subsection (5)(a), in which to file an answering brief.

(c) Reply Brief: If an answering brief is filed, the participant(s) who filed a petition will have 20 days from the date of filing of the answering brief under subsection (5)(b), in which to file a reply brief.

(d) Briefing on Commission Invoked Review: When one or more members of the commission wish to review the proposed order, and no participant has timely filed a Petition, the chair of the commission will promptly notify the participants of the issue that the commission desires the participants to brief. The participants must limit their briefs to those issues. The chair of the commission will also establish the schedule for filing of briefs. When the commission wishes to review the proposed order and a participant also requested review, briefing will follow the schedule set forth in subsections (a), (b), and (c) of this section.

(e) Extensions: The commission or director may extend any of the time limits contained in section (5) of this rule. Each extension request must be in writing and filed with the commission before the expiration of the time limit. Any request for an extension may be granted or denied in whole or in part.

(f) Dismissal: The commission may dismiss any petition, upon motion of any participant or on its own motion, if the participant(s) seeking review fails to timely file the exceptions or brief required under subsection (5)(a) of this rule. A motion to dismiss made by a participant must be filed within 45 days after the filing of the Petition. At the time of dismissal, the commission will also enter a final order upholding the proposed order.

(g) Oral Argument: Following the expiration of the time allowed the participants to present exceptions and briefs, the matter will be scheduled for oral argument before the commission.

(5) Additional Evidence: A request to present additional evidence must be submitted by motion and must be accompanied by a statement showing that the cause for the failure to present the evidence to the hearing officer was beyond the participant's reasonable control. The motion must accompany the brief filed under subsection (4)(a) or (b) of this rule. If the commission grants the motion or decides on its own motion that additional evidence is necessary, the matter will be remanded to a hearing officer for further proceedings.

(6) Scope of Review: The commission may substitute its judgment for that of the hearing officer in making any particular finding of fact, conclusion of law, or order except as limited by OAR 137-003-0655 and 137-003-0665.

(7) Service of documents on other participants: All documents required to be filed with the commission under this rule must also be served upon each participant in the contested case hearing. Service can be completed by personal service, certified mail or regular mail.

Stat. Auth.: ORS 183.341 and 468.020

Stats. Implemented: ORS 183.460, 183,464 & ORS 183.470

Hist.: DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 115, f. & ef. 7-6-76; DEQ 25-1979, f. & ef. 7-5-79; DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0580

Petitions for Reconsideration or Rehearing

(1) A participant is not required to seek either reconsideration or rehearing of a final order prior to seeking judicial review.

(2) Any petition for reconsideration or rehearing must be received by the department within 60 days of service of the final order. Unless specifically set forth in this rule, the procedures for petitions for reconsideration or rehearing are those in OAR 137-003-0675.

(3) A petition for reconsideration or rehearing does not stay the effect of the final order.

(4) The director, on behalf of the commission, shall issue orders granting or denying petitions for reconsideration and rehearing.

Stat. Auth.: ORS 183.341 and 468.020

Stats. Implemented: ORS 183.480 and ORS 183.482

340-011-0585

Petitions for a Stay of the Effect of a Final Order

(1) A petition to stay the effect of any final order must be received by the department within 60 days of service of the final order. Unless specifically set forth in this rule, the procedures for petitions for a stay are those in OAR 137-003-0690 through 0700.

(2) If a participant submits a petition for reconsideration or rehearing or a late request for hearing, the petition for a stay must accompany that petition.

(3) A petition for a stay must contain all the elements set forth in OAR 137-003-0690 and be served upon all participants as set forth in OAR 137-003-0690(4).

(4) Any participant may seek to intervene in the stay proceeding as set forth in OAR 137-003-0695 by filing a response to the petition for a stay with the department.

(5) The director, on behalf of the commission, shall issue an order granting or denying the petition for a stay within 30 days of receipt of the petition.

Stat. Auth.: ORS 183.341 and 468.020

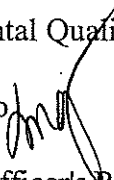
Stats. Implemented: ORS 183.480 and ORS 183.482

State of Oregon
Department of Environmental Quality

Memorandum

Date: September 17, 2003

To: Environmental Quality Commission

From: Susan Greco 

Subject: Presiding Officer's Report for Rulemaking Hearing
Title of Proposal: Rule Revisions Regarding Contested Case Hearings
Hearing Date and Time: September 17, 2003 – 1 p.m.
Hearing Location: 811 S.W. 6th Avenue, Portland in Conference Room 10

The Department convened the rulemaking hearing on the proposal referenced above at 1:00 pm. Zero people attended the hearing and the hearing was closed at 1:20 p.m.

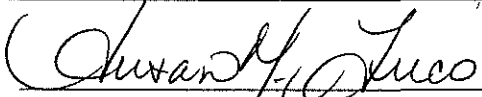
Relationship to Federal Requirements

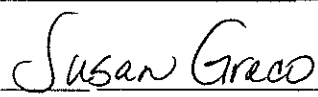
Answers to the following questions identify how the proposed rulemaking relates to federal requirements and potential justification for differing from federal requirements. The questions are required by OAR 340-011-0029.

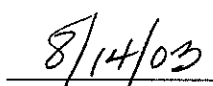
1. Are there federal requirements that are applicable to this situation? If so, exactly what are they? No
2. Are the applicable federal requirements performance based, technology based, or both with the most stringent controlling? N/A
3. Do the applicable federal requirements specifically address the issues that are of concern in Oregon? Was data or information that would reasonably reflect Oregon's concern and situation considered in the federal process that established the federal requirements? N/A
4. Will the proposed requirement improve the ability of the regulated community to comply in a more cost effective way by clarifying confusing or potentially conflicting requirements (within or cross-media), increasing certainty, or preventing or reducing the need for costly retrofit to meet more stringent requirements later? N/A
5. Is there a timing issue which might justify changing the time frame for implementation of federal requirements? N/A
6. Will the proposed requirement assist in establishing and maintaining a reasonable margin for accommodation of uncertainty and future growth? N/A
7. Does the proposed requirement establish or maintain reasonable equity in the requirements for various sources? N/A
8. Would others face increased costs if a more stringent rule is not enacted? N/A
9. Does the proposed requirement include procedural requirements, reporting or monitoring requirements that are different from applicable federal requirements? If so, Why? What is the "compelling reason" for different procedural, reporting or monitoring requirements? N/A
10. Is demonstrated technology available to comply with the proposed requirement? N/A
11. Will the proposed requirement contribute to the prevention of pollution or address a potential problem and represent a more cost effective environmental gain? N/A

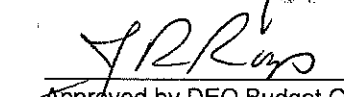
DEPARTMENT OF ENVIRONMENTAL QUALITY
Chapter 340
Proposed Rulemaking
STATEMENT OF NEED AND FISCAL AND ECONOMIC IMPACT
 This form accompanies a Notice of Proposed Rulemaking

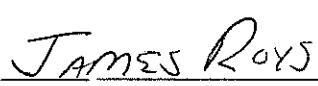
Title of Proposed Rulemaking:	Rule Revisions Regarding Contested Case Hearings
Need for the Rule(s)	On July 21, 2003, the Attorney General's office adopted revisions to the Hearing Panel Rules. These rule revisions will align the Department's rules with those changes. Additionally, the rules adopt various policies, EQC decisions and case law into the Department's rules for clarity.
Documents Relied Upon for Rulemaking	The Department relied upon the following documents in developing this rule proposal: <ul style="list-style-type: none"> •Attorney General's Administrative Law Manual, 2001 edition •Attorney General's Uniform, Hearing Panel and Model Rules (effective July 21, 2003) •Interagency Agreement between the Department and the Hearing Officer Panel (effective July 1, 2001) •Final Order, Case no. WPM/SP-WR-00-009, dated February 11, 2002 •The Department of Environmental Quality, Office of Compliance and Enforcement's Internal Management Directive on Late Hearing Requests and Answers
Fiscal and Economic Impact	
Overview	No fiscal or economic impact is expected from the proposed rule changes. The Department must follow the Hearing Panel Rules regardless of adoption by the EQC. All other rule changes merely incorporate policies or decisions which are already applied to contested case hearings.
General public	No fiscal or economic impact is expected.
Small Business	No fiscal or economic impact is expected.
Large Business	No fiscal or economic impact is expected.
Local Government	No fiscal or economic impact is expected.
State Agencies	No fiscal or economic impact is expected.
DEQ	Adoption of these rules would require use of hearing officers in the event that a respondent files a late hearing request. The average cost of a hearing officer in these cases would be about \$200. The frequency of such filings is not predictably, but is estimated at 5 to 10 per year, meaning the total impact of the rule would be between \$1,000 and \$2,000 per year.
Other agencies	No fiscal or economic impact is expected.
Housing Costs	The Department has determined that this proposed rulemaking will have no effect on the cost of development of a 6,000 square foot parcel and the construction of a 1,200 square foot detached single family dwelling on that parcel.
Administrative Rule Advisory Committee	An advisory committee was not used to develop these rules since the majority of the changes do not involve changes from the current procedures for contested case hearings. The rule changes are based on the most recent changes made by the Attorney General to the Hearing Panel Rules which are binding on the Department. Other proposed rule changes place into rule policies which have already been applied to contested case hearings.

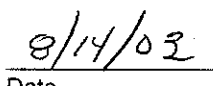

 Prepared by


 Printed name


 Date


 Approved by DEQ Budget Office


 Printed name
 BUDGET MANAGER


 Date

State of Oregon
DEPARTMENT OF ENVIRONMENTAL QUALITY

Rulemaking Proposal
for
Rule Revisions Regarding Contested Case Hearings

Land Use Evaluation Statement

1. Explain the purpose of the proposed rules.

This proposal would align the Department's procedural rules regarding contested case hearings with the most recent changes to the Hearing Panel Rules. Additionally, the rule changes incorporate policies and EQC decisions into rule.

2. Do the proposed rules affect existing rules, programs or activities that are considered land use programs in the DEQ State Agency Coordination (SAC) Program?

Yes ___ No X

a. If yes, identify existing program/rule/activity:

b. If yes, do the existing statewide goal compliance and local plan compatibility procedures adequately cover the proposed rules?

Yes ___ No ___ (if no, explain):

c. If no, apply the following criteria to the proposed rules.

Staff should refer to Section III, subsection 2 of the SAC document in completing the evaluation form. Statewide Goal 6 - Air, Water and Land Resources is the primary goal that relates to DEQ authorities. However, other goals may apply such as Goal 5 - Open Spaces, Scenic and Historic Areas, and Natural Resources; Goal 11 - Public Facilities and Services; Goal 16 - Estuarine Resources; and Goal 19 - Ocean Resources. DEQ programs and rules that relate to statewide land use goals are considered land use programs if they are:

1. Specifically referenced in the statewide planning goals; or
2. Reasonably expected to have significant effects on
 - a. resources, objectives or areas identified in the statewide planning goals, or
 - b. present or future land uses identified in acknowledged comprehensive plans.

In applying criterion 2 above, two guidelines should be applied to assess land use significance:

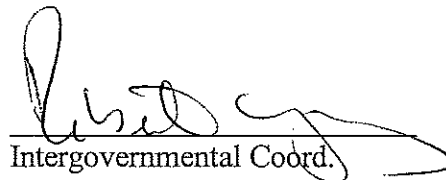
- The land use responsibilities of a program/rule/action that involved more than one agency, are considered the responsibilities of the agency with primary authority.
- A determination of land use significance must consider the Department's mandate to protect public health and safety and the environment.

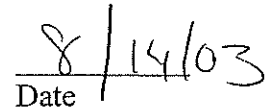
In the space below, state if the proposed rules are considered programs affecting land use. State the criteria and reasons for the determination.

The Department has reviewed the criteria and the proposed rules will not affect land use. The rules are essentially procedural in nature and do not affect the any existing land use programs.

3. **If the proposed rules have been determined a land use program under 2. above, but are not subject to existing land use compliance and compatibility procedures, explain the new procedures the Department will use to ensure compliance and compatibility.**


Division


Intergovernmental Coord.


Date

**Department of Environmental Quality
Enforcement Rules Advisory Group
Membership as of 10/27/03**

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ATTACHMENT 1

**Department of Environmental Quality
Enforcement Rules Advisory Group
Membership as of 10/27/03**

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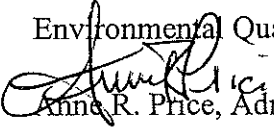
12/4-5/03 EQC Meeting, Item K Handout

State of Oregon
Department of Environmental Quality

Memorandum

Date: December 4, 2003

To: Environmental Quality Commission

From: 
Anne R. Price, Administrator, Office of Compliance and Enforcement

Subject: Correction to EQC Report for Agenda Item K - Rule Revisions Regarding Contested Case Hearings

Attached you will find an Attachment A-2 which should be substituted for the language included as an attachment to the Report dated November 13, 2003.

Specifically, the Department corrected the following items:

1. Section numbering was corrected in OAR 340-011-0550 and 340-011-0575.
2. The title of OAR 340-011-0525 was changed from "Service and Filing of Documents" to "Service of Documents" to more accurately reflect the subject matter of the rule.
3. All references to hearing officer or Hearing Officer Panel were changed to administrative law judge or Office of Administrative Hearings. This change became effective after the public notice date of these rules.

DIVISION 11

RULES OF GENERAL APPLICABILITY AND ORGANIZATION

Rules of Practice and Procedure

340-011-0005

Definitions

Unless otherwise defined in this division, the words and phrases used in this division have the same meaning given them in ORS 183.310, the *Hearing Panel Rules of the Office of Administrative Hearings*, or the Model Rules or other divisions in *Oregon Administrative Rules, Chapter 340*, as context requires unless otherwise defined in this division.

- (1) "Commission" means the Environmental Quality Commission.
- (2) "Department" means the Department of Environmental Quality.
- (3) "Director" means the ~~d~~Director of the ~~D~~department or the ~~D~~director's authorized delegates.
- (4) "Filing" means receipt in the office of the Director or other office of the Department. Such filing is adequate where filing is required of any document with regard to any matter before the Commission, Department or Director, except a claim of personal liability.
- (45) "*Hearing Panel Rules of the Office of Administrative Hearings*" means the Attorney General's Rules, OAR 137-003-0501 through 137-003-0700.
- (56) "Model Rules" or "Uniform Rules" means the ~~October 21, 2001~~ version of the Attorney General's Uniform and Model Rules of Procedure, OAR 137-001-0005 through 137-003-0500, excluding OAR 137-001-0008 through 137-001-0009, *in effect as of August 15, 2003*.
- (67) "Participant" means the ~~respondent~~ person served with notice under ~~OAR 340-011-0097~~, a person granted either party or limited party status in the contested case under OAR 137-003-0535, an agency participating in the contested case under OAR 137-003-0540, and the ~~D~~department.
- (8) "Person" means any individual, partnership, corporation, association, governmental subdivision, public or private organization, or agency.
- (7) "Respondent" means the person to whom a formal enforcement action is issued.
- (8) "Formal Enforcement Action" has the same meaning as defined in OAR Chapter 340, Division 012.

Stat. Auth.: ORS 183.341 & ORS 468.020

Stats. Implemented: ORS 183.341

Hist.: DEQ 69(Temp), f. & ef. 3-22-74; DEQ 72, f. 6-5-74, ef. 6-25-74; DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 122, f. & ef. 9-13-76; DEQ 25-1979, f. & ef. 7-5-79; DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 10-1997, f. & cert. ef. 6-10-97; DEQ 3-1998, f. & cert. ef. 3-9-98; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00; DEQ 10-2002, f. & cert. ef. 10-8-02

Contested Cases

340-011-0097

Service of Written Notice

- (1) The Commission or Department perfects service of a notice of opportunity to request a contested case hearing when the notice is mailed to, or personally delivered to:
 - (a) The person; or

~~(b) Any other person designated by law as competent to receive service of a summons or notice for the person; or~~

~~(c) Following appearance of counsel for the person, the person's counsel.~~

~~(2) A person holding a license or permit issued by the Department or Commission or an applicant for a license or permit, will be conclusively presumed able to be served at the address given in the license or permit application, as it may be amended from time to time.~~

~~(3) Service of written notice may be proven by a certificate executed by the person effecting service.~~

~~(4) Regardless of other provisions in this rule, documents sent by the Department through the U.S. Postal Service by regular mail to a person's last known address, are presumed to have been received, subject to evidence to the contrary.~~

~~Stat. Auth.: ORS 183.335 & ORS 468.020~~

~~Stats. Implemented: ORS 183.341, ORS 183.413 & ORS 183.415~~

~~Hist.: DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 122, f. & ef. 9-13-76; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00~~

340-011-0098

Contested Case Proceedings Generally

~~Except as provided in OAR Chapter 340, Division 011, contested cases will be governed by the Hearing Panel Rules. In general, a contested case proceeding is initiated when an answer to a notice under OAR 340-011-0097 is received by the Department. The term "agency" generally will be interpreted to mean "Department". The term "decision maker" generally will be interpreted to mean "Commission."~~

~~Stat. Auth.: ORS 183.335 & ORS 468.020~~

~~Stats. Implemented: ORS 183.341, ORS 183.413 & ORS 183.415~~

~~Hist.: DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00~~

340-011-0103

Agency Representation by Enforcement Section

~~(1) The Enforcement Section staff is authorized to appear on behalf of the Department in contested case hearings involving civil penalties or other orders issued under OAR Chapter 340, Division 012.~~

~~(2) The Enforcement Section staff shall not present legal argument as defined under OAR 137-003-0545 on behalf of the Department in contested case hearings.~~

~~Stat. Auth.: ORS 183.335 & ORS 468.020~~

~~Stats. Implemented: ORS 183.450 & ORS 183.341~~

~~Hist.: DEQ 16-1991, f. & cert. ef. 9-30-91; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00~~

340-011-0106

Authorized Representatives of Parties in a Contested Case Hearing

~~Per ORS 183.457 and OAR 137-003-0555, a corporation, partnership, limited liability company, unincorporated association, trust and government body may be represented by either an attorney or an authorized representative in a contested case hearing before a hearing officer or the Commission.~~

~~Stat. Auth.: ORS 183.335 & ORS 468.020~~

~~Stats. Implemented: ORS 183.457~~

~~Hist.: DEQ 6-2002(Temp), f. & cert. ef. 4-24-02, thru 10-21-02; DEQ 10-2002, f. & cert. ef. 10-8-02~~

340-011-0107

Answer Required: Consequences of Failure to Answer

- (1) Unless an answer is not required by statute or rule, or the requirement to file an answer is waived in the notice, a person who has been served with notice under OAR 340-011-0097 shall have 20 days from the date of mailing or personal delivery of the notice in which to file with the Department a written answer and a request for hearing unless another timeframe is required by statute or rule.
- (2) In the answer, the person must admit or deny all factual matters and affirmatively allege any and all affirmative claims or defenses and the reasoning in support thereof. Except for good cause shown:
 - (a) Factual matters not controverted will be presumed admitted;
 - (b) Failure to raise a claim or defense will be presumed to be waiver of such claim or defense;
 - (c) New matters alleged in the answer will be presumed to be denied unless admitted in subsequent pleading or stipulation by the Department or Commission; and
 - (d) Subject to ORS 183.415(10) evidence will not be taken on any issue not raised in the notice and the answer unless such issue is specifically raised by a subsequent petitioner for party status and is determined to be within the scope of the proceeding.
- (3) A late hearing request may be accepted by the Department if the Department determines that the cause for the late request was beyond the reasonable control of the person.
- (4) In the absence of a timely answer, the Director on behalf of the Commission or Department may issue a default order and judgment, based upon a prima facie case made on the record.

Stat. Auth.: ~~ORS 183.335 & ORS 468.020~~

Stats. Implemented: ~~ORS 183.430 & ORS 183.435~~

Hist.: ~~DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 122, f. & ef. 9-13-76; DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00~~

340-011-0122

Public Attendance at Contested Case Hearing

~~Contested case hearings before a hearing officer may be closed to the public upon the request of a participant in the contested case hearing.~~

Stat. Auth.: ~~ORS 183.335 & ORS 468.020~~

Stats. Implemented: ~~ORS 183.430 & ORS 183.435~~

Hist.: ~~DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00~~

340-011-0124

Immediate Review by Agency; Motion for Ruling on Legal Issues

~~Immediate review by the agency and motions for ruling on legal issues will not be allowed. (See OAR 137-003-0580 or OAR 137-003-0640.)~~

Stat. Auth.: ~~ORS 183.335 & ORS 468.020~~

Stats. Implemented: ~~ORS 183.430 & ORS 183.435~~

Hist.: ~~DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00~~

340-011-0131

Permissible Scope of Hearing

- (a) ~~The scope of a contested case hearing will be limited to those matters that are relevant and material to either proving or disproving the matters asserted in the Department's notice under OAR 340-011-0097. Equitable remedies will not be considered by a hearing officer.~~
- (b) ~~Under no circumstances will the hearing officer reduce or mitigate a civil penalty below the minimum established in the schedule of civil penalties contained in OAR Chapter 340, Division 12.~~

Stat. Auth.: ORS 183.335 & ORS 468.020

Stats. Implemented: ORS 183.430 & ORS 183.435

Hist.: DEQ 1 2000(Temp), f. 2 15 00, cert. ef. 2 15 00 thru 7 31 00; DEQ 9 2000, f. & cert. ef. 7 21 00
340-011-0132

Alternative Procedure for Entry of a Final Order in Contested Cases Resulting from Appeal of Civil Penalty Assessments

(1) Commencement of Review by the Commission:

- (a) Copies of the hearing officer's Order will be served on each of the participants in accordance with OAR 340-011-0097. The hearing officer's Order will be the final order of the Commission unless within 30 days from the date of service, a participant or a member of the Commission files with the Commission and serves upon each participant a Petition for Commission Review. A proof of service should also be filed, but failure to file a proof of service will not be a ground for dismissal of the Petition.
- (b) The timely filing of a Petition is a jurisdictional requirement and cannot be waived.
- (c) The timely filing of a Petition will automatically stay the effect of the hearing officer's Order.
- (d) In any case where more than one participant timely serves and files a Petition, the first to file will be the Petitioner and the latter the Respondent.

(2) Contents of the Petition for Commission Review: A Petition must be in writing and need only state the participant's or a Commissioner's intent that the Commission review the hearing officer's Order.

(3) Procedures on Review:

- (a) **Petitioner's Exceptions and Brief:** Within 30 days from the filing of the Petition, the Petitioner must file with the Commission and serve upon each participant written exceptions, brief and proof of service. The exceptions must specify those findings and conclusions objected to, and also include proposed alternative findings of fact, conclusions of law, and order with specific references to the parts of the record upon which the Petitioner relies. Matters not raised before the hearing officer will not be considered except when necessary to prevent manifest injustice.
- (b) **Respondent's Brief:** Each participant will have 30 days from the date of filing of the Petitioner's exceptions and brief, in which to file with the Commission and serve upon each participant an answering brief and proof of service. If multiple Petitions have been filed, the Respondent must also file exceptions as required in (3)(a) at this time.
- (c) **Reply Brief:** Each participant will have 20 days from the date of filing of a Respondent's brief, in which to file with the Commission and serve upon each participant a reply brief and proof of service.
- (d) **Briefing on Commission Invoked Review:** When one or more members of the Commission wish to review a hearing officer's Order, and no participant has timely filed a Petition, the Chairman will promptly notify the participants of the issue that the Commission desires the participants to brief. The Chairman will also establish the schedule for filing of briefs. The participants must limit their briefs to those issues. When the Commission wishes to review a hearing officer's Order and a participant also requested review, briefing will follow the schedule set forth in subsections (a), (b), and (c) of this section.
- (e) **Extensions:** The Chairman or the Director, may extend any of the time limits contained in this rule except for the filing of a Petition under subsection (1) of this rule. Each extension request must be in writing and be served upon each participant. Any request for an extension may be granted or denied in whole or in part.
- (f) **Dismissal:** The Commission may dismiss any Petition if the Petitioner fails to timely file and serve any exceptions or brief required by this rule.

(g) Oral Argument: Following the expiration of the time allowed the participants to present exceptions and briefs, the Chairman will schedule the appeal for oral argument before the Commission.

(4) Additional Evidence: A request to present additional evidence will be submitted by motion and be accompanied by a statement specifying the reason for the failure to present the evidence to the hearing officer. If the Commission grants the motion or decides on its own motion that additional evidence is necessary, the matter will be remanded to a hearing officer for further proceedings.

(5) Scope of Review: The Commission may substitute its judgment for that of the hearing officer in making any particular finding of fact, conclusion of law, or order except as limited by OAR 137-003-0665.

Stat. Auth.: ORS 183.335 & ORS 468.020

Stats. Implemented: ORS 183.430 & ORS 183.435

Hist.: DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 115, f. & ef. 7-6-76; DEQ 25-1979, f. & ef. 7-5-79; DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0136

Powers of the Director

(1) The Director, on behalf of the Commission, may execute any written order which has been consented to in writing by the parties adversely affected thereby.

(2) The Director, on behalf of the Commission, may prepare and execute written orders implementing any action taken by the Commission on any matter.

(3) The Director, on behalf of the Commission, may prepare and execute orders upon default where:

(a) A person receiving notice under OAR 340-011-0097 has failed to timely request a hearing; or

(b) The person requesting the contested case hearing failed to appear at the hearing or informed either the hearing officer or the Department that he will not appear at the hearing; or

(c) The person receiving notice under OAR 340-011-0097 filed a timely request for a hearing but later informs the Department that he withdraws the request for a hearing

(4) Default orders will be issued only upon the making of a prima facie case on the record.

Stat. Auth.: ORS 183.335 & ORS 468.020

Stats. Implemented: ORS 183.464

Hist.: DEQ 122, f. & ef. 9-13-76; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0500 (renumbered from 340-011-0098)

Contested Case Proceedings Generally

(1) Except as otherwise provided in OAR Chapter 340, Division 011, contested cases will be governed by the Rules of the Office of Administrative Hearings. The term "agency" generally will be interpreted to mean "Department". The term "decision maker" generally will be interpreted to mean "Commission." The term "party" generally will be interpreted to mean "participant."

(2) In computing any period of time prescribed or allowed by this Division, the day of the act or event from which the designated period of time begins to run will not be included. The last day of the time period is included, unless it is a Saturday or a legal holiday (including Sunday), in which event the time period runs until the end of the next day that is not a Saturday or a legal holiday.

Stat. Auth.: ORS 183.341 & ORS 468.020

Stats. Implemented: ORS 183.341

340-011-0505 (renumbered from OAR 340-011-0136)

Powers of the Director

- (1) The director, on behalf of the Commission, may execute
 - (a) any written order which has been consented to in writing by the participants;
 - (b) formal enforcement actions;
 - (c) orders upon default; and
 - (d) any other final order implementing any action taken by the Commission on any matter.

Stat. Auth.: ORS 183.335 and ORS 468.020

Stats. Implemented: ORS 468.045 and 468.130

Hist.: DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0510 (renumbered from 340-011-0103)

Agency Representation by Environmental Law Specialist

- (1) Environmental Law Specialists and other department personnel as approved by the director, are authorized to appear on behalf of the department and commission in contested case hearings involving formal enforcement actions issued under OAR Chapter 340, Division 012.
- (2) Environmental Law Specialists or other approved personnel may not present legal argument as defined under OAR 137-003-0545 on behalf of the department or commission in contested case hearings.
- (3) When the department determines it is necessary to consult with the Attorney General's office, an administrative law judge will provide a reasonable period of time for an agency representative to consult with the Attorney General's office and to obtain either written or oral legal argument, if necessary.

Stat. Auth.: ORS 183.341, ORS 183.452 & ORS 468.020

Stats. Implemented: ORS 183.452

Hist.: DEQ 16-1991, f. & cert. ef. 9-30-91; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0515 (renumbered from 340-011-0106)

Authorized Representative of Respondent other than a Natural Person in a Contested Case Hearing

A corporation, partnership, limited liability company, unincorporated association, trust and government body may be represented by either an attorney or an authorized representative in a contested case hearing before an administrative law judge or the commission to the extent allowed by OAR 340-003-0555.

Stat. Auth.: ORS 183.341 & ORS 468.020

Stats. Implemented: ORS 183.457

Hist.: DEQ 6-2002(Temp), f. & cert. ef. 4-24-02, thru 10-21-02; DEQ 10-2002, f. & cert. ef. 10-8-02

340-011-0520

Liability for the Acts of a Respondent's Employees

A respondent is legally responsible for not only its direct acts but also the acts of its employee when the employee is acting within the scope of the employment relationship, regardless of whether the respondent expressly authorizes the act in question. The mental state ("R" factor under OAR 340-012-0045) of an employee can be imputed to the employer. Nothing in this rule prevents the department

from issuing a formal enforcement action to an employee for violations occurring during the scope of the employee's employment.

Stat. Auth.: ORS 183.341 and ORS 468.020

Stat. Implemented: ORS 468.005, 468.130 and 468.140

340-011-0525 (renumbered from 340-011-0097)

Service of Documents

(1) Service of a formal enforcement action or other document by the department or commission can be made either personally, by certified mail or by regular mail. Service is perfected when received by the respondent, if by personal service, or when mailed, if sent by mail. Service may be made upon:

(a) The respondent;

(b) Any other person designated by law as competent to receive service of a summons or notice for the respondent; or

(c) The respondent's attorney or other authorized representative.

(2) A respondent holding a license or permit issued by the department or commission, or who has submitted an application for a license or permit, will be conclusively presumed able to be served at the address given in the license or permit application, as it may be amended from time to time.

(3) Service by regular mail may be proven by a certificate executed by the person effecting service.

(4) Regardless of other provisions in this rule, documents sent by the department or commission through the U.S. Postal Service by regular mail to a person's last known address are presumed to have been received, subject to evidence to the contrary.

Stat. Auth.: ORS 183.341 and ORS 468.020

Stats. Implemented: ORS 183.413 and ORS 183.415

Hist.: DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 122, f. & ef. 9-13-76; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0530 (renumbered from 340-011-0107)

Requests for Hearing

(1) Unless a request for hearing is not required by statute or rule, or the requirement to file a request for hearing is waived in the formal enforcement action, a respondent has 20 calendar days from the date of service of the formal enforcement action in which to file a written request for hearing unless another timeframe is allowed by statute or rule.

(2) The request for hearing must include a written response to the formal enforcement action that admits or denies all factual matters alleged therein, and alleges any and all affirmative defenses and the reasoning in support thereof. Factual matters not denied will be considered admitted, and failure to raise a defense will be a waiver of the defense. New matters alleged in the request for hearing are denied by the department unless admitted in subsequent stipulation.

(3) An amended request for hearing may be accepted by the department if the department determines that the filing of an amended request will not unduly delay the proceeding or unfairly prejudice the participants. The respondent must provide the department with a written explanation why an amended request for hearing is needed with the amended request for hearing.

(4) A late request for hearing may be accepted by the department if the department determines that the cause for the late request was beyond the reasonable control of the respondent. The respondent must provide the department with a written explanation why the request for hearing was not filed in a timely manner. If the respondent fails to provide the written explanation, the department cannot accept the late request for hearing. The department may require that the explanation be supported by an affidavit.

