CITY OF FORT COLLINS
AIR QUALITY ACTION PLAN UPDATE
MARCH 1998

! PROGRESS REVIEW OF AIR QUALITY DATA
! PROGRESS REVIEW OF '96-'98 ACTIONS
! UPDATED ACTION PLAN FOR '99

The purpose of this update is to provide:

- A summary of the most current data pertaining to those pollutants of particular concern to Fort Collins, and where applicable, how these data have been affected by the Air Quality Action Plan;

- Current information on the Strategies adopted by Council in March 1996; and;

- Strategies for implementation from January through December 1999.

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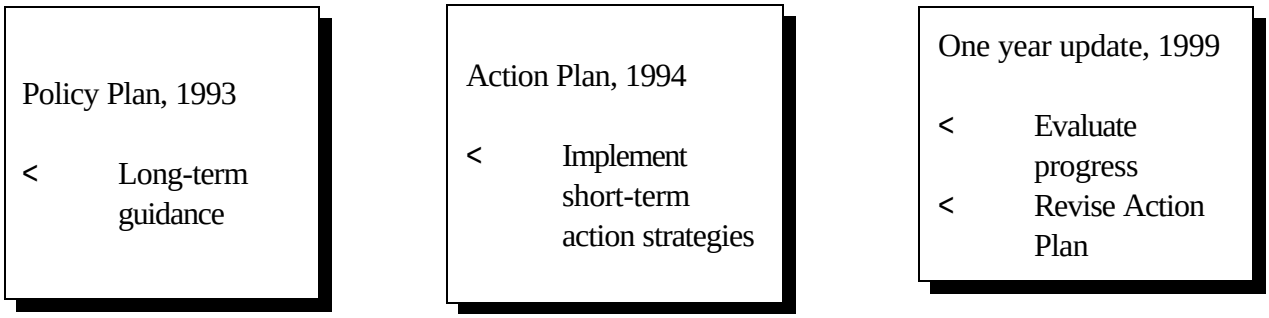
AIR QUALITY PLAN OVERVIEW The Air Quality Policy Plan, adopted by City Council in March 1993 provides the framework for the City's Air Quality Program. The Policy Plan calls for an Action Plan to be reviewed and updated every two years. The first Action Plan was adopted in March 1994, and reviewed in 1996. This is a one year review, scheduled to bring us in sync with the two year budget review process.



The Policy Plan also includes the following guidance, which is repeated here to orient and assist the reader of this Action Plan update.

- **One goal**: Continually improve Fort Collins Air Quality as the City grows. This means existing sources must be reduced to more than offset new growth.

- **Seven objectives**: Reduce the growth of vehicle miles of travel; reduce per-mile tailpipe emissions of high priority pollutants; reduce total emissions of high priority pollutants from commercial and industrial sources; reduce area-wide wood smoke emissions; reduce the number of non-certified wood stoves and conventional fireplaces; and increase the percentage of residences and workplaces taking action to reduce exposure to indoor air pollution.

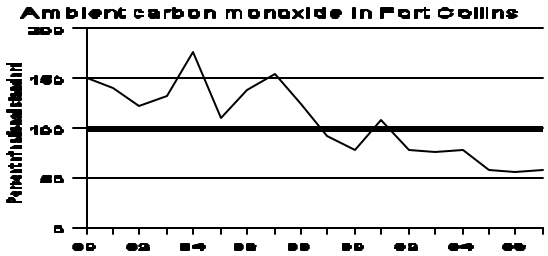
- **Progress measurement**: Use air quality indicators (example -- miles driven per day), not just ambient air quality data. "Indicators" are indirect measurements of air quality that focus on the parts of the problem within our control, whereas ambient data include issues outside our control, such as the effects of weather.

- **Focus on sources, not pollutants**: Action strategies aim at reducing all emissions from a source category (e.g., motor vehicles) rather than at specific pollutants (e.g., carbon monoxide).

