

United States
Environmental Protection
Agency

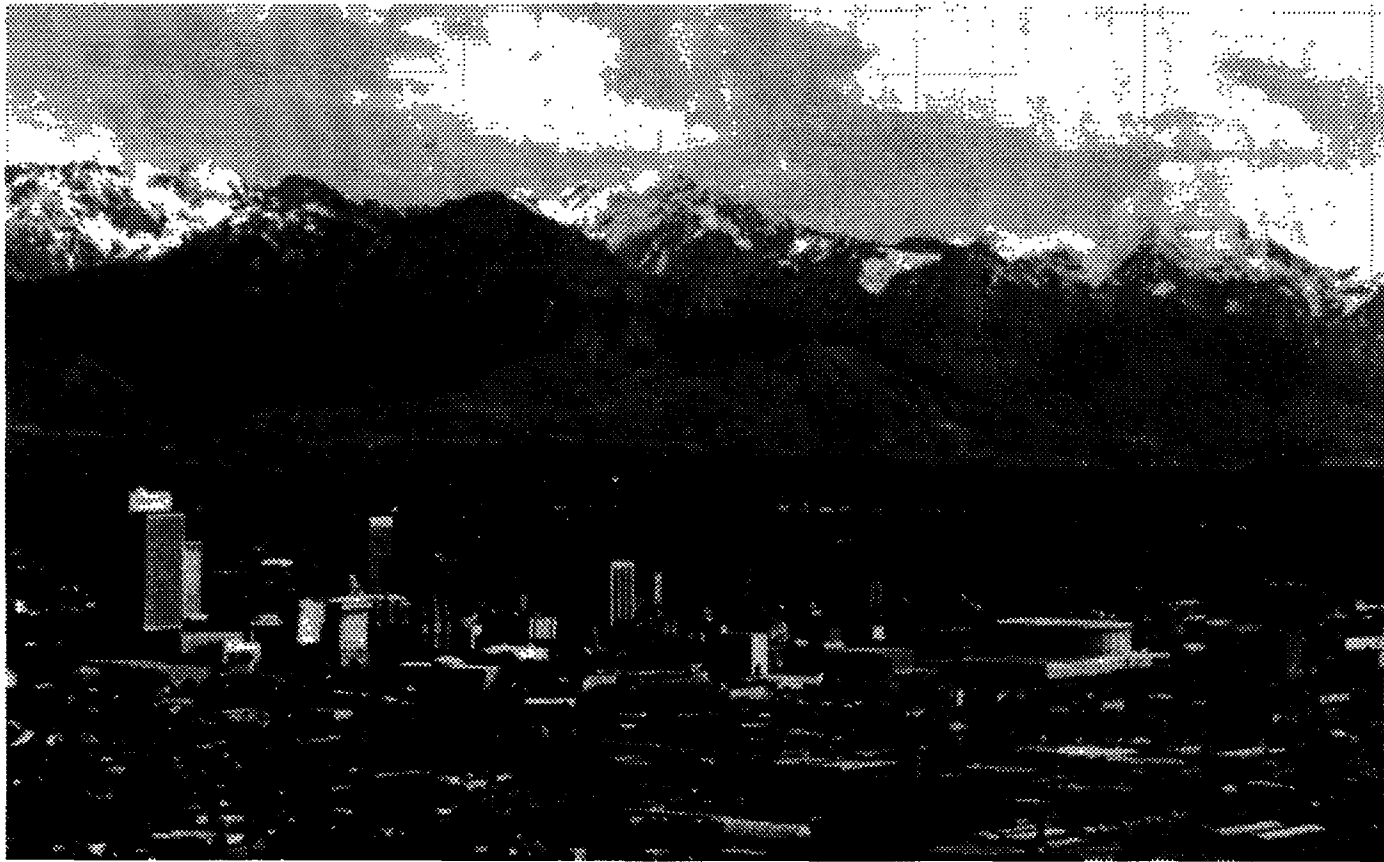
Office of Air Quality
Planning and Standards
Research Triangle Park, NC 27711

EPA-452/R-93-016
December 1993

Air



PM-10 INNOVATIVE STRATEGIES: A SOURCEBOOK FOR PM-10 CONTROL PROGRAMS



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U.S. Environmental Protection Agency
Office of Air and Radiation
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DISCLAIMER

This report has been reviewed by the Air Quality Management Division of the Office of Air Quality Planning and Standards, U.S. EPA, and has been approved for publication. Mention of specific programs, trade names, or commercial products is not intended to constitute endorsement or recommendation for use. Likewise, this report cites several dozen specific local air quality control programs; the inclusion or omission of any program is not intended to constitute either a determination as to whether the program would satisfy any applicable requirements under the Clean Air Act or an appraisal of that program.

ACKNOWLEDGEMENTS

This report was researched and authored by Gwen Jacobs, University of Montana, Missoula in association with the Air Quality Management Division, Office of Air Quality Planning and Standards, U.S. EPA.

Christopher Stoneman, Project Manager in the Sulfur Dioxide/Particulate Matter Programs Branch, provided the conceptual and administrative support that made this project possible.

True thanks must go to the over fifty individuals in local, state, and regional air quality offices from Presque Isle, Maine to Baton Rouge, Louisiana and Boise, Idaho who provided much of the information and documentation contained in this report. These individuals generously offered a level of detail that was sometimes possible through only one, two, or three telephone calls. Very often, supporting information and additional offers of assistance arrived in the mail just days later.

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INTRODUCTION

PURPOSE

The Environmental Protection Agency (EPA) has adopted as an explicit goal the increased development of innovative strategies which include, but are not limited to, economic incentives. In addressing the goal, this document provides twenty-two innovative strategies for controlling particles with an aerodynamic diameter of less than or equal to a nominal 10 microns (PM-10). The strategies and their supporting documentation arise from actual State and local-level PM-10 control programs. In this way, they provide an opportunity for information sharing among air quality specialists. As Dan Redline at the Idaho Department of Environmental Quality states, "We are always looking for new ideas to help start our programs."

BACKGROUND

The Clean Air Act (Act), as amended in 1990, specifically encourages the use of economic incentives to control criteria pollutants [see Sections 110(a)(2)(A) and 172(c)(6) relating to State implementation plans (SIP) and nonattainment area requirements]. Economic incentives are intended to promote a more flexible and efficient allocation of control requirements among pollutant sources than has traditionally existed with command and control regulations. They may also result in cost savings, as well as in the design of new technologies and products.

The EPA proposed Economic Incentive Program Rules (Rules) in February 1993 to establish criteria for acceptable economic incentive program submittals [58 Federal Register 11110 (February 23, 1993)]. While the Agency encourages cost savings and innovation, certain traditional standards of accountability and enforceability must be maintained. The Agency standards include the following:

- ◆ The strategy will not interfere with other provisions of the Act;
- ◆ it will result in quantifiable emission reductions to obtain SIP credits;
- ◆ it will be consistent with reasonable further progress requirements and attainment demonstrations;
- ◆ it will create emission reductions which are surplus to reductions already credited in the SIP;
- ◆ it will be enforceable at both the State and Federal levels; and
- ◆ it will be permanent within the timeframe specified by the program.

In addition, the Rules outline three categories in which economic incentive programs fall: emission limiting, market response, and directionally sound. A program's category depends upon whether emission reductions are specified as part of the program and the program results are quantifiable. For example, emission limiting programs directly specify limits on total emissions, whether measured as a unit of production or as a reduction relative to the program baseline. Such programs would include marketable permits which establish fixed caps on allowable emissions. Likewise, some transportation control measures directly limit emissions by reducing vehicle miles travelled.

Market-response programs provide *incentives* to limit emissions rather than mandate reductions. Fees, subsidies, and tax code provisions exemplify this type of program. Each of these strategies provides an economic incentive to alter behavior, such as reducing woodburning. Yet, while statistics may be generated on program participation, the incentive may not be quantifiably linked to emission reductions since the level of reductions is dependent on how each source responds to the incentives offered by the program. This uncertainty should be addressed in the program design.

Lastly, directionally sound programs do not yield any quantifiable reductions creditable toward an attainment demonstration. They do, however, contribute to an area's overall attainment status. Examples of such a program include media campaigns or the creation of a general fund to finance community-based controls.

PM-10 SOURCEBOOK

This document examines each of the example strategies highlighted above (marketable permits, transportation control measures, fees, subsidies, and tax code provisions) plus numerous others. Some strategies will appear new to many readers, such as construction offset requirements, creative penalties, and recycled asphalt paving. Other strategies will be long familiar, such as woodstove changeout programs. It is useful to include the latter, however, to provide a compilation of recommendations from program-specific experiences. (Note that this document is not intended to be exhaustive but instead to provide a sampling of the information available. Exclusion or inclusion of a program does not constitute a determination by EPA that the program does or does not meet any applicable requirements under the Act. The EPA determines whether programs satisfy the Act's requirements when it reviews official SIP's submitted by States.)

A general description accompanies each strategy, followed by area-specific programs, references and local-level contacts. References are provided for quotations and statistics. These sources are supplemented by a section providing contacts for additional information. The strategies are discussed, wherever possible, with an eye toward enforceability and emission reductions credited to the SIP to assist in the adaptation of similar programs in other areas. Also to assist with adaptation, this introduction is immediately followed by a section which discusses general criteria to consider in program selection. Lastly, the document

includes three appendices. Appendix A includes attachments which provide actual regulatory language for some of the strategies discussed. The location of the attachments in Appendix A is provided in the table of contents. Appendix B includes a list of contacts and Appendix C a list of documented areas.

The document is intended to encourage a dynamic process of learning about innovative PM-10 options, consulting with local-level program developers to clarify discrete points, and brainstorming new strategies. Gretchen Bennitt at Montana's Department of Health and Environmental Sciences underscored this need for information sharing when she proclaimed of her own SIP development work, "You know there's got to be other people who've done this..." As the Sourcebook demonstrates, often other offices *have* instituted similar programs, and their experiences serve as invaluable guidance.

GENERAL CRITERIA

OVERVIEW

As discussed in the Introduction, the Economic Incentive Program Rules contain standards of approvability for economic incentive programs. These standards ensure that a proposed program meets applicable requirements of the Act and of SIP submittals generally. In addition, the Rules discuss criteria which must be met in most circumstances to create an economic incentive program which is not only approvable, but effective. These criteria are discussed below. They are followed by a section describing site-specific considerations which PM-10 areas should examine before proposing a particular economic incentive program for adoption. Such analysis will promote a program most tailored to and, ultimately, most effective in the target area.

ECONOMIC INCENTIVE PROGRAM CRITERIA

- ◆ **Clear statement of purpose and goals**, including a rationale relating the chosen program to the original goal;
- ◆ **Clearly defined scope** which identifies the affected sources;
- ◆ **Program baseline** indicating PM-10 emissions or concentrations to use as the basis for projecting and evaluating the program results;
- ◆ **Procedures for quantifying emission reductions** for SIP credit, including emission factors, monitoring, modelling, or calculations based on production practices;
- ◆ **Source requirements** for monitoring, recordkeeping, and reporting;
- ◆ **Projected emission reductions** resulting from the program using estimates of market response, modelling, or other appropriate measures (including audit and reconciliation procedures);
- ◆ **Implementation schedule** for start-up, notification of affected sources, and submittal requirements for affected sources;
- ◆ **Administrative procedures** for implementing the strategy, such as fee collection or issuance of permits; and

- ◆ **Enforcement mechanisms** to address noncompliance with program requirements.

SITE-SPECIFIC CRITERIA

- ◆ **Source Categories**

The following source categories prove useful in broadly characterizing PM-10 areas.

- **Area sources**
 - Residential wood combustion (RWC)
 - Fugitive dust (FD)
 - Prescribed burning (PB)
- **Mobile sources**
- **Industrial sources**

- ◆ **Emissions Inventory**

Numerous source types exist within each source category. The emissions inventory should be as specific as possible to most accurately target the innovative strategy. For example, FD may emanate from reentrained road dust on paved roads due to wintertime street sanding. The strategy will, therefore, target street sanding practices.

- **RWC:** Backyard burning
Certified/uncertified woodstoves
Fireplaces
- **FD:** Agricultural tilling
Construction/demolition activities
Material transfer
Open area wind erosion
Reentrained dust from paved/unpaved roads
Storage piles
Vacant disturbed land
Wintertime road sanding
- **PB:** Agricultural burning
Silvicultural burning

- Mobile: Diesel tailpipe emissions
- Industrial sources

◆ **Source Apportionment**

The relative PM-10 contributions of each source type may be monitored, modelled, or calculated based on emission factors and production practices. The results are generally recorded as tons per day or as a percentage of total emissions. The dominance of one or several source types should be the strongest factor in selecting an innovative control strategy. While this point appears indisputable, it may be subsumed by pressures to develop strategies which are less costly, represent less administrative investment, or demonstrate more immediate PM-10 reductions. As a result, the program ultimately adopted may fail to address the most pernicious sources of PM-10.

◆ **Duration of Activity**

The temporal nature of each source type should factor into program selection, including batch, daily, seasonal, or annual. At the same time, the temporal nature of PM-10 emissions should also be closely correlated to emission loadings. For example, while open field burning may occur for just three to four weeks each year in contrast to reentrained road dust or residential wood combustion, its brief, but significant, impact on local health could prompt an area to develop a program to limit the number of acres burned.

◆ **Location**

PM-10 emissions may occur area-wide, or they may be limited to commercial, industrial, residential, or rural locations. Consideration should be given to the correlation between these settings and population densities. Conclusions on the efficacy of a control strategy should only be made after determination of any potential for PM-10 transport.

◆ **Size and Economics of Affected Sources**

Innovative strategies concern the flexible, efficient allocation of control requirements among pollutant sources. Sources may include households, private land holdings, non-incorporated organizations, small businesses, large businesses, industrial operations, government entities, and public lands. Weighing the criteria discussed above, the case may arise where the smallest sources, and those least able to finance controls, will be responsible for the greatest levels of PM-10 emissions. If these sources are controlled, the innovative strategy should be designed to address economic limitations through, for example, the use of grants, loans,

subsidies, rebates, tax credits, and other financing options.

◆ **Number of Affected Sources**

Some innovative strategy programs exist specifically to address the problem of a large number of sources. Recycled asphalt paving provides a less costly method of paving infrequently used, but numerous, unpaved roads. Conversely, some programs may be burdened by a large number of sources, finding it unmanageable to administrate and track compliance. Some tradeable permit programs may experience this, particularly those centered around private, residential activities, such as woodburning.

In gauging the constraints resulting from a large number of sources, the program developers should refer to the Economic Incentive Program Rules Criteria in the previous section as a checklist for feasibility. Special consideration should be given to the program's scope, source requirements, implementation schedule, administrative procedures, and enforcement mechanisms.

◆ **Infrastructure Support**

While a particular strategy may ideally target an area's needs, the strategy will fail to meet the Economic Incentive Program criteria discussed in the previous section without adequate infrastructure support. Support includes at least the following:

- An adequately staffed administrative body
- Necessary in-house or available resources (modelling, monitoring equipment)
- Funding (State and local grant programs, EPA Section 105 grants)
- Regulatory authority
- Enforcement authority and capabilities

◆ **History of Control**

An innovative strategy program may not be conducive to an area historically plagued with deficiencies in monitoring, recordkeeping, compliance measurements, enforcement, and local level support. Many innovative strategies require a high level of initial investment energy, as well as organization and local commitment.

On the other hand, the development of innovative strategies has often been motivated by shortcomings in traditional control programs. This is particularly true in the areas of fines and funding. Therefore, a strategy may be targeted to the regulatory or administrative deficiency while continuing to observe the necessary Economic Incentive Program Criteria discussed in the previous section.

◆ Similarity to Areas of Precedent

One relatively reliable measure of potential for an innovative strategy is the degree to which the targeted area mirrors an area which has already set a precedent for that control strategy. In making this determination, consideration should be given to all of the factors discussed in the preceding paragraphs. For example, while two towns may both experience heavy PM-10 loadings due to RWC, the towns may vary widely in their demographics. A program of tradeable permits for operating woodstoves is more feasible for a town with 800 households than for one with an unwieldy 300,000 households. At the same time, the larger town may also experience high levels of motor vehicle exhaust. In this case, the local control strategy could consider both restrictions on the installation of *new* woodstoves *and* a diesel inspection program in order to address its sources of PM-10 while adapting to local demographic constraints.

BULK PURCHASES

GENERAL DESCRIPTION

Bulk purchases of, for example, weatherization materials or woodburning appliances can reduce the cost of these items for area residents. This cost savings may provide incentive for making improvements to a poorly insulated house or for replacing an uncertified woodstove with cleaner burning technology, resulting in PM-10 reductions. Sponsors of bulk purchases could include the local government, employers, retailers, and civic groups.

AREA-SPECIFIC PROGRAMS

◆ Libby, Montana

The Lincoln County Department of Environmental Health has considered the following three bulk purchasing options:

- Employers purchase pellet logs in bulk and distribute them to employees at discounted prices. (This option could also include weatherization materials.)
- Local retailers work with major suppliers to organize bulk sales of weatherization materials. (This option could also include pellet logs and certified woodstoves.)
- Local governments assist these efforts by providing storage for materials purchased in bulk.

◆ Crested Butte, Colorado

In 1989, the Town of Crested Butte, in association with the Hearth Products Association, sponsored an aggressive local woodstove changeout program. Enticed by the large market, five woodstove manufacturers participated, offering ten certified woodstove models. The woodstoves sold at wholesale cost or less, representing a 40-50 percent discount for local residents. Residents were encouraged to participate through impending restrictions on the use of uncertified devices.

As a result of the changeout program, Crested Butte reduced residential wood heating by 44 percent and PM-10 concentrations by 40 percent. Crested Butte Town Manager Bill Crank attributes this success to the attractiveness of discounted stoves to local residents. However,

he cautions that Crested Butte represents a unique situation: with a local population of approximately 1,200 people and emissions in an airshed dominated by residential wood combustion (75-80 percent), the Colorado Department of Health recommended Crested Butte to the woodheating industry as a study area for testing new technology (Crank). In this context, the manufacturers had greater incentive to offer substantial discounts than in more common woodstove changeout programs.

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CLEAN AIR FUNDS

GENERAL DESCRIPTION

Community-based controls are funded through a variety of sources, including private donations and grants. This is particularly true of woodstove changeout or weatherization programs. However, donors are unlikely to contribute to a community's general administrative fund because they may question whether the money will truly be allocated for the designated purpose (Manderino, Fox and Anderson, 1992).

Some communities have established "Clean Air Funds" to address the uncertainty regarding fiscal responsibility and accountability. The Funds act as "receiving units" for donations, with revenues varying widely (Anderson). They may be established through statewide legislation or by applying for nonprofit corporate status with the State and with the Internal Revenue Service under a section 501(c)(3) tax exemption. The Funds may then be administered by the local governing body responsible for environmental regulations or by a coalition of citizen volunteers. Typical coalitions are comprised of representatives from several of the following entities: Chambers of Commerce, utility companies, wood product vendors, local air quality professionals, local health professionals, fuel suppliers, and town residents.

AREA-SPECIFIC PROGRAMS

♦ Denver, Colorado

In 1992, the Denver Metropolitan Area formed a Clean Air Fund to administer \$200,000 in donations for its woodstove changeout program. Fund contributors and organizers included the Regional Air Quality Council, Colorado Interstate Gas Company, Hearth Products Association, Public Service Company, Rocky Mountain Gas Association, and Bank 1.

♦ Libby, Montana

Libby formed a Clean Air Fund in 1992 in association with the local Economic Development Council. Its revenues are intended to target programs addressing woodburning practices. The Fund is administered by individuals from the County Health Department, local businesses, the U.S. Forest Service, area schools, and the local hospital. Funding to date consists of \$4,500 from Pacific Power and Light, Champion International, and PRC Environmental, Inc.

♦ Oregon and Washington

Both the States of Oregon and Washington have adopted statewide legislation establishing air quality control program funds. Each fund is nested within its State treasury. The funds earmark contributions and revenue as separate and distinct from the State's general fund.

In Oregon, the "Residential Wood Heating Air Quality Improvement Fund" receives all money appropriated as gifts or grants. The State Treasurer may invest and reinvest the revenue with interest accruing to the Fund. Fund revenue is allocated for maintaining residential wood combustion emissions inventories, administering air quality programs, and providing low- and no-interest loans for woodstove replacement.

In Washington, the "Woodstove Education and Enforcement Account" receives all revenue appropriated from woodstove installation fees. The Fund is designated for woodstove education and enforcement activities.

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ATTACHMENTS

Oregon Fund Regulation
Washington Fund Legislation



DIESEL INSPECTION PROGRAM

GENERAL DESCRIPTION

Diesel fuel powers nearly every vehicle over 7,500 lbs. gross vehicle weight, including most urban trucks and buses. Due to the nature of these vehicles, they tend to be driven more than gasoline-powered vehicles, contributing to a disproportionate share of total vehicle miles travelled. At the same time, diesel trucks and buses discharge up to 70 times more particulate than gasoline-powered vehicles (Zielinska). In California, where heavy-duty diesel vehicles comprise just 2 percent of the total vehicle population, they contribute as much as 75 percent of on-road PM-10 emissions (California Air Resources Board, 1992).

In response to growing air quality problems associated with diesel emissions, many urban areas have adopted diesel inspection programs. In Denver, Colorado, for example, the diesel inspection/maintenance program is expected to reduce particulates by approximately 15 percent from light-duty vehicles and approximately 7 percent from heavy-duty vehicles (Colorado SIP, 1993).

AREA-SPECIFIC PROGRAMS

♦ California

Between November 1991 and June 1992, the State of California inspected 9,506 heavy-duty diesel vehicles for an opacity limit of less than 20 percent. Eighty-eight percent of the vehicles failed. The California Air Resources Board estimates that the cost of operating its snap-idle roadside tests is equivalent to \$0.47 per lb. of PM-10 reduced.

♦ Arizona

In contrast to California, the State of Arizona measures diesel emissions using a dynamometer at centralized testing stations. Vehicles are tested under load for a 20 percent opacity limit in Phoenix, and 30 percent in Tucson due to the city's higher elevation. The program is administered through the State's vehicle registration program and costs truck owners \$10 per inspection. Vehicle owners are issued color-coded compliance stickers and are considered illegally registered and subject to fines without a sticker visible on the vehicle. This system relies on local police and employers for enforcement through a visual check for compliance stickers, a method which has been only moderately successful (Domskey).

Arizona's experience also serves as a useful comparison for the two test methods: snap-idle and dynamometer. Because the dynamometer consists of a centralized inspection station, it may cost as much as \$100,000 to build. It does, however, allow for better simulation of actual driving conditions and a more accurate measurement of emissions. The snap-idle test, which is completely mobile, costs approximately \$40,000 for a van, equipment, and a data acquisition system. Due to the snap-idle test's flexibility, Arizona plans to switch to this system (Domskey).

♦ Florida

Florida also relies on dynamometer testing, with three contractors operating 50 stations in six counties and testing 5-6,000,000 vehicles a year. Based on the cost of testing versus emission reductions, Florida only requires inspections of vehicles up to 10,000 lbs. gross vehicle weight which excludes heavy-duty trucks and buses, some of the most flagrant violators (Anderson).

Like Arizona's program, Florida charges \$10 per inspection and refuses registration to vehicles that fail. Without registration, vehicles cannot be issued license tags. Using this system, the Florida Department of Environmental Regulation estimates 99 percent compliance with its regulation. However, privatization of the inspection stations has been limiting; the State has had no opportunity to recycle the \$10 inspection fees into the program.

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ATTACHMENTS

AZ Diesel Inspection Rules



ENVIRONMENTAL SCORECARD

GENERAL DESCRIPTION

To date, Louisiana has developed the only statewide example of an environmental scorecard. The State designed the scorecard to tie a given company's property tax exemption to its environmental record. In this way, the scorecard provided an economic incentive to comply with environmental regulations.

The scorecard received awards from the Center for Policy Alternatives and the National Environmental Awards Council, among others. Massachusetts, New Jersey, Texas, and Bulgaria are all studying the program for possible adoption.

AREA-SPECIFIC PROGRAMS

♦ Louisiana

The environmental scorecard program was adopted in 1990 during the administration of Governor Buddy Roemer. It was rescinded in 1992 by the newly elected Governor Edwin Edwards. During its brief 1-year tenure, the scorecard resulted in 382 application submittals with 12 companies committing to \$7,030,249 worth of emission reductions in the process of recovering property tax exemptions. Companies such as Monsanto, BP Oil, and Uniroyal submitted plans to eliminate 141.8 million lbs. of criteria pollutants (e.g., PM-10, sulfur dioxide, carbon monoxide), alone, over a 5-year period (Moreau and Templet, 1992).

The scorecard focused on two primary areas of evaluation: the company's compliance record (number of violations, fines levied, payment of fines) and its emissions per job ratio. Scoring began at 50 on a scale of 100, meaning that a company was automatically entitled to 50 percent of its original property tax exemption. Companies were also given an opportunity to earn bonus points.

Final scores ranged from 67.5 to 100, sending the message that the State would reward companies that were job intensive and pollution restrictive. The State channelled money recouped from scores of less than 100 to local-level education and transportation programs. One of the program evaluators, Robert Moreau, declared the program an equalizer in the penalty process, providing companies with a self-determined economic incentive to improve their environmental records. In the process, it reminded companies that tax exemptions constitute a policy, not a right (Moreau).

Moreau also offered several recommendations for States considering adoption of a similar program (Moreau, 1992):

- The scorecard should rely on a base score of 0 to eliminate automatic tax exemptions.
- The scoring guidelines should provide for cases of severe environmental damage.
- Bonus points should be pro-rationed over five years, instead of being re-awarded yearly, to avoid cases of companies "resting on their laurels."
- The program should encourage media coverage. Louisiana discovered that companies competed for favorable media coverage as fervently as for tax exemptions. The public's understanding of the program was assisted by the 100-point scoring scale which individuals equated to grades of A, B, C, D, and F.

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ATTACHMENTS

Louisiana Scorecard Rules



FEES

GENERAL DESCRIPTION

Fees may be constructed to serve two distinct purposes. First, a fee may provide an economic incentive to change behaviors where, for example, it is high enough to compel individuals to seek some alternative choice. Such fees may be based upon quantity of emissions (as in industrial processes), or they may be based upon a one time surcharge for a behavioral choice (as in the purchase of a woodstove). In the second instance, fees may raise revenue to fund a program. PM-10-related fees tend to fall into this category.

In designing a fee program, consideration should be given to the following three items:

- **Revenue generation** as a product of not only the monetary figure, but the population affected. For example, a \$30 fee on 14,000 woodstoves sold statewide annually could garner \$420,000. Yet, for example, a \$20 fee on 42,000 cords of wood sold statewide annually (assuming each stove consumes 3 cords per year) could garner a higher \$840,000.
- **The burden to the fee collector** and its effect on the program's compliance rate. Effort should be made to connect fee collection with an existing collection mechanism. Private retailers may be resistant to collect woodstove fees on top of the appliance's selling price, for example. Alternatively, the same woodstove fee could be added to an existing woodstove permit fee.
- **The targeted population.** As David Collier at the Oregon Department of Environmental Quality points out, a fee on the sale of every cord of firewood, for example, ties directly to the principle of polluter pays. In contrast, a woodstove fee "hits people investing in new technology and trying to burn cleaner" (Collier).

AREA-SPECIFIC PROGRAMS

◆ Oregon (Cordwood Fee)

Oregon introduced a bill during the 1993 legislative session proposing a fee of \$5 per cord of wood cut from all Federal, State, and private lands. The bill sponsors estimated that the fee would raise as much as \$2-4 million annually for funding State PM-10 control programs. The bill was not adopted and will be reintroduced in a future session.

The bill proposed that fees be collected from Federal and State offices whenever an individual was issued an already mandatory firewood cutting permit. Every six months, these offices would retain 15 percent of the revenue to cover administrative costs and would remit 85 percent to the State Treasury's Residential Wood Heating Air Quality Improvement Fund. Private landowners would be held liable for fee collection and remittance to the Department of Environmental Quality each calendar quarter. However, Collier claims that the program is primarily targeted to just 25 large Federal and State landholdings (Collier).

♦ Oregon (Open Burning Permit Fee)

Oregon currently assesses a fee on agricultural open field burning to fund the State's Smoke Management Program. The fee is \$2 per acre to register to burn and \$8 per acre for actual open field burning. Counties and rural fire protection districts collect the fees with half of the revenue designated for PM-10 monitoring, enforcement, and other control measures. The other half is designated for research on alternatives to open field burning, such as straw utilization.

♦ Washington

During the 1980's, Washington began the collection of \$5 per solid fuel burning device sold at retail. In 1991, the State raised the fee to \$30. Retailers are liable for collection and must remit fees to the Department of Revenue in conjunction with State sales tax. Revenue from the program is designated for the State Treasury's Woodstove Education and Enforcement Account to fund activities including education on health effects of woodburning, efficient burning practices, and the benefits of woodstove replacement.

REFERENCES

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ATTACHMENTS

Oregon Amendment on Fees
Washington Statute on Fees
Washington Regulation on Fees



FINES AND PENALTY ALTERNATIVES

GENERAL DESCRIPTION

Countless examples of fines exist within PM-10 regulations. In Arizona, a diesel-fueled vehicle which fails to obtain the legally required emissions inspection faces fines increasing from \$300 to \$500 to a criminal offense. In Fresno, California, an illegally installed woodstove or fireplace warrants a fine of \$2,000. In Crested Butte, Colorado homeowners who failed to replace uncertified woodstoves by 1989 were charged a \$30 per month polluter fee on municipal water bills.

When designing a fine, consideration should be given to the following items:

- **Will the fine serve as a punishment or as an inducement** to change behavior? A large, one time fine may be considered a punishment. An ongoing fine, such as Crested Butte's polluter fee, may serve as an economic incentive for an individual to seek some alternative choice.
- **The fine's amount** may, as intended, act as a deterrent from engaging in specific activities. However, if too large, the fine may grow counterproductive as businesses and individuals avoid detection at all costs. John Crouch of the Hearth Products Association warned that an exorbitant fine on the illegal installation of a woodstove or fireplace may induce homeowners to avoid *any* home inspection, including beneficial home safety inspections, for fear of a penalty (Crouch).
- Program developers should consider **where the revenue will be channelled**. Many States funnel revenues into a general fund which may fail to benefit local air quality programs. In contrast, Oregon and Washington have established PM-10-specific accounts in their State treasuries [see Clean Air Funds].

The programs highlighted below focus on *penalty alternatives*.

AREA-SPECIFIC PROGRAMS

◆ South Coast Air Basin, California

In 1990, the Prosecutor's Office at the South Coast Air Quality Management District

(SCAQMD) developed a voluntary program of "Creative Penalties." The program encourages violators to adopt measures which create direct and significant air quality benefits in lieu of paying cash fines. The program has now been adopted statewide in California. New York and Texas have inquired about adopting similar programs in their States.

The SCAQMD administers the program, negotiating creative penalties with violators to ensure that the monetary value of any measures adopted is commensurate with the original fine. A source cannot take credit for any measures already required in its air quality control plan. In addition, the source may be ineligible for participation in the program if it has historically evidenced a poor compliance record.

- Typical creative penalties include the purchase of electric vehicles, organizing a company vanpool, coordinating public education programs on air pollution, and sponsoring research. Diana Love, Chief Prosecutor at SCAQMD, States that reaction to the program has been very positive. Companies hate to be regulated or fined, she adds; "it offends them" (Love). Instead, creative penalties offer an opportunity for favorable public relations attention.

In other instances, the creative penalty may act as a catalyst for major environmental improvements. A Toyota body and fender plant in the South Coast Air Basin was fined \$150,000 for a public nuisance violation on emissions and odors. Using the creative penalty program as an incentive, the plant voluntarily revamped its entire production facility at a cost of \$5 million.

Creative penalties translate well to PM-10 regulation. In Libby, Montana, Champion International's plywood and lumber facility was fined \$40,000 on a veneer dryer violation. The company was offered the option of purchasing \$40,000 worth of weatherization materials for area homes. Other PM-10 penalties could include street sweeping, road paving, the purchase of certified residential woodstoves, or planting vegetative cover in the local area to minimize wind erosion.

◆ Puget Sound, Washington

The Puget Sound Air Pollution Control Authority (PSAPCA) fines residential woodburners \$100 for exceeding an emissions opacity limit of 20 percent. However, violators are given the option of attending a 2-hour class sponsored by the Washington State Energy Office and known as "Burner's Ed." The class addresses woodsmoke health effects and woodburning practices. It includes a video, as well as presentations from area health professionals.

During a 6-month period in 1992-93, the program's first year, an average of 20 people attended each of the two programs held monthly. Kent Swigard of PSAPCA estimates that the program also reached several hundred thousand people through its local media coverage. Swigard declares the program a success, claiming that many originally hostile attendees were "actually saying thank you" upon leaving (Swigard).

REFERENCES

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Love, Diana, South Coast Air Quality Management District, Diamond Bar, CA. Telephone communication (July 16, 1993).

Swigard, Kent, Puget Sound Air Pollution Control Authority, Seattle, WA. Telephone communication (July 22, 1993).

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FIREPLACE/WOODSTOVE RESTRICTIONS

GENERAL DESCRIPTION

Fireplace and woodstove restrictions are not new. All communities experiencing violations of the PM-10 standard due to residential wood combustion restrict woodburning to some degree. It is the variation in control approaches that makes discussion of fireplace and woodstove prohibitions useful. The four most common areas of variation are summarized below.

- Areas tend to either **restrict sales or installation** of fireplaces and uncertified woodstoves. One method precludes the other. If restrictions on sales include out-of-state sellers, homeowners are left with no sources from which to purchase illicit woodstoves. Conversely, restrictions on installations make the availability of woodstoves immaterial.

Of the two options, restrictions on fireplace and uncertified woodstove *installations* may be the preferred method, according to Craig Arrowood at the Boise Building Department. He attests that "It's really tough to mandate to the public what to do with their personal property" (Arrowood). However, permitting the sale of used woodstoves while prohibiting their local installation may lead to "dumping" used, uncertified woodstoves in neighboring counties and States (Taylor) [see "disposal," below].