(5) *The filing of a late request for hearing does not stay the effect of any final order.*

(6) *The department will deny a late request for hearing that is filed more than 60 days after entry of a final order by default. A final order by default is considered entered when the order is signed by the director on behalf of the department or commission.*

Stat. Auth.: ORS 183.341 and ORS 468.020

Stats. Implemented: ORS 183.415, ORS 183.464, ORS 183.482 and ORS 183.484

Hist.: DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 122, f. & ef. 9-13-76; DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0535

Final Orders by Default

(1) *The department may enter a final order by default on behalf of the commission, based upon a prima facie case made on the record, when respondent defaults as set forth in OAR 137-003-0670(1).*

(2) *If the respondent has defaulted, the formal enforcement action states that the department's record to date will automatically become the contested case record upon default, and no further evidence is necessary to make a prima facie case of the facts alleged in the formal enforcement action, no contested case hearing will be conducted and the department will issue a final order by default.*

(3) *If the respondent has defaulted and the department determines that evidence, besides that which is in the department's record to date, is necessary to make a prima facie case of the facts alleged in the formal enforcement action, the department will proceed to a contested case hearing for the purpose of establishing a prima facie case upon which the administrative law judge may issue a proposed order by default.*

(4) *If more than one respondent is named in the formal enforcement action and at least one respondent defaults as provided in section (1) of this rule, the department will issue a final order by default against the defaulting respondent. An administrative law judge will conduct a contested case hearing, as necessary, for the respondents who did not default.*

(5) *If the formal enforcement action states that a department or commission order becomes a final order unless a timely request for hearing is filed with the department, the order becomes final on the day after the last day that a timely request for hearing should have been filed. No further order need be served on the respondent.*

Stat. Auth.: ORS 183.335 and ORS 468.020

Stat. Impl.: ORS 183.415 and ORS 183.090

340-011-0540 (renumbered from 340-012-0035)

Consolidation or Bifurcation of Contested Case Hearings

Each and every violation is a separate and distinct violation, and in cases of continuing violations, each day's continuance is a separate and distinct violation. Proceedings for the assessment of multiple civil penalties for multiple violations may, however, be consolidated into a single proceeding or bifurcated into separate proceedings, at the department's discretion. Additionally, the department, at its discretion, may consolidate or bifurcate contested case hearings involving the same fact or set of facts constituting the violation.

Stat. Author ORS 183.341 and ORS 468.020

Stat. Implemented: ORS 183.415

340-011-0545

Burden and Standard of Proof in Contested Case Hearings; Department Interpretation of Rules and Statutory Terms

- (1) The participant who asserts a fact or position is the proponent of that fact or position and has the burden of presenting evidence to support that fact or position.*
- (2) All findings in a proposed or final order must be based on a preponderance of evidence in the record unless another standard is specifically required by statute or rule.*
- (3) In reviewing the department's interpretation of a department rule as applied in a formal enforcement action, an administrative law judge must follow the department's interpretation if that interpretation is both plausible and reasonably consistent with the wording of the rule and the underlying statutes. The administrative law judge may state, on the record, an alternative interpretation for consideration on appeal.*
- (4) With the exception of exact terms that do not require interpretation, an administrative law judge shall give the department's interpretation of statutory terms the appropriate deference in light of the department's expertise with the subject matter, the department's experience with the statute, the department's involvement in the relevant legislative process, and the degree of discretion accorded the department by the legislature.*

Stat. Author ORS 183.341 and ORS 468.020

Stat. Implemented: ORS 183.450

340-011-0550

Discovery

- (1) Motions for discovery will only be granted if the motion establishes that:
 - (a) the participant seeking the information attempted to obtain the information through an informal process. If the participant is seeking information from a public agency, the participant must make a public record request prior to petitioning for discovery; and*
 - (b) the discovery request is reasonably likely to produce information that is generally relevant and necessary to the matters alleged in the formal enforcement action and the request for hearing or is likely to facilitate resolution of the case.**
- (2) An administrative law judge is not authorized to order depositions or site visits unless the department authorizes the same in writing in the specific case.*

Stat. Author ORS 183.341 and ORS 468.020

Stat. Implemented: ORS 183.425, 183.440 and 183.450

340-011-0555

Subpoenas

- (1) Subpoenas for the attendance of witnesses or production of documents at a contested case hearing will be issued in accordance with OAR 137-003-0585.*
- (2) Copies of the subpoena must be provided to the administrative law judge and all participants at the time of service to the person to whom the subpoena is issued.*
- (3) Service of a subpoena for the attendance of a witness must be completed by personal service unless the witness has indicated that he is willing to appear and the subpoena is mailed at least 10 days prior to the hearing. Personal service should be effected at least 7 days prior to the hearing.*
- (4) Service of a subpoena for the production of documents at a contested case hearing may be effected by regular mail provided that it is done sufficiently in advance of the hearing to allow reasonable time to produce the documents.*

(5) Service of a subpoena for both the attendance of a witness and production of documents must be completed as provided under section (3) of this rule.

(6) Any witness who appears at a hearing under a subpoena will receive fees and mileage as set forth in ORS 44.415(2). The fees and mileage must be paid by the participant for whom the subpoena was issued and may be paid at either the time of service of the subpoena or at the hearing.

Stat. Author ORS 183.341 and ORS 468.020

Stat. Implemented: ORS 183.425, 183.440 and 468.120

340-011-0560 (renumbered from 340-011-0122)

Public Attendance at Contested Case Hearing

An administrative law judge may close a contested case hearing to the public upon the request of a participant in the contested case hearing.

Stat. Auth.: ORS 183.341 & ORS 468.020

Stats. Implemented: ORS 183.341

Hist.: DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0565 (renumbered from 340-011-0124)

Immediate Review by Agency

Immediate review by the agency is not allowed. (See OAR 137-003-0640.)

Stat. Auth.: ORS 183.341 & ORS 468.020

Stats. Implemented: ORS 183.341

Hist.: DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0570 (renumbered from 340-011-0131)

Permissible Scope of Hearing

(a) The scope of a contested case hearing will be limited to those matters that are relevant and material to either proving or disproving the matters alleged in formal enforcement action and request for hearing. Equitable remedies will not be considered by an administrative law judge.

(b) The administrative law judge may not reduce or mitigate a civil penalty below the amount established by the application of the civil penalty formula contained in OAR Chapter 340, Division 12.

Stat. Auth.: ORS 183.341 & ORS 468.020

Stats. Implemented: ORS 183.450 & ORS 468.130

Hist.: DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0575 (Renumbered from 340-011-0132)

Review of Proposed Orders in Contested Cases

(1) For purposes of this rule, filing means receipt in the office of the director or other office of the department.

(2) Following the close of the record for a contested case hearing, the administrative law judge will issue a proposed order. The administrative law judge will serve the proposed order on each participant.

(3) Commencement of Review by the Commission: The proposed order will become final unless a participant or a member of the commission files, with the commission, a Petition for Commission Review within 30 days of service of the proposed order. The timely filing of a Petition is a jurisdictional requirement and cannot be waived. Any participant may file a petition whether or not another participant has filed a petition.

(4) *Contents of the Petition for Commission Review.* A petition must be in writing and need only state the participant's or a commissioner's intent that the commission review the proposed order. Each petition and subsequent brief must be captioned to indicate the participant filing the document and the type of document (for example: Respondents Exceptions and Brief; Department's Answer to Respondent's Exceptions and Brief).

(5) *Procedures on Review:*

(a) *Exceptions and Brief:* Within 30 days from the filing of a petition, the participant(s) filing the petition must file written exceptions and brief. The exceptions must specify those findings and conclusions objected to, and also include proposed alternative findings of fact, conclusions of law, and order with specific references to the parts of the record upon which the participant relies. The brief must include the arguments supporting these alternative findings of fact, conclusions of law and order. Failure to take an exception to a finding or conclusion in the brief, waives the participant's ability to later raise that exception.

(b) *Answering Brief:* Each participant, except for the participant(s) filing that exceptions and brief, will have 30 days from the date of filing of the exceptions and brief under subsection (5)(a), in which to file an answering brief.

(c) *Reply Brief:* If an answering brief is filed, the participant(s) who filed a petition will have 20 days from the date of filing of the answering brief under subsection (5)(b), in which to file a reply brief.

(d) *Briefing on Commission Invoked Review:* When one or more members of the commission wish to review the proposed order, and no participant has timely filed a Petition, the chair of the commission will promptly notify the participants of the issue that the commission desires the participants to brief. The participants must limit their briefs to those issues. The chair of the commission will also establish the schedule for filing of briefs. When the commission wishes to review the proposed order and a participant also requested review, briefing will follow the schedule set forth in subsections (a), (b), and (c) of this section.

(e) *Extensions:* The commission or director may extend any of the time limits contained in section (5) of this rule. Each extension request must be in writing and filed with the commission before the expiration of the time limit. Any request for an extension may be granted or denied in whole or in part.

(f) *Dismissal:* The commission may dismiss any petition, upon motion of any participant or on its own motion, if the participant(s) seeking review fails to timely file the exceptions or brief required under subsection (5)(a) of this rule. A motion to dismiss made by a participant must be filed within 45 days after the filing of the Petition. At the time of dismissal, the commission will also enter a final order upholding the proposed order.

(g) *Oral Argument:* Following the expiration of the time allowed the participants to present exceptions and briefs, the matter will be scheduled for oral argument before the commission.

(6) *Additional Evidence:* A request to present additional evidence must be submitted by motion and must be accompanied by a statement showing ~~that~~^{why} the cause for the failure to present the evidence to the administrative law judge ~~was beyond the participant's reasonable control.~~ The motion must accompany the brief filed under subsection (5)(a) or (b) of this rule. If the commission grants the motion or decides on its own motion that additional evidence is necessary, the matter will be remanded to an administrative law judge for further proceedings.

(7) *Scope of Review:* The commission may substitute its judgment for that of the administrative law judge in making any particular finding of fact, conclusion of law, or order except as limited by OAR 137-003-0655 and 137-003-0665.

(8) *Service of documents on other participants: All documents required to be filed with the commission under this rule must also be served upon each participant in the contested case hearing. Service can be completed by personal service, certified mail or regular mail.*

Stat. Auth.: ORS 183.341 and 468.020

Stats. Implemented: ORS 183.460, 183,464 & ORS 183.470

Hist.: DEQ 78, f. 9-6-74, ef. 9-25-74; DEQ 115, f. & ef. 7-6-76; DEQ 25-1979, f. & ef. 7-5-79; DEQ 7-1988, f. & cert. ef. 5-6-88; DEQ 1-2000(Temp), f. 2-15-00, cert. ef. 2-15-00 thru 7-31-00; DEQ 9-2000, f. & cert. ef. 7-21-00

340-011-0580

Petitions for Reconsideration or Rehearing

(1) *A participant is not required to seek either reconsideration or rehearing of a final order prior to seeking judicial review.*

(2) *Any petition for reconsideration or rehearing must be received by the department within 60 days of service of the final order. Unless specifically set forth in this rule, the procedures for petitions for reconsideration or rehearing are those in OAR 137-003-0675.*

(3) *A petition for reconsideration or rehearing does not stay the effect of the final order.*

(4) *The director, on behalf of the commission, shall issue orders granting or denying petitions for reconsideration and rehearing.*

Stat. Auth.: ORS 183.341 and 468.020

Stats. Implemented: ORS 183.480 and ORS 183.482

340-011-0585

Petitions for a Stay of the Effect of a Final Order

(1) *A petition to stay the effect of any final order must be received by the department within 60 days of service of the final order. Unless specifically set forth in this rule, the procedures for petitions for a stay are those in OAR 137-003-0690 through 0700.*

(2) *If a participant submits a petition for reconsideration or rehearing or a late request for hearing, the petition for a stay must accompany that petition.*

(3) *A petition for a stay must contain all the elements set forth in OAR 137-003-0690 and be served upon all participants as set forth in OAR 137-003-0690(4).*

(4) *Any participant may seek to intervene in the stay proceeding as set forth in OAR 137-003-0695 by filing a response to the petition for a stay with the department.*

(5) *The director, on behalf of the commission, shall issue an order granting or denying the petition for a stay within 30 days of receipt of the petition.*

Stat. Auth.: ORS 183.341 and 468.020

Stats. Implemented: ORS 183.480 and ORS 183.482

State of Oregon
Department of Environmental Quality

Memorandum

Date: November 13, 2003
To: Environmental Quality Commission
From: Stephanie Hallock, Director *S. Hallock*
Subject: Agenda Item L, Informational Item Part I: Mercury Reduction Strategy Update - Performance Measures and Targets.

Purpose of Item Mercury is a naturally occurring metallic element that is used in a variety of commonly used products such as thermometers, thermostats, dental fillings and fluorescent light tubes. In addition, mercury is also a by-product of fossil fuel combustion. When released to the environment, mercury can be converted to methylmercury, which is highly toxic and tends to concentrate in fish tissue at concentrations that pose a risk to human health. (See pages 1 through 3 of the attached document for more background information on mercury.)

The Oregon Department of Environmental Quality presented its Mercury Reduction Strategy to the Environmental Quality Commission (Commission) at their December 4, 2002 meeting. During the meeting, the Commission requested that the Department report back to the Commission on the development of performance measures and targets for assessing the effectiveness of the Department's mercury reduction activities.

The purpose of this report is to provide an update on recent, current and planned mercury reduction activities (see pages 3 through 18 of the attached document) and outline a plan to measure the success of these activities (see pages 18 through 22 of the attached document).

The Department has developed and is otherwise participating in a range of activities that will lead to mercury reductions into Oregon's environment. Examples include activities like the development of best management practices (BMPs), technical assistance visits, Mercury Total Maximum Daily Load (TMDL) development and the establishment of an Air Toxics program.

In our proposed measurement framework, these activities are viewed as the initial step towards triggering responses by the regulated community and individuals that result in reductions in the release, discharge and emission of mercury; reductions in the ambient level of mercury and a reduction in the risk to human health and the environment.

The Department proposes to organize our approach to the development of mercury measures and targets into three Types.

1) Mercury reduction activities will be measured by tracking the completion of specific mercury reduction projects and the pounds of mercury collected for recycling as a result of that activity. Measurement of mercury reduction activities is considered a Type A measure. This information either already exists or can be easily collected.

2) Reductions in the release, discharge, and emission of mercury, as well as ambient levels of mercury can be measured through monitoring. These data can be used in measuring mercury emissions, discharges and releases and ambient mercury levels, which are considered Type B measures. This information exists on a limited basis and will require additional resources to obtain, manage and evaluate. A specific example of this type of measure could be to study the amount of mercury released through open burning activities and, using that information, develop specific targets and voluntary activities to reduce those emissions. No specific measures of this kind have been developed.

3) Reductions in risk associated with exposure to mercury can be calculated based on measured mercury concentrations associated with key exposure pathways. The Department has not yet developed any measures at this level.

The Department will continue to evaluate a number of regulatory and non-regulatory options for collecting, managing and evaluating mercury data. Options include:

- Require mercury monitoring in certain air and water quality permits;
- Shifting resources within the Department towards monitoring for mercury and other toxics;
- Identifying grant opportunities to fund monitoring projects; and
- Partnering with other organizations and agencies to leverage resources.

Next Steps

- The Department will continue its mercury reduction activities. These efforts are focused on voluntary and collaborative measures. Activities will be measured through successful completion of projects and the pounds of mercury collected.
- The Department will begin collection of information necessary to evaluate the effectiveness of mercury reduction activities.
- The Department will further refine its performance measures and targets for assessing the effectiveness of mercury reduction activities to reflect new

activities and information.

- The Department will evaluate ways to collect and use monitoring data and other information to evaluate the effectiveness of mercury reduction activities and determine whether regulatory approaches are necessary.
- The Department will continue to look for ways to integrate mercury reduction efforts within existing Agency programs, such as the development and implementation of a Mercury TMDL for the Willamette and other Oregon rivers.

Attachments "Oregon Department of Environmental Quality Mercury Reduction Strategy, Update on Targets and Measures" prepared for the Oregon Environmental Quality Commission, November 2003.

Available Upon Request The following reports were a major source of information used in developing the Department's report:

"Oregon's Mercury Reduction Strategy," prepared by the Oregon Department of Environmental Quality, November 2002. This document is available electronically at:

<http://www.deq.state.or.us/programs/consumercorner/mercury/MercuryReport.pdf>

"Mercury: On the Road to Zero, Recommended Strategies to Eliminate Mercury Releases from Human Activities in Oregon by 2020," Oregon Environmental Council and the Mercury Solution Team, December 2001. This document is available electronically at:

<http://www.orecouncil.org/reports/OEC%20Mercury%20Report.pdf>

"Washington State Mercury Chemical Action Plan," Washington State Department of Ecology and Washington State Department of Health, January 2003. This document is available electronically at:

<http://www.ecy.wa.gov/pubs/0303001.pdf>

Approved:

Section:

Division:




Agenda Item L, Informational Item, Part I: Mercury Reduction Strategy Update
December 4, 2003 EQC Meeting
Page 4 of 4

Report Prepared By: Eric Blischke
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**Oregon Department of Environmental Quality
Mercury Reduction Strategy
Update on Performance Measures and Targets**

**Prepared by:
Oregon Department of Environmental Quality**

November 13, 2003

**Oregon Department of Environmental Quality
Mercury Reduction Strategy Update
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**Oregon Department of Environmental Quality
Mercury Reduction Strategy Update**

INTRODUCTION

Purpose of Update

In December 2002, the Oregon Department of Environmental Quality (DEQ) presented its Mercury Reduction Strategy to the Environmental Quality Commission (EQC). The Mercury Reduction Strategy described what was known at the time about sources of mercury releases in Oregon, and identified an agency-wide strategy for moving forward with a plan to better understand mercury sources and develop and implement mercury reductions.

DEQ is pursuing a number of activities that are expected to reduce the use and release of mercury in Oregon. It is expected that these activities will reduce the risk to human health and the environment resulting from mercury exposure. Many of the reduction activities were identified in DEQ's Mercury Reduction Strategy. Other activities are based on recommendations provided in the Oregon Environmental Council's "Road to Zero Report" and the Washington Department of Ecology's Mercury Chemical Action Plan. This list of activities is not static. It is DEQ's expectation that as we move forward with reduction activities, new opportunities will present themselves and be pursued.

The purpose of this report is to provide an update on recent, current and planned mercury reduction activities, provide revised mercury sources estimates when available, outline a plan to measure the success of these activities, and provide recommendations for additional actions should the planned activities not be adequate.

Why are Mercury Reductions Important?

Mercury is naturally occurring metallic element that may affect the human brain, kidneys, liver and cardiovascular system. Most exposure to mercury occurs as a result of eating mercury-contaminated fish. Wildlife such as loons, osprey, otters and other fish-eating creatures are also at risk from eating mercury-contaminated fish.

The majority of mercury releases are in the form of inorganic or elemental mercury. These forms of mercury can be converted by bacteria to methylmercury, which is the most toxic and bioaccumulative form of mercury. Once formed, methylmercury can be readily passed up through the food chain to fish and upper-level predators.

A mercury advisory warning of health risks from consumption of fish has been in effect at Cottage Grove Reservoir since 1979. In 1997, the Oregon Health Division issued health advisory warnings for fish consumption from the entire Willamette River mainstem and the Coast Fork of the Willamette including Cottage Grove Reservoir and Dorena Reservoir. Other fish advisories have been issued for Cooper Creek Reservoir, Galesville Reservoir, Plat I Reservoir, the Snake River, the Owyhee River and Reservoir, East Lake, Antelope Reservoir,

and Jordan Creek. These fish advisories remain in effect. Nearly all of the mercury present in fish tissue is methylmercury.

Because of fish advisories, DEQ determined that the beneficial water use of fish consumption was not being met within the Willamette River Basin. As a result, DEQ is in the process of developing a mercury total maximum daily load (TMDL) for the Willamette River Basin.

Sources of Mercury in Oregon

Mercury in Products

Mercury is contained in products that are used by consumers as well as in institutional, business and industrial settings. Mercury-containing products include fluorescent lamps, thermostats, thermometers and batteries as well various types of switches and gauges. Mercury emissions from these products typically do not occur at the time of use but rather when the product is taken out of service. At the time of breakage or disposal, releases can occur to the air, water and land. DEQ's preliminary estimate is that approximately 1,600 pounds of mercury is available for release each year from mercury added products.

The use of mercury in products has declined over the past twenty years as a result of federal, state and local initiatives. Recent legislation has banned the use of mercury in a number of products in Oregon including thermostats, thermometers, novelty products and automobile switches. Some of these prohibitions are in place; others will become effective beginning January 1, 2006. However, in spite of the prohibitions, these mercury containing products will remain a potential source of mercury to Oregon's environment until such time that the product is taken out of service. For example, Figure 1 (see page 32) demonstrates the length of time required for mercury to be eliminated from motor vehicles once mercury containing devices such as Anti-Locking Braking Systems (ABS) and mercury switches are no longer installed in new motor vehicles.

Mercury in Point and Non-Point Sources

Mercury is released to the air and water from point and non-point sources. Although mercury may be used in manufacturing facilities (e.g., switches, lamps, and in laboratories), there are no known point sources that purposely use mercury in their manufacturing process in Oregon. In some cases, point sources may discharge mercury incidentally by concentrating naturally occurring mercury or passing through mercury from other sources.

Mercury is naturally present in fossil fuels such as coal, natural gas, diesel fuel and heating oil. In addition, trees accumulate mercury present in soil at naturally occurring levels. As a result, the combustion of fossil fuels or the processing of trees in pulp and paper mills results in the release of mercury to the environment.

Municipal waste water treatment plants (also known as publicly owned treatment works - POTWs) pass through mercury from other sources such as dental offices, consumer products such as soaps and detergents and mercury containing foods. In the case of secondary steel

production and municipal solid waste incinerators, source materials may contain mercury which is then emitted to the atmosphere.

Point sources of air emissions include secondary steel production, municipal solid waste incinerators, natural gas turbines and coal fired power plants. Data regarding air emissions of mercury generally come from emission factors developed based on emission data collected at similar facilities rather than facility specific monitoring data. Point sources of water discharges include POTWs and pulp and paper mills. DEQ has limited monitoring data for point source mercury discharges to water.

Non-point sources of air emissions are known as area and mobile sources and include industrial, institutional and commercial boilers and motor vehicle emissions. Non-point water discharges include runoff from urban, agricultural and forest lands and releases from abandoned mines and other cleanup sites.

Chemical Fate and Transport of Mercury

Mercury is an element that is a heavy metal liquid in pure form. Mercury is naturally occurring in Oregon and is found most commonly as the ore cinnabar (HgS). Mercury is released to the environment through natural processes such as volcanic activity, forest fires and erosion, or through human activities such as mining, fossil fuel combustion and industrial processes.

When released to the atmosphere, the length of time mercury remains in the atmosphere is dependent on its form. Hg (II) and methylmercury tend to settle out quickly. However, elemental mercury is circulated worldwide in the high atmosphere. Over time, elemental mercury reacts with other chemicals, especially chlorine compounds and is removed from the atmosphere through rain and snow events.

Methylmercury is formed when mercury enters a body of water as rain or snow, through run-off, or through direct discharge. Mercury tends to deposit in sediments where it can be converted by bacteria to methylmercury. Factors that facilitate methylmercury production include the presence of organic matter, low-oxygen levels, high microbial activity, and temperature. Aquatic organisms take up methylmercury from food, water and food ingestion. Higher organisms acquire methylmercury primary through food ingestion. Methylmercury tends to bind to sulfur-containing proteins and is eliminated slowly relative to uptake. As a result, tissue concentrations of methylmercury increase at higher levels of the food chain. Predatory fish, such as the northern pike minnow, can accumulate millions of times the concentration of mercury that enter the water as precipitation or run off.

UPDATE ON MERCURY REDUCTION ACTIVITIES

The following sections provide an update on DEQ's efforts to reduce the use and release of mercury. A summary of reduction activities is included in Table 1 (Page 26).

Strategies to Reduce Mercury in Products

The Mercury Reduction Act, passed in 2001 already prohibits the sale of some mercury added products in Oregon and requires labeling of others. Mercury added products addressed through the Mercury Reduction Act include thermometers and novelty products (sale prohibited after January 1, 2003), thermostats (sale prohibited after January 1, 2006), and automotive convenience light switches (prohibited in new cars after January 1, 2006).

Strategies to reduce the amount of mercury in products are focused on the collection and recycling of a variety of mercury containing products and the use of alternative products that do not contain mercury. Collection and recycling will be promoted through education and outreach aimed at the general public and at specific sectors that handle mercury (e.g., recreational miners, dental offices, and vehicle recycling yards). The Universal Waste Rule permits certain hazardous wastes known as "Universal Wastes" to be managed under streamlined requirements that encourage the collection, recycling or disposal of these wastes. Many mercury containing products such as fluorescent light tubes, automotive light switches and thermostats can be managed as universal wastes.

The following section outlines specific mercury reduction activities on a product by product basis. DEQ will generally measure success by tracking the number (or rate) of mercury products recycled and tally the pounds of mercury collected through these efforts.

Fluorescent Lamps

Mercury-containing lighting includes fluorescent tubes, high-intensity fluorescent lamps, high-intensity discharge lamps and neon lamps. Mercury from fluorescent lamps may be released to the atmosphere if the lamps are broken. Manufacturers have reduced the amount of mercury present in fluorescent lamps. DEQ originally estimated that the disposal of fluorescent bulbs results in the disposal of 534 pounds of mercury annually. DEQ has revised this estimate to 210 pounds based on an updated estimate of the amount of mercury contained in fluorescent lamps. Approximately 20% of fluorescent lamps in Oregon are recycled. The balance of the mercury is either released to the atmosphere or disposed of in solid waste landfills.

Recent Activities:

- DEQ funded an education and outreach program focused on building owners and managers in the Portland area to increase recycling rates for fluorescent light tubes.
- The states of Vermont and Washington have passed legislation requiring labeling of mercury added lamps. The labels must state that the product contains mercury and provides information on proper disposal. The National Electrical Manufacturers Association (NEMA) has stated that all mercury containing lamps manufactured and distributed nation-wide by NEMA members will be labeled as containing mercury beginning in 2003.

Current and Planned Activities:

- Develop initiatives to encourage and improve the recycling of compact fluorescent light bulbs.

- Identify opportunities to work with building and facility managers to recycle fluorescent light tubes.

Measurements of Success:

- Initiatives developed and completed.
- Pounds of mercury collected for recycling.

Thermostats

Mercury-containing wall and other thermostats are widely used for control of heating, ventilation and air conditioning systems. Thermostats contain approximately 3 grams of mercury per switch and some thermostats may contain more than one switch. DEQ estimated that the disposal of thermostats results in the disposal of 258 pounds of mercury annually. In the past, most of this waste was disposed of as construction and demolition debris.

Recent Activities:

- Oregon's Mercury Reduction Act, adopted in the 2001 legislative session, and the Act's implementing regulations, require mercury recovery programs for thermostats. The Thermostat Recycling Corporation (TRC), established by a consortium of manufacturers to facilitate the recovery of thermostats, collected 486 thermostats for recycling in 2002 and 495 thermostats during the first half of 2003.
- Mercury containing thermostats must be managed as universal wastes. This requirement prohibits certain businesses from disposing mercury containing thermostats in landfills.

Current and Planned Activities:

- DEQ has received funding from EPA through its pollution prevention grant program to improve the recycling of mercury containing thermostats. DEQ will work with TRC to bring more wholesalers into the recycling program. DEQ will also evaluate options to provide consumers with opportunities to recycle thermostats.

Measurements of Success:

- Completion of TRC recycling project.
- Pounds of mercury collected for recycling.

Dental Facilities

Amalgam fillings used by dentists contain about 50% mercury by weight. Although alternatives to dental amalgam are available, mercury amalgam continues to be applied on a wide-scale basis due to its strength and durability, bonding capability and ease of application. DEQ estimated that 234 pounds of mercury is disposed of or discharged annually from dentists. Depending on how it is handled, mercury from dental offices may be disposed in landfills, released to

wastewater treatment plants or septic systems, or emitted to the atmosphere from medical waste and solid waste incinerators.

A study by the Association of Metropolitan Sewerage Agencies (AMSA) suggests that dental offices are the major source of mercury to POTWs. Mercury released to wastewater treatment plants may either be discharged to the receiving stream or captured in the biosolids. 99% of the biosolids in Oregon are applied to agricultural lands as soil amendments.

Recent Activities:

- Best management practices for dental offices have been developed by the Oregon Dental Association (ODA) based on best management plans (BMPs) developed by the City of Portland, Bureau of Environmental Services (BES) and Clean Water Services (CWS) in Washington County.

Current and Planned Activities:

- DEQ is currently working with ODA and the Oregon Association of Clean Water Agencies (Oregon ACWA) to expand and enhance best management practices (BMPs) for dental offices. Elements of this program include pollution control tax credits, education and outreach and evaluating the effectiveness of existing BMPs.

Measurements of Success:

- Enhance dental office BMPs and expand BMPs statewide.
- Pounds of mercury collected for recycling by dental offices as a percentage of dental amalgam.

Auto switches

Mercury has been used historically in a variety of automotive convenience lighting applications such as lights that turn on when opening car trunks or hoods. Each switch contains from 0.5 - 1 gram of mercury. Although the use of mercury in automotive lighting applications is gradually being phased out by auto manufacturers, 40% of the vehicles currently on the road contain at least one mercury switch. In addition to switches, other vehicle parts such as high intensity discharge (HID) headlamps and dashboard display screens contain small amounts of mercury. DEQ estimated that 127 pounds of mercury in automotive switches is disposed annually.

Under the Mercury Reduction Act, mercury switches are prohibited in new cars beginning in January 2006. Because these switches will continue to be in older vehicles for the foreseeable future, the act also requires reasonable efforts to remove switches prior to scrapping. If these switches are not removed, mercury may be released to the air during secondary steel production. As a result, ongoing efforts to provide technical assistance and promote the removal of auto switches either by the consumer or at vehicle recycling yards remains a priority.

Recent Activities:

- DEQ, the Oregon Environmental Council (OEC), Northwest Auto Traders Association (NATA), Metro and the Port of Portland launched the mercury auto switch program in November 2001. Since that time, nearly 100 automotive repair shops have been recruited in 22 communities to replace mercury containing switches at no charge to the motorist.
- The Oregon Department of Administrative Services (DAS) is replacing mercury light switches in state motor pool vehicles as they are serviced. Mercury switches are also being removed from vehicles sold as surplus or disposed of at vehicle recycling yards.

Current and Planned Activities:

- DEQ is working with Schnitzer Steel Products Company, NATA and vehicle recycling yards to promote the removal of auto switches and mercury containing devices from motor vehicles.
- DEQ is planning on developing a set of comprehensive best management practices for vehicle recycling yards.
- DEQ is planning on working with its Vehicle Inspection Program (VIP) to promote the mercury auto switch program and offer removal clinics at VIP stations on specified days.

Measurements of Success:

- Completion of mercury automotive light switch technical assistance project.
- Development of BMPs for vehicle recycling yards and promotion through Ecological-Business Program.
- Pounds of mercury collected for recycling.

Fever Thermometers

Consumer mercury fever thermometers contain 0.5 to 1.5 grams of mercury and are used to measure body temperature in homes, health care facilities and schools. Mercury fever thermometers are easily broken and can result in exposure to mercury vapor. DEQ estimated that 87 pounds of mercury-containing thermometers are discarded annually. Some of this mercury is released to the atmosphere, some is poured down the drain, and some is contained in the solid waste stream. This estimate does not include mercury fever thermometers discarded by health care facilities, including veterinary facilities or schools.

Recent Activities:

- The Mercury Reduction Act banned the sale of mercury fever thermometers after January 1, 2003.
- DEQ has funded the replacement of mercury containing thermometers with mercury free alternatives. This activity resulted in the collection of 1200 thermometers in 2002.

Current and Planned Activities:

- Local governments and DEQ continue to sponsor thermometer exchange programs at household hazardous waste collection events and facilities.
- DEQ is working with the Oregon Pharmacy Board to ensure that its members are aware of the mercury thermometer ban.

Measurements of Success:

- Pounds of mercury collected for recycling.

Batteries

Federal regulations prohibit the use of mercury in most batteries and most batteries are now mercury free. However, some batteries, such as some hearing aid battery products and batteries in watches, contain mercury oxides and are sold as mercury-zinc batteries or button cell batteries. There are currently no non-mercury alternatives for some of these batteries. DEQ estimated that 50 pounds of mercury from batteries is disposed of annually in Oregon.

Recent Activities:

- Mercury containing batteries are collected at household hazardous waste collection events.
- Hearing aid retailers collect batteries at their businesses.

Current and Planned Activities:

- DEQ will continue to promote the collection of mercury containing button cell batteries at household hazardous waste collection events.

Measurements of Success:

- Pounds of mercury collected for recycling.

Computers and Other Electronic Equipment:

Mercury is found in a variety of electronic equipment such as computers. Most of the mercury in computers is in display tubes, batteries, switches and housing. A 1996 report by the Microelectronics and Computer Technology Corporation (MCC) estimated that the average computer contained 0.6 g of mercury. However, newly manufactured computers contain as little as 5 - 10 mg of mercury.

Recent Activities:

- DEQ is participating in the National Electronics Product Stewardship Initiative (NEPSI) to develop a national products stewardship solution to managing electronic waste in the United States. NEPSI is focused on identifying incentives for manufacturers to design their products with less toxic impacts to the environment.