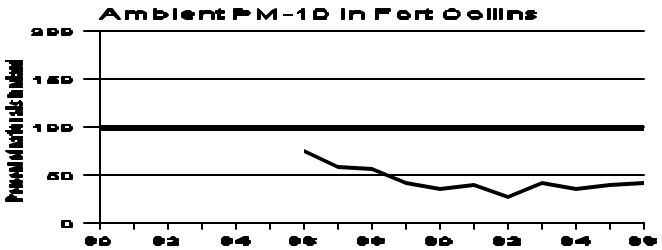
- **Priority for action is based on the amount of pollution generated by a source**. Current priority sources in order of importance: #1 motor vehicles, #2 commerce and industry, #3 homes

- **Priority for achieving goals is based on the following hierarchy of actions**: #1 actions the City must take, #2 actions the City takes voluntarily to reduce emissions from its own operations, #3 actions the City asks others to take (education, incentives), #4 actions the City requires others to take (ordinances)

Carbon Monoxide is emitted mainly by motor vehicles. Emissions continue to decrease nation-wide, mainly due to new car standards. Carbon monoxide concentration in Fort Collins is well below the federal standard, but would rise if growth in daily vehicle miles traveled is not controlled.



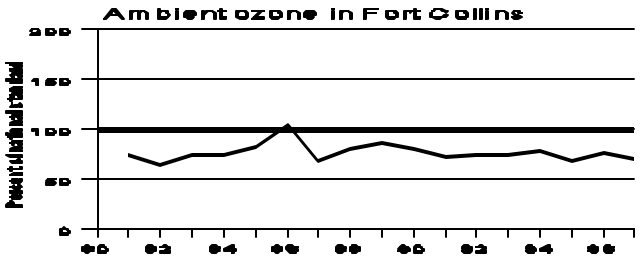
Carbon monoxide concentration in Fort Collins continues to improve.



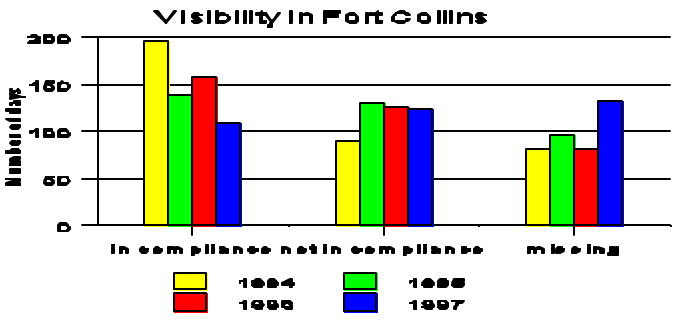
Particles (PM-10) are emitted mainly from roads, fields and construction sites. Particles are the main contributor to visibility impairment.

PM-10 concentration in Fort Collins remains near 50% of the federal standard.

Ozone is formed from nitrogen oxides and hydrocarbons emitted mainly by motor vehicles. Ozone concentration in Fort Collins remains below the federal standard.



Ozone concentration in Fort Collins remains 20% below the federal standard.



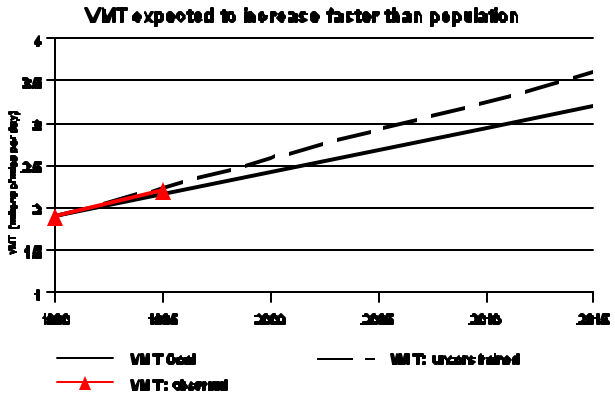
Visibility, a measure of how the air "looks," has been monitored in Fort Collins since the fall of 1993. Visibility exceeded the Colorado standard about one-third of the time in 1996.

Visibility impairment in Fort Collins may be increasing.

Objective # 1: Reduce Daily Vehicle Miles Traveled (VMT)

Current Conditions

The dotted line shows expected VMT unconstrained by the proposed transportation plans. The solid line shows the expected improvement if VMT goals are met through implementation of the various transportation plans. The triangles mark the observed VMT values for 1990 and 1995. The observed 1995 VMT is halfway between the goal and the uncontrolled values.