- Programs vary in their **levels of stringency**, most notably in their grams per hour requirements for emissions. EPA certified Phase II stoves may be as high as 7.5 grams per hour weighted average and are permissible in most PM-10 nonattainment areas. Yet, regulated emission limits may go as low as 1 gram per hour, which Andy Goodrich at the Washoe County, Nevada District Health Department hopes will be "a little technology-forcing" (Goodrich).
- **Disposal requirements** are a byproduct of fireplace and woodstove prohibitions. Regulations may require that stoves be scrapped for cash, disabled, or destroyed. Evidence may be required for any of these options. Alternatively, the regulation may not specify any disposal requirements. In this case, local officials should consider the potential for dumping used, uncertified woodstove in neighboring counties and States, as mentioned above.
- **Enforcement provisions** may target home building code permits or they may target home inspections. Building code requirements already exist in all communities and represent a less labor intensive means of enforcement. In

either case, fireplace and woodstove prohibitions can be difficult to enforce, states Jamie Craighill at the Washington State Department of Ecology, but they can be assisted by three pressures: pressure on retailers to comply, social pressures to reduce woodburning, and pressure from insurance companies (Craighill). In the latter case, homes with illegally-installed fireplaces or woodstoves may be denied insurance coverage or compensation for claims.

AREA-SPECIFIC PROGRAMS

♦ Colorado

In Colorado, "No person shall advertise to sell, offer to sell, or sell" a woodstove unless it has been certified. This regulation includes woodstoves from out-of-state. Program developers reason that limitations on the *sale* of uncertified woodstoves will effectively prohibit their installation (Colorado SIP, 1993).

Additionally, in the Denver Metropolitan Area, regulations prohibit the installation of fireplaces, except for approved gas appliances and inserts. The prohibition is enforced through building code provisions which require a permit for new installations. The State estimates that of the 6,500 new homes constructed each year in the 6-county Denver area, 30 percent would have included a fireplace without an approved gas appliance or insert. The regulation will therefore result in approximately 1,950 fewer fireplaces installed each year.

♦ Mammoth Lakes, California

In 1991, Mammoth Lakes adopted the inverse of Colorado's regulation. Mammoth Lakes prohibits the installation of uncertified solid fuel burning devices, including fireplaces. All new installations must meet EPA phase II standards. In this case, program developers reason that limitations on *installation* will effectively prohibit uncertified woodstove sales within town. As a result, the Mammoth Lakes SIP claimed an 8 microgram per cubic meter air quality improvement for 1993 and 39 microgram per cubic meter improvement for 2005 (resulting from area growth).

♦ Reno, Nevada

Illustrating a high level of stringency, Reno prohibits the installation of any solid fuel burning device in a new, single family dwelling with the exception of gas-fired appliances and those woodstoves meeting emission limits of 1 gram per hour or less.

♦ Pinehurst, Idaho

Pinehurst exemplifies the problem of used, uncertified woodstove dumping. As of 1992, all *new* woodstoves sold statewide in Idaho must meet EPA Phase II emission limits. However,

there are no restrictions on the sale of *used* woodstoves in most of the State. This exposes Idaho communities to used, uncertified woodstoves dumped on the market by sellers from Oregon and Washington where their installation is prohibited (Arrowood).

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ATTACHMENTS

Colorado Prohibition



Mammoth Lakes, CA Prohibition

Reno, NV Prohibition

FUNDING SOURCES

GENERAL DESCRIPTION

To supplement State and Federal grant programs, the more successful funding sources are discussed below. They generally target home weatherization improvements and programs to replace uncertified residential woodstoves with either a certified woodstove or an alternative heating system. [See Clean Air Funds, Fees, Fines, Private Sector Financing, Tax Credits and Rebates, and Utility Company Support.]

SPECIFIC PROGRAMS

♦ Low-interest Bank Loans

Low-interest loans with extended terms are a common funding mechanism for woodstove changeout programs. In Denver, Colorado, Bank One offered a 13 percent unsecured loan (down from the normal 18 percent) to help finance woodstove replacement. However, the low-interest loan was only nominally popular, a possible indicator that the rate was not sufficiently low. Ken Lloyd at the Regional Air Quality Council in Denver claims that the next strategy will be to secure a 7 percent home equity loan for woodstove replacements (Lloyd). Revenue in Clean Air Funds may also be used to "buy down" one or two interest points (Lind).

Banks have incentive to reduce interest rates under the Community Reinvestment Act (12 Code of Regulations 25) which requires financial institutions to extend credit to all segments of the community, including low-income households. Providing low-interest loans satisfies this requirement.

♦ Community Development Block Grants

Community Development Block Grants (CDBG's) are sponsored by the Department of Housing and Urban Development (HUD). Grants focus on three funding categories: economic development, housing, and public facilities. Large metropolitan areas receive funding directly from HUD. Smaller communities receive some portion of general HUD funding given to States.

Communities compete for CDBG's through an application process. Klamath Falls, Oregon has been particularly successful in CDBG awards, garnering \$1.44 million for home weatherization and woodstove replacement. Klamath Falls' success was attributed to the

"dynamic individual" who prepared the CDBG application and to the application's emphasis on the need for low-income funding support in this area of severe PM-10 exceedance episodes (Collier).

◆ Private Sector

Communities have had only limited success with private foundations because air quality management must compete with health issues and the arts, among other things (Lind). In the private sector, individuals and businesses remain the most consistent means of support. In Denver, a consortium of companies contributed \$200,000 to woodstove replacement, including a 1-800 information telephone service.

◆ Farmers Home Administration

The Department of Agriculture Farmers Home Administration provides 0 percent loans and up to \$5000 in grants to support home construction and repair for low-income senior citizens. This program may be accessed for woodstove replacement with either a certified woodstove or a new heating system. However, many seniors are unaware of the program or need assistance in filing an application.

◆ Community Action Agencies

Community Action Agencies receive money from the Department of Energy and may be accessed for assistance with home weatherization improvements and woodstove replacement.

◆ Regional Bioenergy Programs

Like Community Action Agencies, Regional Bioenergy Programs may provide funding for home weatherization and woodstove replacement. These programs are known locally, for example, as the Tennessee Valley Authority in the Southeast and the Bonneville Power Administration in the Northwest.

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LEGISLATION VERSUS REGULATION

GENERAL DESCRIPTION

Some states rely heavily on legislation to manage air quality problems while others focus on local regulations. The discrepancy makes a discussion of relative pro's and con's useful. In considering a campaign for a local regulation versus proposing a bill for statewide legislation, program developers should consider the following questions (Lauderdale):

How localized is the air quality problem? (A regulation may be most appropriate.)

Will this control strategy need enforcement "teeth"? (Legislation will be helpful.)

Will the control strategy be difficult to adopt locally? (Legislation will be helpful.)

What timeframe is necessary for adoption of the control strategy? (A regulation may be most appropriate.)

SPECIFIC PROGRAMS

Below, the relative pro's and con's of legislation and regulations are discussed in greater detail.

♦ Legislation

- Legislation offers a clear statewide mandate.
- It is standardized across the state to prevent potential violators from flocking to areas of relative leniency.
- Because it is prescriptive, legislation may aid enforcement. A local health department official can claim to call a woodburning curtailment alert at, say, 75 micrograms per cubic meter because it is *the law*.
- Legislation may empower locals with the authority to adopt regulations which are otherwise contentious.

◆ Regulation

- Regulations offer locals the flexibility to address the unique nature of their air quality problems. They may be tailored to local air quality, the source mix, demographics, geography, and compliance history.
- Regulations may be adopted more quickly than legislation. In Oregon, the State Legislature established a general fund for air quality control programs. However, a bill to establish authority for locals to collect fees to *provision* the fund died in session. Local air quality managers must now wait for reproposal during the next legislative session.

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MEDIA CAMPAIGNS

GENERAL DESCRIPTION

From brochures, to fact sheets, public service announcements, and videos, communities have produced a seemingly infinite array of media materials on PM-10. A large body of such materials has been compiled in "Public Awareness Materials on Residential Wood Combustion" (September 1990, EPA-450/2-90-013). This reference can be used as a starting point for individuals drafting written information for public consumption on residential wood combustion because in all likelihood, a sample already exists.

At the same time, three additional strategies are presented in the following section.

SPECIFIC PROGRAMS

◆ Production On a Low Budget

Media campaigns need not have large budgets. Instead, they may take advantage of in-kind contributions from printers, media consultants, production studios, suppliers, writers, artists, and others. In Libby, Montana, a speech class at the local community college wrote and produced the town's public service announcements on PM-10 health impacts, home weatherization, and efficient woodburning practices.

◆ Broadening the Audience

Kent Swigard at the Puget Sound Air Pollution Control Authority (PSAPCA) recommends creating a catchy media campaign (Swigard). To draw attention to its woodstove changeout program during the 1991-92 woodburning season, PSAPCA informed the public and the press that woodstove retailers would not only offer rebates on the purchase of new woodstoves, they would *also* remove the homeowner's existing appliance.

During the 1992-93 woodburning season, PSAPCA introduced "Burner's Ed," a 2-hour class on residential woodheating, as an alternative to levying woodburning fines [see Fines and Penalty Alternatives]. The class reached approximately 240 people through actual attendance, but several hundred thousand people through media attention.

◆ Harnessing Public Relations Pressure

Private companies have demonstrated their zeal for competing against one another to obtain favorable public relations attention. In the South Coast Air Basin, the South Coast Air Quality Management District (SCAQMD) publishes a list of top 10 environmental polluters monthly in the "Los Angeles Times." The Baton Rouge "Morning Advocate" and the New Orleans "Times Picayune" published the results of Louisiana's environmental scorecard program [see Environmental Scorecard]. One of the program's evaluators claimed that the newspaper coverage created a "public forum" in which companies sought positive media attention as vigorously as the program's intended property tax exemptions (Moreau).

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PRIVATE SECTOR FINANCING

GENERAL DESCRIPTION

The three programs described in this section arose from local level needs for funding assistance. In each instance, local planners designed creative strategies to tap companies in the private sector for fugitive dust control measure funding.

AREA-SPECIFIC PROGRAMS

♦ Las Vegas, Nevada (Construction Offset Requirements)

Effective August 2, 1993 all new construction projects in Las Vegas, including grading, trenching, and generally disturbing topsoil, were required to obtain PM-10 offsets from the paving of unpaved roads.

In Las Vegas, construction sites contribute approximately 20 percent of PM-10 emissions. With the offset requirement, they are treated similar to stationary sources and are required to remit to the Public Works Agency a 1-time payment for PM-10 emission reduction credits. The credits are based on the site's potential to emit and currently cost \$550 per ton of PM-10. Sites less than 5 acres are exempted from the requirement.

To illustrate the program, after factoring in exemptions and credit for improvements made to vacant, disturbed land, a 15-acre construction site would be required to pay \$1,392 in credits. The County earmarks this money exclusively for paving unpaved roads. Mike Naylor of the Clark County Health District considers the program thoroughly equitable. Sand and gravel facilities, he claims, handle aggregate like construction sites and have long been regulated by SIP control plans (Naylor). In addition, the District estimates that construction sites will pass the cost on to homebuyers at an average cost increase of just \$15 per home.

Regarding the program's effectiveness, the District estimates PM-10 emission reductions from unpaved roads of 2,000 tons per year, an overall reduction of approximately 50 percent by the year 2001.

♦ Missoula, Montana (Contract to Support Chemical De-icing)

Missoula has been unable to avoid exceedances of the PM-10 standard based upon its existing street sweeping control measures. Because the city's continued nonattainment designation might represent additional control requirements for those local industries already in

compliance with applicable regulations, the industries approached the city seeking some cooperative solution.

As a result, Missoula's Public Works Department drafted a 3-year contract committing Champion International, Louisiana Pacific, and Stone Container to \$77,102 in total payments for assisting the City in its conversion to use of a roadway chemical de-icer. The figure was based on the cost of conversion minus what the City already paid in annual sanding and salting materials. It also included a one-time payment of \$7,500 to convert the City's spreaders. The companies distributed the costs among themselves based upon relative PM-10 emissions.

It is important to note that the contract indicated to the companies that the exchange should not be misconstrued as a relaxation of emission limit requirements. In addition, it was agreed that the City would assume all expenses associated with chemical de-icing upon the contract's expiration in 1995.

♦ **Rancho Mirage, California (Letters of Credit)**

All construction and development projects in Rancho Mirage must submit a dust control plan to the City. Beginning in January 1993, the City required that all dust control plans be accompanied by a letter of credit to ensure their adequacy. The letters of credit are intended to pass the full costs of particulate mitigation measures to the responsible construction company. In this way, if a site fails to adequately control particulates, and the City steps in to perform mitigation activities (such as watering), the City will be assured of a means for reimbursement.

In the process, the City may legally enter private property to control particulates, as necessary. It may also act as an agent on a construction company's contract with a third party hired to control PM-10. For example, the City may call out a contracted watering truck without first obtaining permission from the construction company.

The program affects all projects moving more than 50 cubic yards of dirt. The amount posted on a letter of credit is based on a \$2,000 flat fee and \$1,000 per acre over the first acre. So, for example, a 5-acre project would be required to post \$6,000. On the opposite extreme, the Vista Montana housing development was required to post \$236,000. If the City incurs no costs resulting from the project, it will return the entire amount originally posted, plus interest.

Rancho Mirage enforces the requirement through inspections conducted by the Public Works Department and claims a 100 percent inspection rate. The City also investigates public complaints. When a violation is found, the construction company might be told "You have one hour to get a water truck out here" (Mitton). If the City is then forced to control the site and cannot recover costs, the bill will be assessed to the violator's county property tax. To date, no emission reduction credits have been quantified for the program.

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ATTACHMENTS

Las Vegas Offset Requirements 
Missoula De-icer Contract
Rancho Mirage Letter of Credit Requirement

PRODUCT DEVELOPMENT

GENERAL DESCRIPTION

The current practice of burning both agricultural and wood wastes produces large quantities of particulates. Product development concerns the creation of alternatives to these practices. In the process, developing a marketable product provides an economic incentive to utilize, instead of burning, agricultural and wood products residue.

SPECIFIC PROGRAMS

♦ Agricultural Waste

The grass seed industry relies on annual open field burning of residual straw material to maintain a high quality crop. Large grass seed operations exist in Idaho, Minnesota, Oregon, and Washington with farms in the Willamette Valley, Oregon and in Spokane, Washington experiencing some of the most significant PM-10 impacts.

In the Willamette Valley, alone, an area stretching from Eugene to Portland, nearly 400,000 acres of land are farmed annually for grass seed. Of this amount, just 160,000 acres continue to be open burned, in part, as a result of aggressive product development. Chuck Craig of the Oregon Department of Agriculture claims that the program is assisted by three escalating pressures: farmers applying for permits to open burn now face a regulatory "circus"; the public is growing increasingly resentful of the particulates resulting from open burns, and insurance companies have increased the liability associated with open burning (Craig).

Alternatives to burning in the Willamette Valley include the following:

- **Animal Feed.** The Willamette Valley exported 150,000 tons of straw residue to Japan in 1990, alone, to be utilized as a supplementary feed for cattle.
- **On-farm Composting.** Plowing straw residue under benefits the soil condition.
- **Firelogs.** While a promising development, Don Arkell of the Lane Regional Air Pollution Authority cautions that the ash content in straw residue firelogs is ten times greater than in wood fiber logs due to straw's high silica content (Arkell). This negative byproduct may handicap the firelogs' marketability.

- **Fiber Replacement.** Straw can be used to replace traditional wood fiber in products such as paper and fiberboard.
- **Mulch.** Straw mulch has been used on commercial crops, particularly in fruit orchards.
- **Animal Bedding.** Straw residue has been used as cover in horse stables and chicken houses.

◆ **Wood Waste**

Wood waste is a byproduct of logging operations (slash), the wood products industry, and construction activities. Two markets, in particular, have become well-established to utilize these wastes: firelogs and hog fuel for power stations. In both cases, the markets are limited primarily by production capacity and the high cost of transporting wood waste (Fox). However, claims Brian Finneran at the Oregon Department of Environmental Quality, slash utilization "is really picking up" (Finneran).

The Environmental Defense Fund estimates that 22 million tons of forest slash are available in the Western States, an amount that would translate to roughly 865 million megawatt hours of electricity. Already, companies including Costco, K-Mart, and BuyMart are utilizing slash for picture frames and moldings.

Slash utilization will only increase, Finneran predicts, with growing attention focused on the forest health issue (Finneran). Due to management practices in recent decades, millions of acres of dead and dying Western forests now pose a serious threat of wildfires. For example, in the Blue Mountains of Oregon, alone, four million acres of dead trees and brush pose a serious fire hazard. This threat has created increasing pressure on finding markets for wood fiber.

Recognizing the growing market for hog fuel, several private companies have contacted Finneran for information regarding the potential for new electricity generating facilities in Western States. The marketability of hog fuel in these States has grown especially attractive as the cost of hydropower generation increases and its capacity decreases. Yet, as Finneran cautions, with a 35 Megawatt facility requiring approximately 250,000 tons per year of raw material, long-term contracts for a stable supply of material within a cost-effective 50-mile radius of the facility "will be hard to come by" (Finneran).

Examples of existing firelog and hog fuel enterprises are presented below.

- **Firelogs.** Hoodoo Mountain Pellets in Libby, Montana is one example of an enterprise devoted to wood waste utilization. Hoodoo relies on planer shavings from Champion International, its neighboring plywood and lumber mill. In this

application, claims company owner Lee Disney, planer shavings are preferred to forest slash since they contain no "bark, bugs, or dirt" (Disney).

Disney adds that the market for firelogs is "enormous," namely because the cost of firelogs is roughly equivalent to the cost of purchased cordwood. Although firelogs are more expensive per unit, they burn more efficiently, thereby reducing the overall quantity purchased (Lind).

- **Hog Fuel.** Wheelabrator in Anderson, California is a 49 Megawatt electric generating facility. The company relies on urban woodwaste, timber mill residue, and forest slash to fuel its boilers. The high cost of electricity in California makes it profitable for Wheelabrator to operate. In addition, the company operates under the Public Utilities Regulatory Policy Act of 1978 which makes it easier for small companies to enter the electricity generation market. However, because Wheelabrator must be within a 50-mile radius of its supply market to maintain feasible operating costs, the stability of its future supply is tenuous (Finneran).

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RECYCLED ASPHALT PAVING

GENERAL DESCRIPTION

Recycled asphalt paving (RAP) represents a less costly method of paving roadways than traditional hot asphalt paving (also known as strip paving). While more expensive per mile than basic road watering on unpaved and gravel roads, RAP is treated with an oil-based emulsion product which prevents it from breaking down into PM-10-producing aggregate as readily as gravel. RAP, therefore, offers a middle-ground option which may be ideally suited to residential and rural areas.

Many transportation and road departments nationwide have experimented with RAP with varying degrees of success. The most common criticism is disintegration through traffic wear. However, as Scott Schnell at the Street Maintenance Department in Eagle River, Alaska claims, "It boils down to quality control...it's totally reliant on how you maintain it" (Schnell).

AREA-SPECIFIC PROGRAMS

◆ Eagle River, Alaska

The Eagle River Street Maintenance Department surfaced 34 miles of roadway with RAP between 1987 and 1993 with an eventual goal of 110 miles (Schnell). The Town estimates that its road treatment program, which includes both RAP and strip paving, has reduced PM-10 concentrations from road dust by 54 percent. Local air pollution officials further estimate that RAP has a silt content of just 0.7 percent in comparison to 10.9 percent for unpaved roadways. Its efficiency based on silt loadings, therefore, approaches that of strip paving.

In Eagle River, RAP consists of asphalt salvaged from road projects. The material is run through a rock crusher with a 1" screen. After grading the roadbed, crews lay a 3-4" layer of RAP, spray it with water, and grade it again before compacting the surface with a roller. Finally, the surface is sealed with CSS-1, a commercial oil.

Eagle River estimates that its RAP-treated roads cost \$24,000 per miles. In contrast, strip paving can be as high as \$150,000 per mile. (CSS-1, alone, sprayed on unpaved roadways costs \$2,100 per mile but represents a substantially reduced control efficiency.) Eagle River has improved RAP's cost effectiveness by stockpiling its own project-salvaged asphalt; the town formerly purchased crushed asphalt from commercial vendors in Anchorage at \$7 per ton.

Finally, some transportation departments have criticized RAP for its disappointing 3-year lifetime. In Eagle River, however, Schnell predicts a 10 to 12-year life through periodic regrading and oiling.

♦ **Missoula, Montana**

Missoula also stockpiles asphalt from its own street repair projects to use for RAP. The City's Public Works Department targets unpaved alleyways, again roads with intermittent use. Joe Aldegarie at the Public Works Department estimates a lifetime of 10-15 years, "easily," for the City's RAP-treated roads (Aldegarie).

REFERENCES

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"Eagle River PM-10 Control Plan." Municipality of Anchorage, AK, Department of Health and Human Services (September 24, 1991).

"Eagle River PM-10 Control Plan Status Report." Anchorage Air Pollution Control Agency (January 27, 1993).

Schnell, Scott, Street Maintenance Department, Eagle River, AK. Telephone communication (June 30, 1993).

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STREET SANDING GUIDELINES

GENERAL DESCRIPTION

In many communities, reentrained road dust contributes significantly to local PM-10 violations. In areas with heavy snowfall, much of this dust results from road sanding materials, crushed by tire compaction into fine particles throughout the winter and spring. While road sanding alternatives, such as chemical de-icers, offer some relief, their impacts on local water quality are still being measured. Therefore, claims Ken Lloyd at the Regional Air Quality Council in Denver, Colorado, "Our first approach has been better [road sanding] management practices" (Lloyd).

AREA-SPECIFIC PROGRAMS

◆ Presque Isle, Maine

To address the problem of fine particle compaction, Presque Isle now requires that sanding materials be greater than 4 percent silt by weight. The Town also requires materials to meet degradation specifications.

◆ Denver, Colorado

In Denver, where road dust contributes as much as 67 percent of total PM-10 loadings, a coalition of public works officials and industry representatives developed Street Sanding Guidelines in 1991. The Guidelines range from requirements that crews lay no more than 500 lbs of materials per lane mile, to snowplowing before sanding. They were distributed to all public works directors, city councils, and county commissioners in the 6-county Denver area. The guidelines were supplemented with technical training sessions for street crews.

Through adherence to the Guidelines, area street crews have reduced the use of sanding materials by 20-30 percent. Some crews have obtained reductions as high as 50 percent. The Colorado SIP claims emission reduction credits of 16-25 percent. The Regional Air Quality Council tracks compliance with the Guidelines by requiring reports on quantities of sanding material used. The Colorado Department of Health enforces the Guidelines, investigating suspected violations.

REFERENCES

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Lloyd, Kenneth, Regional Air Quality Council, Denver, CO. Telephone communication (July 2, 1993).

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ATTACHMENTS

Presque Isle Sanding Guidelines
Denver Sanding Guidelines



TAX CREDITS AND REBATES

GENERAL DESCRIPTION

Tax credits and rebates offer an incentive to modify behavior based on some monetary gain. In program design, they may either lower costs to increase the attractiveness of an option, or they may be temporary in nature to pressure consumer choice through a "window of opportunity."

Tax credits are usually provided as exemptions from State sales tax or as end-of-tax year credits on State income tax. Rebates are found in the private sector where woodstove dealers, for example, may offer anywhere from 10-50 percent discounts on purchases.

[See also Utility Company Support, and Woodstove Changeouts].

AREA-SPECIFIC PROGRAMS

♦ Montana (Woodstove Tax Credit)

Purchasers of pellet stoves in Montana are entitled to a State income tax credit of 20 percent on the first \$1,000 of the cost of the stove (including installation) and 10 percent on the next \$3,000. Claimed tax credits may not exceed \$500. For cordwood stoves with emissions less than 4.1 grams per hour, purchasers are entitled to 10 percent credit on the first \$1,000 and 5 percent on the next \$3,000. Claimed tax credits for cordwood stoves may not exceed \$250. The sliding scale is intended to provide incentive for State residents to purchase cleaner-burning pellet stoves. Claims for tax credits may be filed using a form issued by the State.

While the program has been successful, Montana intends to sunset woodstove tax credits in 3-4 years due to State budget limitations (Bennitt).

♦ Oregon (Agriculture Tax Credit)

Oregon is actively encouraging alternatives to open field burning of crop residues [see Product Development]. Farmers who invest in facilities or equipment used to accommodate practices other than burning may claim credit on their corporate or income taxes for up to 50 percent of the qualifying facilities or equipment. In addition, farmers are offered a 10-year repayment schedule on loans from the State for the remaining 50 percent. A typical application might involve a building used to house the residual straw from a grass seed crop.

Chuck Craig at Oregon's Department of Agriculture calls the tax credit program critical for Oregon farmers, many of whom are small family corporations. The program "very clearly has been effective," Craig adds, and is a necessary economic incentive to encourage alternatives to open burning (Craig).

Applicants may request a tax credit packet from the Oregon Department of Environmental Quality (DEQ). The application is reviewed by the DEQ and the Oregon Department of Agriculture. Qualifying farmers are then issued a "Pollution Control Certificate" to present to the Oregon Department of Revenue.

REFERENCES

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Telephone communication (July 9, 1993).*

*Craig, Chuck, Oregon Department of Agriculture, Salem, OR. Telephone communication
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ATTACHMENTS

Montana Tax Credit Worksheet



Oregon Tax Credit Rules

TRADEABLE PERMITS

GENERAL DESCRIPTION

Tradeable permit programs cap permissible emission levels while allowing sources the flexibility to trade the right to emit. Trading schemes within one source category are most common (power plants, industrial boilers, residential woodstoves). However, increasing attention has been given to the potential for trading between source categories (e.g. stationary versus mobile sources) where tons of emissions equate to ton of emissions, regardless of the source type.

AREA-SPECIFIC PROGRAMS

♦ Spokane, Washington (Agriculture Trading Program)

To reduce PM-10 loadings, Spokane placed a 35,000-acre cap on agricultural open burning in the grass seed industry in 1990. Farmers must apply with the Spokane County Air Pollution Control Authority (SCAPCA) by June 15th of each year for a permit to burn between the following August and September. An individual farmer's permit is calculated based on the greatest number of acres burned on that farm between 1985 and 1989, an amount referred to as "base acreage."

Originally, farmers could transfer their rights to base acreage only to a family member (spouse, son, or daughter), or through sale or lease. This clause resulted in a monopoly on base acreage by existing farmers and placed new growers at a competitive disadvantage. In response, SCAPCA developed a central base acreage account. Farmers holding base acreage in excess of their needs may voluntarily offer the acreage for sealed, competitive bidding in April and October of each year. The price of a base acre is determined solely by the market.

SCAPCA intends to phase-out open burning over time; for every base acre placed in the account, only 0.9 acres may be purchased for use. In addition, for every base acre purchased, the buyer must pay \$1 to the State's Grass Seed Burning Research Account to fund research on open burning alternatives.

♦ Telluride, Colorado (Woodstove Trading Program)

In 1985, Telluride required that all woodburning devices be registered with the Town Clerk. The program was accompanied by a woodstove changeout in which only EPA-certified devices would be granted a permit to burn. The Town established a resulting cap of 545

woodstove permits which would be freely marketable between town residents.

Telluride's woodstove permits are deed restricted to ensure that once a permit is sold, the home is prohibited from installing a new woodstove. In addition, to reduce the number of wood stoves over time, installers of each new woodstove are required to purchase *two* permits at a current market price of \$1,500 per permit. As of 1991, Telluride had a market of 338 permits with 147 permits for sale.

REFERENCES

Skelton, Eric, "Market-based Approaches to Controlling Air Pollution - Briefing Package." Spokane County Air Pollution Control Authority (January 26, 1993).

Spencer, Peter, Former Mayor of Telluride, CO. Telephone communication (November 1992).

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ATTACHMENTS

Spokane Tradeable Permits Rules
Telluride Tradeable Permits Rules



UTILITY COMPANY SUPPORT

GENERAL DESCRIPTION

Utility company support is just one example of a funding source [see Funding Sources]. Yet, it warrants its own discussion since programs in this category are so diverse and prolific. These programs have provided significant monetary support, often for communities unsuccessful in garnering funding from other sources.

Programs range from a one-time lump contribution to a community's Clean Air Fund to on-going consumer financing schemes [see Clean Air Funds]. They most often target home heating system conversions, home weatherization improvements, or offer economic incentives to reduce reliance on residential woodburning. A number of programs specify conversions of electric heating systems rather than woodstoves. However, the profusion of homes which heat with both electricity *and* woodstoves may often rely predominantly on woodheat due to the high cost of electricity. When offered a lower cost natural gas alternative to electric heat, therefore, homeowners may also tend to reduce woodburning.

AREA-SPECIFIC PROGRAMS

♦ Idaho Power Company

Between 1986 and 1989, the Idaho Power Company offered an economic incentive to homes which heat with both electricity and woodburning in order to reduce reliance on woodheating. The Company offered a 50 percent discount on kilowatt hours (kWhrs) which exceeded the previous year's usage (as evidence of an increased use of electricity and a decreased reliance on woodheat). The Idaho Power Company was motivated by a considerable surplus of electricity generated during the winter months.

During its heyday, the discount program enrolled 4,000 customers. However, the program failed to measure PM-10 reductions as a direct result of its financial incentives. In addition, the Company is no longer experiencing a wintertime surplus of kWhrs. Therefore, Idaho Power discontinued the program.

♦ Montana Power Company

The Montana Power Company, with sales of both electricity and natural gas, offers a program labelled "Energy Share." The program began as an effort to relieve pressure on the

Company's electricity grid and offers no-interest and low-interest loans for conversions to natural gas heating systems.

♦ **Pacific Power and Light**

Begun in the late 1980's, Pacific Power and Light offers home heating audits at a nominal charge. The Company also offers 0 percent interest loans on weatherization materials and heating systems, including heat pumps and zonal heaters.

♦ **Washington Water Power**

Washington Water Power, which sells both electricity and natural gas, began a funding program in 1992 to relieve pressure on its electricity grid. The Company views the program as "demand-side management," an attempt to avoid building a new electricity generating facility by converting customers to natural gas.

Customers are offered a \$2,700 loan to convert their existing electric heat and hot water to natural gas. However, customers are only responsible for repaying \$1,140 of the loan, interest-free, over five years. Charmin Jordan of Washington Water Power states that although the successful program will continue, the loan will be reduced to \$2,200.

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VMT RESTRICTIONS

GENERAL DESCRIPTION

Vehicle miles travelled (VMT) restrictions are designed to limit the number of miles that motorists drive where reentrained road dust is a major contributor to PM-10 nonattainment.

AREA-SPECIFIC PROGRAMS

◆ Aspen, Colorado

With approximately 200 inches of snow each winter, Aspen's street sweeping measures could not keep pace with the need for roadway PM-10 reductions. Additionally, the Town felt that street sweeping treated the symptoms and not the cause of the problem (Cassin). In 1993, Aspen adopted VMT restrictions to reduce the 140,000 miles travelled on area roadways each day.

Aspen has raised downtown parking to \$1 per hour. An outer ring of satellite parking lots costs motorists \$5 per day, with no charge for Town residents. Free shuttle buses transport motorists from the satellite lots to their downtown destinations in 3-5 minutes. Crosstown shuttles, which are also free, run at 10-minute intervals. To accommodate the program, Aspen is currently adding 50 percent more buses to its fleet.

Aspen has financed its VMT program through a voter bond referendum which supported \$1.4 million for the purchase of additional buses. Additionally, all revenue from parking fees will support the free shuttle service. While the Town has not yet calculated PM-10 emission reductions resulting from the program, Lee Cassin at the Aspen/Pitkin Environmental Health Department declares that the program "will definitely be helpful" (Cassin). However, she adds, the restrictions are probably insufficient to offset VMT increases as the area grows. The Town may be forced to add additional satellite lots and to expand its \$1 per hour downtown parking area.

◆ Mammoth Lakes, California

Like Aspen, Mammoth Lakes concluded that street sweeping was insufficient to cope with high loadings of wintertime sanding materials. In response, the Town established a VMT cap of 106,000 miles per day which allows for 60 percent growth to the year 2005.

Mammoth Lakes plans to obtain reductions in VMT through restrictions on development projects. Developers are required to submit plans to the Town Planning Department which demonstrate that VMT resulting from their developments will be 40 percent less than under unrestricted conditions. Developers can make this showing through reductions in density or by paying for the expansion of bus routes, for example.

Local air quality officials estimate that VMT restrictions will result in a 19 microgram per cubic meter air quality improvement by 1995 and a 57 microgram per cubic meter improvement by 2005.

REFERENCES

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Cassin, Lee, Aspen/Pitkin Environmental Health Department, Aspen, CO. Telephone communication (July 2, 1993).

Taylor, Bill, Town of Mammoth Lakes Planning Department, Mammoth Lakes, CA. Telephone communication (July 13, 1993).

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ATTACHMENTS

Aspen VMT Rules



WEATHERIZATION

GENERAL DESCRIPTION

When a poorly insulated home is properly weatherized, it can substantially reduce energy use. This often translates to a reduction in PM-10 from homes which rely heavily on woodheating. Weatherization measures include home audits, insulation, weather stripping, and window replacement.

The usefulness of a weatherization program is often its ability to serve as a first step in residential wood combustion controls. Weatherization is relatively inexpensive and is generally very accessible for low-income communities. Funding and technical assistance may come from local public health or planning departments, the State Department of Energy, Farmers Home Administration, utility companies, community action agencies, and the bulk purchase of materials [see Bulk Purchases, Funding Sources, and Utility Company Support].

Information regarding the importance of home weatherization and available assistance may be transferred through utility bills, retail displays, public service announcements, brochures, and newspapers.

AREA-SPECIFIC PROGRAMS

◆ Pinehurst, Idaho

Pinehurst claimed an 8 percent emission reduction credit for weatherization measures with funding sources from many of the organizations listed above.

REFERENCES

Manderino, Laurie, Randy Fox and Ronald Anderson, "An Integrated Community Approach to Reducing Residential Woodsmoke: Innovative Funding of Control Strategies." PM-10 Standards and Nontraditional Particulate Source Controls (A&WMA/EPA International Specialty Conference, 1992), p. 716-29.

"Pinehurst PM-10 SIP." Idaho Department of Health and Welfare, Boise, ID (February 1992).

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WOOD MOISTURE CONTENT RESTRICTIONS

GENERAL DESCRIPTION

Burning "green" wood emits more PM-10 than seasoned wood because it interferes with efficient combustion. For this reason, numerous areas restrict wood moisture limits to 20 percent or less.

Wood moisture may be measured through conscientious seasoning practices. Many areas provide brochures on stacking, covering, and seasoning wood, recommending that the wood be given no less than 6 months to mature. Alternatively, moisture content may be measured using a wood moisture meter. This device costs \$300 on average and is pounded into a split piece of wood like a thermometer. A moisture meter can be made available to the public on loan from local fire stations or county health departments.

Compliance with wood moisture restrictions may be voluntary or it may be conducted through random inspections of retail wood lots.