Current and Planned Activities:

- The Portland Metro area is participating in a national pilot project called "Plug-in to Recycling" sponsored by U.S. EPA and focusing on government, retailer, and manufacturer participation in pilot electronic waste collection and recycling programs for the general consumer. This program is in the development stages and is not being implemented yet in the Northwest.
- DEQ is conducting a survey to determine what the existing recycling collection infrastructure is for electronics waste statewide so that we may have informed policy discussion with other stakeholders throughout the state on what the future infrastructure and funding needs for managing electronics waste at end of life are and will be. SB 867, passed by the 2003 legislature, created an electronics stewardship taskforce to make recommendations focused on the infrastructure necessary for electronics recycling.
- The State of Oregon Department of Administrative Services is participating in the Western States Contracting Alliance (WSCA) in developing state procurement guidelines for electronics that require take-back of old computer products.

Measurements of Success:

- DEQ will participate in the electronics stewardship taskforce to make recommendations regarding the infrastructure necessary for electronics recycling.

Dairy Manometers

Dairy manometers (mercury vacuum gauges) contain between 6 ounces and 2 pounds of mercury each. DEQ estimates there are 80 - 100 of these devices in Oregon. If these devices are spilled or broken, a significant quantity of mercury may be released to the environment. DEQ does not have a current estimate of how much mercury is released to the environment from dairy manometers.

Current and Planned Activities:

- DEQ has received a grant from EPA to provide mercury free replacements. DEQ is currently working with the Oregon State Dairy Farmers Association and Oregon State University Extension Service to exchange mercury containing manometers in Oregon for mercury free devices.

Measurements of Success:

- Completion of dairy manometer project.
- Pounds of mercury collected for recycling.

Medical Facilities

Medical facilities are a significant source of mercury. An AMSA study determined that Medical facilities are the second highest commercial source (and third highest overall) of mercury to waste water treatment plants. Hospitals and medical clinics contribute approximately 10 % of the total mercury load to waste water treatment plants. Sources of mercury in health care facilities include thermometers, sphygmomanometers (blood pressure measuring devices), pharmaceutical supplies, fluorescent light tubes, electrical equipment and some laboratory chemicals. Sphygmomanometers contain 70 – 100 grams of mercury per unit. If these devices are spilled or broken, a significant quantity of mercury may be released to the environment. DEQ does not have a current estimate of how much mercury is released to the environment from medical facilities.

Recent Activities:

- DEQ is working with Hospitals for a Healthy Environment on reducing the use of mercury in health care facilities.
- Some medical facilities, such as the Providence Health Care System, have phased out the use of mercury containing equipment.

Current and Planned Activities:

- DEQ will work with the health care industry to develop approaches for replacing mercury containing sphygmomanometers with mercury-free alternatives.
- DEQ is working with the states of Washington and Idaho to develop regional BMPs for health care facilities.

Measurements of Success:

- Development of medical facility BMPs.
- Pounds of mercury collected for recycling.

Strategies to Reduce Point Sources of Mercury

Point sources of mercury include discharges to air and water from permitted facilities. Point source discharges to water include major and minor industrial sources and major and minor municipal discharges. These sources are regulated through National Pollution Discharge Elimination System (NPDES) permits. Stormwater is also regulated through NPDES permits. For the purpose of developing mercury reduction strategies, urban stormwater permitted through the Municipal Separate Storm Sewer Systems (MS4s) is viewed as a non point source. Storm water discharged from facilities under a general stormwater (1200Z) or individual permit are considered point sources.

Point source emissions to the atmosphere include major sources permitted under Title V of the Clean Air Act and minor sources permitted through Air Contaminant Discharge Permits (ACDPs). Within the air program, mercury is considered a hazardous air pollutant (HAP).

Facilities with the potential to emit more than 10 tons of an HAP annually are required to have a permit. Other air sources that do not require a permit are considered area sources. Key area sources include boilers that are commonly used in apartment buildings, offices, schools and hospitals.

In general, potential strategies for reducing releases of mercury from point sources include reductions in amounts of mercury used or received before manufacturing or treatment processes begin, as well as improved effluent and emissions controls (i.e., end-of-pipe controls). For POTWs, mercury reduction strategies may include efforts to reduce the amount of mercury disposed in wastewater as well as improved pre-treatment and treatment processes. Where water quality criteria are exceeded for mercury, TMDLs are a vehicle for requiring reductions in point source discharges of mercury.

Power Generation

Nationally, coal-fired power plants are the largest known source of anthropogenic (human-caused) mercury emissions. However, Oregon has only one coal fired plant, located near Boardman. Most mercury emissions from power generation units in Oregon are associated with remote natural gas pumping stations and natural gas turbines used to generate electricity. DEQ identified 12 power generation and transmission facilities located in the state and estimated that these facilities emit 434 pounds of mercury annually.

Mercury emissions from power generating and transmission facilities are not currently limited by law or regulation. A number of proposals have been made in Congress and by the U.S. Department of Energy and the U.S. Environmental Protection Agency to require additional point source monitoring or controls, especially for coal-fired generating facilities. Additional federal regulations for coal-fired power plants are likely in the future.

Recent Activities:

- Federal Maximum Available Control Technology (MACT) rules are being developed that may reduce mercury emissions from the Boardman Coal Fired Power Plant. EPA is also pursuing multi-pollutant legislation for power plants that would replace the mercury MACT with a cap and trade program.

Current and Planned Activities:

- DEQ will promote energy conservation as way of reducing mercury emissions from power generation. This work will be performed in conjunction with steps taken in response to the Executive Order on Sustainability, multi-state efforts to address global climate change and steps taken to address regional haze.
- DEQ will explore working with natural gas distributors regarding the removal of mercury from natural gas.
- As federal regulations are promulgated, DEQ will implement them through its air permit program.

Measurements of Success:

- Improvements in energy efficiency.
- Reductions in mercury emissions from power generation.

Manufacturing

Manufacturing includes facilities for the manufacture of cement, steel, metals, wood products and paper. Mercury emissions from manufacturing include emissions associated with process heat from combustion of fossil fuels and emissions associated with mercury as an incidental component of raw materials (e.g. cement and secondary steel production). DEQ estimated that there are 22 of these manufacturing facilities in Oregon that release 301 pounds of mercury annually.

Some monitoring and reporting requirements, associated with the federal Toxics Release Inventory (TRI) law, apply for mercury air emissions from manufacturing facilities. In addition, state and federal hazardous waste reporting and management requirements apply to generated solid waste that is a characteristic or listed hazardous waste. With respect to air emissions, there are no current limitations or control requirements that are specific to mercury releases from these manufacturing facilities.

There is currently limited data regarding point source discharges of mercury to water from industrial facilities. In addition, estimates of air emissions of mercury from point sources are based almost entirely on established emission factors and not facility specific monitoring data. Identification and characterization of point sources and point source reductions for both air and water sources will be required during implementation of the Willamette River Basin TMDL. As a result, releases from manufacturing facilities are a high priority for data collection and meaningful reductions.

Recent Activities:

- Air emission factors have been updated to develop revised estimates of mercury air emissions.
- DEQ is working with secondary steel manufacturers to reduce the level of mercury in their source material.

Current and Planned Activities:

- DEQ has received funds from EPA to monitor water point sources quarterly over a period of one year. The goal of this project is to develop a better understanding of the discharge of mercury to surface water from point sources.
- DEQ is moving forward with development and implementation of the mercury TMDL for the Willamette River Basin.

Measurements of Success:

- Completion of mercury TMDLs for the Willamette River Basins.
- Reductions in mercury emissions from industrial air and water point sources.

Municipal Waste Water Treatment Plants

Mercury is present in the effluent from municipal waste water plants (also known as POTWs). POTWs are not true "sources" of mercury. Rather, they receive wastewaters from multiple upstream sources and must manage the pollutants they contain, including mercury.

A study by American Metropolitan Sewerage Association (AMSA) determined that the largest source of mercury in wastewater received by POTWs is discharges from dental offices. The second largest source of mercury in wastewater results from domestic sources, including dental amalgam and food sources associated with disposal of human waste, laundry gray-water, and some household products that contain mercury and are subsequently discharged to public treatment systems. The third largest source is hospitals.

Following treatment, mercury is present in POTW water effluent discharges, biosolids, and air emissions. As part of the mercury TMDL for the Willamette River Basin, DEQ estimated that the median concentration of mercury in POTW effluent was 10 ng/l.

The average concentration of mercury in biosolids is 2.2 mg/kg, well below the EPA standard of 57 mg/kg. DEQ estimated that biosolids applied to land in Oregon contained 186 pounds of mercury. DEQ requires any facility applying biosolids to have a permit, meet federal and state pollutant standards, and be approved on a site-by-site basis for all land application activities. POTWs must obtain DEQ approval for application of biosolids to land and must submit annual reports of the volume and concentration of mercury and other pollutants contained in biosolids.

Recent Activities:

- Pretreatment programs have reduced mercury levels in biosolids by 50% over the last 10 years.

Current and Planned Activities:

- See Dental and Medical Facilities.

Measurements of Success:

- See Dental and Medical Facilities.

Municipal Solid Waste Incinerators

Oregon has two permitted municipal solid waste (MSW) incinerators (also known as solid waste combustors) located in Marion and Coos counties. DEQ estimated that these facilities release a combined total of 37 pounds of mercury annually.

Recent Activities:

- DEQ issued a grant to fund the construction of a household hazardous waste collection facility in Marion County. The collection of mercury containing materials such as paints, light tubes, and thermometers for recycling will prevent these materials from being incinerated and thus reduce mercury air emissions.
- The Marion County and Coos County facilities recently installed air pollution control equipment that reduces mercury emissions.

Current and Planned Activities:

- Coos County has applied to DEQ for a grant to develop a household hazardous waste management plan.
- DEQ will continue to work towards promoting the recycling of mercury containing products to prevent mercury from entering the solid waste stream.

Measurements of Success:

- Pounds of mercury recycled at the Marion County facility.
- Reductions in mercury emissions from MSW incinerators.

Strategies to Reduce Non-Point Sources of Mercury

Non-Point Sources of mercury include area (e.g., open burning and space heating) and mobile (e.g., motor vehicle) air sources, runoff from urban, agricultural and forest lands, and releases from abandoned mercury and gold mines and other cleanup sites. Non-point sources generally do not require a permit. However, some facilities are permitted for stormwater through individual or general stormwater permits.

Strategies to reduce non-point source releases of mercury include improvements in energy efficiency, cleanup of abandoned mercury and gold mines, and development and implementation of best management practices. BMPs may be implemented through a number of mechanisms depending on the source:

- Storm Water Pollution Control Plans: Storm Water Pollution Control Plans are required whenever a stormwater permit is issued or renewed. The plans describe measures to prevent and /or treat storm water pollution. Exceeding a monitoring benchmark triggers review and update of the plans.
- Agricultural Water Quality Management Plans: Agricultural Water Quality Management Plans (also known as Senate Bill 1010 Plans) are community based plans for minimizing water quality impacts from agricultural lands and ensuring that water quality standards are maintained. The plans are developed on a community basis to ensure they consider local factors such as soil and crop type.

- Forest Practices Act: The Forest Practices Act was adopted in 1972. The Forest Practices Act establishes minimum management standards to minimize the impacts of forest activities on forest resources such as water quality and fish habitat.

Combustion of Fuels in Boilers

The combustion of fuels category includes mercury emissions associated with use of natural gas and petroleum products from boilers used for space heating. DEQ estimated that 164 pounds of mercury is emitted annually from distillate oil and natural gas boilers in Oregon. This estimate does not include use of wood or wood waste in residential stoves and fireplaces or in the industrial sector. They also do not include mercury emissions from home heating oil or from residential use of natural gas.

Current and Planned Activities:

- DEQ has received a Pollution Prevention Grant from EPA to work with the OEC to improve the energy efficiency of boilers throughout Oregon. The project will provide energy efficiency audits for selected boilers and promote actions to improve energy efficiency.
- DEQ is working with the Oregon Boiler and Pressure Vessel Association to develop a permitting and educational outreach program for the boiler industry in Oregon.

Measurements of Success:

- Completion of boiler energy efficiency project.
- Improvements in energy efficiency.
- Reductions in mercury emissions from industrial, commercial and institutional boilers

Crematoria

There are 59 crematories in Oregon. The human body contains low levels of mercury primarily in the form of dental fillings. DEQ estimated that 43 pounds of mercury are emitted annually from crematories in Oregon.

Current and Planned Activities:

- There are significant cultural and societal barriers to reducing mercury emissions from crematories. DEQ will evaluate mercury reduction opportunities at crematories at a later time.

Measurements of Success:

- No mercury reduction activities are currently planned or underway. As a result, no performance measures or targets have been developed.

Mercury, Gold and Silver Mine Sites

Abandoned mine sites include mercury mines and gold and silver mines that may have used mercury to process ore. DEQ has identified 46 historic mercury mines in Oregon. Five of these mines--Bonanza in Douglas County, Black Butte in Lane County, the Bretz and Opalite mines in Malheur County, and Horse Heaven in Deschutes County--account for approximately 90% of the mercury historically produced in the state. Oregon's mercury mines operated as early as the late 1880s, with some continuing operations until the early 1950s. There are currently no active mercury mines in Oregon.

Data from the Oregon Department of Geology and Mineral Industries include information on approximately 1,300 gold and silver mines. At many of these sites, mercury was used to amalgamate (capture) gold and silver particles to allow for extraction of gold from crushed ore or stream sediments. The number of placer or lode mining operations where mercury was used is unknown. Gold and silver mining operations were most active from the late 1800s until the early 1950s. There are no commercial-scale gold or silver mining operations remaining in Oregon. It is no longer legal to use mercury in placer or lode mine amalgamation processes.

DEQ estimated 680 pounds of mercury a year continue to be released from former mercury-production mines and an additional 50 to 200 pounds per year from former gold and silver mines.

Recent Activities:

- DEQ is using federal funds and state Orphan Site Account funds for investigation and cleanup activities at abandoned mine sites. Since 1996, federal funds have been used to identify and investigate mines sites in eastern and southwestern Oregon. Orphan Site Account funds have been used for investigation and cleanup activities. Removal actions have been performed at the Bonanza Mine in Douglas County.
- DEQ attended a rally of placer gold miners in Myrtle Creek in an effort to improve communication and collect mercury.

Current and Planned Activities:

- DEQ is participating in the Interagency Mine Group sponsored by the Oregon Department of Geology and Mining (DOGAMI).
- DEQ is working with the U.S. Army Corps of Engineers and Oregon State University on a sampling plan for the Bonanza Mine.
- DEQ will use EPA funding and staff resources to identify and investigate mercury mine sites.
- DEQ is developing a strategy for addressing mine sites that includes prioritizing mine sites for investigation and cleanup.

Measurements of Success:

- Number of mine sites with mercury contamination identified, investigated and cleaned up.

Motor Vehicle Emissions

Because motor vehicles burn fossil fuels and fossil fuels include small amounts of mercury, mercury is released to the atmosphere from driving of cars, trucks and other vehicles. DEQ estimated that 373 pounds of mercury is emitted from motor vehicles annually in Oregon. Fuel economy is regulated by Congress. However, states can reduce emissions from motor vehicles by reducing vehicle miles traveled.

Current and Planned Activities:

- DEQ will consider ways to increase energy efficiency and reduce motor vehicle miles traveled in conjunction with steps taken in response to the Executive Order on Sustainability, multi-state efforts to address global climate change and steps taken to address regional haze.
- DEQ is working to reduce motor vehicle miles traveled through its employee commute options (ECO) program and education and outreach efforts.

Measurements of Success:

- Reduce motor vehicle miles traveled.

Urban Stormwater

Urban stormwater is known to contain detectable levels of mercury. However, due to the lack of comprehensive mercury data and the variability of stormwater (concentration and flow), DEQ has not been able to estimate the amount of mercury released to the environment via stormwater.

Recent Activities

- DEQ has reviewed historic stormwater data to develop a better understanding of the contribution of mercury through stormwater discharges.

Current and Planned Activities

- Development and implementation of mercury TMDL.
- Phase I and Phase II Stormwater permits will include requirements for stormwater management plans (SWMPs) to address mercury for water bodies listed for mercury on the 303(d) or where mercury TMDLs are being developed or implemented.

Measurement of Success

- Renew Phase I stormwater permits and develop Phase II stormwater permits.
- Reduction in mercury discharges associated with urban stormwater.

Agricultural Runoff

Recent data collected from the Calapooia River during a storm event suggests that agricultural runoff may contain levels of mercury above naturally occurring background levels. However, due to the lack of data regarding mercury in agricultural runoff, DEQ has not been able to estimate the amount of mercury released to the environment via agricultural runoff.

Recent Activities:

- Participation in SB 1010 plan development and implementation
- Storm event monitoring in the Calapooia River.

Current and Planned Activities:

- Fertilizers may contain soluble mercury. The Oregon Department of Agriculture is sponsoring research to evaluate the fate and transport of heavy metals associated with fertilizer application. DEQ is participating in the development and implementation of this fertilizer application research project.
- Development and implementation of mercury TMDL.

Measurements of Success:

- Reduction in mercury emissions associated with agricultural runoff.

Open Burning

Open burning includes burning of agricultural lands, residential burning and prescribed burning associated with forestry.

Current and Planned Activities:

- Develop an understanding of the emission of mercury from open burning
- Coordinate with the Oregon Departments of Agriculture and Forestry on developing alternatives to prescribed burning.
- Educate the general public on the emissions and risk associated with open burning.
- Evaluate options to reduce open burning emissions through its Air Toxics program.

Measurements of Success:

- Reduction in mercury emissions associated with open burning.

PERFORMANCE MEASURES AND TARGETS

The following sections describe how DEQ will measure progress towards reducing the use and release of mercury in Oregon. A summary of DEQ's mercury reduction performance measures

is provided in Table 2 (Page 31). Targets and Measures for specific reduction activities are included in Table 1 (Page 26).

Strategies to Measure Success

A range of indicators is required to measure the effectiveness of mercury reduction activities. DEQ’s strategy is to develop a pyramid of indicators as shown in Figure 2 (Page 33). At the base of the pyramid, are activities by regulatory agencies such as BMP development, technical assistance and TMDL development. These actions trigger responses by the regulated community, unregulated community and individuals that result in reductions in emissions, discharges and concentrations. These reductions, in turn, trigger reductions in ambient concentrations and risk to human health and the environment. At the top of the pyramid, are measures of the incidence of health effects resulting from exposure to mercury.

This framework is modeled after the Chemical and Pesticides Results Measures (CAPRM) developed jointly by the U.S. Environmental Protection Agency and the program for Environmental Policy and Planning Systems of the Institute of Science and Public Affairs of Florida State University.

The CAPRM suite of indicators are categorized into a Hierarchy of Indicators, which was first developed by the Chesapeake Bay Program, to categorize the relative power of indicators to reflect environmental values. The Hierarchy of Indicators is illustrated below:

Table 3 - CAPRM Revised Hierarchy of Indicators

Societal Response		Pressure	State	Effects		
1	2	3	4	5	6	7
Actions by Federal or State Regulatory Agency	Responses of the Regulatory Community or Society	Changes in Discharge or Emission Quantities	Changes in Ambient Conditions or in the Quantities of Natural Resources	Changes in Uptake and/or Assimilation	Changes in Human and/or Ecological Health Risk	Changes in Health, Ecology or Other Effects

Indicators are further classified according to their immediate availability for use into one of three types:

- **Type A:** Indicators for which adequate data are available now and can be used to support the indicator without significant cost considerations.
- **Type B:** Indicators which are presently feasible and for which data exist but cannot be provided due to inordinate cost, analytical complexity, time limitation or legal constraints.
- **Type C:** Prospective indicators for which indicator quality data do not exist and there is no reasonable prospect of development.

Measurement of progress towards achieving meaningful mercury reduction will rely on three primary strategies focused on actions; emissions, discharges and releases; and ambient concentrations. Targets are established as short and long range goals against which to measure progress. The goal of DEQ's mercury reduction strategy is to reduce the risk and incidence of health effects associated with mercury exposure. Each level is described below and summarized in Table 2 (page 31).

Actions: (CAPRM Tiers 1 and 2)

Actions are those activities taken by state and federal regulatory agencies, businesses and individuals to reduce the use and/or release of mercury. These include activities such as the identification, investigation and cleanup of abandoned mine sites, the development and implementation of BMPs aimed a specific sector, the sponsorship and promotion of household hazardous waste and conditionally exempt generator collection events. DEQ will measure the completion of specific projects and the pounds of mercury collected for recycling associated with that project or activity. When mercury is present in conjunction with other materials (e.g., dental amalgam), DEQ will estimate the amount of mercury being collected for recycling.

Measurements of activities are generally viewed as type A measurements. This information either already exists or is readily collectable. Measurements of activities are considered short-term measures of success. DEQ will work with the solid waste community and sectors responsible for implementing BMPS or recycling a specific product (e.g., TRC) to develop these estimates.

Targets: Targets will be based on the completion of a project and the pounds of mercury collected. DEQ expects to collect 48 pounds of mercury in 2004 and 60 pounds of mercury in 2005 as a result of mercury reduction activities.

Emissions, Discharges and Releases (CAPRM Tier 3)

Reductions in mercury emissions, discharges and releases are directly linked to mercury reduction activities taken by regulatory agencies and businesses or individuals who use or release mercury. For example, a technical assistance visit by DEQ or implementation of BMPs should result in a measurable reduction in the amount of mercury discharged via stormwater. Measurements of emissions, discharges and releases are considered type B indicators. DEQ can generally collect this data or require the data to be collected, although this may require additional resources. These measurements are considered medium-term measures of success due to length of time between implementation of reduction activities and measured reductions in emissions, discharges and releases.

Measuring reductions in mercury emissions, discharges and releases will require the development of baseline data and ongoing monitoring to observe declines in mercury releases. Air and water quality permits typically do not require mercury monitoring. For water sources, a limited number of POTWs have monitored discharges for mercury using low level detection limits. For air sources, emissions are typically estimated through application of emission factors developed for similar facilities. Currently, mercury monitoring of air emissions is required at

only the two municipal solid waste incinerators. The Toxics Reporting Inventory (TRI) requires facilities releasing more than 10 pounds of mercury annually to report the amount released to air, land, water and off-site. Although there are limitations to the use of TRI data, in some cases, TRI data may be used to measure reductions in the emission, discharge and release of mercury.

DEQ has obtained a grant from EPA to monitor discharges from selected industrial and municipal water sources for mercury using low detection limit analytical methods. Additional monitoring will likely take place in conjunction with implementation of the mercury TMDL for the Willamette River Basin and as part of the investigation and remediation of abandoned mine sites.

Targets: Targets will be based on reducing emissions, discharges and releases to levels that will ensure that human health and the environment are not at risk.

Ambient Monitoring (CAPRM Tiers 4 and 5)

Reductions in mercury emissions, discharges and releases are expected to, over time, result in reductions in ambient levels. Ambient monitoring includes measurement of mercury concentrations in air, water, soil, sediment and fish tissue. Measurements of ambient conditions are considered type B indicators. Additional resources will be required to develop an ongoing mercury monitoring program. Measurements of ambient concentrations are considered long-term measures of success.

DEQ recently completed four quarters of ambient monitoring in the Willamette River Basin in support of the mercury TMDL. This monitoring includes 18 ambient locations within the watershed. Monitoring included four quarters of surface water monitoring and one time monitoring events for sediment and fish tissue. This monitoring program provides an excellent baseline for estimating baseline mercury concentrations within the Willamette River Basin.

The USGS, with DEQ support, recently established two air deposition monitoring stations within the Willamette River Basin. One station is located in a relatively undisturbed area of the McKenzie River watershed. The other location is in an urbanized area of Washington County. DEQ will also be establishing geographically based ambient air monitoring stations associated with implementation of the Air Toxics program.

Targets: Targets will be based on reducing ambient concentrations to health based concentrations or natural background levels. Health based concentrations will consider relevant exposure pathways and will be based on an excess lifetime cancer risk of one in a million or levels below levels equivalent to a chronic reference dose.

Measures of Ecological and Human Health (CAPRM Tiers 6 and 7)

Measures of ecological and human health include calculated risk levels and hazard indices and direct measurement of human and ecological health effects. Risk levels and hazard indices will be calculated based on measured concentrations. Direct measures of ecological and human health are more difficult to obtain and correlate to reductions in mercury levels in the

environment. However, DEQ will coordinate our measurement activities with the Oregon Department of Human Services (DHS), Environmental Public Health Tracking Program which is focused on linking information regarding environmental hazards, environmental exposure and human health outcomes in Oregon.

Measures of health are considered Type B or C indicators. Risk levels may be calculated based on ambient mercury concentrations in water, air, soil, sediment and fish and are thus considered type B indicators. However, it is not feasible at this time to measure incidences of public and ecological health attributable to mercury exposure. As a result, direct measurements of human and ecological health are considered type C indicators. Measures of health are considered long-term measures of success.

Targets: The estimated risk to human health and the environment meets acceptable levels. Statistically significant reductions in ecological and human health effects are observed.

NEXT STEPS

DEQ will continue to monitor progress towards reducing the use and release of mercury in Oregon. It is expected that these activities will help reduce ambient concentrations of mercury, mercury uptake by fish and other organisms, the risk to human health and the environment resulting from exposure to mercury, and the incidence of health effects associated with mercury exposure.

DEQ has already begun collecting information related to the implementation of mercury reduction activities. DEQ is tracking the completion of specific mercury reduction projects and the pounds of mercury collected or recycled associated with that project or activity. DEQ will measure pounds of mercury collected for recycling on a product by product basis (e.g., pounds of mercury associated with fluorescent light tube recycling, pounds of mercury associated with thermostat recycling). In cases where the mercury occurs as a mixture (e.g., dental amalgam), DEQ will estimate the amount of mercury collected for recycling.

Collecting the monitoring data necessary to measure reductions of emissions, discharges and releases of mercury will require a combination of regulatory and non-regulatory approaches. Monitoring data can be collected through air quality and water quality permit requirements, as a component of compliance monitoring to measure the effectiveness of cleanup activities, through grant funded monitoring projects and by partnering with organizations such as the United States Geological Service (USGS), watershed councils and university researchers. For example, 319 grant funds can be used to measure reductions associated with non-point source controls, the mercury TMDL for the Willamette River Basin can trigger the inclusion of mercury monitoring requirements in water quality permits, and DEQ has received a grant from EPA to perform point source mercury monitoring.

Reductions in ambient concentrations will also be measured through monitoring. When appropriate, monitoring data in conjunction with modeling efforts will be used to estimate ambient concentrations. DEQ will rely on ambient monitoring collected through its Water Quality Monitoring and Assessment Program, data collected at ambient air stations, data

collected by others with DEQ assistance, and data collected in support of specific projects (e.g., TMDL implementation). In some cases, DEQ resources can be leveraged through in-kind contributions to expand the scope of monitoring projects.

DEQ will evaluate options for monitoring mercury emissions, discharges and releases; monitoring ambient levels of mercury in the environment; and managing and tracking mercury data. Options that DEQ will consider include:

- Require mercury monitoring in certain air and water quality permits.
- Shifting resources within DEQ towards monitoring for mercury and other toxics.
- Identifying grant opportunities to fund monitoring projects.
- Partnering with others and leveraging resources.
- Establishment of a Science and Information Center.

Monitoring information will be used to gauge the effectiveness of DEQ's mercury reduction activities. If reductions do not achieve the desired goal of reducing the risk to human health and the environment, additional regulatory and non-regulatory approaches will need to be considered. Actions that may be considered include banning the disposal of certain mercury products, enhancing best management practices, establishing mercury monitoring requirements and discharge limits in air and water permits.

Relationship with Willamette River Basin Mercury TMDL:

The goal of the mercury TMDL is to reduce the overall load of mercury to the Willamette River so that fish caught and consumed from the river are safe to eat. Monitoring will be required to better understand the sources of mercury in the Willamette River Basin and evaluate the effectiveness of mercury reduction activities in achieving this goal. Mercury reduction activities identified in this strategy are expected to result in a reduction in the overall load to the Willamette River when implemented and will be incorporated into the Willamette TMDL Water Quality Management Plan. For example, best management practices implemented by dental offices should contribute to a reduction in mercury discharges from municipal waste water treatment plants within the Willamette River basin. Other activities that are expected to contribute meaningful reductions include:

- Removal of mercury containing automobile switches from motor vehicles during scrapping (reduces air emissions of mercury from secondary steel mills).
- Cleanup of abandoned mine sites (reduces mercury releases to upper watershed).
- Collecting and recycling mercury containing wastes in conjunction with the operation of the Marion County waste incinerator (reduces air emissions of mercury from municipal solid waste incinerators).
- Developing and implementing best management practices for medical facilities (reduces mercury discharges from municipal point sources).
- Phase I and Phase II Stormwater permits will include requirements for stormwater management plans (SWMPs) to be augmented to address TMDLs
- Working with the Oregon Departments of Agriculture and Forestry and federal land managers (reduces discharges of mercury from non-point sources).

- Working to control open burning (reduces air emissions of mercury from non-point sources).

TABLES AND FIGURES

Table 1 - Summary of Activities and Measures

Category	Lead Program	Estimate (pounds/year)	Reduction Activities Planned or Underway	Priority	Measure	Target
Products						
Fluorescent Lamps	LQ	210	Develop initiatives to encourage the recycling of fluorescent lamps and compact bulbs.	Medium	Pounds of mercury recycled; initiatives developed and completed	Develop one initiative by 2004; complete one initiative by 2005; See note regarding pounds collected. ¹
Thermostats	LQ	258	Pollution prevention project aimed at enhancing the TRC recycling program exploring consumer options.	High	Pounds of mercury recycled; projects completed.	Complete TRC project by 2005; See note regarding pounds collected ¹ .
Dental Facilities	WQ	234	Working with Oregon ACWA and ODA to expand and enhance dental office BMPs.	High	Implementation of BMPs on a Statewide basis. Pounds of mercury amalgam collected.	Implement state-wide BMPs by 2004; See note regarding pounds collected ¹ .
Automobile Switches	LQ	127	Working with Schnitzer, NATA and vehicle recycling yards to promote switch removal.	High	Complete technical assistance project. Develop vehicle recycling yard BMPs. Pounds of mercury collected	Complete technical assistance project and develop BMPs by 2005; see note regarding pounds of mercury ¹ .

Category	Lead Program	Estimate (pounds/year)	Reduction Activities Planned or Underway	Priority	Measure	Target
Fever Thermometers	LQ	87	Promote thermometer exchanges	Low	Pounds of mercury collected.	See note regarding pounds of mercury ¹ .
Batteries	LQ	50	Promote the recycling of mercury containing batteries.	Low	Pounds of mercury collected.	See note regarding pounds of mercury ¹ .
Electrical Equipment and Computers	LQ	Unknown	Encouraging recycling of mercury containing components	Medium	Complete survey and develop recommendations regarding infrastructure necessary for electronics recycling.	Complete survey and make recommendations by 2005.
Dairy Manometers	LQ	Unknown	Received grant from EPA to provide mercury-free replacements	High	Completion of dairy manometer project. Pounds of mercury recycled.	Complete dairy manometer project by 2005; see note regarding pounds of mercury ¹ .
Health Care Facilities	LQ	Unknown	Development and implementation of BMPs	High	Develop BMPs	Develop BMPs by 2005.
Recreational Miners	LQ	Unknown	Work with recreational miners to encourage the collection of mercury and discourage its use to process gold.	Medium	Pounds of mercury recycled.	See note regarding pounds of mercury ¹ .