Actions

Strategies: 1996 - 1998	Strategies: 1999
1. Transportation Planning and Implementation	
0 Regional Transportation Plan: Adopted to achieve a 10% modal shift from single occupancy vehicles (SOV) to other modes by 2015. Guides further implementation.	ø Evaluate progress and continue implementation.
0 Congestion Management Plan: Adopted policy, to limit VMT growth to the population growth rate. Guides further planning.	ø Evaluate progress and continue implementation..
0 Transportation Master Plan: Includes level-of-service criteria for transit, cycling, walking & automobiles; new street design standards for all modes (that will, for example, reduce traffic delay by improving turning movements); and review procedures for multi-modal traffic from new developments.	ø Evaluate progress and continue implementation.

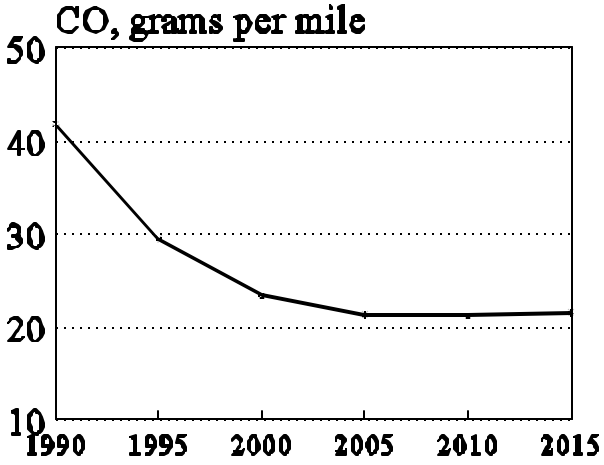
Strategies: 1996 - 1998	Strategies: 1999
1. Transportation Planning and Implementation (continued)	
0 Transportation Demand Management Program: Includes "mobility report card" to track progress, "SMARTTRIPS" marketing program for alternative transportation, employer-based transportation coordinators, VanGo, carpooling and telecommuting**.**	ø Evaluate progress and continue implementation.
0 Transit Development Plan: Plans for improved transit services and ridership.	ø Evaluate progress and continue implementation.
0 Bicycle Plan: Includes construction of bike facilities, improved design and maintenance of bike facilities, policy changes to support cycling, and active **promotion of cycling**.	ø Evaluate progress and continue implementation.
0 Pedestrian Plan: Includes improved design, construction, connectivity, and maintenance of pedestrian facilities.	ø Evaluate progress and continue implementation..
2. Land Use Planning and Implementation	
0 City Plan: Sets a vision and goals for the community to manage development so as to become less reliant on automobiles, complete with supporting principles and policies, new zoning districts, design guidelines, and City land use regulations. Includes a capital investment plan and a process for monitoring alternative transportation usage and construction of desired activity centers.	ø Evaluate progress and continue implementation.

Strategies: 1996 - 1998	Strategies: 1999
3. Internal City efforts	
0 Land Use, Transportation and Air Quality Team (LUTRAQ): Coordinates interdepartmental efforts within City planning and operations. ***0 City Don't Drive One in Five Program:*** Annual program to increase use of alternative transportation among City employees.	ø Continue. Because the size of the future population is an important determinant of future vehicle miles of travel and future vehicle emissions, the Team will work with interested City Council Boards to review population trends and population projection methods. ø Continue through SMARTTrips. Natural Resources Department to assist and coordinate air quality message with SMARTTrips program.

Objective #2: Reduce Per-mile Motor Vehicle Emissions

Current Conditions

Per-mile motor vehicle emissions* are estimated in grams per mile using a special USEPA computer model (Mobile5a), which reflects age and type of vehicle typical in Colorado, and takes into account the State inspection/maintenance and anti-tampering programs specific to Fort Collins. Improvements in per-mile emissions have come mainly from new-car emissions standards, inspection and maintenance, and oxygenated fuels programs.



***Per-mile emissions** refer to any air pollution caused by operation of a motor vehicle, and includes exhaust pipe emissions and road dust kicked up by automobile tires.

Actions

Strategies: 1996 - 1998	Strategies: 1999
1. Emissions Sticker Ordinance	
***0 Emissions Test Law*:** Adopted State emissions test law into City Code in 1994 to simplify enforcement city-wide, and to increase compliance among CSU students. Campus compliance has risen from 75% to 85%. City initiated program in cooperation with CSU Parking Services.	ø Completed.
In 1997/98, Fort Collins is participating in a NFRT&AQPC study to evaluate regional emissions sticker compliance and recommend options to increase compliance.	ø Implement recommended methods to improve compliance.