AREA-SPECIFIC PROGRAMS

♦ Mammoth Lakes, California

Mammoth Lakes restricts the wood moisture content of retail and private cordwood sales to no greater than 20 percent between July 1st and December 31st of each year.

♦ Seattle, Washington

The Seattle area also restricts the sale of cordwood to no greater than 20 percent moisture content. Any cordwood sold with a higher moisture content must be accompanied by a sales receipt stating that the wood is unseasoned and is illegal to burn until dried to less than 20 percent.

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ATTACHMENTS

Mammoth Lakes Moisture Rules
Seattle Moisture Rules



WOODSTOVE CHANGEOUTS

GENERAL DESCRIPTION

Uncertified woodstove changeouts to cleaner burning appliances or to alternative heating systems are long familiar to air quality managers in areas with PM-10 violations due to residential wood combustion. However, the success rate of changeout programs differs markedly.

In Crested Butte, Colorado, where woodstove replacement was mandatory after 1989, the town estimated 100 percent compliance (Crank). In Washington's Puget Sound Area, voluntary changeout has resulted in the replacement of 1,600 woodstoves out of a total population of approximately 270,000 uncertified woodstoves. Many factors are involved in changeout programs in addition to being mandatory or voluntary. These factors are discussed in greater detail below for the purpose of assisting area's in their own program design.

SPECIFIC PROGRAM CONSIDERATIONS

♦ Central Fund [see Clean Air Funds]

Denver, Colorado generated a fund of \$200,000 to support its media campaign and low-income assistance program. Contributors included the Regional Air Quality Council, Hearth Products Association, Colorado Interstate Gas Company, Public Service Company, Rocky Mountain Gas Association, and local retailers. Donors are more likely to contribute to a fund specifically earmarked for a woodstove changeout because it lends greater fiscal responsibility and accountability than a general fund.

♦ Community Development Block Grants [see Funding Sources]

The Department of Housing and Urban Development (HUD) provides grants for economic development, housing, and public facilities. Klamath Falls, Oregon successfully applied for, and was awarded, \$1.44 million in HUD funding for woodstove changeout.

♦ Complementary Regulations [see Fireplace per Woodstove Prohibitions and Woodstove Removal Upon the Sale of Home]

To accelerate woodstove changeout, some areas prohibit the resale or installation of uncertified woodstoves. Other areas require the removal of a woodstove upon the sale of a home.

◆ **Consortium of Industries** [see Funding Sources and Utility Company Support]

Traditionally changeouts were assisted by the wood products industry. More recently, power and natural gas companies, as well as vendors of electric and natural gas heating systems, have begun to participate in greater numbers, recognizing the potential for new customers. In the Puget Sound area, 25 percent of the woodstoves removed from area residences were replaced with natural gas heating systems. In Denver replacement gas heating systems were preferred two to one over woodstoves.

◆ **Disposal** [see Fireplace/Woodstove Prohibitions]

Because used, uncertified woodstoves may be dumped into the markets of neighboring counties and States, areas may consider restrictions on disposal. In contrast, in Denver, BFI collected discarded woodstoves during that city's changeout program and sold the appliances for scrap metal.

◆ **Industry Study Area**

Small communities, such as Crested Butte and Klamath Falls, have had the advantage of serving as wood products industry study areas for field performance tests. With the industry's support, Crested Butte's residents were offered 40-50 percent discounts from five manufacturers on the purchase of a new, certified woodstove.

◆ **Influencing Public Opinion** [see Media]

"The value of good information - scientific, case studies, and anecdotal information - cannot be overstated," claims Patti Shwayder at the Regional Air Quality Council (Shwayder, 1992). With tremendous "fanfare" the Denver Metropolitan Air Quality Council released a report stressing wood combustion health effects, as well as straightforward solutions. The Council followed this with a series of "carefully orchestrated events," including workshops for local officials to detail technical issues and case studies with a "we can do it here" attitude. The Council also cultivated the media with briefings and advance copies of materials to create a "bandwagon" effect of editorials, news stories, and press hooks (Shwayder, 1992).

◆ **Polluter's Fee** [see Fines and Penalty Alternatives]

To accelerate its program, Crested Butte applied a \$30 per month fee to the municipal water bills of area residents who failed to comply with the Town's mandatory woodstove replacement requirements.

◆ Preventative Measures

Crested Butte was not designated nonattainment for PM-10 when it adopted a woodstove changeout program in 1986. Rather, with residential wood combustion constituting 75-80 percent of the area's inventory and with strong wintertime thermal inversions, the "writing was on the wall," claimed Town Manager Bill Crank. In addition, he added anecdotally, the mayor and town planner suffered from asthma (Crank).

◆ Public Relations Contention

The Puget Sound area experienced great contentiousness with the wood products industry when local air quality officials originally proclaimed that all woodburning is bad. At the risk of alienating retailers and manufacturers who could assist with a changeout program, officials adopted a new policy: learn to heat "cleanly" (Swigard).

◆ Inadequate Stove Sizing

Crested Butte calls its experience with improper stove sizing its only significant error (Crouch and Crank, 1992). During the changeout program, manufacturers offered a small, non-catalytic woodstove model at less than \$500 for out of town homeowners who used woodheat infrequently, or for those who used woodheat as a supplemental source. Unfortunately, low-income families also selected the small stove based solely on its price. This resulted in the installation of a number of woodstoves which were insufficient to heat the homes in which they were installed. The woodstove dealers subsequently replaced these appliances.

◆ Window of Opportunity

A finite window of opportunity may pressure homeowners into replacing woodstoves that they would not otherwise have replaced. In Denver, the woodstove changeout program and its accompanying financial incentives ran for just two months between September and October 1992. In Crested Butte, although the program ran for three years, from 1986 to 1989, the incentives were gradually scaled back to encourage early participation. John Crouch of the Hearth Products Association recommends changeout programs which are targeted to the month of January to entice reluctant homeowners who had not considered replacing woodstoves earlier that winter (Crouch).

REFERENCES

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Shwayder, Patti, "Burning Wood - A Political Perspective: Case Studies from the Denver Region." PM-10 Standards and Nontraditional Particulate Source Controls (A&WMA/EPA International Specialty Conference, 1992), p. 669-79.

Swigard, Kent. Puget Sound Air Pollution Control Authority, Seattle, WA. Telephone communication (July 22, 1993).

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WOODSTOVE REMOVAL UPON SALE OF HOME

GENERAL DESCRIPTION

A requirement that uncertified woodstoves be removed or replaced upon the sale of a home provides an expedient method for eliminating the operation of these appliances. In the Puget Sound area of Washington, approximately 90 percent of existing residential woodstoves are uncertified. With the present rate of voluntary changeout, turnover "will take 100 years," claims Kent Swigard at the Puget Sound Air Pollution Control Authority (Swigard). In contrast, local officials in Mammoth Lakes, California estimate that 90 percent of existing homes and rental units, many of which contain woodstoves, will be sold within the next 15 years.

While some areas are skeptical of mandatory programs to remove uncertified woodstoves upon the sale of a home, fearing an unnecessary burden on area realtors, other areas have already successfully implemented such programs. Both Mammoth Lakes and Reno, Nevada have evidenced that woodstove removal need only be one of the many disclosure requirements in the escrow process, similar to asbestos. Removal programs are now being adopted in Boise, Idaho, Libby, Montana, and Seattle, Washington.

AREA-SPECIFIC PROGRAMS

◆ Mammoth Lakes, California

In Mammoth Lakes, realtors are required to submit a form to the Town Planning Department notifying the Department of a home sale involving a woodstove. The form must indicate whether the current homeowner intends to remove or replace the woodstove.

The Planning Department checks this form against its property records to determine if the woodstove at that residence is certified or uncertified. In this way, the Department can track homeowner compliance with the regulation. Bill Taylor at the Mammoth Lakes Planning Department stresses that realtors are only asked to provide notification. The Department is responsible for all enforcement action (Taylor).

Local air quality officials estimate that the removal program will result in a PM-10 air quality improvement of 6 micrograms per cubic meter in 1993, 10 micrograms per cubic meter in 1995, and 19 micrograms per cubic meter by the year 2000.

◆ Reno, Nevada

Since 1990, Reno has required that the escrow process in home sales include either one of two forms: a "Notice of Exemption" or a "Residential Certification Form." The Notice of Exemption, which must be signed by the buyer and the seller, claims that there is "no air-tight device on the premises." Alternatively, the Residential Certification Form, which must be signed by a certified inspector, indicates whether the existing woodstove is certified or uncertified. In either case, the forms are then forwarded to the Health Department. The title company cannot proceed with escrow until it receives notification from the Health Department that an uncertified woodstove has been removed from the home. The Health Department enforces the regulation through a random inspection of approximately 10 percent of the paper trail with a fine of \$1,000 imposed on violators.

Andy Goodrich at the Washoe County District Health Department claims that realtors initially voiced opposition to the regulation, fearing a new role as "air pollution police." However, he adds, they now realize that they are not responsible for enforcement and that the process is "relatively painless" (Goodrich). Craig Arrowood at the Boise Building Department concurs. Realtors realize that "we are selling lifestyles," he states, which includes clean air (Arrowood).

In 1992, Reno's regulation resulted in the replacement of 248 uncertified woodstoves and 1,152 removals from a total woodstove population of 30,000.

REFERENCES

Arrowood, Craig, Boise Building Department, Boise, ID. Telephone communication (July 7, 1993).

"Air Quality Management Plan for the Town of Mammoth Lakes." The Great Basin Unified Air Pollution Control District and the Town of Mammoth Lakes (November 1990).

Goodrich, Andy, Washoe County District Health Department, Reno, NV. Telephone communication (July 8, 1993).

Swigard, Kent. Puget Sound Air Pollution Control Authority, Seattle, WA. Telephone communication (July 22, 1993).

Taylor, Bill, Town of Mammoth Lakes Planning Department, Mammoth Lakes, CA. Telephone communication (July 13, 1993).

FOR ADDITIONAL INFORMATION



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ATTACHMENTS

Mammoth Lakes Removal Rules
Oregon Removal Rules
Reno Removal Rules



APPENDIX A - ATTACHMENTS

CLEAN AIR FUNDS

Attachments for Section 2, Clean Air Funds:

Oregon Fund Regulation
Washington Fund Legislation

CFR 3280.709 for woodstoves installed in manufactured dwellings, or from the standards for installation of woodstoves established by the state Building Codes Agency.

(3) The program established under paragraph (c) of subsection (1) of this section and the fee established under paragraph (f) of subsection (1) of this section shall not apply to any woodstove certified for emission and tested for efficiency by the United States Environmental Protection Agency. Nothing in this subsection shall be construed to prevent the department from enforcing certifications issued by the department or the United States Environmental Protection Agency.

(4) To aid and advise the commission in the adoption of emission performance standards and testing criteria, the commission may establish an advisory committee. The members of the advisory committee shall include, but need not be limited to, representatives from Oregon woodstove manufacturers. [Formerly 468.655]

468A.485 Definitions. As used in ORS 468A.490:

(1) "Area that exceeds the PM10 standard" means an area of the state that exceeds, on or after January 1, 1990, the air quality standard for PM10 as established by the commission under ORS 468A.025.

(2) "Western interior valleys" means the area of the state encompassed by the borders of the States of Washington and California and the crests of the Cascade Mountain Range on the east and the Coast Range on the west. [1991 c.752 §8a]

468A.490 Residential Wood Heating Air Quality Improvement Fund; uses. (1) There is created within the State Treasury a fund known as the Residential Wood Heating Air Quality Improvement Fund, separate and distinct from the General Fund.

(2) All moneys appropriated or received as gifts or grants for the purposes of this section shall be credited to the Residential Wood Heating Air Quality Improvement Fund.

(3) The State Treasurer may invest and reinvest the moneys in the fund as provided in ORS 293.701 to 293.776. Interest from the moneys deposited in the fund and earnings from investment of the moneys in the fund shall accrue to the fund.

(4) All moneys in the Residential Wood Heating Air Quality Improvement Fund are continuously appropriated to the Department of Environmental Quality to:

(a) Pay all costs incurred by the department in maintaining residential wood heating emissions inventories, analyzing projects and

OREGON CLEAN AIR FUND

[page 1 of 2]

programs proposed for funding in accordance with this section, administering projects and programs selected for funding in accordance with this section and implementing the requirements of ORS 468A.475 (2) and 468A.480 (1)(g).

(b) Pay all reasonable costs as determined by the Environmental Quality Commission for local government and regional authority public education, emission inventory maintenance, curtailment and opacity programs to reduce residential wood heating emission in an area that exceeds the PM10 standard or an area that is at risk of becoming an area that exceeds the PM10 standard.

(c) To the extent moneys remain in the fund after paying the costs under paragraphs (a) and (b) of this subsection, to fund programs established under subsections (5) and (6) of this section in a manner designed to achieve cost-beneficial reductions in emission of air contaminants from woodstoves, attain federal ambient air quality standards before deadlines specified in the Clean Air Act and maintain compliance with such standards after the deadlines established in the Clean Air Act.

(d) Not more than 15 percent of the total amount of moneys received under this section shall be expended for costs under paragraphs (a) and (b) of this subsection.

(5) A portion of the moneys available under subsection (4), of this section shall be used by the Environmental Quality Commission to fund a low or no interest loan program for wood heated households located in the western interior valleys or in any other county containing an area that exceeds the PM10 standard to replace woodstoves that were not certified under ORS 468A.480 for sale as new on or after July 1, 1986. The program shall include the following elements:

(a) All forms of new high-efficiency, low air contaminant-emitting heating systems are allowed;

(b) Any removed woodstove must be destroyed;

(c) Any replacement woodstoves selected under the program must be installed in conformance with building code requirements and the manufacturer's specifications including but not limited to chimney specifications; and

(d) To be eligible, program participants shall participate in any home energy audit program provided at no charge to the homeowner and shall obtain all information available regarding subsidies for cost-effective weatherization. The department shall make the information required in this subsection readily available to program participants.

(6) A portion of the moneys available under subsection (4) of this section shall be used by the commission to fund local government or regional authority programs to provide subsidies for replacement of woodstoves that were not certified under ORS 468A.480 for sale as new on or after July 1, 1986, to low income persons in wood heated households in an area that exceeds the PM10 standard. The local government or regional authority programs must include the following elements to be eligible for funding:

(a) All forms of new high-efficiency, low emitting heating systems are allowed.

(b) All woodstoves removed are destroyed.

(c) The local government or regional authority adopts and enforces an ordinance that limits emissions from woodstoves to no visible smoke, except for steam and heat waves, during periods of air stagnation and to an average of 20 percent opacity at all other times except during start up and refueling as determined by the commission. This requirement shall not be in lieu of any final stage of woodstove curtailment required during air stagnation if the final stage of curtailment is necessary to prevent exceeding air quality standards established under ORS 468A.025 by the latest date allowed under the Clean Air Act to reach attainment of such standards.

(d) In an airshed requiring more than a 50 percent reduction in woodheating emissions as specified in the State Implementation Plan control strategy for PM10 emissions, program participants shall have a backup heat source if a certified woodstove is selected.

(e) Any replacement woodstove selected under the program must be installed in conformance with building code requirements and the manufacturer's specifications including but not limited to chimney specifications.

(f) To be eligible, program participants shall participate in any home energy audit program provided at no charge to the homeowner and shall obtain all information available regarding subsidies for cost-effective weatherization. The local government or regional air quality authority shall make the information required in this subsection readily available to program participants. [1991 c.752 §10]

468A.495 Prohibition on installation of used woodstoves. On and after September 29, 1991, the state building code under ORS 455.010 shall prohibit installations of used woodstoves that were not certified for sale as new on or after July 1, 1986, under ORS 468A.480 (1). [1991 c.752 §10a]

RCW 70.94.483 Wood stove education and enforcement account created--Fee imposed on solid fuel burning device sales. (1) The wood stove education and enforcement account is hereby created in the state treasury. Money placed in the account shall include all money received under subsection (2) of this section and any other money appropriated by the legislature. Money in the account shall be spent for the purposes of the wood stove education program established under RCW 70.94.480 and for enforcement of the wood stove program, and shall be subject to legislative appropriation.

(2) The department of ecology, with the advice of the advisory committee, shall set a flat fee of thirty dollars, on the retail sale, as defined in RCW 82.04.050, of each solid fuel burning device after January 1, 1992. The fee shall be imposed upon the consumer and shall not be subject to the retail sales tax provisions of chapters 82.08 and 82.12 RCW. The fee may be adjusted annually above thirty dollars to account for inflation as determined by the state office of the economic and revenue forecast council. The fee shall be collected by the department of revenue in conjunction with the retail sales tax under chapter 82.08 RCW. If the seller fails to collect the fee herein imposed or fails to remit the fee to the department of revenue in the manner prescribed in chapter 82.08 RCW, the seller shall be personally liable to the state for the amount of the fee. The collection provisions of chapter 82.32 RCW shall apply. The department of revenue shall deposit fees collected under this section in the wood stove education and enforcement account. [1991 1st sp.s. c 13 §§ 64, 65; 1991 c 199 § 505; 1990 c 128 § 5; 1987 c 405 § 10.]

NOTES:

Effective dates--Severability--1991 1st sp.s. c 13: See notes following RCW 18.08.240.

Finding--1991 c 199: See note following RCW 70.94.011.

Severability--1987 c 405: See note following RCW 70.94.450.

RCW 70.94.510 Policy to cooperate with federal government. It is declared to be the policy of the state of Washington through the department of ecology to cooperate with the federal government in order to insure the coordination of the provisions of the federal and state clean air acts, and the department is authorized and directed to implement and enforce the provisions of this chapter in carrying out this policy as follows:

(1) To accept and administer grants from the federal government for carrying out the provisions of this chapter.

(2) To take all action necessary to secure to the state the benefits of the federal clean air act. [1987 c 109 § 49; 1969 ex.s. c 168 § 45.]

NOTES:

Purpose--Short title--Construction--Rules--Severability--Captions--1987 c 109: See notes following RCW 43.21B.001.

DIESEL INSPECTION PROGRAM

Attachment for Section 3, Diesel Inspection Programs:

AZ Diesel Inspection Rules

- R18-2-907. Reserved
 R18-2-908. Reserved
 R18-2-909. Reserved
 R18-2-910. Repealed

Historical Note

Adopted effective August 9, 1985 (Supp. 85-4). Former Section R9-3-910 renumbered without change as Section R18-2-910 (Supp. 87-3). Repealed effective February 26, 1988 (Supp. 88-1)

- R18-2-911. Reserved
 R18-2-912. Reserved
 R18-2-913. Repealed

Historical Note

Adopted effective August 9, 1985 (Supp. 85-4). Former Section R9-3-913 renumbered without change as Section R18-2-913 (Supp. 87-3). Repealed effective February 26, 1988 (Supp. 88-1)

- R18-2-914. Reserved
 R18-2-915. Reserved
 R18-2-916. Reserved
 R18-2-917. Reserved
 R18-2-918. Reserved
 R18-2-919. Reserved
 R18-2-920. Reserved
 R18-2-921. Reserved
 R18-2-922. Repealed

Historical Note

Adopted effective August 9, 1985 (Supp. 85-4). Former Section R9-3-922 renumbered without change as Section R18-2-922 (Supp. 87-3). Repealed effective February 26, 1988 (Supp. 88-1)

ARTICLE 10. MOTOR VEHICLES; INSPECTIONS AND MAINTENANCE

R18-2-1001. Definitions

In this Article, unless the context otherwise requires:

1. Abbreviations and symbols used herein shall be as follows:
 - a. "A/F" means air/fuel.
 - b. "CO" means carbon monoxide.
 - c. "CO₂" means carbon dioxide.
 - d. "GVW" means gross vehicle weight.
 - e. "HC" means hydrocarbon.
 - f. "HP" means horsepower.
 - g. "LNG" means liquified natural gas.
 - h. "LPG" means liquid petroleum gas.
 - i. "MPH" means miles per hour.
 - j. "MVD" means the Motor Vehicle Division of the Arizona Department of Transportation.
 - k. "NDIR" means nondispersive infrared.
 - l. "%" means percent.
 - m. "OEM" means original equipment manufacturer.
 - n. "PPM" means parts per million by volume.
 - o. "VIN" means vehicle identification number.
 - p. "RPM" means revolutions per minute.
2. "Certificate of compliance" means a serially numbered document issued by a state station at the time of inspection indicating that the vehicle has met the emissions standards.
3. "Certificate of exemption" means a serially numbered certificate issued by the Director exempting a vehicle

which is not available within the state for the inspection during the 90 days prior to registration.

4. "Certificate of inspection" means a serially numbered document, as may be prescribed by the Director, indicating that a vehicle has been inspected pursuant to the provisions of A.R.S. § 49-546 and has passed inspection.
5. "Certificate of waiver" means a serially numbered document issued by the Department or a fleet inspector other than an auto dealer licensed to sell used motor vehicles pursuant to Title 28 of the Arizona Revised Statutes indicating that the requirement of passing reinspection has been waived for a vehicle pursuant to A.R.S. § 49-542.
6. "Conditioning mode" means either a fast idle condition or a loaded condition as defined in this Section.
7. "Constant four-wheel drive vehicle" means any four-wheel drive vehicle with four wheels which cannot be converted to two-wheel drive except by disconnecting one of the vehicle's drive shafts.
8. "Contractor" means a person, business firm, partnership, or corporation with whom the Director has a contract which provides for the operation of one or more official emissions inspection stations.
9. "Curb idle test" means an exhaust emissions test conducted with the engine of the vehicle running at the manufacturer's idle speed plus or minus 100 RPM but without pressure exerted on the accelerator.
10. "Curb weight" means a vehicle's unloaded weight without fuel and oil plus 300 pounds.
11. "Dealer" means a person or organization licensed by the Arizona Department of Transportation as a new motor vehicle dealer, used motor vehicle dealer, or motorcycle dealer.
12. "Department" means the Department of Environmental Quality.
13. "Director" means the Director of the Department of Environmental Quality.
14. "Director's certificate" means a serially numbered document issued by the Director in special circumstances where the Director deems it inappropriate for the vehicle to show evidence of meeting the minimum standards for registration or reregistration pursuant to R18-2-1022 or R18-2-1023.
15. "Electrically powered vehicle" means a vehicle that both uses electricity as the means of propulsion and does not require the combustion of fossil fuel within the confines of the vehicle in order to generate electricity.
16. "Emissions inspection station permit" means a certificate issued by the Director authorizing the holder to perform vehicular inspections pursuant to this Article.
17. "Exhaust emissions" means products of combustion emitted into the atmosphere from any opening downstream of the exhaust ports of a motor vehicle engine.
18. "Exhaust tail pipes" means the pipes that attach to the muffler and exit the vehicle.
19. "Fast idle condition" means to operate a vehicle by running the engine at 2500 RPM, plus or minus 300 RPM, for up to 30 seconds, with the transmission in neutral, to ready the vehicle for a subsequent curb idle test.
20. "Field calibration gas" means a gas with assigned concentrations of CO, hexane, or CO₂ that is used by a state inspector to check the accuracy of emissions analyzers used by state stations, fleet stations, and vehicular repair facilities.
21. "Fleet emissions inspection station" or "fleet station" means any inspection facility operated under a permit issued pursuant to A.R.S. § 49-546.

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22. "Fuel" means any material that is burned within the confines of a vehicle in order to be used as the means of propelling the vehicle.
23. "Four-stroke vehicle" means a vehicle equipped with an engine that requires two revolutions of the crankshaft for each piston power stroke.
24. "Golf cart" means a motor vehicle which has not less than three wheels in contact with the ground, has an unladen weight less than 1,300 pounds, is designed to be and is operated at not more than 15 miles an hour, and is designed to carry golf equipment and persons.
25. "Governmental vehicle" means a registered motor vehicle exempt from the payment of a registration fee or a federally-owned or leased vehicle.
26. "Gross vehicle weight rating" (GVWR) means the maximum vehicle weight that the vehicle is designed for as established by the manufacturer.
27. "Gross weight" means the sum, measured in pounds, of the empty weight of a motor vehicle combination plus the weight of the maximum load to be carried thereon at any one time, except that for tow trucks, gross weight means the sum of the empty weight of the tow truck plus the weight of operational supplies and equipment.
28. "Inspection" means the mandatory vehicular emissions inspection including the tampering portion.
29. "Inspection sticker" means a self-adhesive, serially numbered one-and-one-half inch by two-inch rectangular sticker indicating a governmental vehicle has met the state of Arizona emissions inspection requirements.
30. "Loaded condition" means to condition a vehicle by running the vehicle on a chassis dynamometer at a specified speed and load for up to 30 seconds to ready the vehicle for a subsequent curb idle test.
31. "Loaded cruise test" means an exhaust emissions test conducted on a chassis dynamometer as prescribed in R18-2-1006.
32. "Model year" means either the date of manufacture of the original vehicle within the annual production period of such vehicle as designated by the manufacturer or, if a reconstructed vehicle, the first year of titling.
33. "MOL percent" means the percent, by volume, that a particular gas occupies in a mixture of gases at a uniform temperature.
34. "Motorcycle" means a motor vehicle, other than a tractor, having a seat or saddle for use of the rider and designed to travel on not more than three wheels in contact with the ground.
35. "Motorhome" means a vehicle built on a truck or bus chassis and equipped as a self-contained traveling home.
36. "New aftermarket catalytic converter" or "new aftermarket converter" means a catalytic converter, except for an OEM, that meets the standards defined in R18-2-1031(A).
37. "New aftermarket fuel filler neck inlet restrictor" means a fuel filler neck inlet restrictor, except for an OEM, which is approved by the Department.
38. "Nonattainment areas" means areas which have been designated by the Administrator of the Environmental Protection Agency, acting pursuant to Section 107 of the Clean Air Act, 42 U.S.C. 7401 et seq., as exceeding national primary or secondary ambient air standards for carbon monoxide or ozone and designated as such in the State Implementation Plan submitted to the Environmental Protection Agency, except that "nonattainment area" does not include the area which the Environmental Protection Agency determined should be redesignated as an attainment area as printed in the Federal Register, Volume 51, Number 149, Monday, August 4, 1986, Page 27843.
39. "Official emissions inspection station" means an inspection facility, other than a fleet emissions inspection station, whether placed in a permanent structure or in a mobile unit for conveyance among various locations within the state, for the purposes of conducting inspections pursuant to A.R.S. § 49-542.
40. "Opacity" means the degree of obscuration of transmitted light.
41. "Operational air pump" means an air injection system (AIS) to supply additional oxygen (air) into the exhaust system to promote further oxidation of HC and CO gases and to assist in catalytic reaction.
42. "Person" means the federal government, state or any agency or institution thereof, any municipality, political subdivision, public or private corporation, individual, partnership, association, or other entity, and includes any officer or governing or managing body of any municipality, political subdivision, or public or private corporation.
43. "Prorate vehicle" means any vehicle whose licensing fee in the state is prorated by its estimated usage in the state.
44. "Program" means the Mandatory Annual Vehicular Emissions Inspection Program pursuant to A.R.S. Title 49, Chapter 3, Article 5 and this Article.
45. "Reconditioned OEM catalytic converter" or "reconditioned OEM converter" means a used OEM reconditioned equivalent or an OEM converter which has had the pellets replaced with new or used OEM equivalent pellets and that also meets the standards defined in R18-2-1031(B).
46. "Reconstructed vehicle" means either of the following:
 - a. A reconstructed special as identified by the code letters "SP" on the portion of the vehicle's Arizona registration card or Arizona certificate of title that is reserved for identification on the vehicle's style.
 - b. A vehicle in which the vehicle style is not shown on the Arizona registration card or certificate of title and the original manufacturer of the complete vehicle cannot be identified from the body.
47. "Standard gases" means gases maintained as a primary standard for determining the composition of working gases, field calibration gases, or the accuracy of analyzers.
48. "State inspector" means an employee of the Department designated to perform surveillance functions pursuant to this Article.
49. "State station" means an official emissions inspection station operated by a contractor.
50. "Tampering" means removing, defeating, or altering an emissions control device which was installed at the time the vehicle was manufactured.
51. "Two-stroke vehicle" means a vehicle equipped with an engine that requires one revolution of the crankshaft for each power stroke.
52. "Unloaded fast idle test" means an exhaust emissions test conducted with the engine of the vehicle running at 2500 RPM.
53. "Vehicle" means any automobile, truck, truck tractor, motor bus, or self-propelled or motor-driven vehicle registered or to be registered in this state and used upon the public highways of this state for the purpose of transporting persons or property, except implements of husbandry, roadrollers or road machinery temporarily operated upon the highway.
54. "Vehicular emissions inspector" means an individual who has been licensed by the Director to perform the vehicular emissions inspection for this program.

53. "Working gases" means gases maintained by a facility to perform periodic calibration of emissions analyzers.

Historical Note

Former Section R9-3-1001 repealed, new Section R9-3-1001 adopted effective January 13, 1976 (Supp. 76-1). Former Section R9-3-1001 repealed, former Section R9-3-1002 renumbered and amended as Section R9-3-1001 effective January 1, 1986 (Supp. 85-6). Amended effective January 1, 1987, filed December 31, 1986 (Supp. 86-6). Former Section R9-3-1001 renumbered as Section R18-2-1001 and amended effective August 1, 1988 (Supp. 88-3). Amended effective September 19, 1990 (Supp. 90-3).

R18-2-1002. Reserved

R18-2-1003. Vehicles to be inspected by the mandatory vehicular emissions inspection program

- A. The following vehicles shall be inspected in accordance with this Article at a state station or a fleet station unless exempted by subsection (B) of this Section:
1. All vehicles to be registered or reregistered in the nonattainment areas of Maricopa or Pima Counties for highway use;
 2. All vehicles being delivered to retail purchasers by dealers licensed to sell used motor vehicles for highway use pursuant to Title 28 and whose place of business is located in the nonattainment areas of Maricopa and Pima Counties;
 3. All vehicles registered outside a nonattainment area but used to commute to the driver's principal place of employment located within a nonattainment area;
 4. All vehicles owned by a person who is subject to A.R.S. §§ 15-1444(C) or 15-1627(F).
- B. The following vehicles are exempt from the inspection requirements of this Article:
1. Vehicles manufactured in or before the 1966 model year.
 2. Vehicles leased to a person residing outside a nonattainment area by a leasing company whose place of business is in a nonattainment area, except as otherwise provided in subsection (A)(3) of this Section.
 3. Vehicles being sold between motor vehicle dealers.
 4. Electrically-powered vehicles.
 5. Prorate vehicles.
 6. Golf carts.
 7. Vehicles with engine displacements of less than 90 cubic centimeters.
 8. New vehicles originally registered at the time of initial retail sale and titling in this state pursuant to A.R.S. § 28-302.
 9. Vehicles being registered at the time of change of name of ownership except when the change in registration is accompanied by required fees for the year following expiration of the prior registration or the change results from the sale by a dealership whose place of business is located in the nonattainment areas of Maricopa or Pima County.
 10. Vehicles for which a current certificate of exemption of Director's certificate has been issued.
- C. Governmental vehicles operated in Maricopa or Pima County and not exempted by this Article shall be emissions inspected pursuant to R18-2-1017.

Historical Note

Former Section R9-3-1003 repealed, new Section R9-3-1003 adopted effective January 13, 1976; Amended as an emergency effective January 19, 1976 (Supp. 76-1). Amended effective January 3, 1977 (Supp. 77-1). Amended effective January 3, 1979 (Supp. 79-1). Amended as an emergency effective January 2,

1981, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 81-1). Former Section R9-3-1003 as amended effective January 3, 1979 and amended as an emergency effective January 2, 1981 now amended effective April 15, 1981 (Supp. 81-2). Amended effective January 1, 1986 (Supp. 85-6). Amended subsection (A) effective January 1, 1987, filed December 31, 1986 (Supp. 86-6). Former Section R9-3-1003 renumbered as Section R18-2-1003 and amended effective August 1, 1988 (Supp. 88-3). Amended effective September 19, 1990 (Supp. 90-3).

R18-2-1004. State inspection requirements

All vehicles required to be inspected by this Article shall pass inspection by meeting the requirements of R18-2-1006 unless waived pursuant to R18-2-1008.

Historical Note

Former Section R9-3-1004 repealed, new Section R9-3-1004 adopted effective January 13, 1976 (Supp. 76-1). Amended effective January 3, 1977 (Supp. 77-1). Former Section R9-3-1004 renumbered as Section R18-2-1004 and amended effective August 1, 1988 (Supp. 88-3).

R18-2-1005. Time of inspection

- A. Vehicles required to be inspected pursuant to R18-2-1003 shall be inspected at the following times:
1. For vehicles not covered by a fleet station permit, within 90 days prior to each registration expiration date;
 2. For vehicles sold by a dealer licensed to sell used motor vehicles pursuant to Title 28, whose place of business is located in the nonattainment areas of Maricopa or Pima County, prior to delivery the vehicle to the retail purchaser;
 3. For consignment vehicles offered for sale by a dealer licensed to sell used motor vehicles pursuant to Title 28 whose place of business is located in the nonattainment areas of Maricopa or Pima County, prior to delivery of the vehicle to the retail purchaser. Such consignment vehicles shall be inspected at a state station in conformance with R18-2-1006;
 4. For governmental vehicles, at least once within 12 months following the applicable date of acquisition by the operating entity in Maricopa or Pima County, date of initial registration, or the date of prior inspection;
 5. For vehicles owned or leased by a person having a valid fleet station permit, at least once within each 12-month period following any original registration or reregistration;
 6. For vehicles that are being registered in Maricopa or Pima County under conditions not specified in paragraphs (1) through (5) of this subsection, within 90 days prior to registration;
 7. For vehicles registered outside Maricopa or Pima County but used to commute to the driver's principal place of work located in a nonattainment area, upon vehicle registration or reregistration;
 8. For vehicles owned by persons subject to A.R.S. §§ 15-1444(C) or 15-1627(F), within 30 days following the date of initial registration at the institution located in a nonattainment area and annually thereafter.
- B. Nothing in this Section shall be construed to waive a late registration fee because of failure to meet inspection requirements by the registration deadline, except that motor vehicles failing the initial or subsequent test shall not be subject to a penalty fee for late registration renewal if both the original testing was accomplished prior to the expiration date and the registration renewal is received by the Arizona Department of Transportation, Motor Vehicle Division, in Pima County or the Maricopa County Assessor in Maricopa County within 30 days of the original test.

- C. A vehicle subject to either paragraphs (1) or (6) of subsection (A) of this Section may be submitted voluntarily for inspection more than 90 days before the registration expiration date on payment of the prescribed inspection fee. Such voluntary inspection shall not be considered as compliance with the registration or reregistration requirement pursuant to R18-2-1003.