Category	Lead Program	Estimate (pounds/year)	Reduction Activities Planned or Underway	Priority	Measure	Target
Point Sources						
Power Generation	AQ	434 ⁱⁱ	Federal MACT standards will result in reduction of mercury emissions from Boardman Power Plant	Medium	Reduce mercury emissions through improvements in energy efficiency	10% reduction in mercury emissions.
Manufacturing	AQ/WQ	301 ⁱⁱⁱ	Willamette River Basin TMDL may result in reductions from industrial point sources	High	Pounds of mercury discharged to air and water from point sources	Reduce mercury emissions to risk based levels.
Municipal Solid Waste Incinerators	AQ/LQ	37	Promoting recycling of mercury containing waste prior to incineration	Medium	Pounds of mercury recycled ⁱ ; pounds of mercury emitted.	Reduce mercury emissions to risk based levels.
POTWs	WQ	186 ^{iv}	See Dental and Medical Facilities above	Low	See Dental and Medical Facilities above	See Dental and Medical Facilities above
Non-Point, Area and Mobile Sources						
Combustion of fuels in boilers	AQ	153 ^v	Received grant from EPA to improve energy efficiency of boilers	High	Reduce mercury emissions through improvements in energy efficiency	10% reduction in mercury emissions.
Crematories	AQ	43	None planned at this time.	Low	Not Applicable	Not Applicable

Category	Lead Program	Estimate (pounds/year)	Reduction Activities Planned or Underway	Priority	Measure	Target
Abandoned Mine Sites	LQ	730 - 1020	Identification, investigation and cleanup of abandoned mine sites.	High	Number of mine sites with mercury contamination investigated and cleaned up	To be developed in conjunction with abandoned mine efforts.
Motor Vehicle Emissions	AQ	372 pounds	Reduce motor vehicle miles traveled through ECO and education and outreach	Low	Motor vehicle miles traveled.	To be developed in conjunction with air quality initiatives.
Urban Stormwater	WQ	Unknown	Develop sector specific BMPs (e.g., vehicle recycling yards)	High	Pounds of mercury discharged via urban stormwater.	Reduce mercury discharges to risk based levels.
Agricultural Runoff	WQ	Unknown	Work with Department of Agriculture on 1010 Plan implementation	High	Pounds of mercury released from agricultural lands.	Reduce mercury discharges to risk based levels.
Open Burning	AQ	141 pounds (prescribed burning only)	Develop alternatives to prescribed burning; educate individuals regarding risks of backyard burning	Medium	Pounds of mercury emitted from open burning	Reduce mercury emissions to risk based levels.
Outreach						
Public Outreach	Agency Wide	Not Applicable	Developed Mercury Program and Consumer Corner Web Pages.	High	Imbedded in above efforts	Not Applicable

Category	Lead Program	Estimate (pounds/year)	Reduction Activities Planned or Underway	Priority	Measure	Target
Sector Specific Outreach	Agency Wide	Not Applicable	Working with specific sectors to increase awareness. Sectors targeted include: dental offices, recreational miners, health care industry, agricultural community, vehicle recycling yard	High	Imbedded in above efforts	Not Applicable

ⁱ Targets for pounds of mercury collected (all products) through DEQ sponsored or promoted activities are as follows: 2003: 40 pounds; 2004: 48 pounds; 2005: 60 pounds.

ⁱⁱ This estimate does not include air emissions from industrial, commercial and residential boilers

ⁱⁱⁱ This estimate does not include point source or stormwater discharges to surface water due to lack of data

^{iv} 99% of biosolids are land applied.

^v This estimate is for natural gas and distillate oil fired boilers only. This estimate does not include use of wood or wood waste or residential use of home heating oil or natural gas.

Table 2 - Mercury Reduction Performance Measures

Tier	Type	Examples	Availability for Use	Notes
Short Term Measures				
1	Actions by Regulatory Agencies	<ul style="list-style-type: none"> • Technical Assistance Visits • Identification of abandoned mine sites • TMDLs developed • BMPs developed • Collection events sponsored 	A	Regulatory framework leading to reduction activities.
2	Actions by the Community	<ul style="list-style-type: none"> • Mercury Product Recycling rates • Improvements in energy efficiency • Pounds of mercury collected • Best management practices implemented • Abandoned mercury mines investigated and remediated • Number of HVAC wholesalers participating in recycling program 	A	Measurable activities to reduce the use, disposal or release of mercury to the environment.
Medium Term Measures				
3	Emissions to air, land and water.	<ul style="list-style-type: none"> • Pounds of mercury emitted to land, air and water 	B	Measurement of mercury releases to the environment.
Long Term Measures				
4	Ambient Conditions	<ul style="list-style-type: none"> • Concentration of mercury in the environment 	B	Measurement of mercury in the environment.
5	Ambient conditions in fish (Uptake and Assimilation)	<ul style="list-style-type: none"> • Concentration of mercury in fish tissue 	B	Measurement of mercury in fish tissue.
6	Human and Ecological Health Risk	<ul style="list-style-type: none"> • Risk to human health resulting from fish ingestion 	B	Calculated risk resulting from mercury exposure.
7	Measures of Ecological and Human Health	<ul style="list-style-type: none"> • Incidence of adverse health effects 	C	Documented instances of health effects from mercury exposure.

Figure 1 - Retirement of Mercury Switches from Automobiles

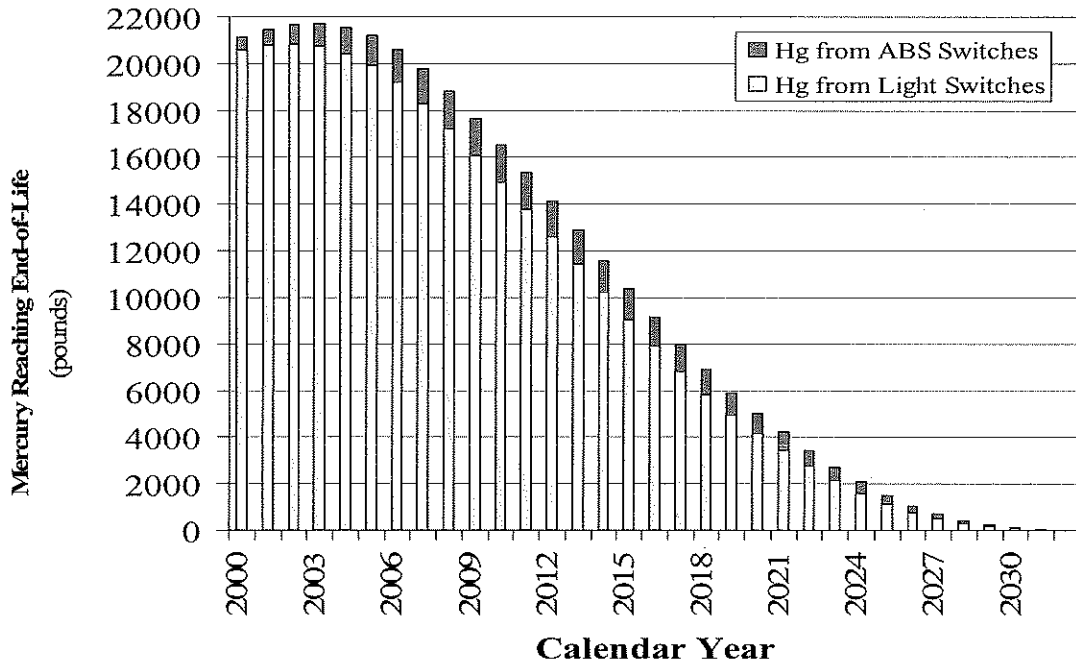
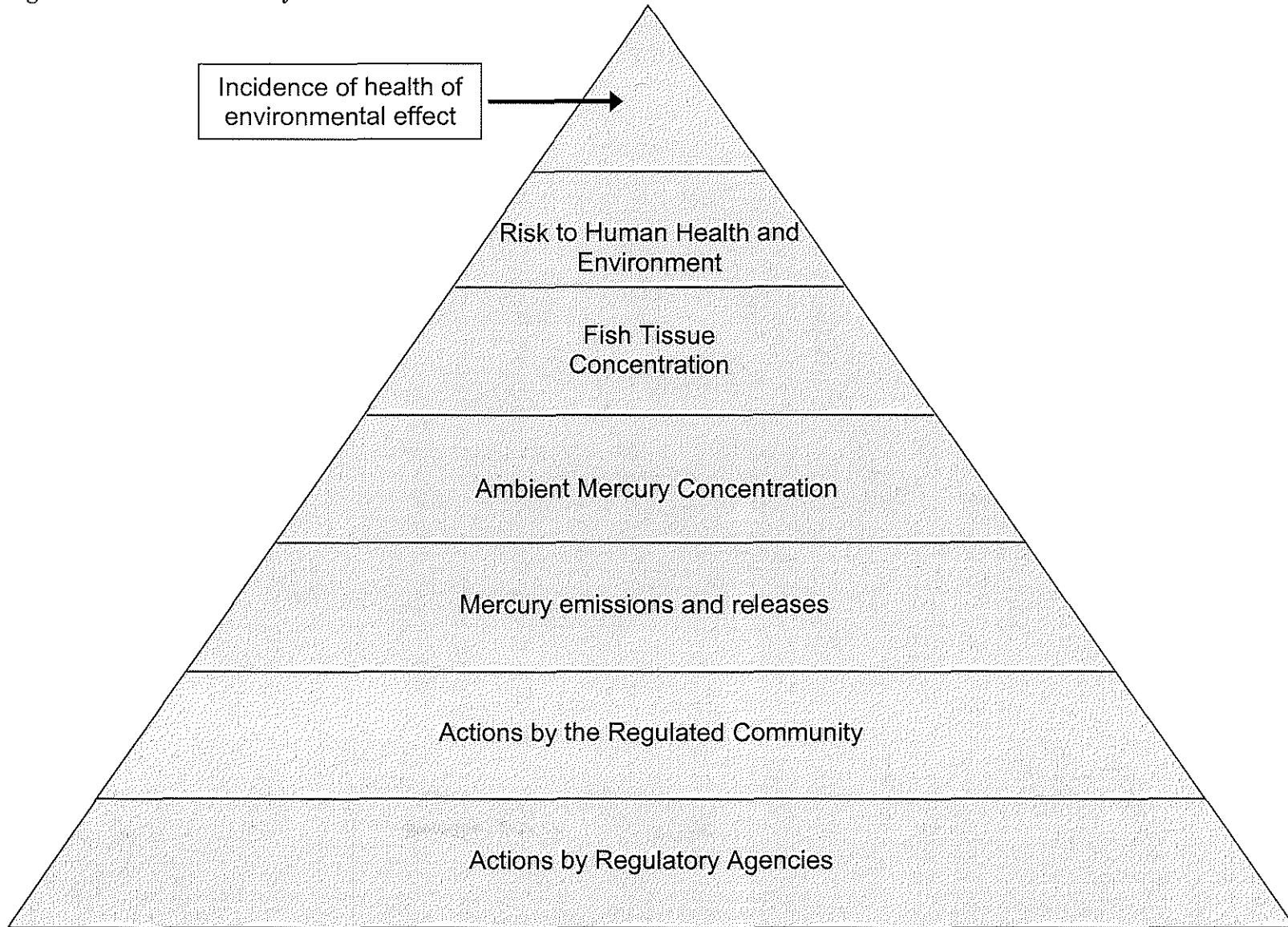


Figure 2 - Performance Pyramid



State of Oregon
Department of Environmental Quality

Memorandum

Date: November 13, 2003
To: Environmental Quality Commission
From: Stephanie Hallock, Director *S. Hallock*
Subject: Agenda Item L, Informational Item Part II: Toxics Reduction Strategy

Purpose of Item The Oregon Department of Environmental Quality (the Department) has identified Protecting Human Health and the Environment from toxics as a Strategic Direction. Toxics tend to be long-lived in the environment, readily move from one media to another and may accumulate in sediments and fish tissue at concentrations that represent a threat to human health or the environment. The Department recognizes that toxics warrant special attention to ensure that existing programs are able to effectively reduce the level of toxics in Oregon's environment. See pages 1 through 3 of the attached report for background information on toxics.

At their December 4, 2002 meeting, the Environmental Quality Commission (Commission) reviewed the Mercury Reduction Strategy prepared by the Department. During the meeting, the Commission requested the Department to develop recommendations for addressing other toxic chemicals beyond mercury.

The Department has produced a framework for the development of a Toxics Reduction Strategy. This proposed strategy is modeled after the Mercury Reduction Strategy presented to the Commission in December 2002. The proposed goal of the Toxics Reduction Strategy will be to develop and implement a coordinated cross program approach towards protecting human health and the environment from toxics consistent with the Department's Strategic Priorities and implementation of Executive Order No. 03-03 ("A Sustainable Oregon for the 21st Century").

Over the next 12 months, the Department will refine the Toxics Reduction Strategy through stakeholder and staff involvement. Through this process, the Department will:

- Identify specific voluntary and cooperative toxics reduction activities;
- Evaluate a monitoring infrastructure that could be used to guide the development of toxics reduction activities and evaluate effectiveness;

- Work in a coordinated, cross media manner to address the use and release of toxics;
- Identify the universe of toxics, including chemicals that do not meet the strict definition of persistent, bioaccumulative toxins, that should be addressed through a Toxics Reduction Strategy;
- Examine the necessary resources to implement toxics reduction activities and evaluate their effectiveness; and
- Determine under what circumstances regulatory approaches are required.

See pages 3 through 9 of the attached report for more information on the elements of the Department's proposed Toxics Reduction Strategy. See pages 9 through 11 of the attached report for more information on steps necessary to implement the Department's proposed Toxics Reduction Strategy.

Next Steps

- Consult with Department staff to identify opportunities for toxics reduction activities, determine what information is available regarding toxics in Oregon and foster cross program approaches.
- Consult with stakeholders to develop effective reduction strategies and obtain the resources necessary to implement and evaluate the effectiveness of toxics reduction activities.
- Develop a comprehensive, cross program Toxics Reduction Strategy that will allow the Department to focus programmatic resources towards reducing the use and release of toxic chemicals in Oregon. Through implementation of the Toxics Reduction Strategy, the Department expects to reduce the potential for exposure to toxics and achieve measurable improvements in the health of Oregonians and Oregon's environment.

See pages 14 and 15 of the attached document for more information on process for developing DEQ's proposed Toxics Reduction Strategy.

Attachments

"Oregon Department of Environmental Quality Toxics Reduction Strategy" prepared by the Oregon Department of Environmental Quality, November 13, 2003.

Available Upon Request

The following reports were a major source of information used in developing the Department's report:

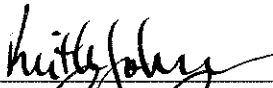
- "Proposed Strategy to Continually Reduce Persistent, Bioaccumulative Toxins (PBTs) in Washington State" Washington Department of Ecology, December 2000.
- "Proposed Willamette River Strategy - Analysis and Recommendations" Developed by DEQ Willamette Cross-Program Team, August 12, 2002 (Draft).


- “A Multimedia Strategy for Priority Persistent, Bioaccumulative, and Toxic (PBT) Pollutants,” Prepared by: The USEPA Persistent, Bioaccumulative and Toxic Pollutants (PBT) Plenary Group *and* The USEPA Office Directors Multimedia and Pollution Prevention Forum, November 16, 1998 (Working Draft).
- “The Great Lakes Binational Toxics Strategy,” prepared by the Binational Executive Committee, April 7, 1997.

Approved:

Section:

Division:





Report Prepared By: Eric Blischke
Phone: (503) 229-5648

**Oregon Department of Environmental Quality
Toxics Reduction Strategy**

**Prepared by:
Oregon Department of Environmental Quality (DEQ)**

November 13, 2003

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Oregon Department of Environmental Quality Toxics Reduction Strategy

Introduction

Background

The Oregon Department of Environmental Quality (DEQ) has identified protecting Oregonians from toxic chemicals (toxics) as one of its Strategic Priorities. Exposure to toxics is of increasing concern in Oregon. Exposure to toxics occurs through many sources such as chemical emissions from cars, trucks and industrial plants or through the food chain and sediments where persistent toxics can accumulate. Exposure to toxics has been linked to a wide range of adverse effects on human health and the environment.

DEQ developed its Mercury Reduction Strategy as an initial step to reduce the potential for exposure to toxics in Oregon. The Environmental Quality Commission (EQC) adopted DEQ's Mercury Reduction Strategy in December 2002. The Mercury Reduction Strategy relies on a variety of voluntary and cooperative measures to reduce the use and release of mercury. In addition, DEQ has developed a set of performance measures to gauge the success of DEQ's mercury reduction efforts. The Mercury Reduction Strategy and associated performance measures should be viewed as a model for our broader toxics reduction strategy.

This document outlines a framework for development of a comprehensive Toxics Reduction Strategy. The goal of the strategy will be to develop and implement a coordinated cross program approach towards protecting human health and the environment from toxics and implementing Executive Order No. 03-03 (See Box). It describes why this strategy is needed, how DEQ will go about developing it and outlines some of the strategy's key elements.

What are Toxic Chemicals?

Strictly speaking, it is the dose or concentration of a chemical that determines whether it is toxic or not. For example, many metals are required nutrients at low concentrations but exert toxic effects at higher concentrations. From a regulatory perspective, each DEQ Program has its own definition of toxics. In addition, EPA has developed a definition of persistent, bioaccumulative toxins (See Box).

Executive Order No. 03-03:

In June 2003, Governor Ted Kulongoski issued Executive Order No. 03-03. This executive order directs the Oregon Sustainability Board to work with state agencies to identify and implement activities to put Oregon on the path to sustainability. The Executive Order directs the Oregon Department of Environmental Quality to continue efforts to develop and implement a cost-effective and collaborative strategy for reducing the amount of toxics in Oregon's air, land and water; promote opportunities within Oregon to minimize toxic releases, properly manage toxics, reduce exposures to toxics, and identify alternatives for products that contain toxics; examine what other states are doing to eliminate the use of certain toxic materials and determine whether such programs are applicable to Oregon. Future efforts may focus on toxics that are persistent and bioaccumulative.

For the purposes of this strategy, toxics are defined as chemicals that:

- Have the potential to cause harm to human health or the environment at low levels due to their toxicity;
- Have the potential to transfer from one media to another or build up in fish tissue;
- Are long lived in the environment; and
- Require a multi-media approach due to their sources and properties.

Although this list includes chemicals that are considered persistent bioaccumulative toxins (PBTs), other, non-PBTs will be included in this strategy if they meet the criteria identified above.

Why is this Strategy Needed?

Toxics, by their nature, tend to be long-lived in the environment, readily move from one media to another and may accumulate in sediments and fish tissue. Even low level releases of these pollutants may accumulate over time in sediments and fish tissue at concentrations that represent a threat to human health or the environment. DEQ recognizes that toxics warrant special attention to ensure that DEQ's existing programs are able to effectively reduce the level of toxics in Oregon's environment.

Traditional air and water quality programs were developed to primarily address point sources of pollution. Reductions in point sources of pollution have greatly improved the quality of Oregon's environment. However, today's sources of toxics are more widespread and diverse. They include individuals as well as industry and originate from a variety of land uses such as urban development, agriculture and forestry. These sources of pollution – referred to as non-point sources – are much more challenging to address. In addition, toxic chemicals are sometimes emitted or discharged from point sources at levels below DEQ's regulatory threshold yet still represent a threat to human health and the environment. As a result, these pollutants require different approaches to identify sources and develop and implement solutions.

Toxics Definitions:

Air Quality: Under the proposed Air Toxics rules, "Air Toxics" are defined as those pollutants known or suspected to cause cancer or other serious health effects, including but not limited to "hazardous air pollutants" or "HAPs" listed by the EPA pursuant to Section 112 (b) of the federal Clean Air Act.

Water Quality: Toxics are defined under Section 307(a)(1) of the Clean Water Act. States are required to develop standards for toxic pollutants. DEQ has developed standards for 167 toxic pollutants.

Land Quality: DEQ's Land Quality authority addresses "hazardous substances." Hazardous substances include oil and all chemical listed as hazardous substances through the federal Comprehensive Environmental Response, Compensation and Liability Act (CERLA).

PBTs: PBTs are defined as those chemicals which:

- Remain in the environment for a long time without breaking down;
- Accumulate in the environment and build up in the tissues of humans, fish and other living organisms; and
- Are toxic to humans and other living organisms.

Goals

The goal of this strategy is to provide a platform for focusing program resources toward a multi-media approach to reducing the potential for exposure to toxics. This strategy will be implemented in support of DEQ's Strategic Priorities and consistent with the Sustainability Executive Order. The goal of the Toxics Reduction Strategy is to:

- Reduce or eliminate the use of toxic chemicals: DEQ will encourage the use of alternatives that do not contain toxic chemicals.
- Reduce or eliminate the release, discharge and emission of toxic chemicals: DEQ will work with industry, municipalities and individuals to minimize the amount of toxic chemicals that enter Oregon's environment.
- Prevent new sources of toxic chemicals: Through pollution prevention, technical assistance and other approaches, DEQ will work with the regulated community to prevent new sources of toxic chemicals.
- Cleaning up historical sources of toxic chemicals: DEQ will streamline the identification and cleanup of historical sources of toxics chemicals including contaminated sediments.

Toxics - Where do they come from?

- Urban Stormwater: The USGS found the highest concentrations of heavy metals in riverbed sediments in urban streams.
- Agricultural runoff: The USGS found the highest pesticide concentrations in streams draining agricultural land. Pesticide results are strongly correlated with suspended solids.
- Point Sources: Air and water point sources emit toxics such as mercury, benzo(a)pyrene, and dioxins and furans incidentally or as by-products.
- Fossil Fuel Combustion: Fossil fuel combustion is a known source of toxics such as mercury, benzo(a)pyrene, and dioxins and furans.
- Contaminated Sediments: The USGS found dioxins and furans in all sediment samples collected within the Willamette River Basin.

Through development of a comprehensive Toxics Reduction Strategy, DEQ will identify opportunities to reduce the use and release of toxics, develop and implement specific toxics reduction activities, work with DEQ programs to ensure that toxics are addressed adequately from a cross media perspective, develop the infrastructure to evaluate the effectiveness of toxics reduction activities and determine whether, and under what circumstances, regulatory approaches are necessary to ensure protection of human health and the environment from toxic chemicals.

Elements of a Toxics Reduction Strategy

Identification of Toxics

Identifying a suite of toxics to focus on is a key first step in the development of DEQ's Toxics Reduction Strategy. Consistent with the definition of toxics, the initial suite of toxics is

comprised of PBTs. However, as we move forward with development of the Toxics Reduction Strategy, other chemicals, including non-PBTs will be considered.

Starter List of Toxics

In 1998, the U.S. Environmental Protection Agency (EPA) issued its Multi-Media Strategy for Priority Persistent, Bioaccumulative and Toxic (PBT) Pollutants. As part of its strategy, EPA identified 12 priority PBT pollutants on which to focus. DEQ has identified a starter list of ten toxics based on the EPA list of 12 PBTs. DEQ eliminated two chemicals from the list: Alkyl lead because leaded gasoline was phased out in the early 1990's and octachlorostyrene because this chemical is not produced in Oregon. The ten starter toxics may be grouped into three broad categories: **1) Toxics that have been banned; 2) toxics that are currently used in a variety of products; and 3) toxics that are by-products of combustion or industrial processes.**

EPA List of PBTs:

- Aldrin/Dieldrin
- Benzo(a)pyrene
- Chlordane
- DDT (and DDE, DDD)
- Hexachlorobenzene
- Alkyl-lead
- Mercury
- Mirex
- Octachlorostyrene
- PCBs
- Dioxins and Furans
- Toxaphene

Banned Chemicals (e.g., PCBs and banned pesticides):

- Aldrin/Dieldrin: Soil insecticide to control rootworms, beetles, termites and – in specific public health situations – used to control disease carriers like mosquitoes and tsetse flies. The importation and manufacture of Aldrin/Dieldrin is currently prohibited in United States.
- Chlordane: Termite control for houses; insecticide for corn crops. The importation and manufacture of chlordane has been prohibited in United States since 1988.
- DDT and breakdown products: Controlled insects that carry diseases such as malaria and typhus. The importation and manufacture of DDT has been prohibited in United States since 1972 (except in public health emergencies).
- Mirex: Pesticide used for insect control and as a fire retardant. The importation and manufacture of mirex is currently prohibited in United States.
- Toxaphene: Insecticide for cotton crops, used on livestock, vegetables, and soybeans. The importation and manufacture of toxaphene is currently prohibited in United States.
- PCBs: PCBs were used in insulation for electrical cables and wires, and as a coolant and lubricant in transformers, capacitors, and lighting ballasts. Also used in epoxy, adhesives, caulk, plasticizers, paints and as an additive to lubricants. Currently found in transformers, capacitors and fluorescent lamp ballasts manufactured before EPA banned production of PCBs in 1977.
- Hexachlorobenzene: Formerly used as a pesticide to protect the seeds of onions, sorghum, and wheat against fungus until 1965. Currently, there are no commercial uses in the US, but it is a by-product from making other chemicals.

Strategies for banned chemicals will focus on activities to control non-point sources of pollution (i.e., runoff from urban, agricultural and forested lands), identification and clean-up of sites

contaminated with banned chemicals, and proper management of existing stocks of banned chemicals (e.g., PCBs in electrical equipment).

Products currently in use (e.g., mercury):

- Mercury: Naturally occurring element and metal – used in thermometers, thermostats, fluorescent lights, preservatives, electrical switches, dental amalgams. Mercury is also a by-product of fossil fuel combustion.

Strategies for products currently in use will focus on pollution prevention activities that reduce their use and as encouraging the use of alternative products.

By-Products (e.g., PAHs and dioxins):

- Benzo (a) pyrene: Benzo (a) pyrene is from a class of chemicals known as polycyclic aromatic hydrocarbons (PAHs). PAHs are a group of over 100 different chemicals that are formed during the incomplete burning of coal, oil, gas, garbage, wood, and other organic substances like tobacco and charbroiled meat. Usually found as a mixture containing two or more PAH compounds. PAHs are found in coal tar, crude oil, creosote, and roofing tar. Also used in medicines, personal care products, and to make dyes, plastics, and pesticides.
- Dioxins and Furans: Created as a by-product of combustion. Sources include municipal and medical waste incinerators, cement kilns, forest fires, coal combustion, residential and industrial wood combustion, residential waste combustion, diesel and gasoline fuel combustion, and bleached-chemical wood pulp and paper mills.

Strategies for by-products will focus on pollution prevention activities that reduce the generation of these toxic chemicals and control technologies that reduce their discharge or emission.

Other Chemicals

The ten chemicals listed above represent a starting point. Many chemicals that meet the definition of “toxic” are not listed. These include toxics as defined by the Air and Water Quality Programs. In addition, the majority of the chemicals identified as “starter toxics” have been banned for many years. Although banned chemicals are still a concern in Oregon as evidenced by their presence in fish tissue at concentrations exceeding health based criteria, reduction strategies for banned chemicals are limited.

Other chemicals beyond DEQ’s list of starter chemicals may require a cross media approach or special attention to ensure that human health and the environment are protected. DEQ will work with stakeholders to identify additional chemicals to be included in our Toxics Reduction Strategy. In addition to PBTs, other toxics may include chemicals that meet the definition of toxic (i.e., are toxic at low concentrations, move from one media to another, are persistent and require a cross media approach) for which less toxic alternatives are available and for which

meaningful reductions are feasible. Chemicals under consideration include metals such as lead, copper and cadmium; polybrominated diphenyl ethers (PBDE's); phthalates; herbicides; and other pesticides.

Prioritization of Toxics

Once DEQ has identified the toxic chemicals to be included in its Toxics Reduction Strategy, it will prioritize those chemicals for follow-up. Prioritization may be based on classes of chemicals (e.g., banned pesticides) or individual chemicals. Factors to be considered include:

- Toxicity: The ability of the chemical to cause health effects such as cancer.
- Persistence: The resistance of the chemical to breakdown in the environment.
- Exposure: How are Oregonians being exposed and how often?
- Feasibility of meaningful reductions: Chemicals for which reduction strategies are easily implementable or for which alternatives are readily available will be given priority.
- Ease of achieving reductions with existing programs: Chemicals that can be addressed through existing regulatory programs such as development and implementation of Total Maximum Daily Loads (TMDLs) or the air toxics program will be given priority.
- Overlap of reduction strategies: Chemicals for which reduction strategies will address a broader suite of toxics will be given priority.

How to Reduce the Use and Release of Toxic Chemicals:

Identification of Sources: Sources of toxic chemicals tend to be widespread and diverse and at low concentrations. New approaches will be required to identify and characterize sources of toxics.

Solutions: Development of effective solutions will require cross program teams focused on a specific geographic area or sector with input from state agencies, local governments and the regulated community.

Implementation: Implementation will require an emphasis on pollution prevention, education and outreach and voluntary and cooperative measures backed by regulatory mechanisms.

Effectiveness Monitoring: Monitoring will be used to assess and refine reduction strategies.

Develop Information Infrastructure

A key element of the Toxics Reduction Strategy will be the development of the information infrastructure necessary to implement the strategy. This effort will include the development of a comprehensive monitoring program that includes toxics monitoring as one of its elements and exerting a leadership role regarding data management and coordination.

Toxics Monitoring Strategy

Historically, DEQ monitoring efforts have focused on conventional pollutants. Most monitoring efforts aimed at toxics have been focused on specific questions such as pesticides in the Hood River Valley, mercury in the Willamette River Basin or ambient air levels of chromium in

Portland. In many cases, toxics monitoring has been performed by others such as the U.S. Geological Survey (USGS), other state and federal agencies, local governments, watershed councils and independent researchers for their own purposes. Some of these monitoring efforts have resulted in the listing of a number of toxics on the Water Quality 303(d) list of impaired water bodies.

DEQ's laboratory has recognized the need to incorporate toxics monitoring into DEQ's routine monitoring program and is in the process of developing a comprehensive monitoring program that includes toxics. Because the costs associated with a comprehensive toxics monitoring program are significant, DEQ will consult its existing body of analytical data to make recommendations regarding monitoring as a first step. DEQ will use this information to develop cost effective monitoring strategies aimed at the following areas:

- Determine the Universe of Toxics: Monitoring data will be evaluated to identify chemicals to be included as part of the monitoring program or for which reduction activities are required. This will be an ongoing process. As a first step, existing data will be evaluated. Subsequent monitoring data may identify other chemicals.
- Identify Sources of Toxics: Information regarding products that contain toxics, processes that generate toxics and releases of toxics to the air, land and water will be evaluated to identify potential sources of toxics. This effort will focus initially on the list of starter toxics and will be expanded as necessary to include other toxics identified through data monitoring and evaluation efforts.
- Development of Reduction Strategies: Monitoring data will be evaluated to develop and implement toxics reduction activities consistent with this strategy.
- Evaluate the Effectiveness of Reduction Strategies: Monitoring data will be evaluated to determine the effectiveness of existing reduction measures and determine what additional reduction measures to pursue.

Data Management and Coordination

A key role for DEQ is to manage data and coordinate the efforts of others. DEQ will establish itself as a leader to coordinate the efforts of others, guide monitoring activities and share information with stakeholders, decision makers, researchers and the general public through development of an information and science center to serve as a clearing house for toxics and other environmental information. This will ensure that data collected by others is used to identify and develop solutions to environmental problems.

Framework for Reductions

A hierarchy of cross program/multi-media approaches will be required to reduce the use and release of toxics. As a first step, DEQ will rely on voluntary and cooperative measures such as

pollution prevention and technical assistance. Voluntary and cooperative measures will be augmented by DEQ's existing regulatory authority as needed. If these efforts are unsuccessful, DEQ may recommend additional regulatory tools to achieve the necessary reductions.

Voluntary reduction measures

- Pollution Prevention and Sustainability: Because release of even small amounts of toxics may be a concern, efforts that focus on preventing the production and use of these chemicals will be a key element of DEQ's Toxics Reduction Strategy. DEQ has received funds through EPA's Pollution Prevention Grant (PPG) program to implement voluntary reduction activities aimed at mercury. DEQ will continue to use pollution prevention as a means of achieving reductions in the use of toxic chemicals.
- Technical Assistance and Best Management Practices: DEQ will develop and, through technical assistance, promote best management practices that reduce the release of toxics. DEQ has worked specific industry sectors such as automotive shops and dental offices to develop and implement best management practices. DEQ will continue to identify sectors for which BMPs are an effective means at reducing the use and release of toxic chemicals on a multi-media basis.
- Education and Outreach: Changes in how average Oregonians handle toxic chemicals will be needed to reduce toxics in the environment. Through its office of education and outreach, DEQ will continue to develop education and outreach efforts aimed at specific sectors and individuals.