Strategies: 1996 - 1998	Strategies: 1999
2. Education on Emission Sticker Ordinance	
***0 Information Campaign*:** Conducted information campaigns on the CSU campus for last three years. Campaigns included posters, letters to campus residents, coupons for discounts on tests, warning tickets, articles in the *Collegian*, and information with parking permits. The City turned this program over to CSU the fall of 1997.	ø Completed.
3. Emissions Testing and Repair	
0 Non-Testing Strategies A citizens' committee was convened in 1997 to recommend early actions the City could take to reduce per-mile emissions. Recommended strategies are to be implemented in 1997 and 1998.	ø Report on effectiveness of strategies conducted in 1997/98. Modify strategies if needed. Continue with implementation of non-testing strategies such as public education, Tech Nights, campaigns using the Remote Sensing Device, etc.

Strategies: 1996 - 1998	Strategies: 1999
3. Emissions Testing and Repair (continued)	
***0 Improved Inspection & Maintenance (I/M) Program*:** The City participates in a "Regional I/M Committee" (formed under the auspices of the North Front Range Transportation and Air Quality Council (NFRT&AQPC)) to recommend an improved local/regional I/M program to replace the existing program which sunsets in December 2001, considering both testing and non-testing issues.	ø At the local and State level, promote new I/M recommendations that best support the City's air quality goal, e.g., build stakeholder and political support; promote the City's I/M recommendations at the State legislature.
The City of Fort Collins participates in the Colorado Department of Public Health & Environment - Air Pollution Control Division's (CDPHE-APCD) Carbon Monoxide Round Table to explore CO reduction strategies available, and to work with other communities to craft a future I/M program that is flexible enough to allow each community to pursue its air quality goals.	ø Continue participation in CO Round Table as needed.
4. Alternative Fuel Vehicles (AFV)	
0 City Takes Leadership Role: As of January 1998, the City had 103 AFVs.	ø Expand the City AFV fleet by at least 25 vehicles each year through 2001.
0 Regional Partnership - "Clean Cities" The City of Fort Collins coordinated an AFV program with Weld and Larimer counties and Rocky Mountain National Park (Weld/ Larimer/RMNP) to promote use of alternative fuels by fleets. Fort Collins was designated a Clean City by the U. S. Department of Energy in May 1996. During 1997, a clean fuels corridor committee was established with sister Clean Cities Denver and Colorado Springs.	ø Continue to coordinate the Weld-Larimer-RMNP Clean Cities partnership. Continue to track the emissions-reduction impacts of AFVs in private and public fleets in the region and throughout the corridor. Continue to work with Denver and Colorado Springs to strengthen the Colorado "Clean Fuels" corridor.

Strategies: 1996 - 1998	Strategies: 1999
5. Street Sanding and Sweeping	
0 Best Management Practices The City Streets Department continues to use the state of the art techniques to reduce particulate emissions from street sanding. All of Streets staff have formal training in particulate pollution reduction. The one quarter cent sales tax for transportation maintenance approved by voters in 1997 includes money for street sweeping enhancements. In 1998, the City will implement a joint project with Larimer County to identify and reduce UGA street dust emissions, including sweeping paved roads and paving or controlling dust from unpaved roads.	ø Continue to use advanced treatments for ice and snow control.
6. Diesel vehicles	
0 Diesel regulations A recommendation will be made to the City Manager on how to best enforce vehicle-related air pollution laws.	ø Continue implementation of recommended actions. ø Participate in Transportation Department studies that have the potential to reduce truck emission impacts in Fort Collins.
7. Signal Timing	
0 Fine-tuning of existing signal network The 1998 benchmark study will identify best practices among survey respondents for traffic signal optimization. A recommendation will be made to incorporate the best practices that are applicable to Fort Collins into the City's signal re-timing procedures.	ø Evaluate the feasibility of implementing the recommended best practices.