Historical Note

Former Section R9-3-1005 repealed, new Section R9-3-1005 adopted effective January 31, 1976 (Supp. 76-1). Amended effective January 3, 1977 (Supp. 77-1). Amended effective March 2, 1978 (Supp. 78-2). Amended effective January 3, 1979 (Supp. 79-1). Amended effective February 20, 1980 (Supp. 80-1). Amended as an emergency effective January 2, 1981 pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 81-2). Former Section R9-3-1005 as amended effective February 20, 1980 and amended as an emergency effective January 2, 1981, now amended effective April 15, 1981 (Supp. 81-2). Amended effective January 1, 1986 (Supp. 85-6). Amended effective January 1, 1987, filed December 31, 1986 (Supp. 86-6). Former Section R9-3-1005 renumbered as Section R18-2-1005 and subsections (A) and (C) amended effective August 1, 1988 (Supp. 88-3). Amended effective September 19, 1990 (Supp. 90-3).

R18-2-1006. Emissions test procedure

- A. Each vehicle to be inspected at a state station shall be visually inspected prior to the emissions test for the following unsafe conditions:
1. All fuel leaks in or around the engine area, fuel tank or lines which cause wetness or pooling of fuel;
 2. All continuous leaking of engine or transmission oil onto the floor;
 3. All continuous leaking of engine coolant onto the floor to such a degree that engine overheating has occurred or will occur within a short time;
 4. Worn tires with less than 2/32-inch tread remaining or which have cord showing, bulges, delaminations, lumps, or separations;
 5. Exhaust tail pipes that do not exit the rear or side of the vehicle to allow for safe exhaust probe insertion and to allow for conducting the lead tampering test. Exhaust tail pipes on diesel-powered vehicles that do not allow for safe exhaust probe insertion and attachment of opacity meter sensor units;
 6. Other unsafe conditions such as loud internal engine noises and obvious exhaust leaks.
- B. No mandatory vehicular emissions inspection shall be performed by an official emissions inspection station on any vehicle that is carrying, loaded with, or towing a trailer loaded with explosives or any other hazardous material not used as fuel for the vehicle.
- C. Any vehicle that has been found to be in unsafe condition as determined by the visual portion of the inspection requirements listed shall be rejected without an emissions test. Vehicle owners or drivers shall be notified of all unsafe conditions found on rejected vehicles and, if at a state station, no fee shall be charged if the vehicle is rejected. The emissions test shall not be conducted on a vehicle rejected for safety until the cause for rejection has been repaired.
- D. When conducting the emissions test procedure prescribed by this Section, both of the following requirements shall be met:
1. All vehicles shall be tested in as-received condition, unless rejected pursuant to subsections (A) or (B) of this Section. The vehicle's engine shall be operating at normal temperature, the vehicle's engine shall not be overheating as indicated by a gauge, warning light, or boiling radiator, and all of the vehicle's accessories shall be turned off.

2. Vehicles that are designed to operate with more than one fuel shall be tested on the fuel used by the vehicle at time of inspection.
- E. The inspection test procedures for all vehicles other than diesel-powered vehicles shall conform to the following:
1. Vehicles manufactured in the 1967 through 1980 model years, except motorcycles and constant four-wheel drive vehicles, shall be required to take and pass only a curb idle test.
 - a. The curb idle test shall be performed with the vehicle in drive for vehicles with automatic transmissions or in neutral for vehicles with manual transmissions. Engine RPM shall be within plus or minus 100 RPM of the manufacturer's specified idle RPM. HC and CO exhaust emissions shall be recorded after readings have stabilized or at the end of 30 seconds, whichever occurs first. A CO₂ reading of four percent or greater shall be registered to establish test validity. A CO₂ reading less than four percent will be deemed as proof of exhaust sample dilution and the vehicle shall be rejected from further emissions inspection.
 - b. In the event the vehicle fails the curb idle test, and if requested by the vehicle operator, the vehicle shall be conditioned according to one of the following conditioning procedures:
 - i. For the fast-idle condition, the vehicle shall be conditioned by increasing engine speed to 2500 RPM, plus or minus 300 RPM, for up to 30 seconds with the transmission in neutral. HC and CO exhaust emissions concentrations shall be recorded after readings have stabilized or at the end of 30 seconds, whichever occurs first. The conditioning mode standards shall be for diagnostic and advisory information only. After exhaust emissions have been recorded, the engine speed shall be returned to curb idle for a second idle test. The fast idle conditioning mode may be used on a vehicle at state stations in place of the loaded conditioning mode if one of the following situations occurs:
 - (1) The vehicle has a tire on a driving wheel with less than 2/32-inch tread, with metal protuberances, or with obviously low tire pressure, as determined by superficial visual inspection, or any other condition that in the opinion of the vehicular emissions inspector precludes loaded conditioning for reason of safety to personnel, equipment, or vehicle.
 - (2) The vehicle is driven by a person who, because of physical incapacity, is unable to yield the driver's seat to the vehicular emissions inspector.
 - (3) The driver refuses to yield the driver's seat to the vehicular emissions inspector.
 - (4) The vehicle is unable to be tested according to Table 1 because of the vehicle's inability to attain the speeds specified.
 - ii. For the loaded condition, the vehicle's drive wheels shall be placed on a dynamometer and the vehicle shall be operated as prescribed in Table 1, in drive for automatic transmission or second or higher gear for manual transmission. HC and CO exhaust emissions concentrations shall be recorded after readings have stabilized or at the end of 30 seconds, whichever occurs first. The conditioning mode standards shall be

for diagnostic and advisory information only. After exhaust emissions have been recorded, engine speed shall be returned to curb idle for a second idle test.

- c. Following one of the conditioning procedures described in subparagraph (b) of this paragraph, the vehicle shall be retested in accordance with the curb idle test procedure described in subparagraph (a) of this paragraph.
2. Vehicles manufactured in or after the 1981 model year, except motorcycles and constant four-wheel drive vehicles, shall be required to take and pass both a loaded cruise test and curb idle test, described as follows:
 - a. For the loaded cruise test, the vehicle's drive wheels shall be placed on a dynamometer and the vehicle shall be operated as prescribed in Table 1, in drive for automatic transmission or second or higher gear for

manual transmission. Overdrive shall not be used. Exhaust emissions, HC and CO concentrations, shall be recorded after readings have stabilized or at the end of 90 seconds, whichever occurs first. After exhaust emissions have been recorded, engine speed shall be returned to idle for a curb idle test.

- b. The curb idle test shall be performed with the vehicle in neutral. Engine RPM shall be within plus or minus 100 RPM of the manufacturer's specified idle RPM. HC and CO exhaust emissions concentrations shall be recorded after readings have stabilized or at the end of 90 seconds, whichever occurs first. A CO₂ reading of four percent or greater shall be registered to establish test validity. A CO₂ reading less than four percent shall be deemed proof of exhaust sample dilution and the vehicle shall be rejected from further emissions inspection.

TABLE 1
DYNAMOMETER LOADING TABLE

Gross Vehicle Weight Rating (Pounds)	Engine Size	Speed (MPH)	Load (HP)
8500 or less	4 cyl. or less	22-25	2.8-4.1
8500 or less	5 or 6 cyl.	29-32	6.4-8.4
8500 or less	8 cyl. or more	32-35	8.4-10.8
8501 or more	All	37-40	12.7-15.8

3. All motorcycles and constant four-wheel drive vehicles shall be required only to take and pass a curb idle test as prescribed in paragraph (1)(a) of this subsection. In the event the vehicle fails the curb idle test, and if requested by the vehicle operator, the vehicle shall be conditioned according to the fast idle conditioning procedure prescribed in paragraph (1)(b)(i) of this subsection. Following conditioning, the engine speed shall be returned to idle for a second curb idle test as prescribed in paragraph (1)(a) of this subsection.
4. The emissions pass/fail determination shall be made as follows:
 - a. Vehicles manufactured in the 1967 through 1980 model years, except motorcycles and constant four-wheel drive vehicles, which do not exceed the curb idle mode HC and CO emissions standards listed in Table 2 on either the first curb idle test or the second curb idle test, shall be deemed in compliance with the minimum emission standards contained in Table 2.
 - b. Vehicles manufactured in or after the 1981 model year, except motorcycles and constant four-wheel drive vehicles, which do not exceed either the loaded cruise mode or curb idle mode HC and CO emissions standards listed in Table 2, shall be deemed in compliance with minimum emissions standards contained in Table 2. The loaded cruise test standards specified in Table 2 shall be applicable to fleet vehicles tested under the 2500 RPM unloaded fast idle test.
 - c. Motorcycles and constant four-wheel drive vehicles which do not exceed the curb idle mode HC and CO emissions standards listed in Table 2 on either the first curb idle test or the second curb idle test shall be deemed in compliance with the minimum emissions standards contained in Table 2.

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TABLE 2
EMISSION STANDARDS
(Maximum Allowable)

Vehicle Engine Type	Vehicle Model Year	Gross Vehicle Weight Rating (Pounds)	Number of Cylinders	Conditioning Mode		Curb Idle Mode Test		Loaded Cruise Mode Test	
				HC PPM	CO %	HC PPM	CO %	HC PPM	CO %
4-stroke Motorcycles	All	All	All	500	5.00	1,800	5.50		
4-stroke	1981 and newer	8500 or less	All	100	0.50	220	1.20	220	1.20
4-stroke	1980	8500 or less	All	100	0.50	220	1.20		
4-stroke	1979	8500 or less	4 cylinders or less	120	1.00	220	2.20		
4-stroke	1979	8500 or less	More than 4 cylinders	120	1.00	220	2.00		
4-stroke	1981 and newer	Greater than 8500	All	300	3.00	300	4.00	300	3.00
4-stroke	1979 and 1980	Greater than 8500	All	300	3.00	300	4.00		
4-stroke	1975-1978	6000 or less	4 cylinders or less	120	1.00	250	2.20		
4-stroke	1975-1978	6000 or less	More than 4 cylinders	120	1.00	250	2.00		
4-stroke	1975-1978	Greater than 6000	All	300	3.00	350	4.00		
4-stroke	1972-1974	All	4 cylinders or less	380	3.50	400	5.50		
4-stroke	1972-1974	All	More than 4 cylinders	300	3.00	400	5.00		
4-stroke	1967-1971	All	4 cylinders or less	450	3.75	500	5.50		
4-stroke	1967-1971	All	More than 4 cylinders	380	3.00	450	5.00		
4-stroke	Reconstructed 1981 and newer	All	All	700	5.25	1,200	7.50	700	5.25
4-stroke	Reconstructed 1981 and Older	All	All	700	5.25	1,200	7.50		
2-stroke	1981 and newer	All	All	18,000	5.00	18,000	5.00	18,000	5.00
2-stroke	1980 and older	All	All	18,000	5.00	18,000	5.00		

d. Any vehicle exceeding the appropriate emissions standards shall fail the emissions test and shall have a low emissions tune-up performed as described in R18-2-1010 prior to reinspection.

5. The tampering inspection shall apply to all vehicles manufactured after the 1974 model year.

a. The inspection shall consist of an examination to determine the presence of an operational air pump and, on a vehicle originally manufactured with a catalytic converter, an examination to determine the presence of all of the following:

i. Properly installed catalytic converters;

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- ii. Fuel filler neck inlet restrictor or malfunction thereof;
- iii. Lead in the vehicle's exhaust tail pipes as evaluated through the use of lead test paper.
- b. The vehicles shall be equipped with an emission system that conforms to the original configuration at time of manufacture. With respect to foreign manufactured vehicles, "original configuration" means the design and construction of those vehicles produced by that manufacturer for original entry and sale in the United States. The applicable emission system requirements shall be verified by the VEHICLE EMISSION CONTROL INFORMATION label under the hood.
- c. Owners of vehicles that fail any portion of the tampering inspection shall be required to repair such tampering in accordance with R18-2-1009 prior to reinspection or provide the written statement prescribed in R18-2-1008(B).
- 6. All rotary piston engines shall be treated in the same manner as 4-stroke engines with four cylinders or less.
- 7. All turbine engines shall be treated as 4-stroke engines having more than four cylinders.
- 8. All vehicles in which a diesel engine has been replaced with a gas engine shall be inspected as gas-powered vehicles of the vehicle model year. Catalytic converters, fuel filter inlet restrictors, air pumps, and other emissions control devices applicable to the vehicle model year and the same or more recent year engine configuration shall be installed and in operating condition.
- 9. Exhaust sampling shall conform to the following:
 - a. All CO and HC emission analyzers shall have water traps incorporated in their sampling lines. Sampling probes shall be capable of taking undiluted exhaust samples from the vehicle's exhaust system.
 - b. All vehicles, other than diesel-powered vehicles, shall be inspected with NDIR analyzers capable of determining concentrations within the ranges and tolerances specified below:

	Range	Tolerances	
		State Station	Fleet Station
4 & 2 stroke vehicles:			
CO in MOL percent	0 to 2.0%	±0.1%	±0.25%
	2 to 10.0%	±0.25%	±0.5%
4-stroke vehicles:			
HC as N-hexane in PPM	0 to 500 PPM	±15 PPM	±30 PPM
	500 to 2000 PPM	±50 PPM	±100 PPM
2-stroke vehicles:			
HC as propane in PPM	0 to 25,000 PPM	±1250 PPM	±1250 PPM

- c. Vehicles with multiple exhaust tail pipes shall be inspected by collecting and averaging samples with one of the following methods:
 - i. Collect separate samples from each exhaust.
 - ii. Utilize manifold exhaust probes to simultaneously sample approximately equal volumes from each pipe.
 - iii. Utilize manifold exhaust pipes to collect approximately equal volume samples from each pipe.
 - iv. Collect samples by a combination of the methods described in subdivisions (ii) and (iii) of this subparagraph. The average concentration shall be used to determine the test results.
- F. The inspection test procedure for diesel-powered vehicles shall conform to the following:
 - 1. The emissions inspection procedure shall be conducted as follows:
 - a. A diesel-powered vehicle either with a GVWR of greater than 26,000 pounds or having tandem axles shall be tested pursuant to one of the following two methods:
 - i. With the vehicle on a chassis dynamometer under no power absorption, the vehicle shall be tested by selecting a gear ratio which will produce a maximum vehicle speed of between 30-35 MPH at governed or maximum rated RPM if the vehicle has a manual transmission or an automatic transmission with individual gear selection and then running the engine at governed or maximum rated engine RPM, at normal operating temperature under a power absorption load applied to the dynamometer until such loading reduces the engine RPM to 80 percent of the governed speed at wide-open throttle position. In the case of vehicles with automatic transmissions with automatic gear kickdown, the engine shall be loaded to a speed just above the kickdown speed or 80 percent of the governed speed, whichever is greater. If the chassis dynamometer does not have enough horsepower absorption capability to lug the engine down to these speeds, the vehicle's brakes may be used to assist the dynamometer.
 - ii. If a chassis dynamometer is not available, the vehicle shall be tested by being lugged by its own brakes by selecting a gear ratio which will produce a maximum speed of between 10-15 MPH at governed engine RPM or maximum rated RPM and then loading the engine by applying the brakes until the engine RPM is lugged down to 80 percent of the governed or maximum rated RPM at wide-open throttle position. If the vehicle does not have a tachometer, the vehicle may be loaded to 80 percent of governed or maximum rated speed.
 - b. A diesel-powered vehicle without tandem axles and having a GVWR greater than 10,500 pounds and less than or equal to 26,000 pounds shall be tested pursuant to one of the following three methods:
 - i. With the vehicle on a chassis dynamometer under no power absorption, the vehicle shall be

- tested by selecting a gear ratio which will produce a maximum vehicle speed of between 30-35 MPH at governed or maximum rated RPM, if the vehicle has a manual transmission or an automatic transmission with individual gear selection, and then running the engine at governed or maximum rated engine RPM, at normal operating temperature under a power absorption load applied to the dynamometer until such loading reduces the engine RPM to 80 percent of the governed speed at wide-open throttle position. In the case of vehicles with automatic transmissions with automatic gear kickdown, the engine shall be loaded to a speed just above the kickdown speed or 80 percent of governed speed, whichever is greater. If the chassis dynamometer does not have enough horsepower absorption capability to lug the engine down to these speeds, the vehicle's brakes may be used to assist the dynamometer.
- ii. The vehicle shall be tested by applying a single load of 30 HP, plus or minus 2 HP, while being operated at 50 MPH.
 - iii. The vehicle shall be tested by being lugged by its own brakes by selecting a gear ratio which will produce a maximum speed of between 10-15 MPH at governed engine RPM or maximum rated RPM and then loading the engine by applying the brakes until the engine RPM is lugged down to 80 percent of the governed or maximum rated RPM at wide-open throttle position. If the vehicle does not have a tachometer, the vehicle may be loaded to 80 percent of governed or maximum rated speed.
- c. A diesel-powered vehicle with a GVWR of greater than 4000 pounds and less than or equal to 10,500 pounds shall be tested by a loaded dynamometer test by applying a single load of 30 HP, plus or minus 2 HP, while being operated at 50 MPH.
 - d. A diesel-powered vehicle with a GVWR of 4000 pounds or less shall be tested by a loaded dynamometer test by applying a single load of between 6.4 - 8.4 HP while being operated at 30 MPH.
2. The emissions pass/fail determination shall be made as follows:
 - a. The opacity reading made over a period of ten consecutive seconds with the engine under the applicable loading specified in paragraph (1) of this subsection shall be the opacity reading used for comparison with the standard specified in R18-2-1030(B). Vehicles which do not exceed the opacity standards set forth in R18-2-1030(B) shall be deemed in compliance with the minimum emission standards.
 - b. Any vehicle exceeding the appropriate standard shall fail the emission test. Prior to reinspection, the vehicle shall have a low emissions tune-up performed as described in R18-2-1010.
 3. Exhaust sampling shall conform to the following:
 - a. Separate measurements shall be made on each exhaust outlet on diesel vehicles equipped with multiple exhaust outlets. For vehicles equipped with more than one exhaust stack or pipe, the reading taken from the outlet giving the highest opacity reading shall be used for comparison with the appropriate standard.
 - b. All diesel-powered vehicles shall be inspected with an opacity meter that is a full-flow, direct reading, continuous reading light extinction type using a collimated light source and photo-electric cell, accurate to a value within plus or minus five percent.

Historical Note

Former Section R9-3-1006 repealed, new Section R9-3-1006 adopted effective January 13, 1976 (Supp. 76-1). Amended effective November 1, 1976 (Supp. 76-5). Amended effective March 2, 1978 (Supp. 78-2). Amended effective January 3, 1979 (Supp. 79-1). Amended effective February 20, 1980 (Supp. 80-1). Former Section R9-3-1006 repealed, new Section R9-3-1006 adopted as an emergency effective January 2, 1981 pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 81-1). Former Section R9-3-1006 as amended effective February 20, 1980 repealed and a new Section R9-3-1006 adopted as an emergency effective January 2, 1981 now adopted and amended effective April 15, 1981 (Supp. 81-2). Amended effective January 1, 1986 (Supp. 85-6). Amended effective January 1, 1987, filed December 31, 1986 (Supp. 86-6). Former Section R9-3-1006 renumbered as Section R18-2-1006 and subsections (A), (C) and (D) amended effective August 1, 1988 (Supp. 88-3). Amended effective September 19, 1990 (Supp. 90-3).

R18-2-1007. Evidence of meeting state inspection requirements

- A. Any of the following documents, when complete, unaltered and dated no more than 90 days prior to registration expiration date, shall be accepted by the county assessor as evidence that a vehicle is in compliance with the requirements of this Article unless he has reason to believe it is a false document. Documents accompanying a late registration may be dated subsequent to the registration expiration date:
 1. Certificate of compliance,
 2. Certificate of waiver (except from auto dealers licensed to sell used motor vehicles pursuant to Title 28),
 3. Certificate of exemption,
 4. Director's certificate,
 5. The upper section of the vehicle inspection report with "PASS" in the final results block.
- B. Complete and unaltered certificates of inspection dated within 12 months of registration shall be accepted by the county assessor as evidence that a vehicle is in compliance with the requirements of this Article unless he has reason to believe it is a false document.
- C. Governmental vehicles for which only weight fees are paid shall be registered without evidence of inspection.

Historical Note

Former Section R9-3-1007 repealed, new Section R9-3-1007 adopted effective January 13, 1976 (Supp. 76-1). Former Section R9-3-1007 repealed, new Section R9-3-1007 adopted effective January 3, 1977 (Supp. 77-1). Amended effective February 20, 1980 (Supp. 80-1). Amended effective January 1, 1986 (Supp. 85-6). Former Section R9-3-1007 renumbered without change as Section R18-2-1007 (Supp. 88-3).

R18-2-1008. Procedure for issuing certificates of waiver

- A. A certificate of waiver on a non-tampered vehicle will be issued at the time of reinspection following completion of the second inspection or subsequent to reinspection by a state inspector at a state or Department facility when it is determined by repair receipts, emissions test results, evidence of repairs performed or such other evidence that the requirements of rule R18-2-1010(A), (B), (C) and (D) have been met, or that any further repairs within the repair cost limit would be ineffective.

- B. A certificate of waiver may be issued to a vehicle failing the tampering inspection if the owner of the vehicle provides to the Director a written statement from an automobile parts or repair business that an emission control device which is necessary to repair the tampering is not available and cannot be obtained from any usual source of supply before the vehicle's current registration expires provided, if applicable, that all requirements of R18-2-1008(A) have been met. All written statements may be subject to verification for authenticity and accuracy by the Department. The Department may deny a certificate of waiver if the state inspector has any reason to believe the written statement is a false document or a usual source of supply does exist and the device which is necessary to repair the tampering is available before the vehicle's current registration expiration. Certificates of waiver for tampered vehicles may be issued conditionally for a specified period, not to exceed 90 days, which allows sufficient time for the procurement and installation of a proper emissions control device. Before or at the end of the specified time period the vehicle owner must present to the Director proof of purchase and installation of the device to prevent cancellation of vehicle registration. The Department will track all issued conditional certificates of waiver and if no proof of purchase and installation is received on or before the end of the specified time period, the Director will forward to the Department of Motor Vehicles an order to cancel said vehicle's registration.
- C. A certificate of waiver will be issued subsequent to reinspection by a state inspector at a state or Department station to vehicles that initially failed both the emissions and tampering inspections, when it is determined by repair receipts, emissions test results, evidence of repairs performed or such other evidence that the requirements of R18-2-1009 and R18-2-1010(A), (B), (C) and (D) have been met or, with respect to emission failures only, that any further repairs within the repair cost limit would be ineffective.
- D. The charge for certificates of waiver obtained from the Department is five dollars each.

Historical Note

Former Section R9-3-1008 repealed, new Section R9-3-1008 adopted effective January 13, 1976 (Supp. 76-1). Former R9-3-1008 repealed, new Section R9-3-1008 adopted effective January 3, 1977 (Supp. 77-1). Amended effective March 2, 1978 (Supp. 78-2). Amended effective January 3, 1979 (Supp. 79-1). Amended as an emergency effective January 2, 1981, pursuant to A.R.S. § 41-1003, valid for only 90 days (Supp. 81-1). Former Section R9-3-1008 as amended effective January 3, 1979, and amended as an emergency effective January 2, 1981, now amended effective April 15, 1981 (Supp. 81-2). Amended effective January 1, 1986 (Supp. 85-6). Amended subsection (A) and added subsection (D) effective January 1, 1987, filed December 31, 1986 (Supp. 86-6). Former Section R9-3-1008 renumbered as Section R18-2-1008 and amended effective August 1, 1988 (Supp. 88-3).

R18-2-1009. Tampering repair requirements

- A. Failure to pass a visual inspection for the presence or malfunction of the fuel filler neck inlet restrictor shall require replacement of the fuel filler neck inlet restrictor with a new OEM or new aftermarket fuel filler neck inlet restrictor, shall require replacement of the catalytic converters with new or reconditioned OEM converters or new aftermarket converters, and shall require replacement of the exhaust tail pipes with new exhaust tail pipes. Names of approved aftermarket restrictors and catalytic converters shall be available at time of inspection and listed on the repair requirement list.
- B. Failure to pass a visual inspection to determine the presence of properly installed catalytic converters shall require replacement

of the converters with new or reconditioned OEM converters or approved new aftermarket converters. Names of approved aftermarket converters shall be available at time of inspection and listed on the repair requirement list.

- C. Failure to pass the lead test paper test to determine the presence of lead in the vehicle exhaust pipes shall require replacement of the exhaust tail pipes with new exhaust tail pipes and shall require replacement of the catalytic converters with new or reconditioned OEM converters or approved new aftermarket converters. Names of approved aftermarket converters shall be available at time of inspection and listed on the repair requirement list.
- D. Failure to pass a visual check to determine the presence of an operational air pump shall require replacement with a new, used, or reconditioned properly installed and operational air pump.
- E. Reconditioned emissions control devices shall be identified and installed with respect to application category. The application category means those vehicles for which the device was the original emissions control device.

Historical Note

Adopted effective January 13, 1976 (Supp. 76-1). Repealed effective January 3, 1977 (Supp. 77-1). New Section R9-3-1009 adopted effective January 1, 1986 (Supp. 85-6). Amended effective January 1, 1987, filed December 31, 1986 (Supp. 86-6). Former Section R9-3-1009 renumbered without change as Section R18-2-1009 (Supp. 88-3).

ENVIRONMENTAL SCORECARD

Attachment for Section 4, Environmental Scorecard:

Louisiana Scorecard Rules

DECLARATION OF EMERGENCY**Department of Wildlife and Fisheries
Wildlife and Fisheries Commission**

In accordance with the emergency provisions of R S 49 953(B), the Administrative Procedure Act, R S 49 967 which allows the Wildlife and Fisheries Commission to use emergency procedures to set finfish seasons, and R S 56 325 3 which established an annual quota for spotted seatrout, the secretary of the Department of Wildlife and Fisheries, pursuant to a resolution passed by the Wildlife and Fisheries Commission on April 4, 1991 in Baton Rouge, hereby declares an emergency and adopts the following rule.

EMERGENCY RULE

Pursuant to R S 56 325 3 the commercial fishery for spotted seatrout is hereby closed until midnight, August 31, 1991, effective at midnight, Friday August 2, 1991.

The purchase, barter, trade or sale of spotted seatrout taken from Louisiana waters after the closure is prohibited.

The commercial taking or landing of spotted seatrout in Louisiana, whether caught within or without the territorial waters of Louisiana after the closure is prohibited.

Effective with the closure, no vessel possessing or fishing any seine, gill net, trammel net, or hoop net shall have spotted seatrout aboard the vessel, whether caught within or without the waters of the state.

Pursuant to R S 56 322 and effective with the closure, the legal commercial mesh size for all gill nets, trammel nets and seine nets used in saltwater areas of the state, other than strike nets, shall be a minimum of four and one-half inches stretched and a person shall have in possession or used aboard a vessel no more than two strike nets.

Nothing shall prohibit the possession of fish legally taken prior to the closure and all commercial dealers possessing spotted seatrout taken legally prior to the closure shall maintain appropriate records in accordance with R S 56 306 4.

A. Kell McInnis, III
Acting Secretary

Rules**RULE****Department of Economic Development
Office of Commerce and Industry**

In accordance with R S 49 950 et seq., the Administrative Procedure Act, notice is hereby given that the Department of Economic Development, Office of Commerce and Industry adopted the following rule, LAC 13:12101-2111:

Title 13**ECONOMIC DEVELOPMENT****Part I. Office of Commerce and Industry****Subpart 1. Finance****Chapter 21. Environmental Criteria For Rating Tax Exemptions****§2101. Introduction**

A. The following rules will be used as the formula to evaluate the environmental compliance of applicants for tax exemptions. The information required to apply the formula will be provided by the applicant as a part of the application. Statistics regarding payroll, man hours, and percentage of capital investments on pollution control equipment may be considered as confidential information in accordance with R S 30 2030 and/or R S 44 1-4. These rules, when applying to a renewal of a five-year Industrial Tax Exemption contract, will use data gathered prior to the beginning date of a renewal contract. This new data will be used to compute a new score which will determine the percentage of tax exemption to be considered for the renewal contract.

B. The formula starts at 50 points and adds the number of points from the environmental compliance record (maximum 25 points) and emissions-per-job categories (maximum 25 points). Bonus points are available and may be used to offset any scores totaling less than 100 points. The total tax relief will be the same as the total score, with a maximum of 100 points. (i.e., if a facility receives 100 points, it will be considered for 100 percent of the tax relief applied for; if it gets 60 points, it will be considered for 60 percent of the tax relief applied for.) The environmental review score will be available to the applicant at any time, after compilation, by written request.

C. For the installation of a Department of Environmental Quality (DEQ) approved pollution control project, these rules do not apply.

D. The jobs tax credit, in the Enterprise Zone Program (R S 51:1787), will not be affected by these rules.

E. Definition of Terms Used in the Rules

1. **Site** - a continuous piece of land over which a company's ownership extends.

2. **Plant** - a production unit (i.e., an ethylene production unit = an ethylene plant)

3. **Facility** - all production units and support units on a site belonging to an applicant.

4. **Applicant** - any business/company/organization that submits an application for a tax exemption, credit or refund, for a specific facility.

5. **Support unit** - equipment that is used on the site other than a plant (i.e., instrument air unit, control house, maintenance unit).

6. **Criteria air pollutants** - are NO_x, SO_x, CO, VOC's, Lead, and Particulates under 10 microns.

7. **TRI** - is the Toxic Chemical Release Inventory published by the United States Environmental Protection Agency, which lists the toxic chemicals defined in §313 of the Emergency Planning and Community Right-to-Know Act.

8. **Totally Enclosed Treatment Facility** - is a facility for the treatment of hazardous waste which is directly connected to an industrial production process and which is constructed and operated in a manner which prevents the release of any hazardous waste or any constituent thereof into the environment during treatment.

9. **Cogeneration** - is the production of electricity and

process steam from the same fuel source.

10. *Full-Time Job or Equivalent* - 2,080 actual man hours worked in one year (12-month period).

AUTHORITY NOTE: Promulgated in accordance with Article VII, Part 2, Section 21 (F); Acts 1985/1008 R.S. 33:4702(H); Acts 1966/12, 1985/3, 1987/307 1990/783, R.S. 47:3201-3206, Acts 1981/901 1990/1069 R.S. 51:1781-1787, Acts 1990/480 R.S. 47:1121-1128; Acts 1982/733 R.S. 47:4301-4305, Article VII, Part 2, Section 21(H) and Acts 1990/503, 1990/1104.

HISTORICAL NOTE: Promulgated by the Department of Economic Development, Office of Commerce and Industry, Financial Incentives Division, LR 17: (August 1991).

§2103. Compliance Records

A. The environmental compliance record considered (25 points maximum) will be facility specific federal and state final penalties, except when the Board of Commerce and Industry and the governor, in their unfettered discretion, consider it to be in the state's best interest to use a company's complete environmental record.

B. An environmental compliance history, starting January 1, 1990, will be used. After January 1, 1995 a five-year compliance history will be utilized on all applications.

C. Point deductions for first year environmental violations which go through adjudication will be as follows:

1. one point deduction for violations with fines under \$3,000;

2. five point deduction for violations with fines between \$3,000 to \$10,000;

3. ten point deduction for violations with fines between \$10,000 to \$25,000;

4. fifteen point deduction for violations with fines in excess of \$25,000;

5. twenty point deduction for criminal felony violations;

6. the age of the violation will be calculated from the date of the application. The older the violation the lower the deduction. Deductions will be weighted as follows:

a. Year 1: 100 percent

b. Year 2: 80 percent

c. Year 3: 60 percent

d. Year 4: 40 percent

e. Year 5: 20 percent

f. Year 6: 0 percent

D. Equivalent violations, voluntarily settled with the DEQ and/or EPA, prior to an adjudicatory hearing, will incur one-half of the point deductions in §2103.C.

E. Only those violations that result in pollution or threat to the environment will be counted in scoring the compliance record of a facility.

F. Compliance history and record is associated with a facility at a given site. Transfer of ownership does not sever that relationship nor does it obviate responsibility of the new owner.

AUTHORITY NOTE: Promulgated in accordance with Article VII, Part 2, Section 21 (F); Acts 1985/1008 R.S. 33:4702(H); Acts 1966/12, 1985/3, 1987/307 1990/783, R.S. 47:3201-3206, Acts 1981/901 1990/1069 R.S. 51:1781-1787; Acts 1990/480 R.S. 47:1121-1128; Acts 1982/733 R.S. 47:4301-4305; Article VII, Part 2, Section 21(H) and Acts 1990/503, 1990/1104.

HISTORICAL NOTE: Promulgated by the Department of Economic Development, Office of Commerce and Industry, Financial Incentives Division, LR 17: (August 1991).

§2105. Emissions-per-job

A. This is a category using total credited emissions divided by the total job equivalents supported by the facility. The job equivalents data will consist of the on site facility work force (permanent full-time, full-time construction equivalents, and full-time contract equivalents), adjusted in terms of payroll equivalent. The adjusted jobs factor is computed by dividing the annual average facility payroll by a derived average earnings per job for Louisiana workers, equal to \$25,000. A ratio (emissions-per-job) is created between the total number of job equivalents existing at a facility and a composite emissions number which combines the total TRI data, criteria air pollutants (added in at 10 percent of the total except for lead which is added in at 100 percent) and accidental toxic releases. Criteria air emissions from cogeneration facilities will not be added to the emissions total used in this calculation. The following point schedule will apply:

POUNDS OF EMISSIONS PER JOB	POINTS RECEIVED
0 - 500	25
501 - 1,000	20
1,001 - 2,500	15
2,501 - 5,000	10
5,001 - 10,000	5
OVER 10,001	0

AUTHORITY NOTE: Promulgated in accordance with Article VII, Part 2, Section 21 (F); Acts 1985/1008 R.S. 33:4702(H); Acts 1966/12, 1985/3, 1987/307 1990/783, R.S. 47:3201-3206, Acts 1981/901 1990/1069 R.S. 51:1781-1787; Acts 1990/480 R.S. 47:1121-1128; Acts 1982/733 R.S. 47:4301-4305; Article VII, Part 2, Section 21(H) and Acts 1990/503, 1990/1104.

HISTORICAL NOTE: Promulgated by the Department of Economic Development, Office of Commerce and Industry, Financial Incentives Division, LR 17: (August 1991).

§2107. Bonus Points Categories

There are five bonus categories, which have a possible combined total of 55 points, that can be applied to final scores of less than 100. Bonus points are used as an incentive to reduce emissions, develop recycling systems and/or use recycled materials, diversify the state's economic base and locate facilities in parishes with high unemployment rates.