Existing regulatory authorities

As much as possible, DEQ will utilize its existing regulatory authority and programs in conjunction with voluntary and cooperative approaches such as technical assistance, monitoring and education and outreach to reduce the level of toxics in the environment. Regulatory programs that can provide a regulatory framework for toxics reduction activities include:

- Air Toxics: Recent air toxics rules are focused on developing geographically based solutions to reducing the level of toxics present in the atmosphere to concentrations that do not exceed an excess lifetime cancer risk of one in a million.
- TMDLs: Total Maximum Daily Loads (TMDLs) are the mechanism to reduce the level of toxics that exceed narrative or numeric water quality standards.
- Non-Point Sources: Management of non-point sources through storm water requirements, best management practices, agricultural water quality management plans, and the Oregon Forest Practices Act are used to reduce non-point sources of toxics.
- Hazardous Waste Program: DEQ provides technical assistance to help facilities reduce their use of toxic chemicals, generation of hazardous waste and comply with state and federal hazardous waste regulations.
- Cleanup of contaminated sediment sites: Areas of contaminated sediments may be identified, investigated and remediated through DEQ's cleanup authority.

- Overlap with current initiatives: Many initiatives that are directed at environmental concerns other than toxics may reduce the release of toxics.

New Regulatory Initiatives

If voluntary measures in conjunction with DEQ's existing regulatory framework are inadequate to reduce toxics sufficiently, new regulatory initiatives may be necessary. Some examples of regulatory initiatives that have been developed in the past include the Mercury Reduction Act passed in 2001 which banned certain mercury containing products, recently adopted rules by the Oregon Department of Agriculture that prohibit the application of banned pesticides in Oregon and adoption of the Air Toxics Rule.

Implementing Toxics Reduction Activities

DEQ will rely on existing programmatic work, federal and other grants, and partnering opportunities to implement the Toxics Reduction Strategy on a cross program, multi-media basis. Examples of how DEQ can implement toxics reduction activities are included in Table 1 (Page 16). Effective implementation of DEQ's Toxics Reduction Strategy will require a new way of working to solve environmental problems:

- Work in a cooperative manner with individuals, environmental organizations and industry groups to make the changes necessary to reduce the use and release of toxics.
- Develop cross-program teams focused on a specific geographic area or industrial sector.
- Establish a science and information center responsible for working with governments, watershed councils, universities, industry groups and others to coordinate efforts.
- Make toxics monitoring a priority to identify toxics of concern and develop and implement solutions.
- Work with DEQ staff and programs throughout the state to identify issues and shift agency resources towards those issues and identify new approaches to reduce toxics.

Existing programmatic work

DEQ's primary mechanism for implementing the Toxics Reduction Strategy will be within the framework of its existing programs. DEQ will evaluate current activities to look for ways to increase efficiencies, work cooperatively with those that use or release toxics, and focus existing resources on reducing the use and release of toxics.

- Site Assessment and Cleanup: Toxics tend to concentrate in sediments. As a result, contaminated sediments represent a source and sink of many toxic chemicals and may contribute to the exceedance of water quality standards. Existing site assessment and cleanup resources could be used to identify areas of contaminated sediments and streamline their cleanup.

- Water Quality Monitoring: Water quality monitoring efforts have typically focused on conventional pollutants. Although these parameters are a general indicator of watershed health, there is currently a lack of monitoring data for toxic chemicals. Monitoring resources could be shifted to include an emphasis on toxic chemicals. Monitoring locations could be shifted from forested and other undeveloped lands to urban and agricultural areas.
- Science and Information Center: Through development of a science and information center, DEQ could coordinate the work of others with DEQ-led reduction activities. For example, local governments or watershed councils could monitor BMP effectiveness.
- Hazardous Waste Technical Assistance Program: DEQ's Toxics Use/Waste Reduction Assistance Program (TUWRAP) provides technical assistance to businesses and other organizations throughout Oregon. TUWRAP resources could be shifted towards sectors that use or generate toxic chemicals or geographic areas where toxics have been identified at levels of concern.
- Toxics Use Reduction: Large users of toxics chemicals and large generators of hazardous waste are required to evaluate chemical use and waste generation through the development of toxics use reduction plans. DEQ could modify this program to focus on multi-media issues and toxic chemicals as defined in this strategy.
- Business Assistance Program: Oregon's Business Assistance Program (BAP) provides technical assistance to small businesses on air quality rules and related environmental issues. BAP resources could be shifted towards increasing energy efficiency and reducing emissions of toxic chemicals.
- Air Toxics Rule Implementation: DEQ has adopted an innovative approach to reduce Oregonians' exposure to toxic air pollutants through community-based planning. The goal of the Air Toxics program will be to develop and implement plans and strategies to reduce the release of these chemicals. Many air toxics such as polycyclic organic matter (POM) and metals are consistent with the working definition of toxics. The Air Toxics program will primarily address air toxics that exceed atmospheric benchmarks. However, the Air Toxics program could work with its Air Toxics Science Advisory Board to develop methods for evaluating cross-media effects.
- TMDL Development and Implementation: Total Maximum Daily Load (TMDL) development and implementation is a mechanism for ensuring that water quality criteria are met. Monitoring data has demonstrated that many toxic chemicals are present in fish tissue, surface water and sediments at concentrations that exceed water quality criteria. However, the picture is incomplete. DEQ could focus existing resources towards toxics monitoring to evaluate trends, determine whether narrative water quality standards have been exceeded and to develop and implement TMDLs.
- NPDES Permits: The National Pollution Discharge Elimination System (NPDES) allows the establishment of monitoring requirements and discharge limits for toxic chemicals. DEQ could require additional monitoring for toxic chemicals in NPDES permits.
- Phase I and Phase II Stormwater Permits: Phase I and Phase II Stormwater permits will include requirements for stormwater management plans (SWMPs) to be augmented to address TMDLs and evaluated to determine their ability to address 303(d) list pollutants. Toxics currently on the 303(d) list or for which TMDLs are being developed include

mercury, PAHs (benzo (a) pyrene), DDT and its associated breakdown products, PCBs, dieldrin and aldrin.

Grants

Federal and other grants represent a way to fund specific activities. For example, DEQ is currently using federal pollution prevention grant funds to implement mercury reduction activities aimed at mercury containing thermostats, dairy manometers and automobile switches and to increase the energy efficiency of industrial and institutional boilers. DEQ will pursue grant opportunities when appropriate to fund toxics reduction activities. DEQ may apply for grants itself, pass through federal monies to non profit groups, or encourage and assist partners to apply. Examples of grant opportunities include:

- Environmental Education Grants Program: This EPA grant focuses on projects which design, demonstrate, or disseminate environmental education practices, methods, or techniques, including assessing environmental and ecological conditions or specific environmental issues or problems.
- State Innovation Grant Program: The goal of this EPA grant program is to strengthen innovation partnerships with states; focus on priority environmental areas including restoration and maintenance of water quality; diversify environmental protection tools and approaches; and foster innovation friendly systems.
- Clean Water State Revolving Fund (CWSRF) Loan Program: This DEQ administered program provides low-cost loans for the planning, design and construction of a variety of projects that address water pollution. The program has recently been refined to better address non-point sources of pollution.
- 319 Grants: This DEQ administered grant program focuses on nonpoint source controls.
- Solid Waste/Recycling/Household Hazardous Waste Grants: This DEQ grant program focuses on establishing permanent collection facilities for household toxics and waste prevention for individuals.
- Pollution Prevention Grant program: This EPA grant focuses on multi-media pollution prevention through technical assistance to businesses, measurement of the success resulting from technical assistance and PBTs.
- PBT Grant: This EPA Grant focuses on chemicals that are persistent, bioaccumulative and toxic. Projects are expected to be innovative and transferable to other chemicals or locales.

Partnering

DEQ will partner with federal, state and local governments, industry and environmental organizations to find ways to leverage resources toward toxics reduction activities.

Opportunities include:

- Cooperative Agreements: Cooperative agreements can be developed with federal agencies and others to fund specific activities.

- Cleanup Agreements: Agreements with responsible parties can be used to clean up contaminated sediments and other sites where toxic chemicals are a concern.
- Working directly with specific industry sectors: DEQ will work in partnership with industry sectors to achieve voluntary reductions in the use and release of toxic chemicals.
- Working directly with non profit and environmental organizations: DEQ will work in partnership with non-profit and environmental organizations to implement specific reduction activities.

Education and Outreach

DEQ will continue its efforts towards educating the public regarding the use of toxics. This effort will include the publication of fact sheets, working with Public Affairs to develop an education and outreach strategy and ensuring that DEQ's website has the latest information available.

Performance Measures

Performance Measures will be modeled after DEQ's Mercury Reduction Strategy. Measuring the effectiveness of DEQ toxics reduction activities will require a range of indicators. DEQ's strategy is to develop a pyramid of indicators. At the base of the pyramid, are activities by regulatory agencies such as development of best management practices (BMPs), technical assistance, TMDL development and Air Toxics program implementation. These actions trigger responses by the regulated community and individuals that result in reductions in releases, discharges and emissions; ambient concentrations; and risk to human health and the environment. At the top of the pyramid, are measures of the incidence of health effects resulting from exposure to toxics.

Measurement of progress towards achieving meaningful toxics reduction will rely on three primary strategies focused on actions; releases, emissions, and discharges; and ambient concentrations. The goal of DEQ's toxics reduction strategy is to reduce the risk and incidence of health effects associated with toxics exposure.

Targets are established as short and long range goals against which to measure progress. A description of targets and measures for each of the primary categories (actions, emissions, concentration, and ecological and human health) are presented below.

Actions

Actions are those activities taken by state and federal regulatory agencies and businesses and individuals to reduce the use and/or release of toxics.

Measures: Actions taken by regulating authorities and businesses or individuals who use or release toxics will be measured. These include activities such as BMPs developed and implemented, collection events sponsored, sediment sites remediated, and TMDLs completed.

Information regarding activities either already exists or is readily collectable. DEQ will work with its programs, the solid waste community and sectors responsible for implementing BMPs or recycling to develop these estimates.

Targets: Targets for actions will be based on the number of reduction actions completed.

Releases, Emissions and Discharges

Reductions in the release emission and discharge of toxics are directly linked to toxics reduction activities taken by regulatory agencies and businesses or individuals who use or release toxics. For example, a technical assistance visit by DEQ or implementation of BMPs should result in a measurable reduction in the amount of toxics chemicals released. DEQ can generally collect this data or require the data to be collected, although this may require additional resources.

Measures: Measuring reductions in toxics emissions, discharges and releases will require the development of baseline data and ongoing monitoring to observe declines in toxics releases. However, in some cases, modeling results or surrogates may be used. Air and water quality permits typically do not require toxics monitoring. For air sources emissions are typically estimated through application of emission factors developed for similar facilities. The Toxics Reporting Inventory (TRI) requires facilities releasing more than 10 pounds of certain toxics, such as dioxin and lead, annually to report the amount released to air, land, water and off-site. Although there are limitations to the use of TRI data, in some cases, TRI data may be used to measure reductions in the emission, discharge or release of toxics.

Targets: Targets will be based on reducing emissions, discharges and releases to levels that will ensure that human health and the environment are not at risk.

Ambient Monitoring

Reductions in toxics releases are expected to, over time, result in reductions in ambient levels. Ambient monitoring includes measurement of toxics in air, water, soil, and sediment and fish tissue.

Measures: DEQ will develop a comprehensive monitoring program to measure concentrations of toxics in the environment over time. Modeling will be considered as a complimentary tool for estimating concentrations.

Targets: Targets will be based on reducing ambient concentrations to health based concentrations or natural background levels. Health based concentrations will consider fish consumption and exposure to air, water and land and will be based on an excess lifetime cancer risk of one in a million or levels below levels equivalent to a chronic reference dose.

Measures of Ecological and Human Health

Measures of ecological and human health include calculated risk and hazard indices and direct measurement of human and ecological health effects. Risk levels and hazard indices will be calculated based on measured concentrations. Direct measures of ecological and human health are more difficult to obtain and correlate to reductions of toxics in the environment. However, DEQ will coordinate our measurement activities with the Oregon Department of Human Services (DHS), Environmental Public Health Tracking Program which is focused on linking information regarding environmental hazards, environmental exposure and human health outcomes in Oregon.

Measures: Measures of health are considered more difficult to obtain than measures of actions, emissions or ambient concentrations. Although risk levels may be calculated based on water, air, soil, sediment and fish concentrations, it is not feasible at this time to measure incidences of public and ecological health attributable to exposure to toxics.

Targets: Risk to human health does not exceed acceptable levels. Statistically significant reductions in ecological and human health effects are observed.

Process for Developing Toxics Reduction Strategy

Schedule for Strategy Development

Development of an agency-wide Toxics Reduction Strategy will require input from all DEQ programs and consultation with external stakeholders. Without these steps, DEQ cannot develop an effective approach to reducing toxics. DEQ plans to use the framework presented in this document to develop a comprehensive agency wide Toxics Reduction Strategy by December 2004. DEQ will present the completed strategy to the EQC at that time.

Consultation with DEQ Staff - Three Months

Over the next three months, DEQ will promote the development of the Toxics Reduction Strategy through open communication with DEQ staff throughout the state. The goal of this process will be to identify opportunities for reductions, determine what information is available and foster a sense of teamwork. DEQ program staff will be consulted to identify sources of toxics and develop and implement multi-media solutions within DEQ's existing regulatory framework. This will be accomplished through a series of meetings at DEQ offices throughout the state. The goal of this effort will be to identify ways to incorporate toxics reduction activities into existing work and identify toxics specific to a geographic region, industrial sector or DEQ program.

Consultation with Stakeholders - Six Months

DEQ recognizes that effective development and implementation of reduction strategies will require consultation with stakeholder groups. Within the next six months, DEQ plans on convening a toxics reduction summit. The goal of the summit will be to identify toxics reduction

strategies through case studies and workshops. DEQ will work with representatives of industry, environmental groups, local governments, tribes and state and federal agencies to identify participants. Key stakeholders include:

- Environmental Groups: Environmental groups that are active in the toxics arena include Oregon Environmental Council, the Oregon Center for Environmental Health and the Oregon Toxics Alliance.
- Industry Groups: Buy-in by industry groups such as Northwest Pulp and Paper, Associated Oregon Industries (AOI), and the Oregon Business Association will be a key factor in the success of DEQ's Toxics Reduction Strategy
- State and Federal Agencies: This includes other state agencies include such as the Oregon Departments of Human Services, Agriculture and Forestry and federal agencies such as the Bureau of Land Management, U.S. Forest Service and EPA.
- Local governments: Local governments such as Metro, City of Portland and Lane County have participated in DEQ's mercury reduction strategy.
- Representatives of Oregon's Sustainability Board: DEQ efforts to address toxics will be considered by the Sustainability Board.


Development of Toxics Reduction Strategy - Twelve Months

Within the next twelve months, DEQ will develop a comprehensive toxics reduction strategy that includes each of the elements described in this document. It is expected that the toxics reduction strategy help DEQ to focus some of its programmatic resources towards reducing the use and release of toxic chemicals in Oregon. By reducing the amount of toxic chemicals in the environment through implementation of specific reduction activities and broad reduction strategies we hope to achieve measurable improvements in the health of Oregonians and Oregon's environment.

Table 1 - Examples of Toxics Reduction Activities


Toxics Reduction Activities			Measures			
Division	Program	Examples	Actions	Emissions	Ambient Levels	Ecological and Human Health
Laboratory	Water Quality Monitoring	Incorporate toxics monitoring into a comprehensive monitoring program	Samples analyzed for toxics	NA	NA	NA
Water Quality	TMDL Development and Implementation	Use toxics monitoring data to identify impaired water bodies	TMDLs Developed and Implemented	Reduce discharges of toxic chemicals	Reduce ambient levels of toxics	Reduce the risk to human health and the environment
	Phase I and Phase II Stormwater Permits	Require municipalities to evaluate stormwater management plans to address 303(d) list pollutants (including toxics)	Stormwater Management Plans evaluated	Reduce discharges of toxic chemicals	Reduce ambient levels of toxics	Reduce the risk to human health and the environment
Water Quality	319 Grant Program	Monitor the effectiveness of BMP implementation	319 grants awarded to fund toxics work	Reduce discharges of toxic chemicals	Reduce ambient levels of toxics	Reduce the risk to human health and the environment

Toxics Reduction Activities			Measures			
Division	Program	Examples	Actions	Emissions	Ambient Levels	Ecological and Human Health
Land Quality	Contaminated Sediments	Focus site assessment resources on the identification of sediment sites	Sediment sites identified, investigated and cleaned up	Reduce releases of toxic chemicals	Reduce ambient levels of toxics	Reduce the risk to human health and the environment
	Toxics Use/Waste Reduction Assistance Program	Focus TU/WRAP resources on industries or sectors that use or generate toxics	Technical assistance visits	Reduce releases of toxic chemicals	Reduce ambient levels of toxics	Reduce the risk to human health and the environment
	Household Hazardous Waste and Conditionally Exempt Generator Collection Events	Focus resources on sectors with stocks of toxics such as agricultural chemicals and PCBs	Collection events sponsored	Reduce releases of toxic chemicals	Reduce ambient levels of toxics	Reduce the risk to human health and the environment
Air Quality	Air Toxics	Coordinate toxics reduction activities with implementation of air toxics rule	Air Toxics Plans developed and implemented	Reduce emissions of toxic chemicals	Reduce ambient levels of toxics	Reduce the risk to human health and the environment
	Business Assistance Program	Focus on energy efficiency as a way to reduce toxics	Technical assistance visits	Reduce emissions of toxic chemicals	Reduce ambient levels of toxics	Reduce the risk to human health and the environment




**Mercury Reduction Strategy Update
and
Developing a Toxics Reduction Strategy**

Presentation before the Environmental Quality Commission
Keith Johnson and Dick Pedersen
Land Quality Division
December 5, 2003



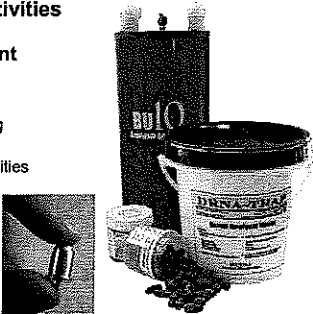
**Toxics and Mercury –
Goals of Presentation**

- Update to DEQ's Mercury Reduction Strategy
- Developing an Agency Toxics Strategy
- Protecting Human Health and the Environment from Toxics



**Part I: Mercury Reduction Update -
Current Activities**

- Best Management Practices
 - Dental Offices
 - Vehicle Recycling Yards
 - Health Care Facilities





Mercury Reduction Update - Current Activities

- **Pollution Prevention Grants**

- Dairy Manometer Exchange
- Mercury Automotive Switches
- Boiler Energy Efficiency
- Thermostat recycling





Mercury Reduction Update - Current Activities

- **Point and Non-Point source mercury monitoring**
- **Coordinated Outreach and Education**
- **Results- Pounds Collected**



Mercury Reduction Update Future Activities and Priorities

- **Willamette Mercury TMDL Coordination**
- **Non-Point Source Coordination**
- **Phase I and Phase II Stormwater Permits**
- **Air Toxics Coordination**
- **Abandoned Mine Site Coordination**
- **Ambient Mercury Monitoring Coordination**



Performance Measures - Why Measure?

- Track Progress of activities
- Evaluate effectiveness
- A Guide future work



Performance Measures - Measuring Process

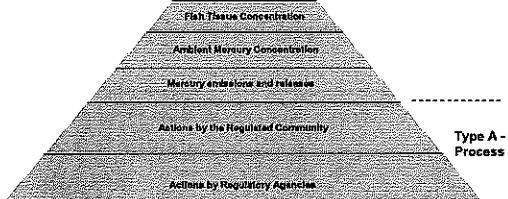
Type A -Process

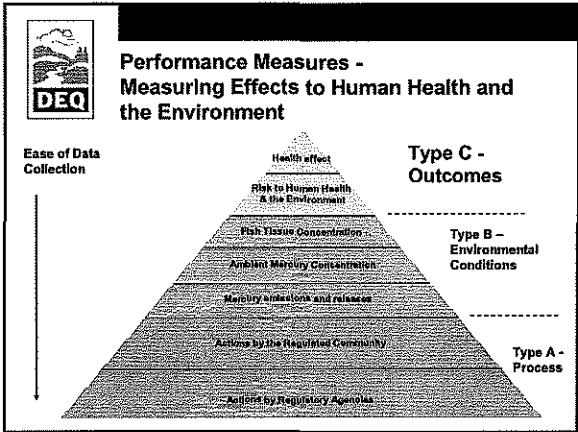






Performance Measures - Measuring Conditions

Type B – Environmental Conditions





- 
- ### Performance Measures- Next Steps
- **We will measure specific activities (Type A)**
 - Track completion of specific projects
 - Both DEQ and community activities
 - **We will continue to evaluate measures for emissions, discharges and releases (Type B)**
 - Continue to measure pounds of mercury collected
 - Abandoned mine site assessment
 - BMP effectiveness and other monitoring
 - **We will continue to evaluate measures of conditions (Type B)**
 - Ambient conditions
 - Changes in system over time

- 
- ### Next Steps- Reduction Activities
- **Continue ongoing mercury reduction activities**
 - **Continue to find new opportunities to reduce mercury**
 - Focus on collaborative, voluntary approaches
 - Integrate new activities with existing work
 - **Refine mercury release data**
 - **Report back on measures and progress against specific targets**

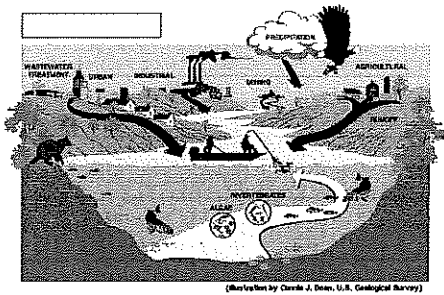


Part II: Toxics- The Emerging Challenge for Environmental Problem Solving





Toxics- A Multi-Media Challenge





Toxics Reduction Strategy Development—The Need for a Comprehensive Strategy

- Sources of toxics are widespread and diverse
- Traditional program approaches may not effectively work together to reduce toxics
 - Cross media effects
 - Small amounts from many sources
 - Emerging role of non-point sources
- Many chemicals are long-lived in the environment and move from one media to another
- Focus resources in comprehensive, cost effective manner



Toxics Reduction Strategy Development- Defining Toxics

- **Definition of Toxics**
 - Highly toxic, and/or;
 - Persistent in environment, and/or
 - Potential to transfer from one media to another (including bioaccumulation)
 - Will require multi-media approach
- **Initial Identification of Toxics**
 - Starter List of Chemicals (see p.4), includes EPA listed Persistent Bioaccumulative Toxics (PBTs)
 - Evaluate other chemicals
 - Metals, PBDE's, phthalates, and pesticides



Toxics Reduction Strategy Development- Goals

- Reduce the use of toxics
- Reduce the release, discharge and emission of toxic
- Prevent new sources of toxics
- Clean up historical sources of toxics



Toxics Reduction Strategy Development- Elements of Our Strategy

- Identification/Evaluation of Toxics
- Develop toxics monitoring strategy
- Identify activities to reduce toxics
- Implementation
- Cross Program Approach



Toxics Reduction Strategy Development- Next Steps

- Develop Strategy over 2004 calendar year
- Evaluate monitoring resources within DEQ and other agencies
 - Complete evaluation of existing DEQ data on toxics
- Work cross program within DEQ to identify issues and cross-program opportunities
- Collaborate with external partners



Toxics Reduction Strategy Development- A Case Study on Approach



State of Oregon
Department of Environmental Quality

Memorandum

Date: November 13, 2003
To: Environmental Quality Commission
From: Stephanie Hallock, Director *S. Hallock*
Subject: Agenda Item M, Informational Item: Sustainability Plan
December 5, 2003 EQC Meeting

Purpose of Item As I mentioned in my report at your October 2003 meeting, the Department is developing a Sustainability Plan as required by the Governor's Executive Order for a Sustainable Oregon for the 21st Century. The purpose of this item is to seek your input and guidance on this plan. The plan is due to the Sustainability Board on January 31, 2004.

Background On June 17, 2003, Governor Kulongoski issued Executive Order No. EO 03-03, A Sustainable Oregon for the 21st Century (Attachment A). The Order is a commitment to lasting solutions that simultaneously address economic, environmental and community well being. Among other things, the Order requires the Department and 19 other agencies to develop sustainability plans and submit them to the Sustainability Board. The Order also requires each agency to appoint a Sustainability Coordinator to ensure compliance with the Order. I have appointed Andy Ginsburg, the Department's Air Quality Administrator, to fill this role.

The Governor transmitted the Order with a letter (Attachment B) to Secretary of State Bill Bradbury, who chairs the Sustainability Board. The letter expands on the Governor's intent, and provides examples of potential agency actions that could be included in sustainability plans. On page 8 of this letter, the Governor identified two potential items for the Department that directly relate to priority 3 of our Strategic Directions: to protect human health and the environment from toxics. The Department also has a direct or indirect role in a number of other potential agency actions listed in the letter.

At its meeting on October 24, 2003, the Sustainability Board approved final guidance for agencies on how to develop sustainability plans (Attachment C). The guidance clarifies that Sustainability Plans should be integrated with agency strategic plans, and should include specific actions that each agency will implement in the near term. The agency Sustainability Coordinators are working together to develop coordinated plans consistent with this guidance. Along these lines, Housing and Community Services is developing a template that other agencies can use in developing their plans. This template may be

available shortly before the December 2003 EQC meeting.

In a related activity, the Governor's Natural Resource Office (GNRO) is developing an integrated plan (Attachment D) for Natural Resource agencies including the Department. This plan identifies priorities for the GNRO, including the Willamette River Restoration, for which the Department is the lead agency. The plan also incorporates Agency Environmental and Economic Action Plans that will include high priority agency projects to be tracked by the GNRO. The Agency Action Plans will be built upon Economic Action Plans prepared by Natural Resource agencies in February 2003. The Department's Economic Action plan (Attachment E) identifies opportunities to build a strong economy while maintaining Oregon's commitment to a healthy environment.

Jim Brown, the Governor's Natural Resource Policy Advisory, asked Natural Resource Agencies to integrate their sustainability plans with the GNRO plan. As a first step, Natural Resource agencies submitted updates to their Action Plans to identify high priority projects. The Department's update (Attachment F) identifies six projects from the Department's Strategic Directions. We will revise this six project list by integrating Attachment E for the Governor's office by December 5. The final Action Plan will become part of the Sustainability Plan.

**EQC
Involvement**

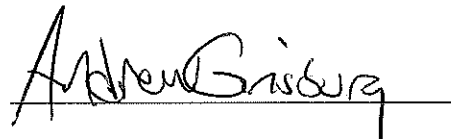
The Department is seeking the Commissions input and guidance on development of the Sustainability Plan. In particular, the Department is seeking advice on how to best integrate the Sustainability Plan with the Strategic Directions and GNRO Priorities.

Attachments

- A. Executive Order No. EO 03-03, A Sustainable Oregon for the 21st Century
- B. Transmittal letter to Secretary of State, Bill Bradbury.
- C. Sustainability Board Guidance
- D. Governor's Natural Resource Office Priorities
- E. DEQ Economic Action Plan
- F. DEQ Environment and Economic Action Plan update

Approved:

Division:



Report Prepared By: Andrew Ginsburg

Phone: (503) 229-5397

Attachment A

Agenda Item M, Informational Item: Sustainability Plan
December 5, 2003 EQC Meeting

EXECUTIVE ORDER NO. EO 03-03

A SUSTAINABLE OREGON FOR THE 21ST CENTURY

Pursuant to my authority as Governor of the State of Oregon, I find that:

While Oregon's economy is in distress, it has many assets: natural resources, a clean environment, extensive telecommunications and traditional infrastructure, and an educated and skilled workforce.

Oregon's economic recovery will be aided by establishing a commitment to lasting solutions that simultaneously address economic, environmental and community well-being. We should not continue to trade one essential aspect of well-being off against another, but we should take actions that will sustain Oregon's assets and put Oregon on the path to long-term prosperity in all aspects of life.

Sustainability is doing business with an eye to the triple bottom line – economy, community and environment. Oregon state government must define sustainability, produce goals within state government to achieve sustainability, identify challenges to achieving sustainability and measure our performance based on sustainability.

This executive order is intended to support and drive the goals of the Oregon Sustainability Act (Act) adopted by the Legislature in 2001. Using the powers vested in the Oregon Sustainability Board under the Act, this Order directs the Board and state employees to move us closer to a more "sustainable" state.

NOW, THEREFORE, IT IS HEREBY ORDERED AND DIRECTED:

Board Actions

In accordance with the Oregon Sustainability Act (Act), ORS 184.423, Sections 2(5) and 3, the Oregon Sustainability Board (Board) is directed to manage and carry out this Order. To do so, it shall:

1. Constitute and convene a Sustainability Leadership Team ("Team") to provide recommendations to the Board and to manage and deliver Board directives to state agencies as approved by the Board. The Team shall be chaired by the Director appointed by the Board pursuant to Section 7 of the Act, or, in her or his absence, the Director of the Department of Administrative Services (DAS), and shall consist of the following members: the Director of DAS, the Chair of the Board, the Director of the Office of Energy, the Governor's Sustainability Advisor, the Director of the Economic and Community Development Department, the Director of the Oregon Progress Board, the Governor's Natural Resources Advisor, the Director of the Department of Housing and Community Services, and such other members as may be requested by the Board from time to time. The Team shall review, revise and recommend for Board approval the Plans prepared by each Agency Sustainability Coordinator as directed under this Order. Pursuant to its authority under the Act, the Board may request additional agencies to provide similar Plans from time to time, or request other actions consistent with its authority under the Act.

2. Within 90 days of this Order, the Team shall deliver to the Board for its review and approval written guidance ("Sustainability Guidance") to state agencies regarding each agency's actions to comply with this Order. To the extent possible, the Team will seek expertise outside state government to assist in the development of the Sustainability Guidance. The Sustainability Guidance shall include the following:

- 2.1 a working definition of sustainability for state agencies to guide their actions;
- 2.2 suggested strategies for achieving greater sustainability;
- 2.3 a policy directive for economic, social and environmental sustainability that accounts for resource constraints and similar financial variables;
- 2.4 performance standards, targets and evaluation methods to determine agency compliance;
- 2.5 identification of key leverage points within and outside state government to enhance sustainability;
- 2.6 identification of cross-agency programs that intersect with sustainability goals;
- 2.7 state agency reporting protocols;
- 2.8 a means to assess the financial impact of proposed actions on state expenditures; 2.9 a directive to develop partnerships with other government and private entities; 2.10 identification of outreach programs to promote practices endorsed in this Order;
- 2.9 identification of training and staff development methods;
- 2.10 identification of potential incentives and acknowledgement for agencies that exceed performance expectations;
- 2.11 a directive that each state agency develop Implementation Plans ("Plans") to comply with these Sustaining Guidelines and any other directive on sustainability from the Board; and
- 2.12 any other guidance to enable state agencies to carry out this Order and sustainability directives from the Board.

3. Pursuant to Section 3 of the Act, the Board shall develop cooperative programs that involve local government, non-profit entities and private industry to achieve the objectives of the Act and this Order.

4. Under the direction of the Board, DAS shall update and maintain the current Oregon Solutions webpage.

5. Under the direction of the Board, the Economic and Community Development Department shall provide staff assistance for meeting scheduling, notification and drafting of documents for an Interagency Sustainability Network ("Network"). The Network shall be an informal forum of state agency personnel, including the Team and each Sustainability Coordinator, whose purpose is exchanging information and developing new approaches on sustainability among state agencies. State agencies should participate in the Network to the extent needed to support this Order. The Network forum will convene periodically to suggest recommendations to the Board on ways to enhance sustainability in Oregon through modification to the Sustainability Guidance, legislation, and other means.

6. The Board shall recommend for the Governor's approval by December 1, 2003, and after approval for dispersal to all agencies through the Oregon Advisory Committee on Government Performance and Accountability, changes in performance management to better incorporate sustainability into the state's management practices. These recommendations shall include but are not limited to: performance standards for agencies, performance measurement and internal audit standards.

7. The Board shall provide guidance to state agencies on how to apply and support the Governor's Oregon Solutions and Community Solutions systems for community-based action to achieve the ten community objectives listed in ORS 184.423 (2).

State Agency Actions

1. Within 90 days of the date of this Order, the director of the agencies identified in paragraph 3 below, shall designate a senior manager within each such agency as the agency's sustainability coordinator ("Sustainability Coordinator"). The Sustainability Coordinator is responsible for the agency's compliance with this Order.