1. **Emission Reductions (15 points maximum):** Up to 15 bonus points may be added to an application if the applying facility has a DEQ approved emissions reduction plan. To be eligible for emission reduction points, a facility must reduce its overall emissions by an average of five percent per year for each year the contract is in effect. One bonus point will be given for each acceptable two percent per year reduction in the composite TRI and criteria air emissions over the contract period, as compared to the year preceding the application. Any facility submitting applications prior to July 1, 1992 shall also be prorated additional bonus points for reductions to July 1, 1989 (based on 1988 SARA Title III emissions data). Only net reductions in TRI and criteria air pollutants will be considered.

One bonus point will be given for each five percent annualized reductions in DEQ approved hazardous and industrial solid waste generated, excluding office trash, occurring in the five-year contract period. To be eligible for the waste reduction bonus points a facility must reduce its overall hazardous and industrial solid waste by an average of five

percent per year. At the end of the five years upon submission of renewal applications, facilities that do not meet their emissions reduction plan will not be eligible for bonus points in this category.

2. **Recycling (5 points maximum):** Bonus points will be available to facilities which install a closed loop recycling system or use recyclable materials. One bonus point will be given for every one percent of recycled hazardous waste material substituted in the input throughput by a closed loop recycling system, or one bonus point will be given for each five percent of recycled total throughput material, purchased outside of the facility and used by the facility, or any combination thereof.

3. **Recycling Companies or Manufactured Consumer Products Bonus (10 points maximum):** Ten bonus points will be available to companies whose predominant activity is recycling, or using bulk materials produced in Louisiana for manufacturing "end use" products such as plastic bags. For those facilities whose recycling represents 50 percent or more of their income, one bonus point will be given for each 10 percent of gross income generated by recycled materials. For those facilities that derive 50 percent or more of their income by using Louisiana produced bulk materials to make "end use" products one bonus point will be given for each 10 percent of gross income generated from such activity.

4. **New Jobs for High Unemployment Areas (15 points maximum):** Up to fifteen bonus points will be given to projects which create at least one new full-time equivalent job per \$30,000 in tax relief in parishes that have an unemployment rate one or more percent above the state's average, as indicated in the current January issue of the *Louisiana Labor Market Information* publication, prior to receipt of the Advance Notification form. Two bonus points will be given for each one percent above the state's revised unemployment rate. A facility located in a parish whose unemployment rate is three percentage points above the state's rate will be eligible for six bonus points. A facility in a parish whose unemployment rate is seven and one half percent above the state's rate would be eligible for all 15 points.

5. **Diversification (10 points maximum):** Bonus points will be available to industries which diversify the state's economy. In this category the Department of Economic Development may recommend bonus points be given to industries not heavily represented in Louisiana which are low- or non-polluting (produce emissions-per-job under 500) and create high quality job opportunities (high paying, high skilled jobs). Louisiana is particularly interested in attracting industries which add significant value to Louisiana's renewable natural resources and/or take advantage of the state's unique assets in science and technology. Under special circumstances, diversification points may be given to industries which do not meet these qualifications, should they locate in a section of the state where their type of business is unique and special.

AUTHORITY NOTE: Promulgated in accordance with Article VII, Part 2, Section 21 (F); Acts 1985/1008 R.S. 33:4702(H); Acts 1986/12, 1985/3, 1987/307 1990/783, R.S. 47:3201-3206; Acts 1981/901 1990/1069 R.S. 51:1731-1737; Acts 1990/480 R.S. 47:1121-1128; Acts 1982/733 R.S. 47:4301-4305; Article VII, Part 2, Section 21(H) and Acts 1990/503, 1990/1104.

HISTORICAL NOTE: Promulgated by the Department of Economic Development, Office of Commerce and Industry, Financial Incentives Division, LR 17: (August 1991).

2109. Restrictions

A. Tax exemptions will be reduced by 50 percent for any facility whose total product includes more than 20 percent banned materials or materials designated to be banned by the United States Environmental Protection Agency. No tax exemption will be granted for any project which will produce a banned product.

B. No tax exemptions will be given to a facility whose net import of hazardous waste from out of state is more than 15 percent of the hazardous waste which it disposes or incinerates in Louisiana.

AUTHORITY NOTE: Promulgated in accordance with Article VII, Part 2, Section 21 (F); Acts 1985/1008 R.S. 33:4702(H); Acts 1986/12, 1985/3, 1987/307 1990/783, R.S. 47:3201-3206; Acts 1981/901 1990/1069 R.S. 51:1731-1737; Acts 1990/480 R.S. 47:1121-1128; Acts 1982/733 R.S. 47:4301-4305; Article VII, Part 2, Section 21(H) and Acts 1990/503, 1990/1104.

HISTORICAL NOTE: Promulgated by the Department of Economic Development, Office of Commerce and Industry, Financial Incentives Division, LR 17: (August 1991).

2111. Exceptions

A. The governor and the Board of Commerce and Industry shall have an unfettered discretion to grant, deny or modify any tax exemption application. Certain environmental concerns may trigger an in-depth environmental study by the Department of Environmental Quality in order to offer the Board of Commerce and Industry and the governor better information from which to make a decision. The following are some of the conditions which may trigger a full environmental review:

1. any facility with compliance deductions of greater than 25 points or a history of multiple violations;
2. any facility with proven groundwater or habitat contamination;
3. companies which do not follow nationally accepted environmental standards;
4. facilities which have had major catastrophes where they were found negligent (such as explosions, fires, large spills, etc.);
5. facilities where environmental problems have resulted in fatalities.

AUTHORITY NOTE: Promulgated in accordance with Article VII, Part 2, Section 21 (F); Acts 1985/1008 R.S. 33:4702(H); Acts 1986/12, 1985/3, 1987/307 1990/783, R.S. 47:3201-3206; Acts 1981/901 1990/1069 R.S. 51:1731-1737; Acts 1990/480 R.S. 47:1121-1128; Acts 1982/733 R.S. 47:4301-4305; Article VII, Part 2, Section 21(H) and Acts 1990/503, 1990/1104.

HISTORICAL NOTE: Promulgated by the Department of Economic Development, Office of Commerce and Industry, Financial Incentives Division, LR 17: (August 1991).

Paul Adams
Secretary

Table 3
Summary Table for the 12 Companies' Emission Reduction Plans
and Other Related Information

A	B	C	D	E	F
<u>Company</u>	<u>Bonus Points</u>	<u>Total Benefits</u>	<u>Total Costs</u>	<u>Em. Red. Benefit Ratio (%)</u>	<u>Credited Reductions (TRI + 1/10 C.A.) and % Reduction</u>
BP Oil, Inc.	4.4	\$166,340	\$94,300,000	.18	1,775,298 (37%)
F.M. (Faustina)	5.7	\$78,841	\$25,000,000	.32	8,592,239 (48%)
Rubicon	9.0	\$405,026	\$119,212,000	.34	3,968,123 (67%)
F.M. (Uncle Sam)	5.8	\$349,378	\$60,000,000	.58	11,601,709 (57%)
U O P (Shreveport)	3.6	\$121,816	\$5,774,000	.66	489,982 (31%)
Monsanto	10.4	\$555,308	\$30,150,000	1.84	5,181,823 (69%)
PPG Industries	10.6	\$2,441,572	\$106,012,628	2.30	1,784,337 (70%)
Vulcan Chem.	5.5	\$343,451	\$12,496,640	2.75	408,900 (35%)
Uniroyal Chem.	15.0	\$961,148	\$18,500,000	5.20	5,347,000 (85%)
Vista Chemicals	4.15	\$668,245	\$8,015,000	8.34	516,473 (35%)
Witco (Jefferson)	10.7	\$108,433	\$250,000	43.37	301,418 (70%)
Sid Richardson	15.0	\$830,691	\$276,000	300.98	10,570,659 (97%)
TOTAL		\$7,030,249	\$479,966,268		

The Emission Reduction Benefit Ratio shows, based solely on economic theory, that the incentives provided by the bonus points of the scorecard were only one of many reasons that 11 of these 12 companies came forth with plans to reduce emissions. In taking this benefit ratio concept a step further, an interesting analysis can be made by examining the percent of credited emission reductions proposed by each company with reference to the ratios. Column F of Table 3 lists each company's total proposed credited reductions (TRI plus criteria air at one-tenth) and the actual percent reductions calculated by DEQ. This information is then illustrated in graphical form in Figure 1 on the following page.

Statistical examination of the data shows a correlation between the incentive ratio (benefit/cost ratio) of a company's reduction plan and the percent of reductions they are willing to commit too. Though the population is only 12, simple linear regression at a 95% confidence interval produces an r^2 value of .35, with a p-value of .043. This bivariate regression produces a measure of co-variation between the two variables of the benefit/cost ratio and the percent reduction. If Sid Richardson Company is eliminated from the analysis (because it may be a potential outlier), the r^2 drops to .073, and the p-value rises to .42 with a 95% confidence level.

This correlation is important in that it shows a positive relationship between economic incentives and emission reductions. This analysis should form the basis on which the scorecard's incentive mechanisms can be judged for effectiveness, and evidence that the program should be utilized as a practical tool in environmental management, applicable on most any level of government.

FEES

Attachments for Section 5, Fees:

Oregon Amendment on Fees
Washington Statute on Fees
Washington Regulation on Fees

House Bill 3513

Introduced and printed pursuant to House Rule 13.01

SUMMARY

The following summary is not prepared by the sponsors of the measure and is not a part of the body thereof subject to consideration by the Legislative Assembly. It is an editor's brief statement of the essential features of the measure as introduced.

Imposes firewood fee to provide funding for incentive programs to increase replacement rate of uncertified woodstoves in areas of state with existing and potential PM10 air quality problems and for continued implementation of local wood heating pollution control programs in PM10 nonattainment areas.

Sunset January 1, 2005.

A BILL FOR AN ACT

Relating to firewood fee to provide funding for pollution control programs in PM10 nonattainment areas; creating new provisions; amending ORS 468A.485 and 468A.490; and appropriating money.

Whereas local governments are facing budget shortfalls that threaten the continued implementation of highly successful residential wood heating education and control strategies that are part of the state's PM10 control program adopted in response to the federal Clean Air Act, as amended; and

Whereas the replacement of uncertified woodstoves is not reaching the levels assumed necessary in the state's PM10 control strategies to maintain compliance with PM10 air quality standards;

Whereas failure to implement PM10 control strategies will result in public exposure to unhealthy air quality; and

Whereas the consequences of failure to continue implementation of adopted PM10 control strategies would, under provisions of the federal Clean Air Act, as amended, include an increased emission offset ratio of 2:1 for industrial expansion, automatic sanctions on federal highway funds, the potential for citizen suits and an implementation plan imposed by the United States Environmental Protection Agency; and

Whereas failure to attain and maintain compliance with federal PM10 air quality standards would, under provisions of the federal Clean Air Act, as amended, trigger contingency strategies that would impose additional emission control requirements on existing industrial sources, require the removal and destruction of uncertified woodstoves upon the sale of a home and could include a ban on forest slash burning; now, therefore,

Be It Enacted by the People of the State of Oregon:

SECTION 1. Sections 2 to 18 of this Act are added to and made a part of ORS 468A.485 to 468A.515.

SECTION 2. It is the purpose of sections 2 to 18 of this 1993 Act to:

(1) Provide a permanent and adequate source of funding for local wood heating education and curtailment programs in PM10 nonattainment areas in order to assure attainment of federal PM10 air quality standards; and

(2) Provide an adequate source of funding for incentives to stimulate the replacement rate of uncertified woodstoves to the level assumed in the State Implementation Plan devel-

NOTE: Matter in boldfaced type in an amended section is new; matter [*italic and bracketed*] is existing law to be omitted. New sections are in boldfaced type.

LC 3214

1 oped by the department under ORS 468A.035.

2 SECTION 3. As used in sections 2 to 18 of this 1993 Act, "firewood" means:

3 (1) Any split or not split logs or branches of any length, other than artificially com-
4 pressed logs or pelletized fuel, that are used, sold or resold as fuel for residential space
5 heating; and

6 (2) Whole logs which are at any time altered into minor forest products resulting in the
7 production of residential heating fuel.

8 SECTION 4. Beginning July 1, 1994, a fee of \$5 per cord is hereby imposed on all firewood
9 originating on federal, state and private lands located east of the crest of the Coast Range
10 mountains. The fee shall be collected as specified in sections 6 to 12 of this 1993 Act.

11 SECTION 5. The fee imposed under section 4 of this 1993 Act shall not apply to:

12 (1) Up to 10 cords per calendar year of firewood cut on private land for the private use
13 of the timber owner and not offered for sale.

14 (2) Minor forest products that are to be pelletized or processed into artificial logs.

15 (3) Firewood donated to charitable nonprofit organizations for the purpose of fund rais-
16 ing.

17 SECTION 6. The fee imposed under section 4 of this 1993 Act shall be paid for firewood
18 removed from state or federal lands by the person obtaining the permit or contract to cut
19 the firewood and shall be remitted at the time the federal agency or the State Forestry De-
20 partment issues the permit or contract.

21 SECTION 7. (1) All fees for firewood removed from federal land shall be collected by the
22 federal agency providing the cutting permit or contract. The federal agency shall remit the
23 fees to the State Treasurer on or before the last day of June and December for the preceding
24 six-month period.

25 (2) The amount remitted to the State Treasurer by the federal agency for each six-month
26 period shall be equal to 85 percent of the total fees due and payable from the federal agency
27 for the six-month period. The federal agency may retain up to 15 percent of revenue received
28 from firewood fees collected to offset the administration and enforcement costs of collection.

29 (3) The United States shall not be liable to the State of Oregon or the depositor for any
30 damage incident to collection of firewood fees on behalf of the State of Oregon.

31 SECTION 8. All fees for firewood removed from state land shall be collected by the State
32 Forestry Department through its existing cutting permit and cutting contract process.

33 SECTION 9. The fee imposed under section 4 of this 1993 Act shall be paid for firewood
34 removed from private land by the person removing the firewood and shall be remitted by the
35 timber owner as provided in section 10 of this 1993 Act. If the timber owner fails to collect
36 the firewood fee from the person who removes the firewood, the timber owner shall pay the
37 fee.

38 SECTION 10. (1) The fee imposed under section 4 of this 1993 Act on the owner of private
39 forest land shall be paid by each timber owner to the Department of Environmental Quality
40 on or before the 15th day of January, April, July and October of each year for the preceding
41 calendar quarter.

42 (2) The amount remitted to the department by the timber owner for each quarter shall
43 be equal to 85 percent of the total fees due and payable by the timber owner for the quarter.

44 (3) Any private timber owner engaging in firewood harvesting operations in excess of the
45 exemption established in section 5 of this 1993 Act shall notify the State Forestry Depart-

1 ment.

2 SECTION 11. The fee imposed under section 4 of this 1993 Act shall be paid for firewood
3 converted from other forest products originating on federal, state and private lands located
4 east of the crest of the Coast Range by the person converting the forest products into
5 firewood and shall be remitted by the person converting the forest products into firewood
6 as provided in section 12 of this 1993 Act.

7 SECTION 12. (1) Any person who converts other forest products into firewood subsequent
8 to removal from federal, state or private lands shall obtain and complete a firewood fee col-
9 lection form provided by the State Forestry Department and remit the form and the appro-
10 priate fee to the Department of Environmental Quality for any firewood sold or bartered
11 during a calendar quarter.

12 (2) The firewood fee collection form and fee shall be submitted to the Department of
13 Environmental Quality on or before the 15th day of January, April, July and October of each
14 year for the preceding calendar quarter.

15 SECTION 13. All moneys received by the State Forestry Department under section 8 of
16 this 1993 Act shall be deposited in the State Treasury and credited to a suspense account
17 established under ORS 293.445. After deducting up to 15 percent of the moneys for payment
18 of administration expenses incurred by the State Forestry Department in administering, en-
19 forcing and collecting the firewood fee, the balance of the money shall be credited to the
20 Residential Wood Heating Air Quality Improvement Fund established under ORS 468A.490.

21 SECTION 14. All moneys received by the Department of Environmental Quality under
22 sections 10 and 12 of this 1993 Act shall be deposited in the State Treasury and credited to
23 a suspense account established under ORS 293.445. After deducting up to 15 percent of the
24 moneys for payment of administration expenses incurred by the Department of Environ-
25 mental Quality in administering, enforcing and collecting the firewood fee, the balance of the
26 money shall be credited to the Residential Wood Heating Air Quality Improvement Fund es-
27 tablished under ORS 468A.490.

28 SECTION 15. The Department of Environmental Quality shall prepare the collection
29 forms required to be submitted with the firewood fee imposed under section 4 of this 1993
30 Act. The forms shall include:

- 31 (1) The name and address of the timber owner;
32 (2) The number of cords of firewood removed;
33 (3) The amount of the firewood fee due; and
34 (4) Any other information the department considers necessary to administer the firewood
35 fee program.

36 SECTION 16. The State Forestry Department shall:

37 (1) Amend the notification form required under ORS 527.670 to include provisions for
38 identifying firewood harvesting operations. The amended form shall include a requirement
39 that the number of cords of firewood harvested be identified by the harvester. The State
40 Forestry Department shall provide to the Department of Environmental Quality a copy of
41 the completed notification form when a firewood harvesting operation has been identified.

42 (2) Provide firewood fee collection forms to all timber owners who file notification of
43 firewood harvesting operations.

44 SECTION 17. The State Forestry Department and, to the extent allowed under ORS
45 321.684 (1)(d), the Department of Revenue shall provide the Department of Environmental

1 Quality with information needed to collect the fee imposed under section 4 of this 1993 Act
2 for firewood removed from private lands and firewood converted from other forest products.
3 The Department of Environmental Quality shall have the authority to ascertain the compli-
4 ance of timber owners subject to the firewood fee.

5 SECTION 18. The Environmental Quality Commission shall adopt rules necessary to
6 carry out the firewood fee program established in sections 2 to 18 of this 1993 Act.

7 SECTION 19. ORS 468A.485 is amended to read:

8 468A.485. As used in ORS 468A.490:

9 (1) "Area that exceeds the PM10 standard" means an area of the state that exceeds, on or after
10 January 1, 1990, the air quality standard for PM10 as established by the commission under ORS
11 468A.025.

12 (2) "Eligible area" means any area located east of the crest of the Coast Range moun-
13 tains and subject to the firewood fee collected under sections 2 to 18 of this 1993 Act.

14 (3) "PM10 nonattainment area" means an area designated by the department as not being
15 in compliance with PM10 standards.

16 [(2)] (4) "Western interior valleys" means the area of the state encompassed by the borders of
17 the States of Washington and California and the crests of the Cascade Mountain Range on the east
18 and the Coast Range on the west.

19 SECTION 20. ORS 468A.490 is amended to read:

20 468A.490. (1) There is created within the State Treasury a fund known as the Residential Wood
21 Heating Air Quality Improvement Fund, separate and distinct from the General Fund.

22 (2) All moneys appropriated or received as gifts or grants for the purposes of this section shall
23 be credited to the Residential Wood Heating Air Quality Improvement Fund.

24 (3) The State Treasurer may invest and reinvest the moneys in the fund as provided in ORS
25 293.701 to 293.776. Interest from the moneys deposited in the fund and earnings from investment of
26 the moneys in the fund shall accrue to the fund.

27 (4) [All] Up to a maximum of 15 percent of the total moneys in the Residential Wood Heating
28 Air Quality Improvement Fund are continuously appropriated to the Department of Environmental
29 Quality to[:]

30 [(a)] pay all costs incurred by the department in maintaining residential wood heating emissions
31 inventories, analyzing projects and programs proposed for funding in accordance with this section,
32 administering projects and programs selected for funding in accordance with this section, enforcing
33 and implementing the requirements of ORS 468A.475 (2) and 468A.480 (1)(g).

34 [(b)] (5) All moneys remaining in the account after deduction of costs under subsection
35 (4) of this section are continuously appropriated to the Department of Environmental Quality
36 to pay all reasonable costs as determined by the Environmental Quality Commission for local gov-
37 ernment and regional authority public education, emission inventory maintenance, curtailment and
38 opacity programs and other measures to reduce residential wood heating emission in an area that
39 exceeds the PM10 standard or an area that is at risk of becoming an area that exceeds the PM10
40 standard.

41 [(c)] (6) All moneys remaining in the account after deduction of costs under subsections
42 (4) and (5) of this section are continuously appropriated to the Department of Environmental
43 Quality [To the extent moneys remain in the fund after paying the costs under paragraphs (a) and (b)
44 of this subsection,] to fund programs established under subsections [(5)] (7) and [(6)] (8) of this sec-
45 tion in a manner designed to achieve cost-beneficial reductions in emission of air contaminants from

woodstoves, attain federal ambient air quality standards before deadlines specified in the Clean Air Act and maintain compliance with such standards after the deadlines established in the Clean Air Act.

[(d) Not more than 15 percent of the total amount of moneys received under this section shall be expended for costs under paragraphs (a) and (b) of this subsection.]

[(5)] (7) A portion of the moneys available under subsection [(4)] (6) of this section shall be used by the Environmental Quality Commission to fund a low or no interest loan program for wood heated households located [in the western interior valleys or in any other county containing an area that exceeds the PM10 standard] east of the crest of the Coast Range mountains to replace woodstoves that were not certified under ORS 468A.480 for sale as new on or after July 1, 1986. The commission shall dedicate a minimum of 25 percent of loan moneys to eligible areas that are not designated as PM10 nonattainment areas. The distribution of this guaranteed minimum funding shall be weighted according to the population of each area receiving funds. The commission shall establish funding priority criteria based on the potential for an area to be designated as a PM10 nonattainment area, and shall distribute the remaining loan funds based on that criteria. The loan program shall include the following elements:

(a) All forms of new high-efficiency, low air contaminant- emitting heating systems are allowed;

(b) Any removed woodstove must be destroyed;

(c) Any replacement woodstoves selected under the program must be installed in conformance with building code requirements and the manufacturer's specifications including but not limited to chimney specifications; and

(d) To be eligible, program participants shall participate in any home energy audit program provided at no charge to the homeowner and shall obtain all information available regarding subsidies for cost-effective weatherization. The department shall make the information required in this subsection readily available to program participants.

[(6)] (8) A portion of the moneys available under subsection [(4)] (6) of this section shall be used by the commission to fund local government or regional authority programs to provide subsidies for replacement of woodstoves that were not certified under ORS 468A.480 for sale as new on or after July 1, 1986, to low income persons in wood heated households in [an area that exceeds the PM10 standard] PM10 nonattainment areas. The local government or regional authority programs must include the following elements to be eligible for funding:

(a) All forms of new high-efficiency, low emitting heating systems are allowed.

(b) All woodstoves removed are destroyed.

(c) The local government or regional authority adopts and enforces an ordinance that limits emissions from woodstoves to no visible smoke, except for steam and heat waves, during periods of air stagnation and to an average of 20 percent opacity at all other times except during start up and refueling as determined by the commission. This requirement shall not be in lieu of any final stage of woodstove curtailment required during air stagnation if the final stage of curtailment is necessary to prevent exceeding air quality standards established under ORS 468A.025 by the latest date allowed under the Clean Air Act to reach attainment of such standards.

(d) In an airshed requiring more than a 50 percent reduction in [woodheating] wood heating emissions as specified in the State Implementation Plan control strategy for PM10 emissions, program participants shall have a backup heat source if a certified woodstove is selected.

(e) Any replacement woodstove selected under the program must be installed in conformance with building code requirements and the manufacturer's specifications including but not limited to

1 chimney specifications.

2 (f) To be eligible, program participants shall participate in any home energy audit program
3 provided at no charge to the homeowner and shall obtain all information available regarding subsi-
4 dies for cost-effective weatherization. The local government or regional air quality authority shall
5 make the information required in this subsection readily available to program participants.

6 **SECTION 21.** Sections 2 to 18 of this Act are repealed on January 1, 2005.
7

REVISED WASHINGTON STATUTE ON FEES

multiplied by a statistically reliable conversion factor determined by ecology that relates the emission test results from the methodology established by the United States Environmental Protection Agency prior to May 15, 1991, to the test results from the methodology subsequently adopted by that agency.

AMENDATORY SECTION (Amending Order 90-58, filed 3/20/91, effective 4/20/91)

WAC 173-433-110 Opacity standards. (1) A person shall not cause or allow emission of a smoke plume from any solid fuel burning device to exceed an average of twenty percent opacity for six consecutive minutes in any one-hour period.

(2) State-wide opacity standard. An authority shall not adopt or enforce an opacity level for solid fuel burning devices that is more stringent than the state-wide standard.

(3) Test method and procedures. Methods and procedures specified by the EPA in "40 CFR 60 Appendix A reference method 9 - VISUAL DETERMINATION OF THE OPACITY OF EMISSIONS FROM STATIONARY SOURCES" as amended through July 1, 1990, shall be used to determine compliance with subsection (1) of this section.

(4) Enforcement. Smoke visible from a chimney, flue or exhaust duct in excess of the opacity standard shall constitute prima facie evidence of unlawful operation of an applicable solid fuel burning device. This presumption may be refuted by demonstration that the smoke was not caused by an applicable solid fuel burning device. The provisions of this requirement shall:

(a) Be enforceable on a complaint basis.

(b) Not apply during the starting of a new fire for a period not to exceed twenty minutes in any four-hour period.

(5) Education. Any person or retailer providing information on the operation of solid fuel burning devices, such as brochures, demonstrations, and public education programs, should include information that opacity levels of ten percent or less are attainable through proper operation.

AMENDATORY SECTION (Amending Order 90-58, filed 3/20/91, effective 4/20/91)

WAC 173-433-170 Retail sales fee. (1) A person selling a solid fuel burning device at retail shall collect a fee from the buyer, pursuant to RCW 70.94.483.

(2) The fee shall be:

(a) Set at a minimum of ~~((fifteen dollars, until January 1, 1994))~~ thirty dollars on January 1, 1992. Thereafter, ecology may annually ~~((increase))~~ adjust the fee ~~((according to changes in the consumer price index;))~~ to account for inflation as determined by the office of the state economic and revenue forecast council. Adjustments in the fee should be rounded down to the nearest dollar.

(b) Applicable to all new and used solid fuel burning devices~~((; with the exception of built-in masonry fireplaces;))~~.

(c) Procedures for masonry fireplaces. Generally, contractors will collect, pay, and report the fee to the department of revenue on the Combined Excise Tax return for the tax reporting period during which the retail sales tax is billed to the customer for the construction of the masonry fireplace. (See WAC 458-20-170 for a detailed explanation.)

RCW 70.94.483 Wood stove education and enforcement account created--Fee imposed on solid fuel burning device sales. (1) The wood stove education and enforcement account is hereby created in the state treasury. Money placed in the account shall include all money received under subsection (2) of this section and any other money appropriated by the legislature. Money in the account shall be spent for the purposes of the wood stove education program established under RCW 70.94.480 and for enforcement of the wood stove program, and shall be subject to legislative appropriation.

(2) The department of ecology, with the advice of the advisory committee, shall set a flat fee of thirty dollars, on the retail sale, as defined in RCW 82.04.050, of each solid fuel burning device after January 1, 1992. The fee shall be imposed upon the consumer and shall not be subject to the retail sales tax provisions of chapters 82.08 and 82.12 RCW. The fee may be adjusted annually above thirty dollars to account for inflation as determined by the state office of the economic and revenue forecast council. The fee shall be collected by the department of revenue in conjunction with the retail sales tax under chapter 82.08 RCW. If the seller fails to collect the fee herein imposed or fails to remit the fee to the department of revenue in the manner prescribed in chapter 82.08 RCW, the seller shall be personally liable to the state for the amount of the fee. The collection provisions of chapter 82.32 RCW shall apply. The department of revenue shall deposit fees collected under this section in the wood stove education and enforcement account. [1991 1st sp.s. c 13 §§ 64, 65; 1991 c 199 § 505; 1990 c 128 § 5; 1987 c 405 § 10.]

NOTES:

Effective dates--Severability--1991 1st sp.s. c 13: See notes following RCW 18.08.240.

Finding--1991 c 199: See note following RCW 70.94.011.

Severability--1987 c 405: See note following RCW 70.94.450.

WASHINGTON REGULATION ON FEES

FIREPLACE/WOODSTOVE RESTRICTIONS

Attachments for Section 7, Fireplace/Woodstove Restrictions:

Colorado Prohibition
Mammoth Lakes, CA Prohibition
Reno, NV Prohibition

REGULATION NO. 4

**Regulation on the Sale of New Woodstoves and the Use of Certain
Woodburning Appliances During High Pollution Days**

I. DEFINITIONS

Unless otherwise required by the context, as used in this Regulation:

1. "Accredited Laboratory" means an independent testing laboratory which has obtained accreditation pursuant to the Federal Regulations 40 CFR Part 60 Subpart AAA.
2. "Approved Pellet Stove" means a woodburning appliance as defined in Section I.A.(16), which has complied with all the requirements of Section III.
3. "Boiler" means a domestic solid fuel burning appliance used primarily for heating space where the appliance is located, by the distribution through pipes of a gas or fluid heated in the appliance. This appliance must be tested and listed as a boiler under accepted U.S. or Canadian safety testing codes.
4. "Burn down time" shall mean that period of time not to exceed three hours following the declaration of a high pollution day required for the cessation of combustion within any wood burning stove or fireplace pursuant to this Regulation.
5. "Certified wood stove" means a wood stove which is a unit of a wood stove model, or which contains a configuration of appliance, for which certification has been granted.
6. "Cookstove" means a domestic wood-fired appliance that is designed primarily for cooking food and that has the following characteristics:
 - a. An oven, with a volume of 1 cubic foot or greater, and an oven rack;
 - b. A device for measuring oven temperatures;
 - c. A flame path that is routed around the oven;
 - d. A shaker grate;
 - e. An ash pan;
 - f. An ash clean-out door below the oven; and
 - g. The absence of a fan or heat channels to dissipate heat from the appliance.

7. **"Dealer"** means a person who sells wood stoves on a regular basis.
8. **"Furnace"** means a domestic solid fuel burning appliance that is designed to be located outside of ordinary living areas and is used for heating spaces other than the space where the appliance is located by the distribution through ducts of air heated in the appliance. The appliance must be tested and listed as a furnace under accepted U.S. or Canadian safety testing codes.
9. **"High pollution day"** means those periods of time declared by Colorado Department of Health as provided for in Section 25-7-106.3(1), C.R.S.
10. **"Manufacturer"** means a person who constructs a wood stove.
11. **"Method 5G/5H"** is a test method(s) for determination of particulate emissions from woodheaters from dilution tunnel sampling and stack locations as described in 40 CFR, Part 60, Subpart AAA, Appendix A.
12. **"Method 28"** is a test method designed to establish certification test conditions and the particulate matter weighted emission values, as described in 40 CFR Part 60 Subpart AAA, Appendix A.
13. **"Method 28A"** is a test method to measure air to fuel ratios and minimum achievable burn rates as described in 40 CFR, Part 60 Subpart AAA, Appendix A.
14. **"Model"** means a group of wood stoves which are identical to one another regarding design, emissions, and heating performance.
15. **"New wood stove"** means any wood stove other than one which was sold to an individual for his personal use prior to January 1, 1987.
16. **"Pellet Stove"** means a wood heater which meets the following criteria: (1) the manufacturer makes no reference to burning cordwood in advertising or other literature, (2) the unit is safety listed for pellet fuel only, (3) the unit's operating and instruction manual must state the use of cordwood is prohibited by federal law, and (4) the unit must be manufactured and sold including a hopper and auger combination as integral parts.
17. **"Phase III Certified wood stove"** means a wood burning stove which meets the emission standards set forth in Section II.A.1.
18. **"Primary source of heat"** shall mean one or more residential wood burning stoves or fireplaces which provide more than half the annual heating demands for the residence.

19. "Standard method" means the applicable testing procedures and criteria set forth in the Federal Regulations 40 CFR Part 60 Subpart AAA, Appendix A.
20. "Wood burning fireplace" means an appliance designed for or capable of burning wood which does not meet the definition of a wood burning stove or is not exempt under the provisions of section II.C.
21. "Wood burning stove" means an appliance designed for or capable of burning wood, including a fireplace insert, capable of and intended for domestic space heating or domestic water heating that meets all of the following criteria:
 - a. An air-to-fuel ratio in the combustion chamber averaging less than 35-to-1 as determined by EPA method 28A as set forth in the Federal Regulations 40 CFR Part 60 Subpart AAA, Appendix A.
 - b. A useable firebox volume of less than 20 cubic feet.
 - c. A minimum burn rate of less than 5 Kilograms per hour.
 - d. A maximum weight of 800 Kilograms.

II. REQUIREMENTS FOR SALE AND INSTALLATION OF WOOD STOVES

- A. On or after July 1, 1991, no person shall advertise to sell, offer to sell, or sell a new wood stove unless it has been tested, certified, and labeled for emission performance in accordance with criteria and procedures specified in the Federal Regulations 40 CFR Part 60, Subpart AAA and meets the emission standards set forth in Subsection 60.532(b)(1) or (2).
- B. The certification requirement shall apply to:
 1. Advertisements for sale and offers for sale communicated by any means to any person in Colorado, including, but not limited to, offers to sell or advertisements for sale which are mailed to any person in Colorado.
 2. Any sale occurring in Colorado, including, but not limited to, sales in which a new wood stove is shipped, delivered, or transported to any person in Colorado by a person located either inside or outside Colorado and to both the initial sale and any subsequent resale of a new wood stove.

C. Exemptions

1. Wood-fired appliances that are not suitable for heating equipment in or used in connection with residences. For example, portable camping stoves. Such appliances must be exempted by the Division on a case-by-case basis.
 2. Boilers
 3. Furnaces
 4. Cookstoves
- D. On and after January 1, 1993 no person shall sell or install a used wood-burning device within those portions of the counties of Adams, Arapahoe, Boulder, Denver, Douglas, and Jefferson which are located in the AIR program area, as such area is defined in Section 42-4-307(8), C.R.S. unless it meets the requirements set forth in Section II.A.

III. APPROVAL PROCEDURE FOR PELLET STOVES

- A. On or after August 1, 1992, a manufacturer of a pellet stove who wishes to have a particular model line designated as an approved pellet stove, shall submit to the Division for their review, the following information:
1. test results showing an air to fuel ratio of 35.1 or greater, using EPA test method, 28A.
 2. test results using EPA test method 5G or 5H and corrected to 5H which have been conducted under minimum burn conditions, (category 1), using EPA test method 28.
 3. a one page letter signed by the laboratory president, verifying the information required in III. A.1. and 2.
- B. All tests conducted under III. A. shall be performed by an EPA accredited laboratory.
- C. Within twenty (20) working days after receipt of an application for approval, the Division shall notify the applicant if the application is complete. Within thirty (30) working days after receipt of a complete application, the Division shall notify the applicant whether the application satisfies all requirements for approval.

- D. If the Division denies approval, the Division shall notify the applicant in writing of the opportunity for a hearing before the Commission pursuant to Section 24-4-104 (9), C.R.S., (1982).
- E. The Division shall grant approval if all information required by Section III A. is submitted and the test results in Section III.A.2. do not exceed 4.1.G/HR.

IV. ENFORCEMENT

- A. The Division may enter and inspect the property or premises of any manufacturer, or dealer, for the purpose of investigating any actual, suspected, or potential violation of this regulation; and may, at reasonable times, have access to and copy any document, inspect any wood stove, wood stove component, or testing equipment, or test the emissions of any wood stove, possessed by any manufacturer, or dealer, for the purpose of ascertaining compliance or noncompliance with this regulation.
- B. The Division shall also enforce the provisions of this regulation through all means authorized by Part 1 of Title 25, C.R.S.

V. LIST OF CERTIFIED WOOD STOVES

The Division shall request each dealer to make available to consumers a list of certified wood stoves, exempt, and approved pellet stoves to be compiled by the Division.

VI. HIGH POLLUTION DAYS

A. Applicability

Limitations on the use of wood burning stoves and fireplaces shall be applicable only in those portions of the counties of Adams, Arapahoe, Boulder, Denver, Douglas, and Jefferson which are located in the AIR program area, as such area is defined in Section 42-4-307(8), C.R.S. but not including those areas above seven thousand feet elevation.

- B. Provisions of this section may be enforced by the appropriate local agency. Local agencies are encouraged to develop suitable enforcement programs and enter into an agreement with the State to promote more effective enforcement of this regulation.

- C. This section shall not apply within any municipality which had an ordinance mandating restricted use of wood burning stoves and fireplaces on high pollution days in effect on January 1, 1990.

1. All such exempt areas shall be required to submit a yearly report to the commission no later than June 30, which provides information concerning the enforcement actions pursuant to their ordinance for the previous heating season.

D. Prohibitions of use

No person shall operate a wood burning stove or fireplace during a high pollution day. A burn-down time shall be allowed for the burn-down of existing fires prior to the initiation of enforcement action.

E. Exemptions

1. Persons utilizing their wood burning stove or fireplace as a primary source of heat.
2. Persons operating a Phase III certified wood burning stove.
3. Persons operating an approved pellet stove.

VII. REQUIREMENTS FOR INSTALLATION OF FIREPLACES

- A. On and after January 1, 1993 no person shall install any fire place in any dwelling in the area defined in Section VI.A. unless it is one of the following:
1. a gas appliance
 2. an electric device
 3. a fireplace insert that meets the requirements set forth in Section II.A.
 4. an approved pellet burning fireplace insert
 5. any other clean burning device approved by the Commission which meets the emission standard set forth in Section II.A.
- B. This section shall not apply to any municipality or a county which has a provision in effect on January 1, 1993 which is substantially equivalent of this section as determined by the Commission.

VIII. IMPLEMENTATION OF LOCAL CONTROL STRATEGIES

The local jurisdictions listed below shall implement and enforce the indicated ordinances and resolutions, as they exist on January 1, 1993. This ordinance limits wood burning on high pollution days as determined by the Colorado Department of Health. In addition, each shall implement and enforce any ordinance adopted in accordance with this regulation. The indicated ordinances or resolutions may be amended in the sole discretion of the respective governing body, provided that they shall be submitted immediately to the Colorado Air Quality Control Commission and the United States Environmental Protection Agency as revisions to the State Implementation Plan. The listed ordinances and resolutions shall remain in full force and effect until such time as the jurisdiction obtains full approval of a State Implementation Plan revision.

Community	HPD Ordinance Number	Date Enacted	Construc- tion Ordinance	Date Enacted
Arvada	2451	11/87		
Aurora	87-118	4/86	92/47	5/92
Boulder	5007	10/86	5445	4/92
Broomfield	794	11/88		
Denver	Chapter 4.24	10/86		
Douglas County			R-991-128	11/91
Englewood	31	9/92	39	10/92
Federal Heights	565	1/88		
Glendale	2	1/88	15	10/92
Greenwood Village	17	6/88	9	3/92
Jefferson County	R-CC89-873	12/89	R-CC90-617	1/91
Lafayette	24	11/88		
Lakewood	113	12/86	61	10/92
Littleton	17	12/88	26	8/92
Longmont	1	1/89		
Mountain View	5	1/91		
Sheridan	22	11/88	1	1/93

COLORADO PROHIBITION

Community	HPD Ordinance Number	Date Enacted	Construc- tion Ordinance	Date Enacted
Thornton	2120	10/91	2194	10/92
Westminster	6/14	11/87	20	12/92

IX. REFERENCES

Materials incorporated by reference in the regulation are available for public inspection during regular business hours at the Commission's office at 4300 Cherry Creek Drive South, Denver, Colorado. The regulation incorporates the materials as they exist at the date of the promulgation of this regulation and does not include later amendments to or editions of the incorporated materials.

Written statements of the basis and purpose of this regulation and revisions have been prepared by the Commission. These written statements have been incorporated in this regulation by reference and in accord with C.R.S 1973, 24-4-103 as amended.

MAMMOTH LAKES, CA PROHIBITION ON THE INSTALLATION OF UNCERTIFIED DEVICES

Section 8.30.030, STANDARDS FOR REGULATION OF SOLID FUEL APPLIANCES

A. After December 7, 1990 (the effective date of this ordinance), no solid fuel burning appliance shall be permitted to be installed within the Town of Mammoth Lakes unless said device is certified as meeting the emission requirements of the U. S. Environmental Protection Agency (EPA) for Phase II certification. This shall not prohibit retailers from selling, prior to January 1, 1991, stock on hand as of the date of this ordinance as long as that stock meets EPA certification for Phase I and the seller can document through invoices or other means that the device was acquired prior to the adoption of this ordinance. After January 1, 1991, all appliances installed in the Town of Mammoth Lakes must meet EPA Phase II certification.

B. The restrictions of this section shall apply to all solid fuel devices including unregulated fireplaces. Exceptions will be made for fireplaces supplied with gas and fitted with artificial logs and for one fireplace located in a hotel/motel lobby or similar common area lobby or in the common area of a condominium project. Said fireplaces shall be subject to burning curtailment episodes as administered under Section 8.30.100.

C. For the purposes of enforcing this chapter, the Town shall keep a record of all certified appliances installed in Mammoth Lakes in accordance with this Chapter and of properties which have been determined to conform to the requirements of this Chapter.

RENO, NV PROHIBITION ON NEW INSTALLATIONS

040.0514 LIMITATION ON NUMBER OF SOLID FUEL BURNING DEVICES IN RESIDENTIAL BUILDINGS

A. The total number of approved solid fuel burning devices installed in each new multifamily development shall not exceed one (1). This provision applies to projects seeking building permits after the effective date of this regulation. (May 23, 1990)

B. The number of approved solid fuel burning devices installed on any property for which a building permit is issued after the effective date of this regulation, shall not exceed one (1). No solid fuel devices will be permitted within single family dwellings which are located within a zone which permits more than 4 dwellings per net acre.

Commencing June 1, 1991, no solid fuel devices shall be installed in any new single family residence located within the Truckee Meadows Non-Attainment area.

C. In dwelling units existing on the effective date of this regulation, installation of additional solid fuel burning devices is prohibited if the resulting number of solid fuel devices exceeds the limitations contained in Section 040.0514 (A) and (B) above. This section does not apply to the installation of gas-fired appliances. Solid fuel burning devices that meet an in-situ emission factor of 1 gram/hour or less of particulate matter are exempt from the requirements of this section.

PRIVATE SECTOR FINANCING

Attachments for Section 11, Private Sector Financing:

Las Vegas Offset Requirements
Missoula De-icer Contract
Rancho Mirage Letter of Credit Requirement

LAS VEGAS CONSTRUCTION OFFSET REQUIREMENTS

12.2 Requirements for Specific Air Pollutants

12.2.1 Non-Major Sources - Requirements for new or modified Stationary Sources of PM_{10} in the Las Vegas Valley, Boulder City, and Eldorado Valley with a total annual Potential to Emit less than 70 tons per year.

Subsection 12.2.1 applies to all new and modified Stationary Sources of PM_{10} proposing to locate in the Las Vegas Valley, Boulder City, and the Eldorado Valley.

This Subsection also applies to road and highway construction projects, flood detention basins and other construction projects meeting the definition of a Stationary Source.

12.2.1.1 Each new or modified emission unit shall incorporate emission controls which are designed for the Best Available Control Technology.

12.2.1.2 Public notification (described in Subsection 12.3) is required if the total Potential to Emit of PM_{10} exceeds ten (10) tons per year.

Exception for construction projects:

Public notification is not required for road and highway construction projects, flood detention basins, and other construction projects covered by Section 17.

12.2.1.3 Emission Reduction Credits are required.

- a) Emission Reduction Credits shall be derived from Section 58 or approved road paving project payments described in 12.4.
- b) These Emissions Reduction Credits must be obtained by the applicant within thirty (30) days of the issuance of the Operating Permit.
- c) The total Emission Reduction Credits shall be

LAS VEGAS OFFSET REQUIREMENTS

greater than (2) times the Potential to Emit.

Exception for construction projects

- d) Commencing August 2, 1993, for construction projects with a potential to emit of at least 1.5 TPY PM_{10} , the Emission Reduction Credits shall be greater than 100 percent of the portion of the Potential to Emit exceeding 1.5 TPY.

12.2.1.4 Stationary Sources proposing to locate in the Eldorado Valley and Boulder City shall also meet the requirements of Subsection 12.2.3.

12.2.2 Major Sources - Requirements for new or modified Stationary Sources of PM_{10} in the Las Vegas Valley, Boulder City and Eldorado Valley with an annual Potential to Emit equal to or exceeding 70 tons per year.

Exception: Highway construction projects, flood detention basin projects and other construction projects permitted under Section 17 are defined as non-major sources and are subject to 12.2.1.

12.2.2.1 Each new or Modified Emission Unit shall incorporate emission controls which are designed for the Lowest Achievable Emission Rate.

12.2.2.2 Public notification (described in Subsection 12.3) is required.

12.2.2.3 Emission Reduction Credits (described in Section 58) are required.

- a) These Emission Reduction Credits shall be obtained by the applicant before the Operating Permit is issued.

- b) The applicant must show evidence that Emission Reduction Credits will be provided by a bona fide proposal before the Authority to Construct is given a preliminary approval.

- c) These Emission Reduction Credits must be Federally Enforceable.

- d) The total Emission Reduction Credits required shall be greater than two (2) times the Potential to Emit.

MISSOULA, MT DE-ICER FUNDING

AGREEMENT FOR FINANCIAL PARTICIPATION BY VARIOUS COMPANIES FOR DE-ICER USE IN COMPLIANCE WITH THE MISSOULA AREA PM-10 AIR QUALITY ATTAINMENT PLAN

THIS AGREEMENT, made and entered into this _____ day of _____, 199_, in the City of Missoula, County of Missoula, State of Montana, by and between the City of Missoula, a municipal organization under the laws of the State of Montana hereinafter referred to as "City", and Stone Container Corporation, Champion International Corporation, and Louisiana Pacific Corporation, hereinafter referred to as "Companies".

WITNESSETH

For and in consideration of the mutual promises and agreements set forth herein, the City and the Companies mutually stipulate and agree to the following provisions:

I. CONDITIONS AND PAYMENT

As part of the State of Montana Department of Health and Environmental Sciences development of the Missoula Area PM-10 Air Quality Attainment Plan and in order to facilitate the United States Environmental Protection Administration approval of such a plan, the Companies agree collectively to assist the City monetarily in the conversion from the use of sanding material on the City streets for winter snow and ice control to the use of an approved de-icer.

The Companies are entering into this agreement to assist the Missoula City/County Air Pollution Control Board in achieving compliance with the particulate air quality standards under the Federal Clean Air Act.

In accordance with the adopted regulation by the Missoula City/County Air Pollution Control Board and the State Implementation Plan, the City will use an approved deicer in lieu of sanding materials in those areas so designated in the regulations as the required de-icing zone.

The Companies collectively agree to pay the City the sum of \$23,200 per year for each of the fiscal years of 1992 and 1993, \$15,467 for the fiscal year of 1994, and \$7,733 for the fiscal year of 1995 for the purpose of substituting an approved de-icer for sanding material in the required de-icing zone. These yearly payments shall be made by January 31 in the fiscal year that they are due.

The Companies also agree to make a one-time payment of \$7,500 to the City for the conversion of five City of Missoula trucks to fully equipped de-icing units. This payment shall be made before

MISSOULA DE-ICER FUNDING

December 31, 1991.

The City agrees that these payments will constitute the Companies' contribution to the conversion and the City will assume all other costs in its regular budget process.

II. LIABILITY

The Companies do not assume any liability for any environmental degradation, or damage to vehicles, or any other property damage or personal injury that may result from the City's use of an approved de-icer, the selection and use of which is the sole discretion of the City.

Entry into this agreement by the Companies is not an affirmation by the Companies that the use of an approved de-icer is required to meet the Clean Air Act, nor that any requirements of the Clean Air Act impose a duty on the Companies to reduce their particulate emissions.

III. MODIFICATION AND WAIVER

This Agreement may not be modified, altered, or changed except pursuant to a written agreement signed by the parties hereto. A waiver of any term or condition of this Agreement or of any breach of this Agreement shall not be deemed a waiver of any other term or condition of this Agreement or any part hereof or of any later breach of the Agreement. Any waiver must be in writing.

IV. AFFIRMATIVE ACTION POLICY

Contractors, subcontractors, subgrantees, and other firms doing business with the City of Missoula or any agency connected with the City of Missoula must be in compliance with the City of Missoula's Affirmative Action Plan and Title 49, M.C.A., or forfeit the right to continue such business dealings. See Attachment A.

V. NON-DISCRIMINATION

The Companies agree that any and all hiring by them related to this Agreement shall be on the basis of merit and qualifications and there shall be no discrimination on the basis of race, color, religious creed, political ideas, gender, age, marital status, physical or mental handicap, national origin or ancestry, by persons performing this contract. Qualifications mean such abilities as are genuinely related to competent performance of the particular occupational task.

VI. PREVIOUS AGREEMENTS

This Agreement constitutes the entire understanding of the parties

MISSOULA DE-ICER FUNDING

and is intended as a final expression of their agreement and a complete statement of the terms thereof. There are no promises, terms, conditions, or obligations, other than contained herein. This Agreement shall supersede all previous communications, representations, or agreements, either oral or written, between the parties.

VII. TERMINATION PRIOR TO COMPLETION OF CONTRACT

The Companies and the City shall both have the ability to terminate this agreement for cause or non-compliance with any of the terms, conditions, and requirements contained herein. Such termination shall come only after first giving a verbal demand for compliance, followed by written demand. Termination shall be allowed on the tenth City business day following receipt by either party of the other party's written demand. The City shall be allowed to terminate this agreement unilaterally if studies and/or experience determine that the de-icer is unsatisfactory, unacceptable or has adverse impacts and the regulation governing its use is repealed.

VIII ENFORCEMENT LEGAL EXPENSES

If the Companies fail to timely pay, the City shall have the right to go to court to enforce collection of the monies due pursuant to this agreement. If the City prevails the Companies shall also pay all City expenses and costs of having to go to court to collect the payments.

IX. NOTICES

Any and all notices to the City of Missoula shall be sent to:

City of Missoula
Attn: Joseph L. Aldegarie, Director of Public Works
435 Ryman Street
Missoula, MT 59802-4297
Phone: 523-4620

Any and all notices to the Companies shall be sent to:

Stone Container
Attn: Larry Weeks
P.O. Box 4707
Missoula MT 59806
Phone: 626-4451

MISSOULA DE-ICER FUNDING

IX. BINDING EFFECT

This agreement shall inure to the benefit of and be binding upon the City and the Companies and their respective heirs, successors, administrators, executors, personal representatives and assigns.

X. SEVERABILITY

If a part of this agreement is invalid, all valid parts that are severable from the invalid part remain in effect. If a part of this agreement is invalid in one or more of its applications, the part remains in effect in all valid applications that are severable from the invalid applications.

XI. TERM OF AGREEMENT

This agreement shall be in force and effect from December 2, 1991 through December 2, 1996 unless terminated in writing as provided hereinbefore.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals on the day and year in this certificate first hereinabove written.

Stone Container Corp.

CITY OF MISSOULA

W. G. Stuart

Mayor Daniel Kemmis

(CORPORATE SEAL)

ATTEST:

Champion International Corp.

Charles C. Stearns
Finance Officer/City Clerk

Tucker Hill

(CORPORATE SEAL)

MISSOULA DE-ICER FUNDING

Louisiana Pacific Corp.

Charles Likes

(CORPORATE SEAL)

APPROVED AS TO FORM:

Jim Nugent, City Attorney

RANCHO MIRAGE, CA LETTERS OF CREDIT

Section 7.01.090 Securities

In order to ensure an adequate level of fugitive dust control at a project site following the completion of grading or demolition activities, the Director shall require the applicant to submit a letter of credit or other financial securities which meet the requirements of the City Attorney and are equal to a percentage of the grading permit bond. Financial securities collected under the provisions of this Ordinance would be held by the City for potential use mitigating the emission of fugitive dust not adequately controlled by the applicant as required by the approved LAQMP.

Said securities would be returned to the applicant once the potential source of fugitive dust emissions has been eliminated.

Section 7.01.100. Fees

For the purpose of paying for the costs of administration associated with this Ordinance, the City Council may impose, and from time to time amend, a fee. Payment of this fee is required at the time of submittal of the LAQMP.

Section 7.010.110 Violations and Penalties

Failure to comply with this Ordinance is hereby declared to be unlawful and a violation of City regulations and shall be subject to the penalties and remedies set forth in Chapter 1.08 of Title 1 of the Rancho Mirage Municipal Code. A violation of this Chapter shall be a misdemeanor.

STREET SANDING GUIDELINES

Attachment for Section 14, Street Sanding Guidelines:

Presque Isle Sanding Guidelines
Denver Sanding Guidelines

PRESQUE ISLE, MAINE STREET SANDING GUIDELINES

PART B

CONTROL OF PARTICULATE MATTER REENTRAINED FROM PAVED ROADS

I. Scope and Purpose

Part B of this Memorandum of Understanding is an agreement among the Department of Environmental Protection, the Department of Transportation, and the City of Presque Isle to reduce the amount of fine particulate matter (PM₁₀) reentrained into the ambient air by vehicular traffic on paved roadways. The Department of Transportation's responsibilities are limited to Part B paragraph II B of this Memorandum of Understanding. Nothing in Part A of this MOU modifies the terms of Part B, which DEP shall submit to E.P.A. as a SIP revision.

The following requirements apply to the ½ mile radius critical area centered at the Northeastland Hotel on Main Street henceforth known as the "critical area" and consists of the following streets and portions of streets in this area:

Main St., Academy St., State St., Parsons St., Mechanic St., Industrial St., Dyer St., Riverside St., Chapman St., Second St., Blake St., Third St., Judd St., School St., Park St., Wilson St., Allen St., Church St., Oak St., Dudley St., Barton St., Hillside St., Howard St., Pleasant St., Maple St., Cedar St., Elm St., Dupont Drive, Munson St., Exchange St., Lenfest St., Coburn St., Lake St., Cook St., Hall St., Roberts St., Ryan St., Bishop St., Charles St., South St., Summer St., and Haines St.,

II. Requirements

- A. The City shall not create or keep a stockpile of antiskid material any sample from which contains over 4% silt by weight or exhibits a degradation less than 24 by the Washington Degradation Test for use in the critical area. The City of Presque Isle will use the antiskid material known as grit plus manufactured sand as a supplemental material when necessary, that is manufactured by Lane Construction Corporation of Presque Isle. If Lane antiskid material is not available then DEP and the City will find another source.

PRESQUE ISLE SANDING GUIDELINES

- 6 -

- B. No party to this MOU shall directly deposit or spill on any paved roadway any sand, fill, antiskid, or other solid material any sample of which contains over 4% silt by weight or exhibits a degradation less than 24 by the Washington Degradation Test.
- C. Between December 1 and May 1 the City of Presque Isle shall insure the dry silt loading (200 mesh material) on the travel lanes does not exceed 10 g/m^2 by implementing ongoing sweeping during periods when the temperature is above 35°F and the water, if necessary to use as a dust suppressant, does not freeze on contact with the pavement. Temperature and freezing conditions will be determined by the City of Presque Isle.
- D. Between December 1 and May 1 removal of curbside and parking lane deposits from roadways shall commence on days when the temperature exceeds 35°F and the water, if necessary to use as a dust suppressant during sweeping, does not freeze on contact with the pavement. Silt removal shall continue until the temperature falls below 33°F , the silt loading (200 mesh) falls below 10 g/m^2 , or if icing does not occur, as determined by the City of Presque Isle.

III Record keeping and Reporting Requirements

- 1. To demonstrate compliance with this MOU the City of Presque Isle shall, at the request of the DEP or EPA, sample stockpiles created for winter sanding or other sources Presque Isle intends to use, analyze samples for silt content and degradation, report sampling and analysis results, and implement specified record keeping measures. Such records shall be available for inspection and kept for a period of not less than three years. DEP will sample road surfaces with support for safety provided by the City of Presque Isle.
- 2. The City shall sample supplies of antiskid materials upon receipt, analyze each sample for silt content and degradation, and report all results to DEP in writing no less than 30 days after accepting any new material.
- 3. The City shall maintain, and keep available for inspection for a period not less than three years, a written record of:
 - a. The dates, times, and methods of street cleaning conducted pursuant to this Memorandum of Understanding.
 - b. The time and place of each antiskid material stockpile sample collected pursuant to this Memorandum of Understanding, and the results of each silt content or degradation analysis performed on it.

IV Sampling and Testing Methods

- A. Sampling of antiskid material, dry street deposits, and other solid material for compliance with this regulation shall follow the procedures recommended in Appendix D of Control of Open Fugitive Dust Sources (EPA-450/3-88-088) (COFDS).

GUIDELINES: STREET SANDING

Standardize the Quantity of Sand Applied

When sand is needed, operators should limit the application rate to no more than 500 pounds per lane mile on each pass. This is the amount of material determined to be sufficient for maintaining the roads while minimizing the adverse effects of sanding. The target of 500 pounds per lane mile should apply most of the time, although there may be some variation based on the type of roadway being sanded. During some storms it is necessary to sand the roads more than once, but by limiting the amount of material applied on each pass it is possible to eliminate excessive sanding.

Calibrate and Maintain Spreaders

Proper calibration and maintenance of spreaders is critical for reducing the quantity of sand applied. At the beginning of the snow and ice season, each spreader should be calibrated to a rate of no more than 500 pounds per lane mile. Calibration should be verified by testing the equipment under actual operating conditions. This can be done by laying down a piece of canvas and running the spreader over the area at a typical speed. The material on the canvas can then be weighed and the application rate determined.

Spreaders should be properly maintained and adjusted throughout the year. In addition to normal maintenance and adjustments, spreaders should be recalibrated at least once during the winter season.

Purchase Better Spreaders

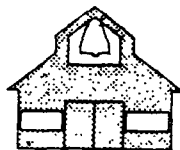
As replacement of spreading equipment becomes necessary, old spreaders should be upgraded to those capable of achieving the most accurate application rates. While this equipment is typically more expensive than conventional spreaders, it reduces the amount of material applied which saves money and improves air quality.

Use Snowplows Before Sanding

Increasing the use of snow plows to remove snow and ice from roadways can reduce the need for sanding. If it is determined that plowing alone will not be sufficient, sand should be applied from the same truck that is plowing. Also, the effectiveness of sanding can be enhanced by plowing during the early stages of a storm. Applying sanding material to a plowed surface will keep the road clear for a longer period of time and may eliminate the need to sand the same area again.

Focus Sanding on Priority Areas

The focus of street sanding efforts should be on sections of the roadway network that are most prone to accidents and areas with special safety concerns. These include:



- a) school zones, hospital zones, and police and fire stations;
- b) bridges and overpasses;
- c) turn lanes and approaches to intersections;
- d) curves and inclines;
- e) heavy traffic areas; and
- f) specific problem areas such as those that receive little sunlight or where there is excessive snow accumulation.

The use of sanding material should be limited on local and residential streets as well as on the straightaway sections of highways and other roadways. In these areas of the roadway network minor accumulations of snow do not usually present a significant risk, and plowing can accomplish most of the needed maintenance.

GUIDELINES: STREET SANDING

Public works officials are under increasing pressure to apply more sand more often, when in many cases it is not actually needed. When requests for sand are received, a qualified member of the public works staff should conduct an on-site inspection prior to sanding. If the individual making the inspection determines that the sand is unnecessary, it should not be applied. The person making the request should then be notified of the decision not to sand and the reasons it was made.

Rock salt (sodium chloride) is the most common deicer used in Colorado. While some type of deicing compound is necessary to keep the roads clear of snow and ice, rock salt contributes significantly to air and water pollution associated with street sanding. For this reason, the quantity of salt should be limited to between 12 and 20 percent depending on weather conditions, and the minimum amount of salt necessary should always be used.

Timing is an important factor in the application of deicing compounds. By getting the deicer down in the early stages of a storm, or even right before a storm begins, a brine is established that will keep the road free of snow and ice longer than if the material is applied in the later stages of a storm when there is already a significant accumulation of snow and ice.

Over the past few years, several alternatives to rock salt have been introduced into the market. The most common alternative deicing compounds are magnesium chloride ($MgCl_2$), calcium chloride ($CaCl_2$), and calcium magnesium acetate (CMA). The primary benefits from these compounds are that they melt ice at lower temperatures ($MgCl_2$ and $CaCl_2$) or are less corrosive (CMA) than rock salt. Use of alternative deicers can lead to a reduction in the amount of sand applied by more effectively melting snow and ice and eliminating the need for additional applications of sand.

Further testing of these compounds is needed, but there are certain applications which have already proven effective. Local governments that have experimented with alternative deicers have found that they are most effective when pavement temperatures drop below 20 degrees fahrenheit. Under these conditions rock salt is ineffective, and public works officials find themselves applying more and more sand and salt without significantly improving road conditions. By using an alternative deicer, either at full strength or by applying it to the sand, melting occurs more rapidly, eliminating the need for additional applications of sand.

An area where more work is needed relates to the application of liquid deicers on the sanding material. The most common application method is to spray liquid compounds on the truck loads immediately before they leave the yard. This method has proven effective, but some public works officials think that better methods are needed. The Colorado Department of Transportation will begin using a sprayer mounted on the back of the truck that applies the deicer as the sand is laid down, allowing the operator to use these deicers only when needed.

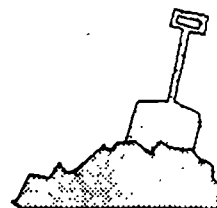
Public works officials in the Denver metro area who have experimented with these compounds believe that under certain conditions they can keep streets free of ice longer than rock salt. Additional experimentation at the local level is still needed, and state and local governments that use these materials are encouraged to share their experience with others so that the effectiveness and cost of alternative deicers can be documented. The Colorado Department of Transportation conducted tests during the 1990-91 winter and plans to continue this research in 1991-92.

Investigate Requests for Sand

Limit the Use of Rock Salt

Early Application of Deicers

Alternative Deicing Compounds



For information, contact

Regional Air Quality Council
2480 W. 29th Ave., #330-B
Denver, CO 80211

303-480-1550
303-480-1128 (fax)

GUIDELINES: STREET SANDING

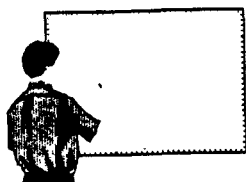
Utilize Weather Information Systems

The weather information system currently being used by the Colorado Department of Transportation and some local governments in the Denver metro area can be used by public works officials to make better decisions on the need for sanding their roadways. This system includes a network of pavement sensors and provides forecast information on pavement temperature, air temperature, precipitation, wind direction, and wind speed. Such information can help a public works supervisor make better decisions about when and when not to sand the streets.

Agencies currently using the weather information system believe that the cost of the system is quickly recovered through reduced sanding and sweeping costs. Over the long term, the system will not only pay for itself, but can actually end up saving a department money.



Training for Operators



Annual training for the personnel responsible for sanding the roads is another way to cut down on the amount of sand applied. Excess material may be applied when spreaders are not set correctly or when sand is applied in areas where it is not needed. If all personnel fully understand the department's sanding philosophy, which should include a commitment to environmental quality, they will be able to reduce the amount of material applied while still providing for public safety.

It is possible to limit excess sanding through a comprehensive annual training program and many departments already conduct this type of training for their employees. A training program for operators should strive to:

- 1) Convey the department's overall sanding philosophy in terms of how, where, and how much sand should be applied. This should include information on the environmental impacts of sanding and the potential cost savings for the department if optimum sanding practices are used. Operators must realize the important role their work has in maintaining the public's health, safety, and quality of life. These objectives will be realized when operators apply enough sand to keep the roadways safe but not so much that it has a negative impact on the environment.
- 2) Help operators make better decisions about the need for sanding in cases where it is left up to their judgement. In many cases the person most likely to determine whether or not sand is needed is the operator. Therefore, it is critical that they know what factors to consider when making this decision.
- 3) Establish a goal of 500 pounds per lane mile per pass as the quantity of sand that should be applied in most cases.
- 4) Teach operational practices that reduce excess application of sanding material.
- 5) Familiarize operators with the various types of equipment they will be called on to use during the course of the year. Most departments have several different types of trucks and spreading equipment, and operators should be familiar with each so that they are able to operate them efficiently and make adjustments as necessary.

GUIDELINES: STREET CLEANING

Whereas the guidelines for street sanding described above will usually result in cost savings, that is not always the case for the street cleaning guidelines described below. Improving air quality by improving street cleaning will generally require an increase in the amount of resources dedicated to street cleaning activities.

Increasing the frequency of street cleaning will require additional staff time and may require the purchase of additional equipment. Expanding the use of vacuum and regenerative air machines will require most departments to purchase new equipment as well as increase the amount of staff time since these machines are slower than broom sweepers. Vacuum and regenerative air machines do more than broom sweepers to reduce air pollution, but this benefit could be lost if there is a reduction in the total number of road miles that get cleaned.

The effectiveness of street sweeping equipment depends in large part on it being maintained in proper working order. Frequent inspections of brooms, spray bars, and other parts, and repair or replacement as necessary, will increase the effectiveness of current street sweeping efforts.

An essential part of this maintenance effort is proper training of the equipment operators. Operators should be provided with a checklist of items to inspect on a daily basis, and when problems are found they should be repaired as soon as possible. This kind of awareness on the part of operators will not only lead to cleaner streets but will also reduce equipment and maintenance costs that come from neglect. Operators should go through some type of refresher course on these procedures on an annual basis.

Increasing the frequency of street sweeping operations is another way to reduce the amount of reentrained road dust that ends up polluting the air. An important element of this strategy during the winter months is to sweep roads that have been sanded as soon as possible after each storm. Recognizing that most departments are already sweeping as much as they can, it will probably be necessary to devote additional resources for the equipment and personnel needed to increase street sweeping efforts. Some local governments in the Denver area contract with private firms for additional sweeping during those times of the year when an increased level of service is needed.

Most local governments currently use mechanical broom sweepers which have a tendency to pick up the larger material while blowing much of the fine particulate matter into the air. Vacuum and regenerative air machines have been shown to be more effective than mechanical broom sweepers for picking up fine particulate matter, however, these machines may not always be as effective at picking up the larger size fraction.

Going to a fleet of all vacuum or regenerative air machines is not a practical alternative for most departments, but public works officials are encouraged to assess where these machines would be effective and to purchase these types of machines as appropriate when replacing older equipment.

One promising strategy is to use vacuum or regenerative air machines in tandem with mechanical broom sweepers. Using broom sweepers to pick up the larger particles and vacuum or regenerative air machines to pick up the fine material will minimize the amount of reentrained dust from roadways.

Maintain Sweeping Equipment

Increase the Frequency of Street Sweeping

Expand the Use of Vacuum and Air Machines

TAX CREDITS AND REBATES

Attachments for Section 15, Tax Credits and Rebates:

Montana Tax Credit Worksheet
Oregon Tax Credit Rules

Form ENRG-B
Rev. 7-92

Montana

NONFOSSIL/GEOTHERMAL ENERGY SYSTEM CREDIT

Credit allowed residents for certain nonfossil energy systems installed in Taxpayer's principal dwelling

Name(s) as shown on Form 2	Social Security #
----------------------------	-------------------

Address of installation (if not same as on Form 2) _____

Description of installation (brand & model) _____

Eligible Wood burning stove or Biomass combustion device (see instructions)

Date installation was completed in your home _____

- | | | |
|--|----|--|
| 1. Cost of system, including cost of installing | 1. | |
| 2. Amount of grants received | 2. | |
| 3. Subtract line 2 from 1 | 3. | |
| 4. Enter 10% of the first \$1,000 shown on line 3 | 4. | |
| 5. Enter 5% of the amount on line 3 in excess of \$1,000 | 5. | |
| 6. Total of lines 4 & 5. (Maximum credit — \$250) | 6. | |

Eligible Wood pellet or other nonfossil Biomass pellet combustion device.

Date installation was completed in your home _____

- | | | |
|--|-----|--|
| 7. Cost of system including cost of installing | 7. | |
| 8. Amount of grants received | 8. | |
| 9. Subtract Line 8 from Line 7 | 9. | |
| 10. Enter 10% ^{20%} of first \$1,000 shown on Line 9 | 10. | |
| 11. Enter 10% of the amount of Line 9 in excess of \$1,000 | 11. | |
| 12. Total of Lines 10 & 11 (maximum credit of \$500) | 12. | |

Nonfossil energy system

Date installation was completed in your home _____

(In the event you acquired title to a dwelling to be used as your principal residence and it was equipped with a nonfossil energy system, give date of acquisition)

- | | | |
|--|-----|--|
| 13. Cost of system including installation | 13. | |
| 14. Amount of grants received | 14. | |
| 15. Subtract Line 14 from Line 13 | 15. | |
| 16. Enter 10% of first \$1,000 shown on Line 15 | 16. | |
| 17. Enter 5% of the amount of Line 15 in excess of \$1,000 | 17. | |
| 18. Total of Lines 16 & 17 (maximum credit of \$250) | 18. | |

Geothermal system

Date installation was completed in your home _____

- | | | |
|---|-----|--|
| 19. Cost of system including installation | 19. | |
| 20. Amount of grants received | 20. | |
| 21. Subtract Line 20 from Line 19 | 21. | |
| 22. Maximum allowable credit per year \$250 | 22. | |
| 23. Total amount claimed for previous years .. 23. _____ | | |
| 24. Add Lines 6, 12, 18 & 22, enter here and on Form 2A, Schedule II, Line 98 | 24. | |

**POLLUTION CONTROL FACILITIES
TAX CREDIT**

468.150 Field sanitation and straw utilization and disposal methods as "pollution control facilities." After alternative methods for field sanitation and straw utilization and disposal are approved by the committee and the department, "pollution control facility," as defined in ORS 468.155, shall include such approved alternative methods and persons purchasing and utilizing such methods shall be eligible for the benefits allowed by ORS 468.155 to 468.190. [1975 c.559 §15]

Note: 468.150 was enacted into law by the Legislative Assembly but was not added to or made a part of ORS chapter 468 or any series therein by legislative action. See Preface to Oregon Revised Statutes for further explanation.