2. Within 90 days of the Board's issuance of the Sustainability Guidance, each Sustainability Coordinator shall prepare a plan to implement such guidance and submit the plan to the Board ("Plan"). The agency's Plan shall include appropriate performance measures, and a strategy for meeting the Sustainability Guidance that is incorporated into the agency's 2- and 6-year strategic plans as well as the agency's biennial budget submission to DAS, as appropriate.

3. In accordance with ORS 184.423 Section 2 (5), the following agencies shall each develop and implement a Plan as described above in paragraph 1.: Administrative Services, Economic and Community Development, Environmental Quality, Land Conservation and Development, Housing, Forestry, Energy, Transportation, Progress Board, Agriculture, Watershed Enhancement, Parks and Recreation, Fish and Wildlife, State Lands, Water Resources, the Public Utilities Commission, Human Services, Corrections, Higher Education, and Community and Business Services.

Done at Salem, Oregon this 17th day of June, 2003

/s/ _____
Theodore R. Kulongoski
GOVERNOR

ATTEST:

/s/ _____
Bill Bradbury
SECRETARY OF STATE

Attachment B

Agenda Item M, Informational Item: Sustainability Plan
December 5, 2003 EQC Meeting

The Honorable Bill Bradbury
Chair, Oregon Sustainability Board
State Capitol
Salem, Oregon

Dear Bill,

Today I issued Executive Order 03-03, to achieve a sustainable Oregon for the 21st century. That Order is intended to support and drive the goals of the Oregon Sustainability Act (Act) adopted by the Legislature in 2001. I direct and encourage the Oregon Sustainability Board (Board) to use the powers vested under the Act to provide the needed leadership and direction for state government to achieve new plateaus of sustainability. And, it is my hope that the Board will also provide leadership and encouragement to the rest of the state to move to significantly higher levels of sustainability.

It is my intent that state agencies take specific actions to achieve the Board's sustainability goals for the state, and under the Act, I believe the Board has the ability to direct assistance from other agencies in reaching these goals. I have received a number of excellent suggestions from inside and outside state government about actions that agencies could take to drive to sustainability. By this letter, I forward these attached suggestions to you.

The first group is a set of actions that were developed in discussion with state agencies and may be ready to implement almost immediately. I believe that implementing this group of actions in a timely manner would move the state measurably down the path toward sustainability. The second group includes other ideas that have not been developed sufficiently to implement immediately, but are also very worthy of consideration. I invite the Board, and its Sustainability Leadership Team provided for in the Order, to review both groups of suggestions and take the actions it deems appropriate.

In close, I want to thank you for your continued leadership on the Board and encourage you to call on me if you need further direction or assistance in this matter.

Highest Regards,

Governor Kulongoski

Attachment B

Agenda Item M, Informational Item: Sustainability Plan
December 5, 2003 EQC Meeting

State Agency Sustainability Actions Underway

1. Development of a Statewide Conservation Plan ("Conservation Plan"). (Proposed deadline: June 30, 2005)

- a) The long-term goal of the Conservation Plan would be to assure the sustainability of Oregon's terrestrial and aquatic ecosystems and the economies that rely upon them. The Conservation Plan could be coordinated with major economic development initiatives of the state to avoid unnecessary conflicts and misdirected investments. It could contain a vision statement, overall assessment of the distribution and condition of natural resources (soil, timber, water, fish, wildlife, habitat, etc.), goals and objectives for major regions of the state, a map of resources in greatest need of conservation, and performance monitoring. The Conservation Plan could address the sustainable management of lands used primarily for economic purposes to help define their role in meeting overall conservation objectives.
- b) The Director of the Oregon Department of Fish and Wildlife could assemble an interdisciplinary team to develop the Conservation Plan, drawing expertise from other agencies and the private sector, to address the full range of natural resource conservation needs, including those outside the jurisdiction and expertise of the agency.
- c) To the extent applicable, the Directors of the Departments of Agriculture, Water Resources, Forestry, Environmental Quality and Watershed Enhancement should provide information needed for and participate in the development of the Conservation Plan.
- d) The Director of the Oregon Department of Fish and Wildlife could solicit the involvement of the Institute for Natural Resources at Oregon State University, Tribal and local governments, non-government organizations with an interest in natural resources conservation and management, and appropriate federal agencies.

2. Oregon Energy Office (Energy) Actions.

- a) Implement a High Performance Schools program that makes energy and green building design services for new schools available to all K-12 school districts. The designs could significantly improve energy efficiency and indoor air quality, and in most cases, do so at no additional capital cost to the districts. The goal would be to involve at least 50 percent of all new school buildings. In addition, Energy could offer a companion program targeted at new k-12 portable classrooms, that could exceed building code energy-efficiency requirements by 30 percent, address indoor air quality, and provide higher levels of daylighting. Energy also could assist school districts to obtain funding for additional energy enhancements that may be funded by grants from other sources and notify all appropriate entities about the program.
(Proposed deadline: July 1, 2003)
- b) Develop a proposal for the Governor to designate October as Energy Awareness Month. The Director could provide agencies with information, ideas and materials to promote energy conservation, use of renewables, and the reduction in Green House Gas emissions.

Attachment B

Agenda Item M, Informational Item: Sustainability Plan

December 5, 2003 EQC Meeting

- c) In consultation with the Chairman of the Energy Facilities Siting Council (EFSC), evaluate whether, on a MW output basis, renewable energy facilities face comparable siting requirements compared to conventional generating facilities. If the Director determines there is a disparity that disadvantages renewable facilities, the Director would then recommend to the Board remedies to eliminate the disadvantages for adoption by EFSC.
- d) Participate in negotiations and prepare recommendations for Oregon's potential participation in the West Coast Climate Change/Clean Energy Initiative.

3. Oregon Department of Agriculture (AG) Actions.

- a. In collaboration with the Department of Administrative Services, the Department of Corrections, the Department of Economic and Community Development, and stakeholder groups, AG could develop strategies, baseline data and targets to increase the purchase of locally produced and grown food, groceries and produce by state institutions, in particular food products certified as organic under Federal law or that meet other similar certification programs.
- b. Develop a report for the Board on how to increase the sustainability of Oregon agriculture through the use and promotion of voluntary sustainability certification programs. In developing this recommendation, AG would work with the State Board of Agriculture, the US Department of Agriculture, the agricultural industry and groups that have developed agricultural certification programs (such as the Food Alliance and Oregon Tilth). The report could examine the pros and cons of existing certification programs and the marketing advantages to agriculture from using the programs. If the report concludes that certification programs can help improve agricultural sustainability and offer marketing advantages to Oregon agriculture, the report could make specific recommendations on how to promote existing programs and/or develop a new program, a work plan, schedule and budget for implementation of the recommendations. (Proposed deadline: March 2004)
- c. Maximize the opportunities and resources associated with the 2002 Farm Bill Energy Title that provides assistance to growers for project development of bio-fuels, bio-mass, wind energy, methane digesters, carbon sequestration, and other similar programs. In collaboration with the Energy, Economic and Community Development Department, the Governor's Office, and other federal, state, and local agencies, organizations, and private businesses, the department could implement a program to assist growers in identifying financial and technical assistance to maximize these opportunities.
- d. Complete the development of Agricultural Water Quality Management Plans for all basins in the state. The department would work with Soil and Water Conservation Districts, USDA agencies, and other state and local entities to identify and provide technical, financial and educational assistance to the advisory groups helping the department develop the plans. (Proposed deadline: January 2004)

4. Department of Administrative Services Actions:

Attachment B

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- a) Establish motor vehicles purchase standards, subject to competitive solicitation processes:
- (1) Light duty vehicles (under 8,500 lbs. gross) that score 6.0 or higher on the U.S. Environmental Protection Agency's emissions/air pollution index, provided that such vehicles are available and capable of carrying out the operational needs of using agencies.
 - (2) Oversee an annual process wherein all state agencies that own vehicles determine a composite EPA emissions/air pollution score and an average fleet miles-per-gallon score for all 2003 and later models. Agencies would be directed to increase the percentage value each year by an amount to be set by the Director after consultation with affected agencies. The Director could also compile scores of all agencies that use DAS Motor Pool vehicles. The Director could compile and submit agency scores for inclusion into the biennial statewide fleet review mandated by ORS 283.343. (Proposed deadline: September 2003)
 - (3) Oversee a process that results in at least three state agencies operating vehicle repair facilities achieving "Eco-Logical Business" certification from the Department of Environmental Quality. (Proposed deadline: July 2005).
 - (4) Annually, measure the quantities of "environmentally friendly" fuel (compressed natural gas, bio-diesel, ultra-low sulfur diesel, and others to be determined) and normal fuel (unleaded gasoline, diesel) used by Motor Pool vehicles in the previous fiscal year. The Director could implement programs, as necessary, directed toward meeting an objective of increasing the use of "environmentally friendly" fuel by 5% per year. (Proposed deadline: September 2003)
- b) Other purchasing activities:
- (1) In consultation with the Department of Environmental Quality and the Western States Contracting Alliance, develop sustainability-sensitive purchasing and disposal policies, targets and benchmarks for state-agency purchased personal computers, monitors, PDAs, cell phones, servers, and related peripheral equipment. These policies could result within 6 years in a measurable target, such as direct supplier take-back of these components at the end of their operational lifetimes. (Proposed deadline: July 2004)
 - (2) Revise the Department's statewide bid specifications for electronic office equipment to require an "Energy Star" or other third-party certification standard relating to energy savings. (Proposed deadline: July 2003)
- c) Standards and guidelines for state buildings:
- (1) New State Facilities: To the extent possible under exiting laws, ensure that all state buildings, including buildings on the campuses of institutions of higher education, authorized for design after a defined date are sited, designed, constructed, operated and maintained in ways that are models of energy, water, and materials efficiency. Revise the State Facilities Standards and Guidelines, as necessary, to accomplish this to include all reasonable cost-effective measures in the areas of site, water efficiency, energy and atmosphere, materials and resources, and indoor air quality. Look for ways to exceed the statutory goal of 20% for energy consumption and include

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practices to ensure buildings start and continue to operate efficiently over time. Measures reported could include reduced water use, waste recycled, materials reused, reduced energy use, and recycled materials used.

- (2) Existing Buildings: Reduce the use of non-renewable energy use in buildings by at least 10 percent below consumption for the base year of 2000. Renovations to existing buildings could include all reasonable cost-effective measures in the areas of site, water efficiency, energy and atmosphere, materials and resources, and indoor air quality. (Proposed deadline: July 2003)
- (3) Leased Facilities: By July 2004, all build-to-suit and leases involving major renovation could incorporate all reasonable cost-effective measures in the areas of water efficiency, energy and atmosphere, materials and resources, and indoor air quality that have pay-backs shorter than the lease term. (Proposed deadline: July 2004)
- (4) Develop and implement a plan for state agencies to double the amount of electricity purchased from green power sources. State agencies could work with electricity providers in all areas of the state to help ensure green power is available and cost-effective. (Proposed deadline: July 2005).
- (5) Set up a standards review committee which would advise the Director of DAS on updating the State Facilities Standards and Guidelines policy, developing new standards, and providing references and guidance to state agencies. A key objective of this update would be to provide measurable standards for all mandatory elements of the policy, and as many measurable standards as possible for the recommended and optional elements. (Proposed deadline July 2004)

5. Economic and Community Development Department (OECDD) Actions:

- a) Investigate the possibility of creating an annual sustainability awards program modeled on the Oregon Performance Excellence Awards program. The Director of OECDD could seek the involvement of private for profit corporations and businesses, non-profit entities and local and federal government to fund and operate the program. (Proposed deadline: February 2004).
- b) Promote sustainable industries and business practices in coordination with other public and private partners by:
 1. Developing a target industry strategy as part of the Oregon Marketing Campaign to capitalize on business opportunities that support sustainable development, including opportunities for new and existing businesses. The Director would work the Sustainability Board, industry and other partners in developing this strategy. Target industries to be evaluated could include: renewable energy and energy conservation; clean transportation technologies; pollution control and prevention; water conservation, recycling and reuse; stormwater technologies; green chemistry and materials sciences; recycling and reuse products and technologies; ecosystem management and restoration; organic and sustainable agriculture; green building design and construction technologies; products from certified forest practices; eco- and agricultural tourism; and international services.

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2. Including a sustainability factor when OECDD reviews projects for priority funding. OECDD could review the extent to which a request for funding promotes sustainable industries or sustainable business practices.
3. Providing incentives to use Leadership in Energy and Environmental Design (LEED) standards and other green building practices in the development of facilities funded by the OECDD.
4. Sponsoring workshops and training opportunities, connecting businesses with providers of technical assistance, identifying suppliers of sustainable products, supporting partnerships that encourage sustainable development and providing information concerning sustainable business practices to businesses throughout the state via the Regional Development Officers' Business Outreach program and the work of OECDD's Sustainable Business Liaison.
5. Developing proposals for tax incentives and other funding mechanisms to support sustainable business practices and sustainable industry development. Included in this could be a recommendation to the Board on whether to propose legislation to establish a Development Finance Authority. (Proposed deadline: November 2004 for inclusion in the 2005 legislative package).
6. Convening workshops with representatives from different tourism-related industries in Oregon (travel agents, hotels, conference facilities, tour operators, meeting planners, attractions, transportation options, etc.) to develop a plan for "sustainable tourism."

6. Department of Parks and Recreation Actions:

- a) Establish criteria for the evaluation of grant proposals that include considerations for use of sustainable materials, efficient use of energy, waste and hazardous substance reduction and impact on ecosystems. Such criteria could apply to projects through the Local Government Grant Program, County Opportunity Grant Program, Land and Water Conservation Fund, Recreation Trails Program and the All Terrain Vehicle Grant Program. (Proposed deadline: January 2004).
- b) Develop a program to phase out the use of two-cycle engines. Director of OECDD, with the advice and support of the Director of the Department of Environmental Quality, could develop a report for the Board's review that contains an inventory of all implements with said engines used by the department or its regular contractors, determines the availability and suitability of substitute implements that are more efficient and significantly less polluting, calculates the emissions reductions from the new equipment, projects phase-in of new equipment over a 6 year period, and calculates the additional cost for implementing this program. (Proposed deadline: January 2004).

7. **Oregon Progress Board Actions:** The Oregon Progress Board could recommend to the Board a plan for incorporating the measurement of sustainability into the Oregon Benchmarks. The Progress Board could also incorporate the concepts of sustainability into all subsequent updates of Oregon Shines, the state's strategic vision. (Proposed deadline: December 30, 2003).

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Potential State Agency Actions

1. **Department of Administrative Services (DAS).** DAS could undertake the following actions:
 - a) Review the International Council for Local Environmental Initiatives/ICLEI "Green Your Fleet" methodology in order to develop a fleet vehicle CO2 emissions goal for state fleet and to give priority to purchase of SULEV and ZEV vehicles.
 - b) Develop a program to ensure that all state agencies are "greening the supply chain" by ensuring that the state utilizes its purchasing power to influence the availability and purchasing of more sustainable products and services.
2. **Public Utility Commission (PUC) Actions.** PUC could undertake to report to the Board on whether the Least Cost Plans for the electric utilities that are OPUC regulated are appropriately evaluating the inclusion of renewable energy resources. In addition to the customary OPUC evaluation criteria, the report could evaluate whether considerations of price stability, system reliability and environmental quality are satisfactorily reflected in those plans.
3. **ODOT and DEQ Actions.** ODOT and DEQ could undertake to:
 - a) Determine options for reducing diesel truck and other diesel equipment idling, especially in populated areas, including their authority to implement such actions.
 - b) Evaluate options for emissions testing for diesel-powered vehicles, costs and benefits associated with such testing, and make appropriate recommendations to the Board.
 - c) Evaluate emissions impacts of the current school bus fleet. Evaluate options for converting school bus fleets to non-diesel or lower-emissions diesel alternatives.
4. **Department of Housing and Community Development Actions.** The Department of Housing and Community Development could implement a policy to increase the use of technology by residents of publicly funded affordable housing. Agencies could structure programs so that they aid affordable housing developers to stimulate a culture of digital use among residents. To achieve these goals programs could provide that:
 - Agencies could only fund housing developments that provide high speed Internet access in residential units.
 - Each unit could be connected via a data network to reduce the cost of high speed Internet access.
 - All costs of providing high speed Internet access for each residential unit could be eligible for funding.
 - Ongoing monthly costs of high-speed Internet access could be considered a part of the housing operating budget and eligible for funding.
 - Computers could be included in each unit and funded as an amenity could be considered an eligible expense.

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5. **The Department of Energy and DAS** could develop a program to promote the use of renewable resources so that by a date certain all state agencies purchase at least 10 percent of their electricity from green power sources. All state agencies could consider installing renewable energy applications at state facilities, such as solar-powered parking lot lighting. All state agencies that own adequate land resources could assess the feasibility of installing renewable resource electricity generation on those lands.

6. **Department of Energy (Energy) Actions.** Energy could undertake the following:
 - a) Help increase the number of state employees using the telework program by offering training and other assistance. Telework helps reduce the amount of carbon dioxide emissions and relieves traffic congestion. The State of Oregon could take advantage of telework where there are opportunities to improve employee performance, reduce commuting miles and produce agency savings.

 - b) Through life-cycle cost-effective energy measures, develop a program so that each agency reduces its greenhouse gas emissions attributed to facility energy use by a defined percentage by a defined date compared to such emissions levels in 2000. In order to encourage optimal investment in energy improvements, agencies could count greenhouse gas reductions from improvements in nonfacility energy use toward this goal.

7. **ODOT Actions.** ODOT could undertake the following:
 - a) Develop specific sustainability measures and criteria for the demolition, design and construction of bridges in the state.

 - b) Oversee development of an Environmental Management System (EMS) in the Maintenance Division by a certain date to minimize the environmental impacts of the maintenance of the transportation system throughout Oregon while providing an effective transportation system that supports both the economic activities of the state and the livability of communities. The Environmental Management System could be documented so that cost and time savings can be identified along with environmental protection improvements. The documentation would be designed as a model for other ODOT Divisions, other state agencies, and other large government entities.

8. **The Department of Environmental Quality (DEQ) Actions.** DEQ could undertake the following:
 - a) Continue efforts to develop and implement a cost-effective and collaborative strategy for reducing the amount of toxics in Oregon's air, land, and water, in support of the Agency's strategic priorities; promote opportunities within Oregon to minimize toxic releases, properly manage toxics, reduce exposures to toxics, and identify alternatives for products that contain toxics; examine what other states are doing to eliminate the use of certain toxic materials and determine whether such programs are applicable to Oregon. An initial focus of the effort could

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be to develop a strategy for reducing mercury. DEQ could develop a mercury reduction strategy, including recommendations for efforts to be undertaken to reduce mercury, as well as targets and specific measures of progress. Future efforts could focus on developing strategies, consistent with the approach above, addressing reductions for other toxics, focusing on, but not exclusive to, those that are persistent and bioaccumulative.

- b) In consultation with interested stakeholders, develop a strategy to promote clean diesel technology in Oregon that considers public health, environmental impacts, cost, economic development, the role of renewable fuels and other relevant factors.

9. The Land Conservation and Development Commission Actions. LCDC could undertake the following:

- a) Work with the "Committee on Land Use Planning" group (HB 2912) to assess the ability of Oregon's land use planning system to enhance planning for sustainable communities and to recommend changes needed that would improve the ability of the state and local land use planning programs and services in encouraging sustainable communities.
- b) Work in partnership with other government agencies and the private sector to develop a system to certify that communities and/or development projects as sustainable.
- c) Continue to work with the Ocean Policy Advisory Council to evaluate and plan for a limited system of marine reserves to address the economic concerns of the commercial and recreational fishing industry and coastal communities while meeting the conservation objectives of Statewide Planning Goal 19.
- d) Help maintain a land base to support sustainable agricultural and forest industries in accordance with its performance measures regarding land zoned for exclusive farm or forest use outside urban growth boundaries.
- e) Allocate grants to local government with a priority on planning activities that directly assist in promoting economic development and sustainable communities.
- f) Work with the Oregon Department of Energy and local governments to plan for and site renewable energy projects such as wind facilities.
- g) Continue to work with local governments through programs like the Transportation Growth Management program to encourage development patterns that foster sustainability.
- h) Work with local governments to develop capitol improvement and infrastructure plans that support sustainable development.

10. The Department of State Lands Actions. DSL could undertake the following:

- a) Partner with the Oregon Department of Agriculture, the Bureau of Land Management, NRCS, and its lessees to identify and treat noxious weeds on state owned land.
- b) Initiate a program to assess rangeland health and create long-term plans that achieve sustainable management of rangelands.
- c) Participate in collaborative efforts to find viable commercial uses and ecologically beneficial storage sites for dredging spoils.
- d) Participate in research at the South Slough National Estuary aimed at supporting sustainable aquacultural industries and developing scientifically sound techniques for restoration of estuarine and riparian habitats.

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- e) Explore the potential for wind generation and other alternative energy sources on state-owned land.

11. The Oregon University System (OUS) Actions. OUS could establish guidelines and a program to expand the reach of the sustainability efforts the universities have already made in curriculum, research, and operations.

State Agency Guidance for Implementing

Governor Kulongoski's
Executive Order 03-03

A Sustainable Oregon for the 21st Century

Prepared by the
Oregon Sustainability Board

1 November 2003

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Introductory Statement by the Governor

The principle of sustainability is at the heart of what makes - and keeps - Oregon such a special place to live. It is also an integral part of my efforts to revitalize Oregon's economy and improve state government.

My Sustainability Initiative will guide the way for Oregon to achieve greater economic prosperity, more vital communities and a healthier environment. We will only succeed when we view these three goals as inseparable. We cannot afford to pursue economic strategies at the expense of the quality of life that makes Oregon a sought-after place to live and work. We must strive to imbed sustainability into the fabric of Oregon's economic and social, as well as environmental, policies.

We are undertaking an ambitious program and we are fortunate to have an excellent foundation on which to build. Governor Kitzhaber's Executive Order, the Oregon Sustainability Act, the work of the Progress Board, and many other public and private activities throughout the state give us a superb basis for Oregon to take sustainability to the next plateau.

Issuing an Executive Order is only the first step in this journey. Sustainable development is not something that is done to us - or for us. It is something all of us must do together. I know that we will not move far without bringing to bear the intelligence, insight, dedication and humanity of state employees and our many partners outside state government.


In some cases, the actions we must take are clear and we can and should take a leading role. In others, accomplishing our objectives will require help, guidance and participation from other stakeholders. I know that considerable expertise already exists within many agencies, and that outside expertise is available to help.


To focus our efforts in these financially constrained times, my Executive Order asks 20 agencies to undertake sustainability programs in the immediate future. This does not mean that other agencies should not undertake such efforts on their own. I have encouraged them to do so and I applaud their self-initiative.

It is time to say that just doing a little better isn't good enough. The buck stops with this generation, with this administration, with us. I look forward to telling Oregonians about the results of our efforts.



Theodore R. Kulongoski
Governor

 *If not us, who?*
If not now, when?
John F. Kennedy

 *We must be
the change
we wish to see.*
Mahatma Gandhi



Introductory Statement by the Sustainability Board

Welcome to the State Agency Guidance for state agencies (Guidance). This Guidance is designed to help agencies put the concepts of sustainability into practice, ensuring sound stewardship of our human, economic and natural resources for today and tomorrow.

The Legislature established the state's overall sustainability policy when it adopted the Oregon Sustainability Act (ORS 184.423). In order to implement the Act, Governor Kulongoski issued Executive Order 03-03, which directs the Sustainability Board to oversee the process for carrying out the Act. The Governor's goal, above all, is that the 20 agencies identified in the order take steps to turn the general concept of sustainability into concrete, measurable actions.

We do not want this Guidance to result in agencies entering into long planning processes. The premium will be on moving quickly to take concrete actions. To illustrate how this can happen quickly, the Board adopted recommended actions for seven agencies in July 2003¹. These actions, while imperfect and small in themselves, are nonetheless examples of concrete actions that are within the means of agencies to implement immediately. These actions will contribute to moving the state down the path toward sustainability.

By using this Guidance, your agency will determine how it can contribute to achieving the state's objectives. Many agencies are already doing a lot, and this guide will help them organize and take credit for their sustainability efforts. Other agencies are just getting started, and our intent is that this Guidance will help them take the first steps.

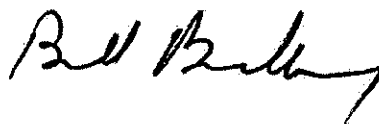
This Guidance is aimed at the 20 agencies named in Appendix A. Sustainability coordinators from those agencies will lead the efforts to implement the Governor's Executive Order. Most are familiar with the principles of sustainability from their work with the previous executive order. We provide, first, a very brief statement of the ultimate goals of the initiative. Then, in several appendices, we provide details on specific aspects of the initiative that the agency coordinators may find useful.

■ *The key to this program is "actions speak louder than words."*

¹ Go to <http://www.sustainableoregon.net> to review the recommended actions.

The Board appreciates the progress that agencies have already made in adjusting internal operations to reduce waste, save energy, and purchase more sustainable products. These efforts should continue and expand. The next more fundamental stage of the process is for state government to look carefully at the policies, services, and programs it manages, with an eye toward improving the sustainability of Oregon.

This Guidance will be updated periodically. To stay up to date on what is happening with sustainability in Oregon, please visit the state website at: <http://www.sustainableoregon.net/oregon/index.cfm>. This site also provides links to many sources of excellent information.



Bill Bradbury

Secretary of State and Oregon
Sustainability Board Chair

Sustainability Guidance

■ **ORS184.421 definition of sustainability:**
" 'sustainability' means using, developing and protecting resources in a manner that enables people to meet current needs and provides that future generations can also meet future needs, from the joint perspective of environmental, economic and community objectives."

- **Key points for implementing the program in your agency**
- *Integrate sustainability into your strategic plan.*
 - *Look beyond your own agency for support and impacts.*
 - *Set at least one mission-related goal and 3 actions to complete in one year.*
 - *Assign responsibility.*
 - *Set metrics.*
 - *Assess results.*

1. What we mean by sustainability

Numerous short definitions of sustainability exist. In essence sustainability asks us to achieve these five basic objectives:

- Develop a vibrant economy and strong communities.
- Ensure that resources used can be reused indefinitely by nature and man.
- Enhance local and regional self-reliance and human well-being.
- Maintain and restore (where needed) the viability, integrity, and diversity of natural systems.
- Preserve Oregon's legacies for future generations.

These five simple statements are intuitive and simple. Many agencies are already taking actions that conform to them. An enormous task lies ahead of us to change how we do things to fully accomplish these objectives. But we have to start somewhere, and that is what Governor Kulongoski's Executive Order asks us to do².


2. How this initiative fits into your agency

Work done to comply with this Executive Order should be fully integrated into other normal agency processes. Agencies with existing strategic plans and visions should integrate sustainability goals, objectives and actions into them. At a minimum, agencies should integrate sustainability into the two- and six-year plans that are required as part of their normal budget development process³. Stand-alone sustainability plans or programs are not recommended.

In addition agencies are asked to look beyond the confines of their individual visions and missions to develop strategies that leverage the efforts of their partners, thus achieving multiple benefits. This initiative will fail if each agency retreats inward, develops its own actions and ignores the potential synergies with other state agencies, with other government agencies, and with private entities.

² See Appendices B and C for further discussion of "sustainability." See Appendix E for web links to further information.

³ See 2003-2005 Budget and Legislative Concept Instructions for an example. These will be updated for the 2005-07 biennium by approximately February 2004.

 *The sustainability initiative should help accomplish your agency mission, not compete with it.*

This initiative may at first seem overwhelming. To get an idea of how it can materially assist you in meeting your agency's mission, we invite you to review the efforts of three public agencies as a source of inspiration:

- **US Army:** <http://www.envquest.com> (see Fort Lewis website in particular)
- **City of Seattle:** <http://www.cityofseattle.net/environment/>
- **City of Portland:** <http://www.sustainableportland.org/default.htm>

3. Where you can look for potential actions

We have developed a list of potential areas you can consider, provided below. This is not an exhaustive list, and some items may not apply to your agency at all⁴.

Planning for sustainability can present a bewildering number of potential actions an agency can take. This section and the next section can help those agencies just beginning this journey to hone in on a manageable set of actions. More advanced agencies can skip to Section 5. All agencies are encouraged to review the supplementary materials provided in the appendices for new ideas, using the list of objectives in ORS 184 as a starting point.

Possible Action Areas for Agencies

PURCHASING

- Vehicles & equipment
- Building materials
- Chemicals, cleaning & coating materials
- Food
- Office equipment and furnishings
- Product stewardship
- Paper products
- Green buildings and operations
- Workforce development
- Citizen involvement
- Stakeholder reporting
- Environmental justice
- Education
- Public safety
- Workforce diversity

COMMUNITY HEALTH

- Smart growth
- Brownfields redevelopment
- Infrastructure (transportation, water, sewer, etc.)
- Viable industry
- Fair contracting

HEALTHY ECOSYSTEMS

- Watershed management
- Chemical & nutrient management
- Instream, riparian and wetland conditions
- Landscaping management
- Land management
- Biodiversity and habitat conservation
- Forests and agriculture

continued on next page

⁴ As part of this process, agencies should also review the sustainability objectives adopted by the Legislature, ORS 184.421 *passim*. AXIS Performance Partners has an excellent guide to help sort through all these topic areas. (*Identifying Environmental Impacts*, available at <http://www.pacifier.com/~axis>).

Possible Action Areas for Agencies (continued)

ENERGY

- Facilities, vehicles, and equipment
- Office equipment
- Work travel
- Employee commuting
- Alternative fuels and green power
- Telecommuting

ECONOMY

- Life-cycle costing
- Local economic stability
- Predictable, fair business climate
- Regulatory streamlining
- Strengthening the economic base

POLLUTION AND WASTE REDUCTION

- Construction and demolition
- Recycling & waste reduction
- Toxic or hazardous substances
- Food waste
- Other major waste streams
- Climate change

4. Selecting the actions to take

How do you narrow your actions to just a few⁵? The following criteria and questions can help guide the selection process:

- Quick Wins:** Choose the easily accomplished, low-cost actions that will show measurable progress in the near term.
- Cost Savings:** Choose actions that demonstrate cost savings to the agency and the state. Some of these cost savings can help fund future sustainability efforts.
- Efficiencies:** Choose actions that improve government efficiency, delivering better service or serving more customers with no increase in cost.
- Educational/Visible:** Choose actions with educational value for employees or others. Employees and others will be able to see what you are doing and will be told why you are doing it.
- Synergy:** The benefits and lessons of the project can be used in many other agencies, multiplying the benefits many times over. Your project might be the catalyst for many other positive actions.
- Comprehensive:** This is usually not difficult to achieve, but agencies should review their actions to be sure that they positively impact the three legs of sustainability: economy, society and environment.
- Use Your Leverage:** Do we have real leverage to act on this item at all?
- Make a Difference:** If we took action on this item, would it make much difference to enhancing our sustainability?
- Adjust Current Activities:** Are there opportunities to modify existing agency activities to make a change rather than starting something new?
- Measure Performance:** Do we already have data that measures where we are today so that we can more easily measure change in the future?


⁵ This Guidance has set a minimum requirement of three actions, but agencies are encouraged to develop as many as they wish.

DAS will take overall responsibility within state government for purchasing programs and greening state buildings, so agencies that wish to develop similar projects should check first with DAS to avoid duplication.

5. Coordinating with other state agency efforts

Four major cross-agency efforts are underway that all agencies should be aware of to take advantage of the leverage that comes from these efforts and so as not to repeat efforts already underway. Agencies are encouraged to create other cross-agency efforts, for only in that manner can the full potential of the sustainability initiative be realized.