468.155 Definitions for ORS 468.155 to 468.190. (1)(a) As used in ORS 468.155 to 468.190, unless the context requires otherwise, "pollution control facility" or "facility" means any land, structure, build-

ing, installation, excavation, machinery, equipment or device, or any addition to, reconstruction of or improvement of, land or an existing structure, building, installation, excavation, machinery, equipment or device reasonably used, erected, constructed or installed by any person if:

(A) The principal purpose of such use, erection, construction or installation is to comply with a requirement imposed by the department, the federal Environmental Protection Agency or regional air pollution authority to prevent, control or reduce air, water or noise pollution or solid or hazardous waste or to recycle or provide for the appropriate disposal of used oil; or

(B) The sole purpose of such use, erection, construction or installation is to prevent, control or reduce a substantial quantity of air, water or noise pollution or solid or hazardous waste or to recycle or provide for the appropriate disposal of used oil.

(b) Such prevention, control or reduction required by this subsection shall be accomplished by:

(A) The disposal or elimination of or redesign to eliminate industrial waste and the use of treatment works for industrial waste as defined in ORS 468.700;

(B) The disposal or elimination of or redesign to eliminate air contaminants or air pollution or air contamination sources and the use of air cleaning devices as defined in ORS 468.275;

(C) The substantial reduction or elimination of or redesign to eliminate noise pollution or noise emission sources as defined by rule of the commission;

(D) The use of a material recovery process which obtains useful material from material that would otherwise be solid waste as defined in ORS 459.005, hazardous waste as defined in ORS 466.005, or used oil as defined in ORS 468.850; or

(E) The treatment, substantial reduction or elimination of or redesign to treat, substantially reduce or eliminate hazardous waste as defined in ORS 466.005.

(2) "Pollution control facility" or "facility" does not include:

(a) Air conditioners;

(b) Septic tanks or other facilities for human waste;

(c) Property installed, constructed or used for moving sewage to the collecting facilities of a public or quasi-public sewerage system;

(d) Any distinct portion of a pollution control facility that makes an insignificant

contribution to the principal or sole purpose of the facility including the following specific items:

(A) Office buildings and furnishings;

(B) Parking lots and road improvements;

(C) Landscaping;

(D) External lighting;

(E) Company or related signs; and

(F) Automobiles;

(c) Replacement or reconstruction of all or a part of any facility for which a pollution control facility certificate has previously been issued under ORS 468.170, except:

(A) If the cost to replace or reconstruct the facility is greater than the like-for-like replacement cost of the original facility due to a requirement imposed by the department, the federal Environmental Protection Agency or a regional air pollution authority, then the facility may be eligible for tax credit certification up to an amount equal to the difference between the cost of the new facility and the like-for-like replacement cost of the original facility; or

(B) If a facility is replaced or reconstructed before the end of its useful life then the facility may be eligible for the remainder of the tax credit certified to the original facility;

(f) Asbestos abatement; or

(g) Property installed, constructed or used for clean up of emergency spills or unauthorized releases, as defined by the commission. [Formerly 449.605; 1975 c.496 §1; 1977 c.795 §1; 1979 c.802 §1; 1983 c.637 §1; 1987 c.596 §4; 1989 c.802 §4]

468.160 Policy. In the interest of the public peace, health and safety, it is the policy of the State of Oregon to assist in the prevention, control and reduction of air, water and noise pollution and solid waste, hazardous wastes and used oil in this state by providing tax relief with respect to Oregon facilities constructed to accomplish such prevention, control and reduction. [Formerly 449.615; 1975 c.496 §2; 1977 c.795 §2; 1979 c.802 §2]

468.165 Application for certification of pollution control facilities; fees. (1) Any person may apply to the commission for certification under ORS 468.170 of a pollution control facility or portion thereof erected, constructed or installed by the person in Oregon if:

(a) The air or water pollution control facility was erected, constructed or installed on or after January 1, 1967.

(b) The noise pollution control facility was erected, constructed or installed on or after January 1, 1977.

POLLUTION CONTROL

468.170

(c) The solid waste facility was under construction on or after January 1, 1973, the hazardous waste or used oil facility was under construction on or after October 3, 1979, and if:

(A) The facility's principal or sole purpose conforms to the requirements of ORS 468.155 (1);

(B) The facility will utilize material that would otherwise be solid waste as defined in ORS 459.005, hazardous waste as defined in ORS 466.005 or used oil as defined in ORS 468.850 by mechanical process or chemical process or through the production, processing including presegregation, or use of, materials which have useful chemical or physical properties and which may be used for the same or other purposes, or materials which may be used in the same kind of application as its prior use without change in identity;

(C) The end product of the utilization is an item of real economic value;

(D) The end product of the utilization, other than a usable source of power, is competitive with an end product produced in another state; and

(E) The Oregon law regulating solid waste imposes standards at least substantially equivalent to the federal law.

(d) The hazardous waste control facility was erected, constructed or installed on or after January 1, 1984, and if:

(A) The facility's principal or sole purpose conforms to the requirements of ORS 468.155 (1); and

(B) The facility is designed to treat, substantially reduce or eliminate hazardous waste as defined in ORS 466.005.

(2) The application shall be made in writing in a form prescribed by the department and shall contain information on the actual cost of the facility, a description of the materials incorporated therein, all machinery and equipment made a part thereof, the existing or proposed operational procedure thereof, and a statement of the purpose of prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or recycling or appropriate disposal of used oil served or to be served by the facility and the portion of the actual cost properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or appropriately disposing of used oil as set forth in ORS 468.190 (2).

(3) The director may require any further information the director considers necessary before a certificate is issued.

(4) The application shall be accompanied by a fee established under subsection (5) of this section. The fee may be refunded if the application for certification is rejected.

(5) By rule and after hearing the commission may adopt a schedule of reasonable fees which the department may require of applicants for certificates issued under ORS 468.170. Before the adoption or revision of any such fees the commission shall estimate the total cost of the program to the department. The fees shall be based on the anticipated cost of filing, investigating, granting and rejecting the applications and shall be designed not to exceed the total cost estimated by the commission. Any excess fees shall be held by the department and shall be used by the commission to reduce any future fee increases. The fee may vary according to the size and complexity of the facility. The fees shall not be considered by the commission as part of the cost of the facility to be certified.

(6) The application shall be submitted within two years of substantial completion of construction of the facility. Failure to file a timely application shall make the facility ineligible for tax credit certification. An application shall not be considered filed until it is complete and ready for processing. The commission may grant an extension of time to file an application for circumstances beyond the control of the applicant that would make a timely filing unreasonable. If a facility is completed before January 1, 1984, the application shall be submitted within two years after January 1, 1984. [Formerly 449.625; 1974 s.s. c.37 §2; 1975 c.496 §3; 1977 c.795 §3; 1979 c.502 §3; 1981 c.359 §1; 1983 c.637 §2; 1989 c.502 §5]

468.170 Action on application; rejection; appeal; issuance of certificate; certification. (1) The commission shall act on an application for certification before the 120th day after the filing of the application under ORS 468.165. The action of the commission shall include certification of the actual cost of the facility and the portion of the actual cost properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil as set forth in ORS 468.190 (2). The actual cost or portion of the actual cost certified shall not exceed the taxpayer's own cash investment in the facility or portion of the facility. Each certificate shall bear a separate serial number for each such facility.

(2) If the commission rejects an application for certification, or certifies a lesser actual cost of the facility or a lesser portion of the actual cost properly allocable to the prevention, control or reduction of air, water or noise pollution or solid or hazardous

waste or to recycling or properly disposing of used oil than was claimed in the application for certification, the commission shall cause written notice of its action, and a concise statement of the findings and reasons therefor, to be sent by registered or certified mail to the applicant before the 120th day after the filing of the application.

(3) If the application is rejected for any reason, including the information furnished by the applicant as to the cost of the facility, or if the applicant is dissatisfied with the certification of actual cost or portion of the actual cost properly allocable to prevention, control or reduction of air, water or noise pollution or solid or hazardous waste or to recycling or properly disposing of used oil, the applicant may appeal from the rejection as provided in ORS 468.110. The rejection or the certification is final and conclusive on all parties unless the applicant takes an appeal therefrom as provided in ORS 468.110 before the 30th day after notice was mailed by the commission.

(4)(a) The commission shall certify a pollution control, solid waste, hazardous waste or used oil facility or portion thereof, for which an application has been made under ORS 468.165, if the commission finds that the facility:

(A) Was erected, constructed or installed in accordance with the requirements of ORS 468.165 (1) ;

(B) Is designed for, and is being operated or will operate in accordance with the requirements of ORS 468.155 (1) and (2); and

(C) Is necessary to satisfy the intents and purposes of ORS 454.010 to 454.040, 454.205 to 454.255, 454.405, 454.425, 454.505 to 454.535, 454.605 to 454.745, ORS chapters 459, 466 and 467 and this chapter and rules thereunder.

(b) No determination of the proportion of the actual cost of the facility to be certified shall be made until receipt of the application.

(c) If one or more facilities constitute an operational unit, the commission may certify such facilities under one certificate. A certificate under this section is effective for purposes of tax relief in accordance with ORS 307.405, 316.097 and 317.116 if erection, construction or installation of the facility was completed before December 31, 1995.

(5) A person receiving a certificate under this section may take tax relief only under ORS 316.097 or 317.116, depending upon the tax status of the person's trade or business except if the taxpayer is a corporation organized under ORS chapter 61 or 62, or any predecessor to ORS chapter 62 relating to incorporation of cooperative associations, or is a subsequent transferee of such a corpo-

ration, the tax relief may be taken only under ORS 307.405.

(6) If the person receiving the certificate is an electing small business corporation as defined in section 1361 of the Internal Revenue Code, each shareholder shall be entitled to take tax credit relief as provided in ORS 316.097, based on that shareholder's pro rata share of the certified cost of the facility.

(7) If the person receiving the certificate is a partnership, each partner shall be entitled to take tax credit relief as provided in ORS 316.097, based on that partner's pro rata share of the certified cost of the facility.

(8) Certification under this section of a pollution control facility qualifying under ORS 468.165 (1) shall be granted for a period of 10 consecutive years which 10-year period shall begin with the tax year of the person in which the facility is certified under this section, except that if ad valorem tax relief is utilized by a corporation organized under ORS chapter 61 or 62 the facility shall be exempt from ad valorem taxation for a period of 20 consecutive years.

(9) Portions of a facility qualifying under ORS 468.165 (1)(c) may be certified separately under this section if ownership of the portions is in more than one person. Certification of such portions of a facility shall include certification of the actual cost of the portion of the facility to the person receiving the certification. The actual cost certified for all portions of a facility separately certified under this subsection shall not exceed the total cost of the facility that would have been certified under one certificate. The provisions of ORS 316.097 (8) or 317.116 (8), whichever is applicable, shall apply to any sale, exchange or other disposition of a certified portion of a facility. [Formerly 449.635; 1974 s.s. c.37 §3; 1975 c.496 §4; 1977 c.795 §4; 1979 c.531 §6; 1979 c.802 §4; 1981 c.408 §3; 1983 c.637 §3; 1987 c.596 §5; 1989 c.802 §6]

468.175 [1973 c.831 §2; 1975 c.496 §5; 1977 c.795 §5; 1979 c.802 §5; repealed by 1989 c.802 §6]

468.180 Conditions for issuance of certificate under ORS 468.170. (1) No certification shall be issued by the commission pursuant to ORS 468.170 unless the facility, facilities or part thereof was erected, constructed or installed in accordance with the applicable provisions of ORS 454.010 to 454.040, 454.205 to 454.255, 454.405, 454.425, 454.505 to 454.535, 454.605 to 454.745, ORS chapters 459, 465, 466 and 467 and this chapter and the applicable rules or standards adopted pursuant thereto.

(2) Nothing in this section is intended to apply to erection, construction or installation of pollution control facilities begun before October 5, 1973. [1973 c.831 §3; 1975 c.496 §6; 1977 c.795 §6; 1979 c.802 §6; 1989 c.802 §7]

TRADEABLE PERMITS

Attachments for Section 16, Tradeable Permits:

Spokane Tradeable Permits Rules
Telluride Tradeable Permits Rules

SPOKANE, WA TRADEABLE PERMITS FOR OPEN-BURNING

SECTION 6.10 GRASS FIELD BURNING

A. Purpose and Authority.

This section is enacted pursuant to authority granted by RCW 70.94.141 to establish conditions for issuance of permits for burning of turf grass fields and field and forage grass fields and to implement restrictions upon grass field burning consistent with the provisions of WAC 173-430-030.

B. Definitions.

As used in this section, words and terms shall have the meanings herein stated:

- (1) Turf grasses: All blue grasses, fescues, bentgrass, and perennial ryegrass, planted to produce seed.
- (2) Open burning: The combustion of materials in the open or in a container, with no provision for the control of the combustion or control over the combustion products.
- (3) Emissions: A release of air contaminants into the outdoor atmosphere.
- (4) Field and forage grasses: canary grass, brome grass, oat grass, timothy, wheat grass, and orchard grass, planted to produce seed.
- (5) Straw: All material, other than seed, removed by swathing, combining, or cutting.
- (6) Director: The Director of Spokane County Air Control Pollution Authority.
- (7) Authority: The Spokane County Air Pollution Control Authority.

SPOKANE TRADEABLE PERMITS

- (8) Board or Board of Directors: The Board of Directors of Spokane County Air Pollution Control Authority.

C. Permit Required:

No person shall open burn any grass field in Spokane County without first obtaining a permit therefore and paying such fee as is hereinafter provided. The Director shall issue permits to all persons entitled thereto upon payment of the fee, all as hereinafter provided.

D. Field and Forage Grass Burning Prohibited - Exceptions:

Open burning of field and forage grasses is hereby prohibited, EXCEPT a permit may be issued to burn field and forage grasses for disease, pest or weed control if there is a need to burn such grasses with such need certified by a county agent or other agricultural authority; or if such grasses were planted as part of a soil erosion control plan approved by a conservation district. Any permit issued pursuant to the exception herein stated may be subject to any and all conditions and restriction of other permits herein provided.

E. Permits to Burn Grass Fields - Applications:

Before the Director shall issue a permit to burn a grass field the applicant shall apply therefore as follows:

- (1) All persons desiring to burn grass field(s) shall apply for a permit therefore prior to June 15 of the year in which he or she desires to burn. Applications received after June 15 may not be processed for that year's burning season.
- (2) The application shall be in writing upon a form to be provided by the Director and shall be submitted to the Director or such person as the Director may designate.
- (3) The permit application shall contain the following information:
 - a. The name, address, telephone number, social security account number or federal employer identification number of the applicant. If the applicant is not an individual, the application shall state whether the applicant is a corporation, partnership, or other entity, and shall specify the relationship between the applicant and the person acting on behalf of the applicant, i.e. owner, manager, partner, etc.;
 - b. A description of the field(s) to be burned so as to enable the Director to locate the field for inspection and verification of other information. As a minimum the description shall include the county tax parcel number, the name of any roads bordering the property, any identifying landmarks on or near the property, and a narrative description of the most available access to the property;
 - c. The number of acres encompassed in each separate field;
 - d. The type of grass grown and to be burned;
 - e. Whether for each of the five preceding years, the field was burned and if so, by whom, if known;
 - f. The name and relationship to the applicant of the person who will initiate the burn and who will be responsible

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for control of the burn to insure only permitted area is burned and other permit conditions are met.

- (4) The Director may require such other information to insure identity of the applicants and property and to compile information to aid in future development of policy to prevent air pollution.
- (5) The Director shall not issue a permit unless the application shall be submitted as herein provided, and the Director shall revoke any permit issued if upon investigation it shall appear that any information provided in the application is substantially untrue.

F. Base Acreage Determination:

- (1) Base acreage establishes permit history and is defined as the greatest number of acres that a person or entity has burned, under permit issued by the Authority, in any single year from 1985 to 1989 inclusive, except that if more than one applicant has received a permit in the same period to burn the same field(s), then only the last person or entity to burn the field(s) may use the field(s) in determining the base acreage total.
- (2) Each applicant shall identify with specificity the year and number of acres burned, including the location, whereupon the Director shall cause a record to be made of the determination for each applicant, and the Director shall mail notice to each applicant of the base acreage determination for that applicant. No person or entity, possessing base acreage, may apply for or be granted a permit to burn grass field(s) unless the grass field(s) are under the applicant's direct control, either by ownership or lease.
- (3) No person or entity may apply for or be granted a permit to burn grass field(s) unless the person or entity establishes base acreage which equals or exceeds the number of acres specified in the application. After November 6, 1993, no person or entity may possess base acreage unless the person or entity has a valid conservation plan which has been approved by the Spokane County Conservation District or the Soil Conservation Service of the United States Department of Agriculture. Such plan shall specify present or future intent to maintain perennial grasses in rotation as part of a conservation system. All persons or entities possessing base acreage on May 6, 1993, and intending to retain base acreage, shall submit to the Authority evidence of approval of such plan no later than November 6, 1993. All base acreage for which such evidence of a valid conservation plan has not been established by November 6, 1993, shall be transferred to the Base Acreage Account of the Authority. Within 90 days of amendment of a conservation plan, the affected person or entity shall submit evidence of such amended plan to the Authority.
- (4) Any person or entity alleging permit history pursuant to Chapter 173-430 WAC, and aggrieved by the determination of the Director may give notice thereof in writing, stating all reason(s) for being aggrieved. Upon receipt of written notice, the Director shall determine if the base acreage entitlement shall be modified and give notice of the determination. If still aggrieved, then the person or entity may request a hearing before the Board of Directors of the Authority, and upon hearing the Board of Directors shall determine if the base acreage entitlement shall be modified.

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Such request for hearing by an aggrieved person or entity, in order to be considered, must be received by the Authority within 30 days of the Director's determination. The decision of the Board of Directors shall be final, except for any further appeal as may be allowed by law to the Pollution Control Hearings Board or the courts.

- (5) Any hearing, as may be provided for herein, may be conducted by a hearings official appointed by the Board of Directors. If the Board of Directors chooses to appoint a hearings official to conduct the hearing, the decision of such hearings official shall be the final decision of the Board of Directors.
- (6) Permits when properly applied for may issue for 100% of an applicant's entitlement reflected in the base acreage determination, unless prorata reductions are imposed, as provided in Section 6.10.I. In the event that prorata reductions are imposed, the base acreage in the Base Acreage Account of the Authority shall be reduced at the same time by the same percentage.
- (7) If upon any determination of a person's or entity's base acreage, it shall appear that the person or entity is entitled to count acreage formerly included in another applicant's base acreage, then the Director shall reduce the prior applicant's base acreage determination, credit the new person or entity accordingly, and give notice thereof to both parties. Appeal may be had from any such determination to the Board of Directors of the Authority as provided in Section 6.10.F.(4).
- (8) Base acreage shall apply to a person or entity and not to specific parcels of land. Base acreage is transferable at the option of the person or entity, at the time an equivalent number of acres of land is transferred, by sale, lease, expiration of lease, or inheritance, to a spouse, son, daughter, or other successor to the land, or by operation of law, and becomes the possession of the successor to the land, except as provided in Section 6.10.F.(9). The person or entity possessing base acreage may retain all or part of base acreage upon transfer of land or loss of interest in the land, provided the retained base acreage does not exceed the total area of land, intended for agricultural use, which remains under control of the person or entity, either by ownership or lease, and provided the lease or sublease does not constitute a temporary transfer agreement as described in Section 6.10.F.(9). Any person or entity with base acreage exceeding the total area of land, intended for agricultural use, remaining under their control as a result of such land transfer or loss of interest in the land may petition the Director for retention of excess base acreage for up to 24 months from the date of transfer or loss of interest in the land. Such petition shall be made in writing within 90 days of land transfer or loss of interest in the land. The Director shall grant the retention of excess base acreage if the person or entity demonstrates to the satisfaction of the Director that every reasonable effort is being made to secure additional acreage of land for intended agricultural use which equals or exceeds the base acreage excess and which complies with Section 6.10F.(3). The Director may grant an extension of time for up to 24 additional months, if the person or entity demonstrates to the satisfaction of the Director that specific parcels of land will be secured by a specified date and the requirements of Section 6.10F.(3) will be met. Otherwise, any excess base acreage resulting from such land transfer or loss of interest in the land, is transferred to

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the Base Acreage Account of the Authority. Nothing in Section 6.10.F.(8) shall be construed as limiting the rights of aggrieved persons or entities to appeal, pursuant to the provisions of Section 6.10.F.(4).

- (9) Any person or entity, possessing base acreage and having title to or leasehold interest in equivalent acreage of land, may enter into an agreement with a lessee or sublessee of the land to temporarily transfer base acreage for the term of the lease or sublease, provided the person or entity possessing the base acreage notifies the Authority in writing within 90 days of the transfer. At a minimum, notification shall include the effective date of the lease or sublease, the expiration date of the lease or sublease, the number of acres of land transferred or leased and the number of base acres transferred. Upon expiration of the lease or sublease, the base acreage shall revert to the person or entity who transferred the base acreage.
- (10) Except as provided in Section 6.10.F.(9), any person or entity, possessing base acreage, may voluntarily relinquish all or a portion of said base acreage to the Base Acreage Account of the Authority. No person or entity, possessing base acreage, may transfer base acreage directly to another person or entity, except as provided in Sections 6.10.F.(8)&(9).
- (11) Any person or entity intending to engage in the business of growing turf grass or field and forage grass for seed may apply to the Authority for base acreage from the Base Acreage Account. The Director may require proof of ownership or lease, proof of intent to own or lease equivalent acres of agricultural lands, and/or proof of compliance with Section 6.10.F.(3) before an application is approved.
- (12) Any person or entity which transfers base acreage to the Base Acreage Account of the Authority shall specify to the Authority a minimum bid price per acre to be paid as compensation by a person or entity which purchases base acreage. The transferring person or entity shall place the specified minimum bid price inside a sealed envelope, with the name of the person or entity and the amount of base acreage specified on the outside of the envelope, and deliver it to the Authority. The envelope shall be clearly marked on the outside with the word, "transferred". Base acreage shall be disbursed from the Account, in order of priority, beginning with the lowest and proceeding to the highest specified minimum bid price per acre (as specified by the seller), except that any base acreage with a specified minimum bid price exceeding the highest bid, shall not be disbursed from the account. In the case of a required transfer of base acreage to the Base Acreage Account, if the person or entity fails to specify a minimum bid price per acre, the Authority shall establish the bid price as the average of all the specified minimum bid prices of base acreage in the Base Acreage Account for which there are apparent successful matches between seller and bidder at the time the bids are opened. In the case of two or more specified minimum bid prices being the same, the base acreage shall be disbursed from the account on the basis of equal percentage from each affected transferring person or entity. Transfer of base acreage to the Base Acreage Account constitutes consent to sell the base acreage in total or in increments as determined by the successful bids.

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- (13) Base acreage shall be disbursed from the Base Acreage Account to persons or entities, as described in Section 6.10.F.(11), by a sealed, competitive bid process. The bidder shall place the actual bid price inside a sealed envelope, with the name of the bidder, and the number of base acres desired on the outside of the envelope, and deliver it to the Authority. The envelope shall be clearly marked on the outside with the word, "bid". The bidder shall also specify on the outside of the envelope the minimum number of base acres the bidder will commit to purchase in the event that the full base acreage request cannot be met. If the number of base acres available to the bidder is less than the bidder's minimum commitment to purchase, then the bid shall be deemed unsuccessful. Base acreage shall be awarded, in order of priority, beginning with the highest bidder and proceeding to the lowest bidder. In the case of two or more bid prices being the same, the base acreage shall be awarded on the basis of equal percentage of request to each bidder. The successful bidder shall pay to the transferring person or entity, the minimum bid price per acre, specified by the transferring person or entity, plus one-half of the difference between the specified minimum bid price and the actual bid price, for each acre purchased. Payment shall be made within 5 days of bid opening by delivery by the successful bidder to the Authority of a cashier check, certified check, or money order in the amount of the purchase price and payable to the transferring persons or entities. Within 5 days of receipt of all such payments for the completed competitive bid process, the Director shall transmit the payments directly to the transferring persons or entities.
- (14) The person or entity awarded base acreage from the Base Acreage Account shall, in addition, pay one dollar (\$1) per base acre disbursed, to the Authority. The Director shall transmit the one dollar (\$) per acre fee to the Grass Seed Burning Research Account in the General Fund of the State of Washington. For every base acre disbursed from the Base Acreage Account, the person or entity shall be credited by the Authority with 0.9 base acres, after showing proof of payment. Any base acreage remaining in the Base Acreage Account for six (6) years or more shall no longer be eligible for disbursement.
- (15) Disbursement of base acreage by sealed, competitive bid shall occur twice each year, between April 1, and April 15, and between October 1, and October 15, on dates established by the Director, provided there is base acreage in the Account. In addition, a special one-time disbursement of base acreage shall occur within 30 days of the effective date of the amendments to Section 6.10.F., provided there is base acreage in the Account. On each specified date, the Director or his designated representative shall open all envelopes of the sellers and bidders and match the transferred base acreage with the bids as described in Sections 6.10.F.(12)&(13). Any person or entity which specified a minimum bid price per acre, as provided in Section 6.10.F.(12), may modify the specified minimum by presenting the Director with a substitute sealed envelope. Such substitution must be received by the Authority no later than 5 days prior to the established dates of bid opening. All transferring persons or entities which participate in the competitive bid process and fail to sell all or part of their base acreage shall submit a new sealed envelope, as described in Section 6.10.F.(12), no later than 5 days prior to the next established date of bid opening. No base acreage which has been transferred to the Base Acreage Account may be removed, retrieved, or disbursed from the Account except as provided in Sections 6.10.F.(13)&(15).

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- (16) If the entity is a corporation or partnership, upon dissolution, liquidation, consolidation, or reorganization, the base acreage shall be divided equally among the shareholders, partners, or tenants in proportion to their ownership. Any use of a business entity, such as a partnership, corporation or otherwise, for the purpose of avoiding the restrictions, conditions, or limitations on the transfer of base acreage as required by Section 6.10.F. shall constitute a violation of this regulation and have no force or effect.
- (17) No person or entity may retain, receive, or transfer base acreage through willful misrepresentation or failure to fully disclose all relevant facts. If it is determined that a person or entity has retained, received, or transferred base acreage through such misrepresentation or failure of disclosure, in addition to being subject to the penalties provided in Article II of Regulation I, such retention, receipt, or transfer shall be rendered null and void.
- (18) Section 6.10.F. does not create nor is it intended to create any vested or compensable right in any base acreage by an owner, lessor, lessee, purchaser, permit holder, applicant, or other person.

G. Burning Season:

A burning season shall be set by the Director each year. The Director shall consider relevant information submitted prior to making the determination of the burning period, and he shall set the period so as to best satisfy existing agricultural practices. The burning season shall be for a period of 16 consecutive days, exclusive of Fridays, Saturdays, Sundays and holidays, and shall not be extended once it has started. Any permit holder that does not complete all permitted burning during the burning season shall not burn at any later date that year.

H. Permit conditions - Generally:

- (1) Permits to burn grass fields shall be issued by the Director conditionally, and as hereinafter provided shall allow burning of grass fields only as provided in the permit. The effective period of a permit shall coincide with the burning season for the year in which it is issued.
- (2) Permits to burn grass fields shall only allow burning during the burning season established by the Director.
- (3) Permits to burn grass fields shall only be effective for specified hours, as determined by the Director on each day burning is allowed.
- (4) Permits to burn shall be subject to the granting of daily authority to initiate a field burn by the Director. Each permit holder shall, prior to initiating any burn, contact the Director or his or her representative and only upon being given permission to initiate a burn shall a field be burned, and only that specific field for which permission is given.
- (5) The Director shall withhold permission to initiate a burn unless:
 - a. Existing and forecast winds are such as to direct smoke from the site of the burn away from the City of Spokane, the City of Coeur d'Alene, the Spokane Valley, and other densely populated areas.

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- b. Wind speed is expected to be less than 20 miles per hour at ground level.
 - c. Air pollutants from all other sources are not excessive, including air pollutants from other grass burns.
 - d. All air contaminants from every preceding days' burn shall be substantially dispersed.
 - e. The Director as a condition of allowing burning may require pertinent weather data be submitted by permit holders. All data provided by the applicants shall be telemetered into the Spokane County Air Pollution Control Authority office in Spokane, Washington.
- (6) All permit holders shall have available at the site of any burn a person in charge of the burn who shall have in his or her possession the permit, or copy thereof, and upon request shall display the permit to the Director or his or her representative.
 - (7) If permission to burn on a specific day is given, the Director, or his representative, may revoke that permission if any weather condition appears that was not forecast when permission was given such that permission would not have been given. If permission is withdrawn, any in progress burn(s) may be allowed to burn out, but no other burning shall be initiated. Each permit holder shall provide a telephone number where the Director shall give notice of revocation of permission to burn. Each permit holder is responsible to cease all burning once the Director calls the telephone number given.
 - (8) Without regard to wind or weather, no permit to burn shall be valid unless permission to burn is given on the day of the burn.
 - (9) Within 24 hours of each grass field burning, Saturday, Sunday and legal holidays excluded, the permit holder shall report by telephone to the Director or his or her representative what field(s) was burned and the total area burned. Following each burning season each permit holder shall report in writing to the Director the total acres burned and the day(s) the burning was done.
 - (10) Open burning of all grasses schedule for tear-out shall be prohibited, unless a permit specifically allows such burning.
 - (11) The open burning of certain fields may be denied based upon health impacts to residents in nearby residential areas and businesses.

I. Annual Prorata Reduction in Acreage Burned.

- (1) The Director shall issue permits to burn grass for the year 1990 for only the total number of acres equal to the total base acreage determined for all permit applicants.
- (2) Until approved alternatives become available, the Board may limit the number of acres, on a pro-rata basis, among those affected for which permits to burn will be issued in order to control emissions from this source. Subject to its review, the Board deems it advisable to limit the total number of acres of grass fields burned each year in Spokane County to no more than 35,000 acres. This number can be changed only by vote of the Board following a public hearing.

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- (3) The Director or staff shall inspect grass fields within Spokane County to verify only permitted acres are burned.
- (4) Any applicant shall be entitled to burn additional acres provided a method is used which substantially reduces air pollution. The additional acres allowed shall be proportional to the pollution reduction. The applicant shall be responsible for proving the pollution reduction from the proposed method.

J. Research and Reporting.

The Director shall meet yearly with the Intermountain Grass Grower's Association and the State of Washington, Department of Ecology to develop future policy for regulation of grass field burning consistent with accepted agricultural practices and air pollution reduction. The Director shall request annually that a report be submitted by the Intermountain Grass Grower's Association as to the status of all ongoing research and development of alternate technologies to field burning. The Director shall report to the Board of Directors at least annually as to the status of research and development of alternate technologies, and as to the results of the prior years burning.

K. Other Applicable Law.

Nothing contained in this Section shall be deemed to require issuance of any permit or to otherwise allow burning of grass fields if burning is otherwise prohibited by WAC 173-430-080 or other applicable law. This section shall be supplemental to any other applicable law, and if any provision hereof shall conflict with other applicable law then the more restrictive burning limitation shall be deemed to apply.

K. Permit Fee - Adjustment.

A permit fee of one dollar (\$1.00) per each acre shall be paid by an applicant prior to issuance of a permit to burn grass field(s). The Director shall separately account for all permit fees collected pursuant to this provision and shall annually report to the Board of Directors all sums collected and all expenses incurred in administration and enforcement of this section. If revenues are found to exceed or fall below expenses of administration and enforcement then the Board of Directors shall act to adjust the fee herein provided in future years.

L. Penalties.

Any person found to have violated any requirement or prohibition contained in this Section 6.10 shall be subject to civil and or criminal penalties as provided in Section 2.11 of this Regulation I. Burning in violation of any condition of a permit issued pursuant to this Section shall subject the violator to civil and or criminal penalties as provided in Section 2.11 of this Regulation I.

M. Severability.

If any portion of this Section 6.10 shall be deemed invalid, illegal or unenforceable by any court of competent jurisdiction then the remainder of this section shall not thereby be effected and shall remain in full force and effect.

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Chapter 8.12

SOLID FUEL BURNERS

- 8.12.010 Definitions.
- 8.12.020 Standards for Regulation of Solid Fuel Burning Devices.
- 8.12.030 Administration.
- 8.12.040 General Rules and Regulations.
- 8.12.050 Abatement.
- 8.12.060 Number of Permits.
- 8.12.070 Investigation and Noncompliance.
- 8.12.080 Appeals to the Board of Adjustment.
- 8.12.090 Penalties.
- 8.12.100 Colorado Department of Health.

8.12.010 Definitions.

A. For the purposes of this Chapter, unless otherwise apparent from the context, certain words and phrases used in this Chapter are defined as follows:

1. "Appendix A" and "Appendix B" mean the test procedures promulgated by the State Department of Health as described in Colorado Air Pollution Regulation No. 4, in effect as of August 15, 1985. See Exhibit A incorporated in this Chapter by reference.

2. "Commission" means the duly constituted Town Environmental Commission.

3. "Department" means the Town Building Department.

4. "Person" means any individual, public or private corporation, partnership, association, firm, trust, estate or any other legal entity whatsoever which is recognized by law as the subject of rights and duties.

5. "Solid fuel burning device" means any device, including, but not limited to, fireplaces or wood stoves of any nature, as defined in C.R.S. 25-7-402, as amended, or any other device used for the purpose of burning

combustible material. This definition specifically excludes barbecue devices or any other authorized burning device used in Town-sponsored activities.

6. "Structure" means anything constructed or erected which requires location on the ground and is a combination of roof and supporting walls and/or columns.

7. "Unit" means an individual space consisting of enclosed rooms occupying all or part of one (1) or more floors of a structure.

B. Any word, term or phrase not defined or specified in this Chapter shall be defined in accordance with the Telluride Land Use Code, as amended. (Ord. 677, 1985; Ord. 822, 1988)

8.12.020 Standards for Regulation of Solid fuel Burning Devices.

A. After the effective date for registration as set forth in Section 8.12.030, no solid fuel burning device permit shall be issued unless said device has been certified by the State Department of Health and has an emission rate, calculated as per Colorado Air Pollution Regulation No. 4, Section IV.A, which meets the following standards:

1. The solid fuel burning device shall emit particulates at a rate of six (6) grams per hour or less when tested in accordance with Appendix A or four (4) grams per hour or less when tested in accordance with Appendix B.

2. No solid fuel burning device permit shall be issued unless said device emits carbon monoxide (CO) at a rate of two hundred (200) grams per hour or less, when tested in accordance with Appendix A or Appendix B, whichever is more stringent.

3. In the event the State, the County or the Commission establishes more stringent emission standards, the most stringent standards shall apply.

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4. This standard specifically excludes solid fuel burning devices registered according to the provisions of Section 8.12.030 of this Chapter; notwithstanding, however, all solid fuel burning devices shall be subject to the provisions for abatement in Section 8.12.050 of this Chapter.

B. Any solid fuel burning device so certified as being within the standards set forth herein shall be presumed to be operated within the limits of those standards. Additional solid fuel burning devices may be certified by the Department upon the applicant's demonstration through testing that the solid fuel burning device will meet these standards, provided that tests on that proposed model are conducted by a testing laboratory accredited by the State using a standard method and the results are calculated according to Section 8.12.070.A, as specified in Air Pollution Control Regulation No. 4.

C. On or before August 1st of each year, beginning with August of 1985, the Department will prepare a list of solid fuel burning devices known to be certified, which list shall be available for inspection in the Department's offices. (Ord. 677, 1985; Ord. 822, 1988)

8.12.030 Administration.

A. Between August 15, 1985 and October 15, 1985, all persons who own real property wherein a solid fuel burning device is maintained, used or operated within the Town shall register such device with the Town Clerk on forms provided at the Town Hall. If the owner does not register such device by October 15, 1985, the lessee, if any, may register such device within ten (10) days after the date in the same manner as set forth in this Chapter. The right to register for a solid fuel burning device permit shall be relinquished if no permit is applied for within the time frame as set forth in

this Section. There shall be an administration fee of fifty dollars (\$50.00) for registration and issuance of a permit. No solid fuel burning device permit shall be issued unless the device is in existence within the structure prior to September 15, 1985, or is planned for a structure in which there is at a minimum a foundation in place prior to September 15, 1985.

B. All registrants shall be issued concurrently with the registration of their solid fuel burning device a solid fuel burning device permit which shall: identify the solid fuel cookstove, fireplace insert, etc.; identify the number of solid fuel burning devices in each individually owned unit; and identify the names and addresses of the unit owners or lessees. The original permit shall be valid for three (3) years or until October 15, 1988. Prior to March 1, 1989, the Department will inspect each premises subject to a permit and validate the permit as to full compliance with all provisions of this Chapter. Upon validation this permit will remain in effect as long as Chapter 8.12 of this Code is in effect; provided, however, that such permits may be subsequently modified or terminated by the Town Council or its designee.

C. Solid fuel burning device permits will be maintained with the Department and shall transfer freely with conveyance of the real property. A purchaser shall, within thirty (30) days of the transfer, register with the Town as the new holder of the permit. Permits shall not be transferred apart from conveyance of the real property, except under the following conditions. The permit holder may sell the solid fuel burning device permit on the open market on two (2) conditions:

1. A deed restriction, stating that no solid fuel burning device may be used in that structure for as long as this Chapter is in effect; and

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2. The purchaser must buy two (2) permits to install one (1) solid fuel burning device.

If the permit was registered by the lessee and the landlord-tenant relationship is terminated for any reason, the lessee shall notify the owner of his or her right to purchase the permit from the lessee and to register with the Town as provided in this Section. If the owner does not register as holder of the permit within forty-five (45) days of the termination of the landlord-tenant relationship, the permit shall be relinquished to the Town. In the event a permit holder desires to voluntarily relinquish the use of the solid fuel burning device, the Department may retire the permit if the Town Council determines it would be in the best interest of the health, safety and welfare of the community. (Ord. 677, 1985; Ord. 682, 1985; Ord. 822, 1988)

8.12.040 General Rules and Regulations.

A. Only one (1) solid fuel burning device shall be operated per structure unless specifically exempted within this Chapter.

B. It shall be unlawful for any person to construct, install, maintain, use or operate any solid fuel burning device within the Town in any manner which is not in compliance with the provisions of this Chapter.

C. No solid fuel burning device shall be operated in an existing unit after the date for registration as provided in Section 8.12.030 of this Chapter without previously having registered and obtained a solid fuel burning device permit.

D. No coal shall be burned after October 15, 1985, unless used as a primary heat source as of October 15, 1985. There shall be a presumption of prior use upon the person who uses a solid fuel burning device to burn coal submitting an affidavit attesting to this use to the Department on or before October 15, 1985. On or after October 15, 1988, no coal shall be burned by any person within the Town.

E. After the date for registration as provided in Section 8.12.030 of this Chapter, no building permits shall be issued for a new structure which has plans or other provisions for a solid fuel burning device unless there is:

1. Only one (1) solid fuel burning device which complies with the particulate emission standard and the carbon monoxide standard set forth in Section 8.12.020 of this Chapter; and

2. The solid fuel burning device complies with the manufacturer's installation requirements according to the standards of the Department; and

3. The solid fuel burning device does result in a net increase in heating energy, that is, the heat energy gained by the unit or structure must be greater than the heat energy lost by the unit or structure; and

4. A solid fuel burning device permit has been obtained from the Town and the applicant has paid the required permit fee; and

5. In the event the cap on solid fuel burning device permits is lifted by the Town Council, the applicant for the permit must pay an impact fee of seventy-five dollars (\$75.00) per gram of particulate emission per hour on that model of solid fuel burning device as determined by the standards defined in Section 8.12.020 of this Chapter.

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F. After the date for registration as provided in Section 8.12.030, only one (1) open fireplace will be allowed in the following establishments: hotel lobby, multiple unit dwelling lobby, bar/saloon or restaurant. No open fireplaces will be allowed in a new home construction.

G. Residential and commercial owners of existing fireplaces will be required to retrofit their fireplaces with a certified fireplace insert by October 15, 1988, as defined by the requirements of certification by Colorado Air Pollution Regulation No. 4.

H. All combustible material for use in a solid fuel burning device shall be in a dry and burnable condition and safely stored so as not to create a fire hazard.

I. All permits may be displayed so as to be clearly visible from the public right-of-way.

J. Wood cookstoves will be exempt from the requirements of this Chapter, provided that those stoves are used as a primary cooking source in the house and are in place on or before August 15, 1985. This exemption extends only for the lifetime of the wood cookstove owner and is, therefore, not transferable. (Ord. 677, 1985; Ord. 682, 1985; Ord. 822, 1988; Ord. 829, 1988)

8.12.050 Abatement.

A. After October 15, 1988, no person within the Town shall operate, construct, use or install a solid fuel burning device unless he or she has obtained a permit from the Town and the solid fuel burning device complies as follows:

1. Such device complies with the particulate emission standard and carbon monoxide standard set forth in Section 8.12.020 of this Chapter; and

2. There is not more than one (1) solid fuel burning device per unit or structure; and

3. A permit has been issued by the Town for the solid fuel burning device.

B. A rebate program is hereby established for solid fuel burning device replacements as required within this Chapter: A rebate of two hundred dollars (\$200.00) for devices replaced from September 15, 1985, to October 15, 1986; a rebate of one hundred fifty dollars (\$150.00) for devices replaced from October 15, 1986, to October 15, 1987; and a rebate of one hundred dollars (\$100.00) for devices replaced from October 15, 1987, to October 15, 1988. A full rebate of two hundred fifty dollars (\$250.00) will be given for total conversion to gas, propane or electric at any time during the September 15, 1985 to October 15, 1988 compliance period. This full rebate is available only to residents who replace the existing permitted solid fuel burning devices with a nonsolid fuel heat source. The permit for the extinct solid fuel burning devices shall then be validated by the Department so that it may be sold or used toward the two (2) permits required for installation of one (1) solid fuel burning device in the future, in accordance with Section 8.12.030.C. (Ord 677, 1985; Ord. 682, 1985; Ord. 822, 1988)

8.12.060 Number of Permits.

A. The Town Council shall allow no additional solid fuel burning device permits for new construction to be issued within the Town after the date for registration as provided in Section 8.12.030. Upon the completion of modeling studies to be conducted by the Commission in a written report to be filed with the Town Council on or before October 1, 1986, issuance of additional permits may be considered by the Town Council.

Health and Safety - 8.12.060

B. It will be possible for a person wishing to install a new solid fuel burning device in a structure to purchase two (2) relinquished permits, if any are available, in order to install one (1) new solid fuel burning device. In this event, the purchaser must present to the Town Hall proof of purchase of two (2) permits and verification of two (2) deed restrictions, stating that no solid fuel burning device may be used in that unit or structure as long as this Chapter is in effect, in order to install the new solid fuel burning device in a structure. Conformance to all of the provisions of this Chapter will also apply. (Ord. 735, 1986; Ord. 822, 1988)

8.12.070 Investigation and Noncompliance.

A. The Department shall inspect each solid fuel burning device as reflected by the records of the Department. The purpose of the inspection shall be to determine that the permit holder is in compliance with the provisions of this Chapter. If a permit holder or person operating the solid fuel burning device refuses to consent to the Department's inspection, the Department may, upon a showing of reasonable grounds for the purpose of inspecting solid fuel burning devices only, apply for an inspection warrant from the Municipal Court and execute and conduct the inspection under order of the Court.

B. When the Department has reasonable grounds based upon its investigation or upon written complaints sufficiently demonstrating reasonable grounds that a person has violated this Chapter, the Department shall issue a notice and order setting forth the alleged violations and the corrective actions that need to be taken. The Department shall allow thirty (30) days for the person to take the necessary corrective actions and comply with this Chapter.

C. When a person has not complied with the Department's notice and order, the Department shall issue an order of noncompliance and institute a summons and complaint on behalf of the Town with the Municipal Court for violation of this Chapter. The Department may also obtain injunctive relief through the Municipal Court in order to enforce this Chapter. Any order of noncompliance shall be stayed in the event an aggrieved person files a notice of appeal with the Board of Adjustment of the Town as set forth in Section 8.12.080 of this Chapter. (Ord. 677, 1985; Ord. 822, 1988)

8.12.080 Appeals to the Board of Adjustment.

A. An appeal of the Department's notice and order of noncompliance shall be filed with the Board of Adjustment of the Town in writing no later than thirty (30) days from the date of the Department's notice and order.

B. The Board of Adjustment shall make such rules and regulations as it determines are necessary for the conduct of its hearings under this Chapter, and according to any other applicable ordinances of the Town and/or laws of the State.

C. Upon a timely filing of a notice of appeal to the Board of Adjustment, the Board of Adjustment shall set a hearing date to review the notice and order of the Department. This hearing date shall be on a date certain not to be less than five (5) days, nor more than fifteen (15) days from the filing of the date of the notice of appeal. The Board of Adjustment shall have the power to subpoena witnesses and a record shall be kept of the hearing. The Board of Adjustment shall issue its decision and order upon the appeal within ten (10) days of the date of the hearing.

D. The Board of Adjustment may affirm, modify, rescind or delay the compliance order based upon the following standards:

1. Planned termination of operation of the noncomplying solid fuel burning device;

2. Planned replacement of the noncomplying solid fuel burning device with a certified device;

3. A change in the operations of the solid fuel burning device due to excusable malfunction;

4. Extreme hardships or life-threatening emergencies.

E. The Department shall represent the Town before the Board of Adjustment and shall have the burden of proof to establish noncompliance by a preponderance of the evidence.

F. The order of the Board of Adjustment shall take effect immediately, and shall contain written findings. The Board of Adjustment may grant a greater time, at its discretion.

G. All appeals from the Board of Adjustment shall be to the District Court as provided in Chapter 18.36 of the Land Use Code. (Ord. 677, 1985; Ord. 822, 1988)

8.12.090 Penalties.

Any person, upon conviction of a violation of any provision of this Chapter, shall be subject to a fine not to exceed three hundred dollars (\$300.00) or imprisonment in jail for a period of not more than ninety (90) days, or both, at the discretion of the Court, for each separate offense, and may be enjoined from any further or continued violation of this Chapter. Each day any violation of this Chapter shall continue shall constitute a separate offense under this Chapter. (Ord. 677, 1985; Ord. 822, 1988)

8.12.100 Colorado Department of Health.

The inspector is directed to forward this Chapter to the Division of Administration of the Colorado Department of Health for inclusion in the comprehensive State implementation plan, pursuant to C.R.S. 25-7-128(1), as amended; for administration of the local regulations as part of the State plan, pursuant to C.R.S. 25-7-111, as amended; and for enforcement of the local regulations as part of the State plan, pursuant to C.R.S. 25-76-115, as amended. (Ord. 677, 1985; Ord. 822, 1988)

VMT RESTRICTIONS

Attachment for Section 18, VMT Restrictions:

Aspen VMT Rules

ASPEN VEHICLE MILES TRAVELLED RESTRICTIONS

4. Mass Transit Service Expansion.

- a. Pitkin County shall implement a plan to assist the Roaring Fork Transit Agency to increase the provision of bus passenger service between the City of Aspen and downvalley communities by the addition of at least fourteen (14) buses to the Roaring Fork Transit Agency's fleet. These buses shall be put into service by December 10, 1993. Information on the acquisition by lease, rental or purchase of these buses must be submitted to the Division upon their acquisition. Reports on the effectiveness of this measure in reducing vehicle miles traveled must be provided to the Department and Division on February 1 and May 1 of each year.

ASPEN VMT RESTRICTIONS

- b. The Roaring Fork Transit Agency shall operate a crosstown shuttle service connecting the commercial core area with the Post Office and the Rio Grande Parking Facility utilizing at least two vehicles simultaneously and operating at least from 9 am to 5 pm, seven days per week. Reports on the effectiveness of this measure in reducing vehicle miles traveled must be provided to the Department and Division on February 1 and May 1 of each year.

5. Commercial Core Paid Parking and Resident Only Permit Parking in Outlying Areas.

Within an area of the commercial core of the City of Aspen (bounded by and including Main Street, Durant Avenue, Hunter Street, and Monarch Street), the City of Aspen shall permit all passenger vehicles to park only upon the payment of a one dollar (\$1.00) per hour parking fee. Within an area outside of the commercial core, but inside an area bounded by and including Cleveland Street, Ute Avenue, Durant Avenue, First Street, and Hallam Street, passenger vehicles will be permitted to park only if they display a "resident-only" parking permit. Reports on the effectiveness of this measure in reducing vehicle miles traveled must be provided to the Department and Division on February 1 and May 1 of each year.

6. Voluntary No-Drive Program on High Pollution Days.

a. Requirement for Public Education.

The City of Aspen and Pitkin County shall conduct public awareness programs to inform citizens about the pollution impacts of driving passenger vehicles, driving alternatives, and ways in which commuters can minimize pollution. The program shall utilize media advertisements, brochures, mailings, and/or publicity at local events.

b. Requirement for High Pollution Days.

Upon notification by the Division that a high pollution day is expected to occur, the Department shall notify local radio and television stations, newspapers, and any other groups deemed necessary. In addition, the Colorado Department of Transportation shall

ASPEN VMT RESTRICTIONS

post notification to drivers on Highway 82 of the high pollution alert. Residents and visitors shall be asked to car pool, ride the bus, work at home, and to refrain from unnecessary road trips.

c. Tracking and Reporting.

Reports on the effectiveness of this measure in reducing vehicle miles traveled must be provided to the Division and the Department on February 1 and May 1 of each year.

7. Implementation of Local Control Strategies.

a. City of Aspen.

The City of Aspen shall implement and enforce Ordinance No. 74, Series of 1992, as it exists on January 1, 1993. This ordinance limits future growth in emissions from wood burning fireplaces, stoves and restaurant grills. In addition, the City of Aspen shall implement and enforce any ordinance adopted in accordance with these regulations. These ordinances may be amended in the sole discretion of the City Council of the City of Aspen, provided that they shall be submitted immediately to the Colorado Air Quality Control Commission and United States Environmental Protection Agency as revisions to the State Implementation Plan. Any amendments to these ordinances shall not constitute a revision to the State Implementation Plan until such time as the State Implementation Plan is appropriately revised. Ordinance No. 74, Series 1992, shall remain in full force and effect until such time as the City obtains full approval of a State Implementation Plan revision.

b. Pitkin County.

Pitkin County shall implement and enforce Ordinance No. 18, Series of 1992, as it exists on January 1, 1993. This ordinance limits future growth in emissions from wood burning fireplaces, stoves and restaurant grills. In addition, Pitkin County shall adopt and enforce any resolutions adopted in accordance with these regulations. These resolutions may be amended in the sole discretion of the Board

ASPEN VMT RESTRICTIONS

of County Commissioners, provided that they shall be submitted immediately to the Colorado Air Quality Control Commission and United States Environmental Protection Agency as revisions to the State Implementation Plan. Any amendments to these resolutions shall not constitute a revision to the State Implementation Plan until such time as the State Implementation Plan is appropriately revised. Resolution No. 18, Series 1992, shall remain in full force and effect until such time as the County obtains full approval of a State Implementation Plan revision.

c. Reporting Requirements.

No later than February 1 and August 1 of each year, the Department shall submit to the Division a report containing information for the period covering July 1 through December 31 and January 1 through June 30, respectively, that describes the tracking and enforcement of the local ordinances and resolutions listed in subsections a. and b. above. The report shall include information on compliance and enforcement activities in order to verify that the ordinances and resolutions have been properly implemented.

WOOD MOISTURE CONTENT RESTRICTIONS

Attachments for Section 20, Wood Moisture Content Restrictions:

Mammoth Lakes Moisture Rules
Seattle Moisture Rules

MAMMOTH LAKES, CA WOOD MOISTURE RESTRICTIONS

Control Measure 6b - 20% Moisture Limit for Wood Retailers

Wood that has not been adequately dried will result in higher air pollution emissions, increased creosote build-up in the flue, and as much as 50% lower heating efficiency. Most wood should be dried for six months to a year to ensure that it is dry before it is burned. This measure would affect wood retailers and not wood

(language continued from next page...)

gathering for personal use. A calibrated moisture measuring device would be used to determine the moisture content of wood. This control measure would prohibit the selling or offering for sale, wood with a moisture content greater than 20% between July 1 and December 31 of each year. This measure could result in a 5% decrease in emissions from wood burning stoves and fireplaces. The cost for the moisture measuring device is about \$300 each. The cost for wood sellers to implement the measure is unknown. The program may cause wood sellers to increase their prices, but it will also result in fewer flue fires, lower air pollution emissions, a higher burning efficiency and less wood burned.

Adoption Date: June 1990

Implementation Date: July 1, 1991

SEATTLE WOOD MOISTURE CONTENT RESTRICTIONS

CHAPTER 16.12 - GENERAL

16.12.010. General. A. No woodstove will be permitted to be used as the sole source of adequate heat in any new or remodeled dwelling or structure.

B. All certified woodstoves installed in any dwelling must be approved by an independent testing laboratory that the woodstove meets all applicable portions of the Underwriters' Laboratory listing requirements for safety and if the woodstove includes a catalytic combustor, the combustor must be warranted to meet or exceed the requirements of 40 CFR Part 60 Subpart AAA as of July 30, 1991. The Board finds that durability and safety of the product are directly related to emission from the woodstoves.

C. The installation or sale for use in King County by any person of any uncertified woodstove is prohibited.

D. Any person responsible for the operation of a woodstove shall ensure that the fuel is covered in a manner to stop rain or other moisture sources from wetting the fuel and which allows sufficient air flow around the fuel to allow it to season (dry). The Director may establish guidelines to assist regulated parties in complying with this rule.

E. As provided by RCW 70.94.477 and associated administrative rules, fuel for all woodstoves shall be only untreated wood or lumber with a moisture content of 20% or less, newsprint for the purpose of starting a fire only and products manufactured for the sole purpose of use as fuel. All other materials including, but not limited to, treated wood, plastics, garbage, plywood, particle board, rubber products, animal carcasses, asphaltic products, waste petroleum products, paints and chemicals are prohibited from being burned in a woodstove or fireplace.

F. No wood with a moisture content greater than 20% moisture may be sold by a retail seller of firewood unless a sales receipt is issued to the consumer which contains the name, address and phone number of the seller and the following notice: **UNSEASONED FIREWOOD, MOISTURE CONTENT EXCEEDS 20%; ATTEMPTS TO BURN WILL RESULT IN EXCESS SMOKE AND CREOSOTE FORMATION. IT IS ILLEGAL TO BURN WOOD UNTIL DRIED TO 20% OR LESS MOISTURE CONTENT.**

G. The Director shall provide assistance to sellers and buyers of wood in measuring the moisture content of wood and in developing specific educational materials for their use.

16.12.020. Buy Back. The Director is authorized to establish an uncertified woodstove removal program which may incorporate various financial incentives for energy conservation and air quality improvements, including but not limited to household insulation and insulating products, as well as uncertified woodstove replacement, and substitution of heating methods or devices including certified woodstoves. The Director shall assist administratively and financially to the extent possible, programs of this type established by other state and local agencies so as to minimize administrative duplications and costs.

16.12.030. Public Education. The Director shall assist other state and local agencies with a program of public education, emphasizing proper burning and fuel storage techniques to ensure

WOODSTOVE REMOVAL UPON SALE OF HOME

Attachments for Section 22, Woodstove Removals Upon Sale of Home:

Mammoth Lakes Removal Rules
Oregon Removal Rules
Reno Removal Rules

MAMMOTH LAKES, CA WOODSTOVE REMOVAL UPON SALE OF HOME REQUIREMENT

Section 8.30.050, REPLACEMENT OF NON-CERTIFIED APPLIANCES UPON SALE OF PROPERTY

A. Prior to the completion of the sale of any real property within the Town of Mammoth Lakes, all existing non-certified solid fuel appliances shall be replaced, removed, or rendered permanently inoperable. The Building Department, or a qualified inspector as designated by the Building Department, shall inspect the appliance(s) in question to assure that they meet the requirements of this chapter. Within five working days from the date of the inspection, the Building Department shall issue a written certification of compliance or non-compliance for the affected property. If the inspection reveals that the subject property does not comply with the requirements of this chapter, all noncomplying solid fuel appliances shall be replaced, removed, or rendered permanently inoperable. In this event reinspection shall be required prior to certification of compliance.

B. If real property is to be sold which does not contain a solid fuel appliance, a form approved by the Building Department, containing the notarized signatures of the seller, the buyer, and the listing real estate agent attesting to the absence of any solid fuel device, may be accepted in lieu of an inspection. A written exemption shall be issued by the Building Department.

C. No appliances removed under the provisions of this Section may be replaced except as provided by this Chapter.

468A.500 Prohibition on sale of non-certified woodstove. On and after September 29, 1991, no person shall advertise for sale, offer to sell or sell, within this state, a used woodstove that was not certified under ORS 468A.400 (1) for sale as new on or after July 1, 1986. [1991 c.752 §10b]

468.505 Removal of noncertified woodstoves. After December 31, 1994, all woodstoves, other than cookstoves, not certified for sale as new on or after July 1, 1986, under ORS 468A.480 (1) shall be removed and destroyed upon sale of a home in any PM10 nonattainment area in the state that does not attain compliance with the PM10 standard established by the commission under ORS 468A.025 by December 31, 1994. [1991 c.752 §10c]

OREGON WOODSTOVE REMOVAL UPON
SALE OF HOME REQUIREMENT

468A.510 Antique woodstove exemption. ORS 468A.495 to 468A.505 shall not apply to antique woodstoves. As used in this section, "antique woodstove" means a woodstove built before 1940 that has an ornate construction and a current market value substantially higher than a common woodstove manufactured in the same time period. [1991 c.752 §10d]

468A.515 Wood heating curtailment program requirements; exemptions. (1) Any programs adopted by the commission to curtail residential wood heating during periods of air stagnation shall provide for two stages of curtailment based on the severity of projected air quality conditions. Except as provided in subsection (2) of this section, the programs shall apply to all woodburning fireplaces, woodstoves and appliances. The programs shall provide that woodstoves that were certified for sale as new on or after July 1, 1986, under ORS 468A.480 (1) shall be curtailed only at the second stage to insure attainment of air quality standards.

(2) Programs adopted by the commission to curtail residential wood heating shall not apply to:

(a) A person who is classified at less than or equal to 125 percent of poverty level pursuant to federal poverty income guidelines adopted under the Omnibus Budget Reconciliation Act of 1981 (P.L. 97-35);

(b) A person whose residence is equipped only with wood heating until such time as funding becomes available for replacement or woodstoves that were not certified under ORS 468A.480 for sale as new on or after July 1, 1986, and for the period of time between application for such funds and completion of the replacement; and

(c) Wood burning pellet stoves.

(3) If a local government or regional authority has not adopted or is not adequately implementing the required curtailment pro-

RENO WOODSTOVE REMOVAL UPON SALE OF HOME REQUIREMENT

040.0512 EXISTING WOOD STOVE/FIREPLACE INSERT - REPLACEMENT

- A. Commencing July 1, 1988, it is unlawful for any person to complete, or allow the completion of, any escrow transaction for the transfer or conveyance of any previously occupied residence unless the residence has been certified by the Control Officer as being in compliance with the woodstove/fireplace insert certification requirements of these regulations.

The buyer and seller of any residential property shall observe any disclosure statements supplied by the real estate agents relating to the requirement under this regulation for the inspection of any wood burning device in the residence.

- B. A person may be licensed by the Control Officer to inspect and certify that wood burning stove/fireplace inserts in residences are certified.
- C. To obtain a license, an application must be made to the Control Officer, on a form approved by him for that purpose. A license will be issued upon satisfactory completion of all requirements set forth by the Control Officer and payment of the fee established by the District Board of Health for the licensing process. A license remains in effect for one year from the date of issuance and may be renewed upon meeting all the requirements of the Control Officer and payment of the renewal fee.
- D. A licensee shall report the result of each inspection of a residence on a form provided by the Control Officer after the licensee pays the fee established by the District Board of Health for that form. The licensee must indicate:
- a. Whether the residence contains any woodstove/fireplace inserts.
 - b. The number of woodstoves/fireplace inserts which are certified.
 - c. The number of woodstoves/fireplace inserts which are not certified.

- E. Not later than seven (7) working days after receipt of a report from the licensee, the Control Officer will issue a Certificate of Compliance if each wood stove/fireplace insert is certified. If the Control Officer fails to act within the seven (7) day period, each woodstove/fireplace insert within the residence will be deemed certified.
- F. If the report indicates that a woodstove/fireplace insert is uncertified, the woodstove/fireplace insert must be removed from the residence or retrofitted to meet certification standards. Reinspection by a licensee is required. If an uncertified woodstove/fireplace insert is removed from a residence, the device must not be stored at any other location on the real property or elsewhere within the Health District without the approval of the Control Officer.
- G. The Control Officer may issue a Certificate of Compliance for a residence if a person provides a copy of the Dealer's Report of Sale issued under Section 040.051 (E) and provides evidence that the certified woodstove/fireplace insert has been installed in compliance with all applicable building, fire and other codes adopted by the jurisdiction in which the residence is located.
- H. If a residence is to be sold and does not contain a woodstove/fireplace insert, a form approved by the Control Officer, containing the notarized signatures of both the buyer and seller attesting to that fact, may be accepted in lieu of an inspection, and a Notice of Exemption may be issued. If the residential property contains a woodstove/fireplace insert which is not certified and must be removed pursuant to subsection F, the form must not be executed by either the buyer or seller until the removal has been completed. On any subsequent sale, a new Notice of Exemption or Certificate of Compliance is required.
- I. A Certificate of Compliance issued pursuant to this section:
1. Remains valid until such time as the residence is transferred or conveyed to a new owner.
 2. Does not constitute a warranty or guarantee by the licensee or the Control Officer that the woodstove/fireplace insert within the residence meets any other standards of

operation, efficiency or safety, except the emission standards contained in these regulations.

J. Commencing January 1, 1995, it is unlawful for any person to have a wood stove/fireplace insert in any residence unless:

1. The woodstove/fireplace insert is certified; or
2. The residence has received a Certificate of Compliance.

K. Any person who violates any of the requirements of this section, or who falsely attests as to information as part of compliance with this section, is subject to the penalties as set forth in Section 020.040 and may be subjected to the applicable penalties prescribed by law for perjury and may have any license issued by the Control Officer pursuant to this section revoked.

040.0514

LIMITATION ON NUMBER OF SOLID FUEL BURNING DEVICES IN RESIDENTIAL BUILDINGS

A. The total number of approved solid fuel burning devices installed in each new multifamily development shall not exceed one (1). This provision applies to projects seeking building permits after the effective date of this regulation. (May 23, 1990)

B. The number of approved solid fuel burning devices installed on any property for which a building permit is issued after the effective date of this regulation, shall not exceed one (1). No solid fuel devices will be permitted within single family dwellings which are located within a zone which permits more than 4 dwellings per net acre.

Commencing June 1, 1991, no solid fuel devices shall be installed in any new single family residence located within the Truckee Meadows Non-Attainment area.

C. In dwelling units existing on the effective date of this regulation, installation of additional solid fuel burning devices is prohibited if the resulting number of solid fuel devices exceeds the limitations contained in Section 040.0514 (A) and (B) above. This section does not apply to the installation of gas-fired appliances. Solid fuel burning devices that meet an in-situ emission factor of 1 gram/hour or less of particulate matter are exempt from the requirements of this section.

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APPENDIX C - DOCUMENTED AREAS

Listed below are general characteristics of the areas documented in this sourcebook. Demographic data was taken from 1990 U.S. Bureau of the Census data. The emission inventories have not been obtained from a single consistent source of information, such as state implementation plans, filter analyses, or emission factor estimates. Nor do the inventories consistently represent either 24-hour or annual PM-10 concentrations. Despite their lack of specificity, the inventories are included here to serve as a means for *general* comparison with areas considering adoption of similar control programs.

ASPEN, COLORADO (Pitkin County)

Average annual rainfall	10"
Total county population	12,600
Total number of households	9,800
% households with wood as main heat source	7%
Median household income	\$40,000
84%	Road dust
13%	Residential wood combustion

BOISIE, IDAHO (Ada County)

Average annual rainfall	13"
Total county population	205,800
Total number of households	80,800
% households with wood as main heat source	5%
Median household income	\$30,200
34-63%	Residential wood combustion
50-60%	Road dust
2%	Motor Vehicle

CRESTED BUTTE, COLORADO (Gunnison County)

Average annual rainfall	9"
Total county population	10,300 (1,200 town)
Total number of households	7,300
% households with wood as main heat source	28%
Median household income	\$23,000
75-80%	Residential wood combustion

DENVER, COLORADO METROPOLITAN AREA (Adams, Arapahoe, Boulder, Denver, Jefferson Counties)

Average annual rainfall	15"
Total county population	1.8 million
Total number of households	692,000
% households with wood as main heat source	1%
Median household income	\$30,600

67%	Road dust
15%	Diesel emissions
11%	Motor vehicle
4%	Residential wood combustion

EAGLE RIVER, ALASKA

95%	Road dust
3%	Residential wood combustion

KLAMATH FALLS, OREGON (Klamath County)

Average annual rainfall	23"
Total county population	57,700
Total number of households	26,000
% households with wood as main heat source	32%
Median household income	\$23,100

63%	Residential wood combustion
11%	Road dust
10%	Industry
9%	Open burning
6%	Motor vehicle

LIBBY, MONTANA (Lincoln County)

Average annual rainfall	21"
Total county population	17,500
Total number of households	8,000
% households with wood as main heat source	55%
Median household income	\$20,900

8%	Residential wood combustion
62%	Road dust
29%	Industry

LAS VEGAS, NEVADA (Clark County)

Average annual rainfall	5"
Total county population	741,500
Total number of households	317,200
% households with wood as main heat source	<1%
Median household income	\$30,700

25-30% Residential wood combustion

20% Construction

15% Road dust

MAMMOTH LAKES, CALIFORNIA (Mono County)

Average annual rainfall	7"
Total county population	(35,000 summer/winter) 10,000
Total number of households	(summer/winter resort) 10,700
% households with wood as main heat source	52%
Median household income	\$31,900

50% Residential wood combustion

50% Road dust

MISSOULA, MONTANA (Missoula County)

Average annual rainfall	13"
Total county population	78,700
Total number of households	35,500
% households with wood as main heat source	12%
Median household income	\$23,400

52% Road dust

24% Residential wood combustion

8% Motor vehicle

5% Industry

PINEHURST, IDAHO (Shoshone County)

Average annual rainfall	15"
Total county population	13,900
Total number of households	6,900
% households with wood as main heat source	31%
Median household income	\$21,000

60% Residential wood combustion

40% Road dust

PRESQUE ISLE, MAINE (Aroostook County)

Average annual rainfall	37"
Total county population	86,900
Total number of households	38,400
% households with wood as main heat source	18%
Median household income	\$22,200

88%	Road dust
5%	Residential wood combustion
5%	Point source
<1%	Motor vehicle

RANCHO MIRAGE, CALIFORNIA (Riverside County)

Average annual rainfall	6"
Total county population	15,000 (city only)
Total number of households	N/A
% households with wood as main heat source	1%
Median household income	large % retirement

61%	Natural background
22%	Construction
12%	Road dust

RENO, NEVADA (Washoe County)

Average annual rainfall	10"
Total county population	254,700
Total number of households	112,200
% households with wood as main heat source	3%
Median household income	\$31,900

50-60%	Road dust
20-60%	Residential wood combustion
15%	Construction

SEATTLE, WASHINGTON (King County)

Average annual rainfall	72"
Total county population	1.5 million
Total number of households	647,300
% households with wood as main heat source	4%
Median household income	\$36,200

50%	Road dust
20%	Residential wood combustion
15%	Open burning
10%	Industry

SPOKANE, WASHINGTON (Spokane County)

Average annual rainfall	17"
Total county population	361,400
Total number of households	150,100
% households with wood as main heat source	8%
Median household income	\$25,800

38%	Residential wood combustion
23%	Road dust
9%	Industry

TELLURIDE, COLORADO (San Miguel County)

Average annual rainfall	8"
Total county population	1,300 (town only)
Total number of households	N/A
% households with wood as main heat source	35%
Median household income	\$30,600

56%	Residential wood combustion
34%	Road dust