- a. **Department of Administrative Services:** Beginning under the previous Executive Order, DAS has initiated a number of activities that all state agencies can participate in. Current DAS programs include:
 - General Purchasing: establishing statewide purchasing guidelines for green products and participating in the purchasing alliance with other western states.
 - Electronics recycling: DAS will oversee the program enacted by the 2003 Legislature to examine ways to reduce the amount of electronics products going to landfills.
 - Green Buildings: DAS adopted initial green building guidelines and will be reexamining and significantly improving them during 2003-2004.
 - Motor Vehicles: DAS will strengthen its guidelines on purchasing of motor vehicles.
- b. **Department of Consumer and Business Services:** DCBS was ordered under Governor Kulongoski's first executive order to oversee implementation of a government regulatory streamlining initiative. The regulations of all state agencies are being reviewed in order to identify improvements, and many have already been implemented.
- c. **Governor's Economic Revitalization Team** (formerly Community Solutions Team): The Governor's Economic Revitalization Team (GERT) has been the principal state entity attempting to implement the ten community-related objectives established in the Sustainability Act (see Appendix D.) Its work has been coordinated with the National Policy Consensus Center at Portland State University, which sponsors public-private partnerships under the name of Oregon Solutions to resolve complex social-economic-environmental issues (See Appendix F for further details.) Many agencies in addition to the six that formerly make up the GERT have participated in projects during the past two biennia.
- d. **Department of Energy:** DOE is responsible for the overall implementation of the energy policy of the state. It serves as a consultant to all state agencies, and has funds available for state and private energy conservation projects. It works closely with the Oregon Energy Trust, which also has programs that can assist with energy conservation and education.

 *Agencies that have already undertaken activities as a result of the July 2003 actions by the Sustainability Board should include the action(s) as part of the plan. Agencies, of course, are encouraged to take on more than three new actions.*

6. Contents of a sustainability plan


Agencies are required by the Executive Order to present their sustainability plans for approval to the Sustainability Board within 90 days of the issuance of this Guidance. The plan need not be lengthy or elaborate⁶. It should at a minimum, contain these sections:

- a. **Goal(s):** Describe at least one overall goal for sustainability that conforms to the agency's mission and vision. The goal should "stretch" the agency beyond its normal practices. It should be fully compatible with your legislatively approved 2003-2005 budget.
- b. **Current Actions:** Describe current actions already underway. (For many agencies this was already prepared as part of the report to the 2003 Legislature by the Board.) It is important to recognize and celebrate how much your agency has already done. Discuss barriers you have encountered in implementing current activities and recommend ways to overcome them.
- c. **Three (or more) Actions:** Define at least three new actions that the agency will implement within a year.
- d. **Define Effect of Actions:** Describe how those actions will move the agency toward greater sustainability.
- e. **Performance Measurement:** Define how the agency will measure its progress toward accomplishing the three or more actions. Targets should be quantifiable.
- f. **Responsibility:** Describe who will be responsible to carry out the sustainability initiative within the agency.
- g. **Communications Program:** Describe the agency's internal communication and education program related to sustainability.
- h. **Fitting into Agency Strategic Plan:** Describe the process the agency will use to incorporate the sustainability program into the agency's strategic plan, including the process for updating them.
- i. **Coordination with Other Agencies:** Describe actions the agency will take to integrate its activities with other state agencies and, where applicable, with other government entities and private entities.

7. How your plan will be reviewed and updated

The Sustainability Board will review the plans and either approve them or return them with comments and suggested improvements. These criteria are:

- a. Has a clear sustainability goal been set that conforms to the agency's mission and vision and that "stretches" the agency beyond "business as usual"?
- b. Does the plan describe current actions already underway and analyze barriers?
- c. Does it define at least three actions to be implemented this biennium, with a schedule for implementation?
- d. Does it clearly show how those actions will move the agency toward greater sustainability?

 *The Board does not intend to create a lengthy review-revision process, but only to assure that plans meet common criteria.*

⁶ Plans of 15-40 pages will be sufficient. You can supplement the plan by reference to other agency documents. We do not recommend inserting photos in the plans because they make the files very large and inhibit electronic transmission.

-
- e. Does it show how the agency will measure its progress toward accomplishing the actions? Are the targets set measurable and time-limited?
 - f. Does it describe who will be responsible to carry out the sustainability initiative within the agency?
 - g. Does the plan describe the agency's internal communication and education program related to sustainability?
 - h. Does it clearly show how the sustainability initiative is hard-wired into the agency's strategic plan, including the process for updating?
 - i. Does it show how the agency will integrate its actions with other agencies and, where applicable, with other government entities and private entities?

During the next year the Board will develop additional guidance on how future updates to the plans will be done. At a minimum, the Sustainability Board will ask for annual progress reports from agencies.

8. Resources that are available to help

The Governor intends to designate a sustainability advisor to work with the Sustainability Leadership Team⁷ to assist the team, the Board and agencies in implementing the executive order.

The Sustainability Leadership Team intends to hold trainings for sustainability coordinators.

The Progress Board has considerable expertise in defining metrics and targets for sustainability. There are many written sources of information on this, too.

Oregon is fortunate to have some of the most experienced practitioners of sustainability in the world. These people work in public and private organizations and many are available on a consultancy basis. Some are available on a volunteer basis. In addition, there are formal and informal networks available on-line.

Other agencies are also excellent sources of help. Both the Departments of Housing and Community Services (www.hcs.state.or.us) and Parks and Recreation (http://www.oregonsolutions.com/agency/parks_rec_report.cfm) have developed sustainability plans. The Department of Economic and Community Development has been a leader in implementing the previous Executive Order. The Department of Energy has many resources to help with energy aspects of sustainability plans.

Appendix E provides further sources of guidance and information.

⁷ The Sustainability Leadership Team was established in the Executive Order.



Appendices




Appendix A

State Agencies and Agency Sustainability Coordinators

Agency Name	Agency Director	Sustainability Coordinator	E-mail Address	Phone
Administrative Services	Gary Weeks	George Dunford	<i>george.m.dunford@state.or.us</i>	(503) 378-4027
Agriculture	Katy Coba	John Szczepanski	<i>john.r.szczepanski@state.or.us</i>	(503) 872-6613
Consumer & Business Services	Cory Streisinger	Scott Harra	<i>scott.l.harra@state.or.us</i>	(503) 947-7957
Corrections	vacant	Sue Acuff	<i>sue.m.acuff@state.or.us</i>	(503) 945-9007
Division of State Lands	Ann Hanus	John Lilly	<i>john.lilly@state.or.us</i>	(503) 378-3805 Ext. 281
Economic & Community Development	Marty Brantley	Rich Grant	<i>rich.grant@state.or.us</i>	(503) 986-0159
Energy	Mike Grainey	Larry Gray	<i>larry.v.gray@state.or.us</i>	(503) 378-8607
Environmental Quality	Stephanie Hallock	Andy Ginsburg	<i>andy.ginsburg@state.or.us</i>	(503) 229-5397
Fish & Wildlife	Lindsay Ball	Gail McEwen	<i>gail.a.mcewen@state.or.us</i>	(503) 947-6035
Forestry	Marvin Brown	Ted Lorensen	<i>tlorensen@odf.state.or.us</i>	(503) 945-7206
Housing & Community Services	Bob Repine	John Fletcher	<i>john.fletcher@state.or.us</i>	(503) 986-6721
Human Services	Jean Thorne	Linda Riddell	<i>linda.c.riddell@state.or.us</i>	(503) 945-5817
Land Conservation & Development	Nan Evans	Ann Beier	<i>ann.beier@state.or.us</i>	(503) 373-0050 Ext. 255
Oregon University System	Richard Jarvis	Bob Simonton	<i>bob_simonton@ous.edu</i>	(541) 346-5728
Parks & Recreation	Michael Carrier	Tim Wood	<i>tim.wood@state.or.us</i>	(503) 378-4168 Ext. 238
Progress Board	Jeff Tryens	Jeff Tryens	<i>jeffrey.l.tryens@state.or.us</i>	(503) 378-3202
Public Utility Commission	Rick Willis	Sandy Berger	<i>sandy.berger@state.or.us</i>	(503) 373-0044
Transportation	Bruce Warner	Barbara Fraser	<i>barbara.k.fraser@state.or.us</i>	(503) 986-4127
Water Resources	Paul Cleary	Phil Ward	<i>phillip.c.ward@state.or.us</i>	(503) 378-8455 Ext. 247
		Debbie Colbert (back-up)	<i>debbie.l.colbert@state.or.us</i>	(503) 378-8455 Ext. 316
Watershed Enhancement Board	Geoff Huntington	Jay Nicholas	<i>jay.nicholas@state.or.us</i>	(503) 986-0181

Appendix B

BACKGROUND ON SUSTAINABILITY

 *In practice, sustainability means applying some basic principles to the decisions we make.*


The goal of sustainability is to simultaneously improve environmental, economic, and community health for today and for future generations. Sustainability occurs when human activity does not adversely affect the quality of the environment and resource base available for future generations of living things on the planet.

While this goal isn't new, the current situation is. The world today faces unprecedented economic needs and threats to the natural systems we all depend upon. Challenges such as hunger and poverty, global warming and massive loss of habitat and species signal a need for new strategies that responsibly manage the way we live on the earth.

Within the three-part definition of sustainability there is an implicit hierarchy. We live on an earth that is governed by certain natural laws, and we cannot survive without the "goods and services" provided by the earth's natural and physical systems. Living on the earth we have many social systems, and each has an economic system of some type. Without a well-functioning social system, an economic system cannot be productive. In short, the sustainability hierarchy runs this way: the **natural and physical systems** of the earth provide the basic sustenance for **social systems**, each of which has an **economic system** that serves it.

However you decide to define sustainability for your agency, the word "sustainability" will only become meaningful when it is defined in the context of what your agency does and how that fits into the community it serves, the ecology it lives in, and the government system it is part of. By discussing and debating what it is, you will develop a definition that is relevant to what your agency does in context of the larger system (all state and local agencies, your customers, the economy, employees, and the environment).

Sustainability objectives

 *The word sustainability will only become meaningful when it is defined in a context relevant to your agency mission.*

When the discussion of sustainability moves beyond the very general ground of the definition in the Sustainability Act or the definitions provided in this Guidance, it enters potentially perilous ground. Almost everyone can embrace the general concept, but when it comes down to articulating the actual principles to follow, controversy arises. And, when you describe the actual actions you intend to take, more controversy can ensue.

We cannot avoid this controversy. A healthy debate about what we "really, really" mean when we say we want to be more sustainable is needed. To help spur the discussion, we provide below some principles for environmental, social and economic sustainability. Not all will agree with these, but they provide a point of departure for discussion.

Environmental objectives

The basic environmental objectives or principles are derived from the laws of nature. A number of organizations and books describe these principles in various ways, but they can be summarized as:

- Assure the functionality of the life-supporting services provided by the world's "natural capital" (air, water, minerals, natural ecosystems, soil, etc.).
- Obtain the greatest utility from our products and processes, using less material and less energy.
- Phase out the use of substances that cannot be readily integrated back into the cycles of production (sometimes called zero waste or cradle-to-cradle principles). As a last resort, dispose of toxic substances in a manner that they cannot reenter or harm that environment.
- Do not harvest or manipulate ecosystems beyond their productive capacities, and invest in ecosystems to restore those that have been degraded.

Economic and social objectives

The social and economic aspects of sustainability have a common basis in the concept of social justice. Social justice represents a belief that there are some things which people should have, that there are basic needs that should be fulfilled, that burdens and rewards should not be spread too divergently across the community, and that policy should be directed with impartiality, fairness and justice towards these ends. Some examples of actions that contribute to social and economic sustainability are:

- Assuring a solid economic base for a community.
- Paying a fair wage.
- Providing a predictable and fair environment for businesses and other organizations to operate in.
- Selecting vendors with a sustainability ethic toward their products and services.
- Offering employees opportunities for advancement.
- Building long-term trade relationships.
- Providing healthy and safe working and living conditions.
- Informing the public in a timely manner about conditions that might endanger health, safety or the environment.
- Conducting business and government transparently and openly reporting progress in implementing programs.

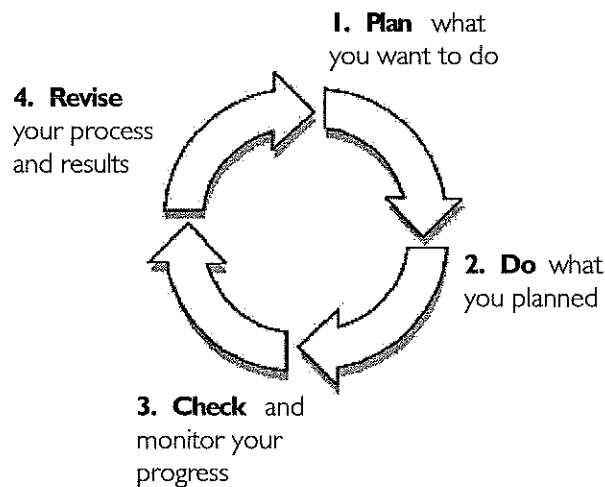
Appendix C

A PRIMER ON DEVELOPING AN AGENCY PLAN

This section describes a basic strategic planning process that can be applied to developing the sustainability plan or the agency's overall strategic plan.


The Executive Order calls for twenty agencies to prepare plans. Some agencies have sustainability initiatives well underway, others are just getting started. Some agencies have even completed sustainability plans. Whatever the case, putting sustainability into practice is a process of continual improvement, so even agencies who are far along will want to develop methods to improve and update their plans.

Anyone who has been involved in Total Quality Management or other organizational improvement programs will recognize the diagram below. There is no point in repeating the wealth of material that exists on this subject here. We provide only a very brief synopsis of the basic steps. Suggested reading, guidance, web links for examples, handbooks and plans, and more in depth reading on sustainability can be found in Appendix E.



I. Plan — know where you are going

The planning phase is the Achilles heel of many strategic or sustainability plans, for it is easy to get bogged down. It is important to respect the fact that agencies are at many different levels in doing either strategic planning or sustainability planning. Some agencies may be at a pilot phase where they are just getting started. Or they may be at a more advanced stage. It would be a mistake for all agencies to try to achieve an advanced stage at the beginning. Agencies are cautioned to start this process where they are, not where they would like to be. Keep it simple, start with small, achievable and smart actions that create wins to build on. Be wary of creating create a paper tiger or something for which costs exceed returns or grows too big too fast.

 *An ability to take risks and try new things is essential to successfully implementing a sustainability program.*

During the Planning phase, the key steps are:

- Prioritize
- Set goals & targets
- Identify specific actions to achieve your goals and targets

For more detail on this activity, see the section "Creating an Action Plan" later in this appendix. AXIS Performance Partners has an excellent guide for identifying your environmental impacts, which can be a first step in determining what projects you may want to undertake. (*Identifying Environmental Impacts*, available at <http://www.pacifier.com/~axis>).

2. Do — implement the plan

Here you will implement your projects and develop the necessary internal support systems to make sure they work out the way you intended. Over the long-term, agencies that see themselves as 'learning organizations' that are willing to experiment and make mistakes will have the greatest success implementing a sustainability program. In large part this is because there are no road maps to sustainability, and our knowledge of how to get there is limited.

3. Check — measure your progress

Track how the projects are going and how well your systems are functioning.

4. Revise — improve your plan

In this phase, you review what has happened and make appropriate adjustments to the projects or your management systems.

Once your sustainability initiative is underway, you'll be ready to look for new opportunities (back to #1).

Helpful information for the Plan-Do-Check-Revise Cycle

Thinking about your leverage points

Typically, agencies are organized to pursue a narrow set of goals. In identifying impact areas, consider the following tools or leverage points that you have:

- Education & information:** Does the agency have opportunities to raise awareness among citizens and businesses? Is the agency engaged in monitoring and reporting on sustainability goals?
- Incentives:** Can the agency provide any incentives or disincentives for sustainable actions by citizens or businesses?
- Regulation:** Does the agency create regulations that support or impede sustainable actions by citizens or businesses?
- Investment:** Are agency investments in conflict with state sustainability goals and policies?
- Partnerships:** Can the agency develop or participate in public-public or public-private partnerships that can support the state's sustainability efforts? The

Sustainability Board has identified certain types of partnerships that it believes can be particularly valuable to the state's efforts:

- **Other State Agencies:** The first place you should look for partners is other state agencies.
- **Oregon Solutions:** This non-government organization was established to bring together the state, local governments, private interests and non-profit organizations to develop sustainable solutions to community-based problems throughout the state. To date Oregon Solutions has undertaken over 25 projects. The Governor directly supports this activity by designating Oregon Solutions projects and appointing neutral convenors to lead a team to address the challenge. See <http://www.orsolutions.org/>. See also Appendix F.
- **Private Industry:** There are a number of significant private industry initiatives. Individual industries in Oregon have distinguished themselves worldwide by being leaders in the movement.
- **Non-profit Organizations:** Oregon is home to some of the best recognized NGO institutions in the world, including the Oregon Natural Step, the China-US Center for Sustainable Development, and the Zero Waste Alliance.
- **Local Government:** A number of local governments have undertaken their own sustainability initiatives.
- **Other states and countries:** Many other states and countries have undertaken sustainability initiatives and other actions that move us in the direction of sustainability. We will look for opportunities to join efforts with them.

Building organizational support

An agency sustainability program needs organizational support to produce lasting results. It needs champions who provide leadership and staff who understand how they can contribute. Sustainability goals need to be reflected in the plans, policies, and other management systems that the agency uses for direction.

The Executive Order calls on 20 agencies to appoint a high-level staff member to head the agency's sustainability effort. The Governor does not expect this individual to develop and implement the plan on her or his own. Rather, the program will need to be a cooperative effort reaching broadly into the agency. We recognize that developing and implementing agency-wide initiatives is time consuming and can be costly. Therefore, each agency is expected to use its discretion in determining who needs to be involved and the level and depth of involvement needed by all agency personnel.

With respect to your agency's sustainability leadership team, it will be important to decide who needs to "be at the table" in your agency to have a successful program. In determining this, ask yourself if the team includes these sorts of people:

- Sustainability experience: your in-house experts with knowledge and experience in sustainability.
- Balance: people with zero sustainability experience who will provide balance.

■ *To support significant change in an organization, you'll need to:*

- *Create a compelling 'business' case for change*
- *Elicit top management buy-in*
- *Produce quick wins along with long-term programs*
- *Develop shared mental models so you can communicate effectively across the organization*
- *Align with the rest of your organizational systems and cultures*
- *Manage personal transitions/losses*
- *Become self-funding and provide platforms for future steps*
- *Make the most of symbolism, stories and actions*

Adapted from: AXIS Performance Partners, *Developing an Implementation Plan*, 2001, p 11.

■ *The move toward sustainability is an evolutionary shift involving changes in fundamental ways of thinking about the world.*

- **Connections:** people who communicate well within the agency.
- **Institutional knowledge:** people familiar with the full breadth of agency activities.
- **Diversity:** people who broaden representation in terms of gender, race, age, etc.

Orientation, training & communication

As you introduce sustainability into your agency, you will encounter a range of orientation and training needs. There is already considerable understanding of the basic principles of sustainability among members of many agencies as a result of work done under the Kitzhaber Executive Order. Staff in many agencies attended training sessions by The Natural Step and in some cases the agencies have begun to implement internal sustainability action plans.

Things to think about as you develop your training and communications strategy:

- a. Where behavior change is desired, it is especially important that the process honor the culture of the agency and that employees be involved to the maximum extent practical in developing and implementing the program. Each agency will differ on how it wants to create such involvement, and time and budgets will limit how much is practical. In general, however, the more that staff is involved in the program and is informed about it, the better chance the agency will have of being successful.
- b. There are many ways to educate staff about sustainability. This can occur in classroom-like situations but also through displays, brownbags, and other more informal means. Given the limited budgets for training in most agencies, agencies will need to be creative in approaching the issue of communications. Two excellent, low cost guides on these issues can be obtained from AXIS Performance Partners, titled *Making Sense of Sustainability – An Employee Guide, and Training Employees on Sustainability*. (<http://www.pacifier.com/~axis>). Portland State University has developed a graduate-level certificate program in sustainable development that would provide agency Sustainability Coordinators with an excellent base for their work: http://www.sustain.pdx.edu/ap_continuing_ed.php.
- c. Unless staff hears about the program continuously, the velocity and trajectory of the program is likely to be disappointing. Communication is a vital element that drives the spread of new ideas.
- d. A major challenge for sustainability educators is that the information about sustainability can be overwhelming. It is a delicate balancing act to provide enough information to understand the importance and urgency of action while avoiding a rush of discouraging "gloom and doom". The education step will fail if it paralyzes the team. One way to get past the feeling of being overwhelmed is to look at what has worked for other organizations and copy them.

Creating an action plan

After you have completed an initial assessment of opportunities for your agency, the next step is to create a plan that sets the direction for your sustainability initiative. This section provides suggestions on how you might accomplish this by:

- 1. Prioritizing**
- 2. Setting goals & targets**
- 3. Identifying specific actions to achieve your targets**

1. Prioritizing

If your agency reviewed the possible actions listed in Section 3, you probably identified more impact areas than you can effectively tackle. At this stage, you want to focus your efforts strategically. Here are three key things to look at:

Impact

Where does your agency have the greatest opportunity to benefit the economy, the environment and the community? It might be those areas that account for most of your resource use and costs. It might also be areas that have very acute impacts. For example, toxic substances can have tremendous impact even when used in small quantities. Criteria are:

- Benefits for Oregon business (e.g. switching to a product made by a local company)
- Benefits for the environment (e.g. restoring fish habitat that also improves recreational opportunities)
- Benefits for the community (e.g. designing a stormwater facility that also adds neighborhood greenery)

Influence

Your greatest opportunity to make a difference may be in those areas where you can influence or support others in the community. Also sometimes lower impact projects have high potential for generating attention and gaining the interest of employees.

- Visibility (e.g. increasing recycling at a building with high volume of public visitors)
- Support for community initiatives (e.g. participating in a local campaign to eliminate mercury switches and thermometers)

Investment

Companies like NIKE and Norm Thompson Outfitters have shown a positive rate of return on their sustainability projects. If you want your sustainability program to last, you'll need to identify projects that contribute to the organization, financially, or in terms of improved worker morale, safety or customer relations. The program needs to fit with what you're already doing. Criteria are:

- Cost effectiveness (e.g. switching to energy-efficient lighting)
- Timely activities (e.g. focusing on a large upcoming construction project)
- Ease of implementation (e.g. integrating sustainability into an existing process improvement project)
- Benefits for employees (e.g. eliminating chemicals that pose health or safety concerns)

Stay focused.
There will be a temptation to set too many performance targets and to expect sweeping changes.

2. Setting goals, performance measures and targets

Once your agency has identified its priorities, the next step is to clarify what you plan to achieve and how you will measure your progress. Goals provide a broad statement of direction. Performance measures help you identify, specifically, what you intend to achieve. Each measure should be accompanied by a target, providing the desired level of a performance measure at a specific point in time. Agencies are strongly advised to follow the state's guidelines for developing goals and performance measures. (See DAS budget guidelines at <http://www.econ.state.or.us/opb/PerfMeas/Guidelines.doc> for details.)

Even an agency with unlimited resources cannot implement too many changes simultaneously. So the strategies developed during this step should be focused narrowly. Note that in the sample below, energy use is measured on a per square foot basis. In other cases, results might be measured on a per acre, per employee, or per work output basis. These types of measures facilitate comparison with others. They also ensure that changes in levels of activity or output aren't mistaken for increases or decreases in efficiency. See the inset below for an example of combination goals and targets set by a local government agency.

Sample goal: Decrease energy use

Sample performance measure and target: Decrease energy use per square foot in our HQ building by 15% by 2004.


METRO Environmental Action Team (ENACT)

INTERNAL SUSTAINABILITY GOALS AND TARGETS FOR METRO FACILITIES AND OPERATIONS RESOLUTION 03-3338

1. Zero net increase in carbon emissions.
2. Zero discharge of persistent bio-accumulative toxins.
3. Zero waste disposed and incinerated.
4. Fifty percent reduction in water consumption.
5. Zero net loss of biodiversity and productive healthy habitat for forests and riparian areas.

3. Identifying strategies and actions to achieve your goals

What will it take to meet your targets? At this point in the process you will need to break the task down into discrete steps, make assignments to responsible parties, and set a schedule. This mirrors what agencies already do over and over when implementing other types of programs. Make sure that the tasks you identify are written into the appropriate agency workplans.

 *The noble concept of sustainability has little meaning unless we set measurable goals and chart our progress toward them.*

Discussion about performance measures

A key focus of the Kulongoski administration is to harness the capacity and creativity of the public and private sectors to grow quality jobs and ensure statewide prosperity. Two building blocks of this effort are the sustainability and government performance initiatives. The performance initiative, led by the Department of Administrative Services and coordinated with the Progress Board, focused on developing and implementing approaches to measure and improve the performance of state government. These concepts fit naturally with the goals of economic recovery and government performance, so the sustainability program will be integrated closely with them.

Fortunately, in Oregon we have almost 20 year's experience measuring our state under the guidance of the Oregon Progress Board. Statewide benchmarks have been developed and updated continually over this period. In addition, under direction from the Legislature, all state agencies have developed measurable performance goals for their activities that are tied directly to the benchmarks (see: <http://www.econ.state.or.us/opb/PerfMeas/Guidelines.htm>). These performance goals are not tied to measures of sustainability, but they are a beginning.

Our goal is to frame an ongoing process that will move us along a pathway toward sustainability rather than to describe in detail the fixed endpoint we are trying to achieve.

A key challenge to implementing the sustainability initiative is to determine how to describe what would move Oregon measurably toward sustainability. We will frame a general vision for the endpoint, but our most important work will be to set measurable objectives to guide us in the direction of the vision, readjusting it along the way as we learn.

An excellent model for what should be considered in developing your performance indicators is the 10 Bellagio Principles. The Bellagio Principles indicate that assessment systems and their indicators should:

1. Be guided by a clear vision of sustainability and clear goals.
2. Be holistic in nature.
3. Include equity, ecological conditions and economic/non-market activities.
4. Be broad in scope.
5. Be practical.
6. Be transparent to public scrutiny.
7. Be engaging enough to elicit stakeholder interest.
8. Involve a broad cross-section of residents.
9. Be periodically reviewed and adjusted.
10. Be integrated into decision-making frameworks.

Pursuant to the governor's executive order, the Sustainability Board will issue additional guidance on performance measurement in early 2004.

Appendix D

THE OREGON SUSTAINABILITY ACT

The State Legislature adopted sustainability policies in the Oregon Sustainability Act, ORS 184.421. Your agency may benefit from having its own policy statement that articulates how sustainability supports the agency's mission, goals, and values. If you decide to pursue an agency policy statement, be certain it reflects the policies stated below.

The state policies are divided into two sections: general sustainability policies and policies focused on community development. They are provided here for reference:

General State Sustainability Policy: In conducting internal operations, state agencies shall, in cooperation with the Oregon Department of Administrative Services, seek to achieve the following objectives:

- a. State purchases should be made so as to serve the broad, long term financial interests of Oregonians, including ensuring that environmental, economic and societal improvements are made so as to enhance environmental, economic and societal well-being.
- b. Investments in facilities, equipment and durable goods should reflect the highest feasible efficiency and lowest life cycle costs.
- c. Investments and expenditures should help promote improvements in the efficient use of energy, water and resources.
- d. State operations should be located in diverse locations, including rural and distressed communities.
- e. State operations and purchases should help maintain vital and active downtown and main street communities.
- f. State purchases should help support opportunities for economically distressed communities and historically underemployed people.
- g. State operations should reflect partnerships with communities and businesses.
- h. State operations should help reduce adverse impacts on native habitats and species and help restore ecological processes.
- i. State operations should be conducted in ways that significantly increase the efficient use of energy, water and resources.
- j. State operations and purchases should reflect the efficient use and reuse of resources and reduction of contaminants released into the environment.

State Community Development Sustainability Policies: In supporting sustainable communities, state agencies shall seek to enable and encourage local communities to achieve the following objectives:

- a. Resilient local economies that provide a diversity of economic opportunities for all citizens.
- b. Workers supported by lifelong education to ensure a globally competitive workforce.
- c. An independent and productive citizenry.

-
- d. Youth supported by strong families and communities.
 - e. Downtowns and main street communities that are active and vital.
 - f. Development that wisely and efficiently uses infrastructure investments and natural resources.
 - g. Affordable housing available for citizens in community centers.
 - h. Healthy urban and rural watersheds, including habitats for fish and wildlife.
 - i. Clean and sufficient water for all uses.
 - j. Efficient use and reuse of resources and minimization of harmful emissions to the environment.
 - k. Intensification of efforts to increase the economic stability of communities designated as economically distressed.

Appendix E

RESOURCES FOR DEVELOPING AND IMPLEMENTING YOUR PLAN

Listed below is a very short sampling of resources that may be useful to you.

Places with general information

A good list of books on various aspects of sustainability can be found at: www.pacifier.com/~axis.

If you just want to surf the web for ideas or resources, here are two excellent (though slightly overwhelming) places to start: <http://www.ulb.ac.be/ceese/meta/sustvl.html>; <http://sdgateway.net/>.

Ecotrust in Portland has developed an excellent website that explores the various aspects of the three pillars of sustainability: economy, community and environment: <http://www.conservazioneconomy.net/>.

An excellent source of information on what the **Federal government** is doing can be found at: <http://www.federalsustainability.org>.

Examples of sustainability programs and projects can be found at the Founders of the New Northwest website (<http://www.sustainabilitynorthwest.org>.)

Specific guidance on developing a sustainability program and plan

AXIS Performance Partners of Portland has developed a series of booklets on various aspects of implementing a sustainability program. Their website can be reached at: www.pacifier.com/~axis. The booklets are:

Developing a Business Case for Sustainability

Developing an Implementation Plan:

How to embed sustainability into your existing initiatives

Embedding Sustainability into your Environmental Management System

Greening Your Supply Chain

Training Employees on Sustainability

Identifying Your Environmental Impacts

Developing Sustainability Metrics and Targets

Selecting A High Impact Sustainability Project

Developing Effecting Systems to Manage Sustainability: Creating an EMS-Lite

Reducing Energy Use and Greenhouse Gases

Approaching Zero Waste

Choosing Greener Products

Making Sense of Sustainability: An employee guide

City of Portland Office of Sustainable Development:

<http://www.sustainableportland.org/>. At this site, you can download the city's guidance document for agencies on how to develop an agency sustainability plan:

http://www.sustainableportland.org/stp_sdc_guide_0503.pdf. The City has also developed sustainable procurement procedures, which can be found at:
http://www.sustainableportland.org/spc_procur.html.

City of Seattle Office of Sustainability and the Environment: This website has a wealth of information relevant to public agency implementation of sustainability programs, <http://www.cityofseattle.net/environment/>.

A Local Government Handbook: Accelerating Community Sustainability in the 21st Century, by The International Council for Local Environmental Initiatives (ICLEI), http://www.iclei.org/us/c21execsum_handbook.doc.

Information on specific topics relevant to sustainability

Sustainability indicators and measurements: If you are interested in probing this subject, a comprehensive site exists at the Compendium of Sustainable Development Indicator Initiatives, a worldwide directory of who is doing what in the field of sustainability indicators: <http://www.iisd.org/measure/compendium/>. The Oregon Progress Board website also has excellent resources: <http://www.econ.state.or.us/opb/PerfMeas/Guidelines.htm>. The Global Reporting Initiative also is an excellent source of information: <http://www.globalreporting.org/guidelines/2002.asp>.

Setting goals and targets: A superb example of a set of objectives and targets for a public agency can be seen at the website of the City of Seattle Office of Sustainability and the Environment: http://www.cityofseattle.net/environment/EAA_Report_2003-04.pdf.

Environmental Management Systems (EMS): EMS can be defined as "Adapting human culture through a system of monitoring, governance and compliance that is synergistic, dynamic and sustainable." Zero Waste Alliance (www.zerowaste.org), a non-profit organization that specializes in EMS training and implementation in association with The Environmental Protection Agency (EPA), will assist up to ten government organizations that wish to develop and implement environmental management systems (EMS). Participants pay a fixed fee for implementation and are provided assistance in the form of training workshops, on-site visits, and electronic materials/consultation. ZWA will work closely with each participant throughout the life of the program and provide training, technical assistance, site visits, and other materials designed to help each participant develop a complete EMS, using the ISO 14001 International EMS Standard as a baseline. For further information contact: Larry Chalfan (503) 279-9383, lchalfan@zerowaste.org. See also <http://peercenter.net> for information on what is happening with the EPA program around the country. All federal agencies are required by EO 13148 to have EMS programs in place by 2005. See the EPA site for information on what they are doing: <http://epa.gov/ems/index.htm>

The Department of Administrative Services has several sites that can be of assistance to agencies. For purchasing, see: <http://tpps.das.state.or.us/purchasing/sustainable/sustain-menu.php>. For facilities see: <http://www.facilities.das.state.or.us/1256115.pdf>. For general information on waste reduction sign up for the DAS newsletter: http://www.facilities.das.state.or.us/waste_watcher.htm.

University resources for education and training

The Oregon University System has many resources that can be of help: <http://www.oregonsolutions.net/university/index.cfm>.

Portland State University has developed a graduate-level certificate program in Sustainable Development that would provide agency Sustainability Coordinators with an excellent base for their work: http://www.sustain.pdx.edu/ap_continuing_ed.php.

The University of Oregon also has a training program that is available as a credit or non-credit program: <http://center.uoregon.edu/sustainability/> (541) 346-4231 or (800) 824-2714

See also the University of Oregon Program for Watershed and Community Health: <http://cwch.uoregon.edu/>. There is a new book just published by Bob Doppelt: *Leading Change Toward Sustainability: A Change Management Guide for Business, Government, and Civil Society*, Greenleaf Publications.

Appendix F

OREGON SOLUTIONS PROJECTS

I believe that to meet the challenges we face today it is essential to engage businesses, government, non-profit organizations and citizens in collective action. Oregon Solutions creates the place to come together and provides the means to reach community agreements that connect Oregonians in solving these challenges, in communities across the state.

Governor Theodore R. Kulongoski

Oregon Solutions projects are intended to implement the 10 community objectives in the Oregon Sustainability Act. The goal is to create sustainable solutions to community-based problems. The projects use the Community Governance System to develop sustainable solutions through the collaborative efforts of businesses, government, and non-profit organizations. State agencies are encouraged to use the Community Governance System to develop and implement sustainable community-based projects.

Recent successful Oregon Solutions projects include:

- The siting of 17 wind turbines in Sherman County – a project that was permitted in four months as a result of the early participation of organizations that had siting concerns.
- Watershed and habitat restoration of the Delta Ponds, including re-establishing the connection of the Ponds with the Willamette River floodplain in the City of Eugene.
- The Bridge to Hope – Partnerships for Inmate Aftercare project in Bend. The project includes development of an integrated, community-based network of services and support for women leaving incarceration that will help them re-integrate into their communities as productive citizens.

Possible state agency actions

State agencies can develop and implement sustainable community-based projects in the following ways:

- Identify appropriate projects that embrace the Sustainable Community Objectives in the Sustainability Act for designation by the governor as "Oregon Solutions Projects." The Governor will consider the designation of new projects at the request of your agency.
- Include strategies for developing Governor's Oregon Solutions projects in agency Sustainability Plans.
- Include information about your community-based partnering efforts with local governments, businesses, non-profits, and other agencies in reports to the Sustainability Board. The information should include discussion of your involvement with the Governor's Oregon Solutions projects, successes, and resources leveraged for project implementation.

Designating a governor's Oregon Solutions project

Contact the Oregon Solutions office (503-725-9097) or the GERT Regional Coordinator for your area to propose your project for designation by the Governor as an Oregon Solutions project.

For more information about the governor's Oregon Solutions projects

To find out more about developing projects for designation by the governor as Oregon Solutions projects, and for more examples of projects, visit the Oregon Solutions website: <http://www.orsolutions.org>.

The community governance system

Governor's Oregon Solutions projects are implemented using the Community Governance System. The projects grow out of the collaborative efforts of government, businesses and non-profits and support the sustainable community objectives. There are five elements of the Community Governance System:

1. **A problem or opportunity defined by the community** that addresses at least one sustainable community objective.
2. **A neutral community convener** from the local community, appointed by the governor, who can lead a team to address the challenge.
3. **A governor's Solutions Team** of federal, state, local, and other government entities, businesses, non-profits, and citizens who are needed or can contribute to a solution.
4. **An integrated solution** that leverages the resources of the Solutions Team to meet the challenge at hand and fulfills sustainability objectives.
5. **A declaration of cooperation** that team members sign that commits their resources and time in an integrated action plan.

Mission: A Livable Oregon Through Vibrant Economies Supporting Sustainable Ecosystems.

Vision: State Government as a Leader and Partner.

Goal: Maintenance and enhancement of long-term socio-economic benefits to meet the needs of society from natural resource management through working landscapes, healthy ecosystems, and a supportive legal and institutional framework.

GNRO Role: Influence national, state and local policies, processes and actions that integrate social, economic & environmental values.

GNRO Priorities

Working Landscapes	Rivers	Legal, Institutional Framework
Conservation Plan	Col River Management	Sustainability E.O.
OR Plan ESA Assurances	Will River Restoration	Integration of Agency Action Plans
Wolves	Klamath Basin	NR Funding/Budgets
30 Year Land Use Review	SNAKE RIVER Hydro-Relicensing	Accountability → Customer Service → Benchmarks → Performance Measures
Federal Land Management	Common Law Floatage	Regulatory Streamlining
State Forest Acquisition/Mgt Policies	Ocean Policies	Boards/Comm Appts.
Pesticides	Marine Reserves	
Marketing Oregon Products	Climate Change Renewable Energy	

Implementation: Coordination and Integration of Agency Action Plans

Agency: See Agency Action Plans

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**OPPORTUNITIES FOR OREGON'S ENVIRONMENT
TO SUPPORT OREGON'S ECONOMY**

DEQ

February, 2003

The Objective

Build a strong economy while maintaining Oregon's commitment to a healthy environment.

What We Are Trying To Accomplish

Develop an understanding of the dynamics between economic opportunity and environmental improvement, and target strategies to achieve both. Look for opportunities to put Oregonians back to work in environmentally beneficial and sustainable ways.

Why It's Important

Our environment and our people are Oregon's greatest asset. Oregonians expect clean air, clean water, and an environment free from toxics. Businesses and industries need clean buildable land and unpolluted process water. Farmers, foresters and ranchers need healthy soils, and water and air that is free from pollution to support the natural resource based sector of our economy. Abundant fish and wildlife habitat, great physical beauty, and diverse outdoor recreational activities create jobs, draw tourists, and play a key role in recruiting business to Oregon. Maintaining a healthy environment is essential to building a strong economy.

In 1980, only 30% of Oregonians lived in clean air areas. Today, 100% of Oregonians live where the air meets national health standards. The water in 64% of Oregon's rivers monitored by DEQ is now getting cleaner, and only 1% is declining. Since 1991, citizens have properly disposed of more than three million pounds of household hazardous waste through statewide collection events. These and other successes have been achieved through the collective efforts of state government, communities, businesses and citizens.

The economic well-being and quality of life that Oregonians cherish are continually subject to new stresses. Population growth in urban areas creates more air pollution from cars, more waste generated from households and businesses, more pollution running off our streets and through sewers to rivers, and a greater demand for new sources of clean drinking water. While urban areas grow, many of our rural communities remain economically depressed, and pressure builds to relax environmental regulations with the hope of stimulating natural resource based industries and economic development.

Over past decades, environmental regulations have provided effective controls on industrial and municipal pollution. Today, more pollution is coming from the everyday activities of individual households and landowners than from large factories or treatment plants. For example, the US EPA estimates that 80% of pollution in the nation comes from "non-point" source activities, not from permitted facilities. There is a real need to build public understanding of how everyday activities such as use of household chemicals, gas powered lawn mowers, open burning, over-watering, and

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use of pesticides and fertilizers on lawns affect the quality of our environment, particularly in urban, densely-populated areas. In rural Oregon, agricultural and forest activities which have been a foundation of our economy are struggling to remain economically viable while investing in changes that will protect fish and wildlife habitat, water quality and quantity, and provide sustainable forests.

To achieve a healthy environment and a healthy economy, we must convince ALL Oregonians to change daily activities and past practices to conserve and protect the natural resources which are the foundation for so much of our economy. Business and industry cannot continue to shoulder most of the burden for reducing pollution to which all Oregonians contribute. There is no “them,” there is only “us.” We all must be willing to do our part for Oregon’s future.

What DEQ Has Been Doing to Help

- Engaged local officials and communities statewide in creating local solutions to environmental and economic challenges. Examples include Environmental Partners for Oregon Communities, regional Community Solutions Teams, citizen groups working on water quality and stream improvements, and local clean air committees working to prevent air quality problems from happening in fast growing communities such as Bend.
- Worked with businesses and industries to safely permit projects with significant environmental and economic impacts, e.g. the Blue Heron paper mill in West Linn, the Port Westward energy facilities in Clatskanie, and the PacifiCorp hydro project on the North Umpqua river. In addition, a “Green Permit” is available to facilities who provide protective Environmental Management Systems, as has been done at LSI in Gresham and LP in Hines. Last legislative session, the pollution control tax credit law was amended to provide incentives to business to do more than regulations require to protect the environment.
- Continue to provide information and outreach about environmental requirements and to make it easier to do business with DEQ. Examples include radio campaigns in Eastern Oregon geared toward consumer protection that provide information on septic system, heating oil tank and woodstove requirements, plus a “Consumer Corner” on DEQ’s web site that answers citizens’ most frequent questions. Companies are more able to take advantage of growth opportunities now that a number of DEQ permits and rules have been streamlined and simplified. Small businesses are saving money and time by submitting some required reports to DEQ “on-line,” including petroleum release reports prepared by heating oil tank contractors, and waste quantity reports submitted by hazardous waste generators. Soon, municipalities and businesses will be able to submit their wastewater discharge monitoring reports on-line, relieving what has been a burdensome reporting process.

Breakthrough Opportunities for the Future

- Maintain the high quality of life that Oregonians expect and that attracts business. There should be no “backsliding” on fundamental environmental protection laws, but every effort should be made to streamline state and local regulations and processes to make it easy to do business in

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Oregon. Agencies must work together to provide “shovel ready” development sites and more industrial land in areas that are NOT environmentally sensitive should be a priority.

- Stimulate and develop diverse economic opportunities in rural communities that are currently heavily dependent on natural resources. Government needs to maximize grant and loan programs and support locally-driven processes to facilitate economic growth. The state needs to engage landowners in finding ways to conserve resources. Economic incentives (e.g. tax credits) should be available for landowners who develop and use sustainable agricultural and forest practices, or who want to start up “environment friendly” enterprises or transition to businesses that do not adversely affect the environment. Government at all levels, particularly in the natural resource arena, is a significant employer in rural Oregon. We should look for opportunities to move more government jobs into rural Oregon.
- Develop more public/private partnerships. Government alone cannot stimulate the economy and cannot protect Oregon’s natural resources. Oregonians have proven that they will do their part if given the opportunity, so it should be a priority of government to create opportunities with as many partners as possible. Oregonians recycle, join watershed councils, participate in beach and river cleanups, ride bikes and take public transit in urban areas. Many Oregonians work on the land and come from families who have done so for generations. Outreach and education to keep the next generation of Oregonians involved and caring for our state is essential. It is an economic asset for business in Oregon to be perceived as “green” and businesses should be offered more opportunities and given incentives to participate in programs that help protect the environment and conserve resources. For example, millions of gallons of waste water can be a valuable resource if economically feasible ways can be found to treat and reclaim it. A partnership between government and the generators of that wastewater could figure out how to make that happen.
- Stay in the “driver’s seat” in managing Oregon’s natural resources and protecting our environment. Oregon needs to maintain delegation of federal environmental regulatory programs and needs to continue to push the federal government to accept the Oregon Plan for Salmon and Watersheds as an “approved” plan for protecting aquatic species. We need to be sure that the Forest Practices Act continues to provide sustainable forests and protect water for fish. The agricultural community needs to put into practice the commitments that have been made in agricultural water quality management (1010) plans, and DEQ, ODA and OWEB need to provide the maximum financial incentives possible to landowners to implement these practices. If the federal government is to accept state primacy on natural resource matters, DEQ needs to be funded to finish setting court-mandated pollutant loads (TMDLs) for all 303(d) listed streams by 2010, and then be funded to ensure actions to reduce pollutants are implemented.
- Keep urban areas in compliance with air quality standards, both for the environment and to allow capacity for industry to expand. To do so will require greater effort by individual Oregonians to reduce driving and the use of other fossil fuel burning equipment such as lawn mowers, ATVs, and motorboats, and to reduce outdoor burning and use of wood stoves. Continuation of a high quality vehicle inspection program in Portland and Medford is critical.

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- Aggressively pursue redevelopment of “Brownfields” and come up with creative strategies to help increase industrial lands in both rural and urban areas, e.g. expedited clean up of old mill sites for reuse. We need to address land use restrictions on extension of sewer outside urban growth boundaries, which can affect our ability to protect the environment and stimulate the economy.
- Continue clean up of the Willamette River. Most of Oregon’s growth will continue to be in the Willamette Valley, and the river is the heart of the Valley. The City of Portland must be held accountable for completing the combined sewer project by 2011, and the business community affected by the listing of Portland Harbor as a national Superfund site must pull together to expedite the cleanup and restore the economic viability of the waterfront. DEQ needs to continue to seek funding to clean up pollution from mercury and other toxins leaching from abandoned mines throughout the basin, and to determine the cause of fish deformities in the Newberg Pool. DEQ must be funded to complete setting pollutant loads (TMDLs) for the Willamette by the end of 2003, and then get those loads written into stormwater and point source permits and ensure that the agriculture and forest industries implement water quality management plans to reduce pollution.
- Enhance our ability to provide good science and good data to make informed decisions and protect the public. Environmental regulations can affect the pocketbooks of all Oregonians. Our decisions need to be based on high quality monitoring data and objective analyses. Environmental data and information need to be accessible and understandable to Oregonians and need to be better shared and integrated among natural resource agencies. Regular monitoring of ambient air and water quality provides important information to protect public health, e.g. air quality advisories or threats to drinking water. The DEQ laboratory and the Public Health laboratory have an added responsibility to protect the public from terrorist threats by serving the FBI and first responders in analyzing unknown chemicals and recommending appropriate actions. Homeland security may be requiring new types of monitoring for air and drinking water as well. Both labs are in antiquated, outdated facilities that have poor HVAC systems and cannot house the staff and equipment needed to meet the Homeland Security demands. The legislature needs to approve the sale of \$32 million in Certificates of Participation to fund the move of these labs.
- Continue to engage Oregonians in solving environmental problems. Efforts like Community Solutions Team and the watershed approach of the Oregon Plan should be used broadly throughout state government. Agencies should be encouraged and funded to provide communication and outreach to Oregonians rather than have it treated as “public affairs fluff.” The state needs to invest in bringing information technology into the 21st century. More public/private partnerships linking economic development and environmental protection and involving citizens need to be forged and encouraged with incentives. We need to move from a “punishment” mentality to an “incentive” mentality in environmental protection, so that we are focusing our enforcement resources on the most egregious violators and freeing up resources to help those who truly want to solve problems but may not have the tools to do so.

What Can Leaders Do Now?

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Leaders can support the “breakthrough opportunities” listed above. The Governor and business and political leaders should publicly articulate the connection between economic opportunity and care for Oregon’s natural resources, and the fact that every Oregonian has a responsibility to provide such care. A healthy environment is an essential component of a strong, sustainable economy and prosperous communities. Industry and municipal government cannot stand alone in preventing and removing pollution – every individual and every sector of our economy must do its share. Our leaders must make clear the vital connection between economic well-being and enhancement of natural resources and encourage Oregonians to reduce individual impacts on the environment and to engage in community activities. Leaders must provide incentives and support core regulations critical to maintaining Oregon’s environmental accomplishments in protecting public health and providing clean air, water and land.

Attachment A

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EXECUTIVE ORDER NO. EO 03-03

A SUSTAINABLE OREGON FOR THE 21ST CENTURY

Pursuant to my authority as Governor of the State of Oregon, I find that:

While Oregon's economy is in distress, it has many assets: natural resources, a clean environment, extensive telecommunications and traditional infrastructure, and an educated and skilled workforce.

Oregon's economic recovery will be aided by establishing a commitment to lasting solutions that simultaneously address economic, environmental and community well-being. We should not continue to trade one essential aspect of well-being off against another, but we should take actions that will sustain Oregon's assets and put Oregon on the path to long-term prosperity in all aspects of life.

Sustainability is doing business with an eye to the triple bottom line – economy, community and environment. Oregon state government must define sustainability, produce goals within state government to achieve sustainability, identify challenges to achieving sustainability and measure our performance based on sustainability.

This executive order is intended to support and drive the goals of the Oregon Sustainability Act (Act) adopted by the Legislature in 2001. Using the powers vested in the Oregon Sustainability Board under the Act, this Order directs the Board and state employees to move us closer to a more "sustainable" state.

NOW, THEREFORE, IT IS HEREBY ORDERED AND DIRECTED:

Board Actions

In accordance with the Oregon Sustainability Act (Act), ORS 184.423, Sections 2(5) and 3, the Oregon Sustainability Board (Board) is directed to manage and carry out this Order. To do so, it shall:

1. Constitute and convene a Sustainability Leadership Team ("Team") to provide recommendations to the Board and to manage and deliver Board directives to state agencies as approved by the Board. The Team shall be chaired by the Director appointed by the Board pursuant to Section 7 of the Act, or, in her or his absence, the Director of the Department of Administrative Services (DAS), and shall consist of the following members: the Director of DAS, the Chair of the Board, the Director of the Office of Energy, the Governor's Sustainability Advisor, the Director of the Economic and Community Development Department, the Director of the Oregon Progress Board, the Governor's Natural Resources Advisor, the Director of the Department of Housing and Community Services, and such other members as may be requested by the Board from time to time. The Team shall review, revise and recommend for Board approval the Plans prepared by each Agency Sustainability Coordinator as directed under this Order. Pursuant to its authority under the Act, the Board may request additional agencies to provide similar Plans from time to time, or request other actions consistent with its authority under the Act.

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EXECUTIVE ORDER NO. EO 03-03
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2. Within 90 days of this Order, the Team shall deliver to the Board for its review and approval written guidance (“Sustainability Guidance”) to state agencies regarding each agency’s actions to comply with this Order. To the extent possible, the Team will seek expertise outside state government to assist in the development of the Sustainability Guidance. The Sustainability Guidance shall include the following:

- 2.1 a working definition of sustainability for state agencies to guide their actions;
- 2.2 suggested strategies for achieving greater sustainability;
- 2.3 a policy directive for economic, social and environmental sustainability that accounts for resource constraints and similar financial variables;
- 2.4 performance standards, targets and evaluation methods to determine agency compliance;
- 2.5 identification of key leverage points within and outside state government to enhance sustainability;
- 2.6 identification of cross-agency programs that intersect with sustainability goals;
- 2.7 state agency reporting protocols;
- 2.8 a means to assess the financial impact of proposed actions on state expenditures; 2.9 a directive to develop partnerships with other government and private entities; 2.10 identification of outreach programs to promote practices endorsed in this Order;
- 2.9 identification of training and staff development methods;
- 2.10 identification of potential incentives and acknowledgement for agencies that exceed performance expectations;
- 2.11 a directive that each state agency develop Implementation Plans (“Plans”) to comply with these Sustaining Guidelines and any other directive on sustainability from the Board; and
- 2.12 any other guidance to enable state agencies to carry out this Order and sustainability directives from the Board.

3. Pursuant to Section 3 of the Act, the Board shall develop cooperative programs that involve local government, non-profit entities and private industry to achieve the objectives of the Act and this Order.

4. Under the direction of the Board, DAS shall update and maintain the current Oregon Solutions webpage.

5. Under the direction of the Board, the Economic and Community Development Department shall provide staff assistance for meeting scheduling, notification and drafting of documents for an Interagency Sustainability Network (“Network”). The Network shall be an informal forum of state agency personnel, including the Team and each Sustainability Coordinator, whose purpose is exchanging information and developing new approaches on sustainability among stage agencies. State agencies should participate in the Network to the extent needed to support this Order. The Network forum will convene periodically to suggest recommendations to the Board on ways to enhance sustainability in Oregon through modification to the Sustainability Guidance, legislation, and other means.

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6. The Board shall recommend for the Governor's approval by December 1, 2003, and after approval for dispersal to all agencies through the Oregon Advisory Committee on Government Performance and Accountability, changes in performance management to better incorporate sustainability into the state's management practices. These recommendations shall include but are not limited to: performance standards for agencies, performance measurement and internal audit standards.

7. The Board shall provide guidance to state agencies on how to apply and support the Governor's Oregon Solutions and Community Solutions systems for community-based action to achieve the ten community objectives listed in ORS 184.423 (2).

State Agency Actions

1. Within 90 days of the date of this Order, the director of the agencies identified in paragraph 3 below, shall designate a senior manager within each such agency as the agency's sustainability coordinator ("Sustainability Coordinator"). The Sustainability Coordinator is responsible for the agency's compliance with this Order.

2. Within 90 days of the Board's issuance of the Sustainability Guidance, each Sustainability Coordinator shall prepare a plan to implement such guidance and submit the plan to the Board ("Plan"). The agency's Plan shall include appropriate performance measures, and a strategy for meeting the Sustainability Guidance that is incorporated into the agency's 2- and 6-year strategic plans as well as the agency's biennial budget submission to DAS, as appropriate.

3. In accordance with ORS 184.423 Section 2 (5), the following agencies shall each develop and implement a Plan as described above in paragraph 1.: Administrative Services, Economic and Community Development, Environmental Quality, Land Conservation and Development, Housing, Forestry, Energy, Transportation, Progress Board, Agriculture, Watershed Enhancement, Parks and Recreation, Fish and Wildlife, State Lands, Water Resources, the Public Utilities Commission, Human Services, Corrections, Higher Education, and Community and Business Services.

Done at Salem, Oregon this 17th day of June, 2003

/s/ _____
Theodore R. Kulongoski
GOVERNOR

ATTEST:

/s/ _____
Bill Bradbury
SECRETARY OF STATE

Attachment F

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State of Oregon

Department of Environmental Quality

Memorandum

To: Jim Brown
Natural Resources Policy Director

Date: October 17, 2003

From: Stephanie Hallock
Director

Subject: Update to DEQ Economic and Environmental Action Plan

In your memo of September 12, 2003, you asked Natural Resource Agency directors to update our Economic and Environmental Action Plans by identifying approximately six high profile projects that deserve some Governor's Office attention, fit with the agency's strategic needs and help satisfy the request for an action plan by the Sustainability Board. I am submitting the following six projects, which I believe rise to this level for DEQ. These projects, which are all highlighted in DEQ's Strategic Directions, will be incorporated into DEQ's Economic and Environmental Action Plan and DEQ's sustainability plan.

1. Encourage Broader Reuse of Wastewater

Project Summary: The direct release of treated wastewater into surface water is a common water quality management practice. This wastewater, while technically clean, often contains nutrient and temperature levels that exceed natural water conditions. As an alternative, many treatment plants have developed strategies to "reuse" treated water to irrigate crops, provide a source of water for municipal and industrial economic development, or restore wetland habitats. This reclamation of wastewater has many potential benefits, including helping to offset the need for using drinking water supplies for non-drinking purposes, which in turn can promote in-stream water flows for Oregon's rivers to sustain fisheries. To promote greater investment in these activities, DEQ will foster opportunities for additional reclamation and reuse of wastewater throughout the state.

Relation to other planning activities: This is one of the three DEQ projects already listed as an individual agency project in Attachment 6 of your memo. This project is identified in DEQ's Strategic Directions as a key action under our priority to Protect Oregon's Water. DEQ is required by SB 820 to evaluate urban water reuse barriers and incentives. This project will also be identified in DEQ's sustainability plan.

Rationale for GNRO attention: This project helps address Oregon's water quantity crisis by offsetting the need for developing new water supply sources. In addition, this project can enable industrial development in areas where no new water rights are available. GNRO attention can help build support with municipalities, the agricultural sector, and other stakeholders.



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2. Promote Clean Diesel Engines and Fuels

Project Summary: The diesel engine is a workhorse in Oregon's economy, providing a reliable, efficient, and durable means of transporting goods and people as well as powering construction and farm equipment. While emissions from diesel engines cause significant public health concerns and contribute to global warming, technology is now available to greatly reduce these emissions. DEQ is promoting voluntary retrofit of diesel engines, early use of cleaner diesel fuels, and alternatives to diesel engine idling. This project is part of a larger DEQ effort to reduce exposure to toxic air pollutants through air quality monitoring and the development of community-based air toxics reduction plans.

Relation to other planning activities: This is one of the three DEQ projects already listed as an individual agency project in Attachment 6 of your memo. This project is identified in DEQ's Strategic Directions as a key action under our priority to Protect Human Health and the Environment from Toxics. This project was recently identified as an early action item under the Governor's west coast climate change initiative, and will also be identified in DEQ's sustainability plan.

Rationale for GNRO attention: This project is closely related to the existing GNRO priority for Climate Change and Renewable Energy, and is already receiving GNRO attention as part of the west coast climate change initiative. This project already enjoys broad stakeholder support, but GNRO attention can help translate support into action. GNRO attention can also help DEQ secure grant funding for this work.

3. Protect Public Health from Mercury and Other Toxic Chemicals

Project Summary: DEQ is seeking new ways to help Oregonians reduce the use of mercury and other toxic chemicals. DEQ is promoting a wide range of voluntary measures to reduce mercury releases, including partnerships to clean up abandoned and inactive mercury mines. In addition, DEQ is evaluating ways to reduce mercury in the Willamette River. While efforts to reduce mercury are getting underway, DEQ is also developing a comprehensive strategy to reduce health risks from other toxic chemicals. This will include monitoring, data analysis, voluntary measures and regulatory actions.

Relation to other planning activities: This is one of the three DEQ projects already listed as an individual agency project in Attachment 6 of your memo. This project is identified in DEQ's Strategic Directions as a key action under our priority to Protect Human Health and the Environment from Toxics. The Environmental Quality Commission requested that DEQ submit an updated mercury strategy and a

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comprehensive toxics reduction strategy at their December 2003 meeting. This project will also be identified in DEQ's sustainability plan.

Rationale for GNRO attention: This project relates to an existing Executive Order to reduce mercury and other persistent and bio-accumulative toxics. Fish advisories for mercury affect tourism as well as the food supply for vulnerable populations. GNRO attention can help coordinate agency actions to reduce mercury releases through our purchases and incentive programs.

4. Ensure Safe Destruction of Chemical Agent at the Umatilla Weapons Depot

Project Summary: At the Umatilla Chemical Depot, DEQ works to ensure that the public and the environment are protected from risks associated with the storage and destruction of chemical agents. After years of planning and construction of disposal facilities, the U.S. Army is scheduled to begin destruction of chemical agent in 2004. DEQ regulates the Army's chemical agent disposal activities, and has on-sight inspectors who oversee operations. Completion of this project will protect the public from a catastrophic release of dangerous chemicals and will result in 20,000 acres of reusable land for industrial development.

Relation to other planning activities: This project is identified in DEQ's Strategic Directions as a key action under our priority to Protect Human Health and the Environment from Toxics. While this project will not be included in DEQ's sustainability plan, it indirectly relates to our sustainability efforts due to the reuse of 20,000 acres of industrial land. This project is of such great significance that I recommend you elevate it to a GNRO priority under the Working Landscapes category.

Rationale for GNRO attention: Because of the high profile nature of the project, the public in Northeastern Oregon expect it to be a focus of the Governor's attention. Oregon is one of only 3 states with chemical agent stockpiles subject to destruction under international treaties, so this project is also in the national spotlight.

5. Conduct a Comprehensive Clean-up of the Willamette River

Project Summary: The Willamette River is a defining feature of Western Oregon, providing for commerce, recreation, wildlife habitat and drinking water. While the amount of pollution added to the river has been reduced over the past few decades, the Willamette still does not meet clean water standards due to ongoing pollution and contaminated sediments. Industrial pollution in the Portland Harbor led to its listing as a federal cleanup site. DEQ is developing a comprehensive strategy to restore and protect the Willamette River. This includes efforts to clean up the contaminated McCormick and Baxter site, establish maximum pollution loads that allow the river to

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meet water quality standards, work with stakeholders to reduce total pollutant loads, and educate the public about the effects of their personal actions on the river.

Relation to other planning activities: This project will be highlighted in the next update to DEQ's Strategic Directions as a key action under our priority to Protect Oregon's Water. DEQ is nearing completion of a draft TMDL for the Willamette River, and is overseeing a high profile cleanup of the McCormick and Baxter site.


Rationale for GNRO attention: This project is already identified as a GNRO priority under the Rivers category. GNRO attention is warranted because of the importance of the Willamette Valley to the state's economy and environment.

6. Enhance the DEQ and Public Health Laboratory

Project Summary: The DEQ and Public Health laboratory provides the sampling and analysis needed to support environmental protection work throughout the state. In addition, the DEQ laboratory has been called upon recently to analyze unidentified substances in response to credible terrorist threats. The facility, which is located at Portland State University, must be relocated because the lease is expiring and is not renewable. DEQ and the Department of Human Services Oregon Public Health Laboratory are planning for a new facility to house their laboratory functions. In addition, the new facility will provide the critical structure for DEQ's environmental science and information center. This center is being developed to better integrate and interpret agency data to improve the State's environmental decision-making capabilities.


Relation to other planning activities: This project will be highlighted in the next update to DEQ's Strategic Directions as a key action under our priority to Involve Oregonians in Solving Environmental Problems. Last session, DEQ received permission to issue certificates of participation for the purchase of a property for the new facility.

Rationale for GNRO attention: This project deserves attention from GNRO because the DEQ laboratory and the environmental science and information center is critical for success of a number of the GNRO priorities. The success of the environmental policies and their implementation outlined in the above proposed priorities all rest on the foundation of the sound environmental science and information that will be provided by this facility.




Developing DEQ's Sustainability Plan

- Background on sustainability
- DEQ's sustainability plan
- Discussion: sustainability vision




Sustainability Plan

- 2000: Kitzhaber Sustainability EO
- 2001: Sustainability Act
- 2003: Kulongoski Sustainability EO




Sustainability Plan

Sustainability means using, developing and protecting resources in a manner that enables people to meet current needs and provides that future generations can also meet future needs, from the joint perspective of environmental, economic and community objectives




Sustainability Plan

- Integrate with strategic plan and budget process
- Leverage other agencies and private entities
- For the initial plan, include:
 - At least one sustainability goal
 - At least 3 new short term actions
 - Measures and responsibilities
 - An internal communications plan



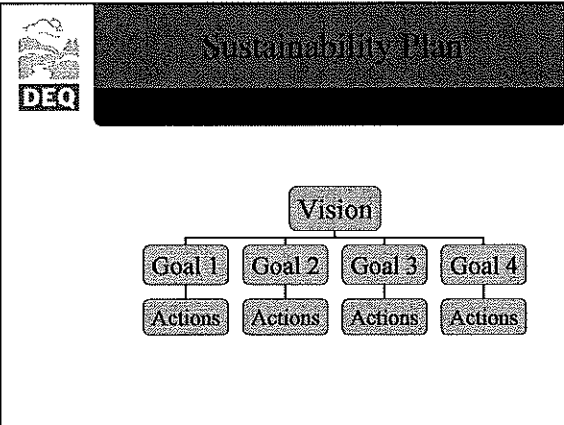
Sustainability Plan

- **Coordinating Group:**
 - Andy Ginsburg, Kerri Nelson, Dick Pederson
- **Sustainability Team:**
 - Brian Fuller (Western Region)
 - Susan Christensen (Eastern Region)
 - Dave Kunz, Monica Russell (NW Region)
 - Lary McAllister (Water Quality)
 - Cameron Oster (Land Quality)
 - Kathleen Craig (Air Quality)
 - Doug Drake (Lab)
 - Dawn Farr (Management Services)
 - Rich Grant (Office of Compliance & Enforcement)
 - Pete Dalke (Oregon Solutions liaison)



Sustainability Plan

- Vision
- Goals
 - Protect Oregon's Water
 - Protect Human Health and the Environment from Toxics
- Past and Ongoing successes
 - Internal
 - External
- Actions for this biennium
 - Internal
 - External
 - Wastewater reuse
 - Clean diesel
 - Mercury and other toxics strategy
- Internal communications
- Coordination with other agencies



Sustainability Plan

DEQ

- **Mission:** Leader in restoring, maintaining and enhancing the quality of Oregon's air, water and land.
- **Vision:** Work cooperatively with all Oregonians for a healthy, sustainable environment.
- **Values:** Environmental Results, Customer Service, Partnership, Excellence and Integrity, Employee Growth, Teamwork, Diversity, Employee Health and Safety

Sustainability Plan

DEQ

- What does a “healthy, sustainable environment” look like?
- How do we “work cooperatively with all Oregonians” to achieve a sustainable environment, economy and communities?
- How would we measure success?