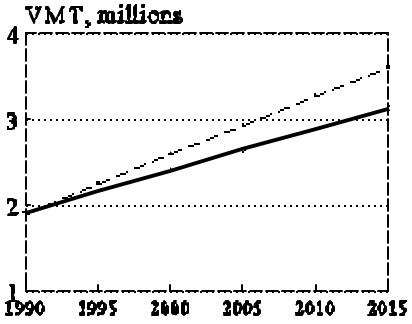
Objective #3: Prevent Total Motor Vehicle Emissions from exceeding Low Point

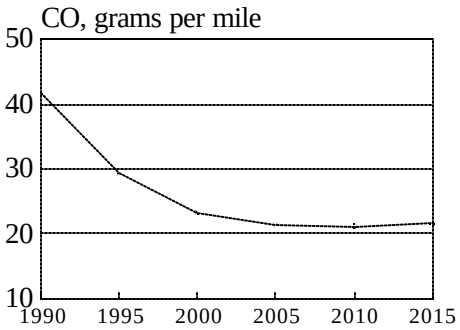
Current Conditions

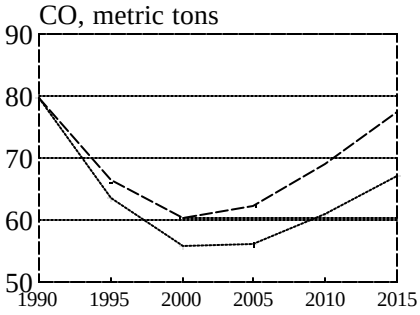
Total daily motor vehicle emissions are estimated by multiplying daily vehicle miles traveled (see Objective #1) by per-mile emissions (see Objective #2). The figures below show per-mile and total emissions of carbon monoxide in Fort Collins. Other pollutants from motor vehicles include hydrocarbons, nitrogen oxides, particulate, and toxics.

Actions

See Objectives #1 and #2







If VMT growth is reduced to 2.8% per year...

This analysis assumes that the Transportation Plan goal for VMT growth is met, dropping levels from the current 3.8% down to 2.8% per year (VMT growth rates expressed as linear non-compounded percentage).

...and if technology cuts CO emissions to half of 1990 levels...

Emissions per mile are expected to drop due to federal new car standards and state inspection and maintenance and oxygenated fuels programs, and local use of alternative fuels. If a local inspection and maintenance program is implemented, emissions will drop further than shown.

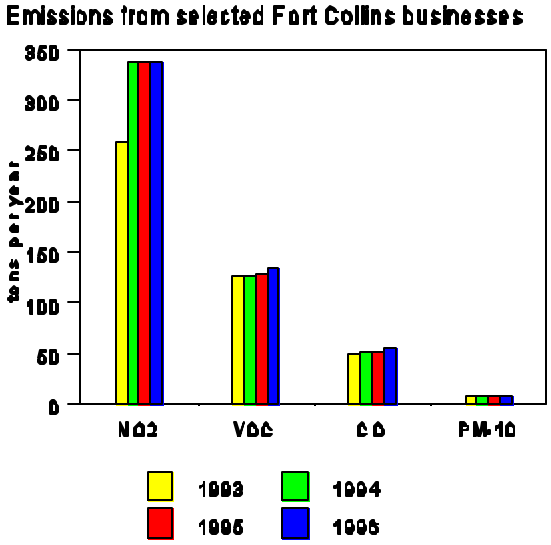
...then total CO levels will meet our objective through 2009.

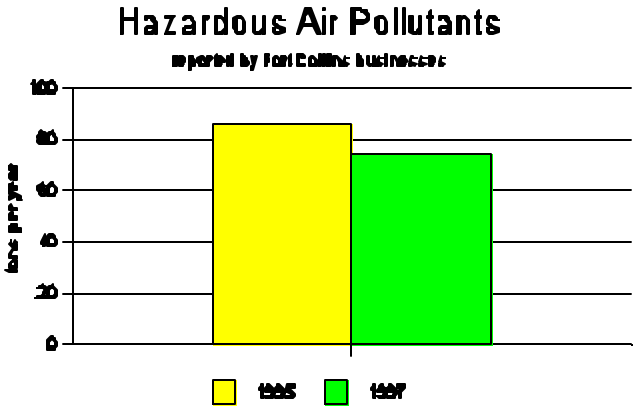
Although reduced rate of VMT growth will still out-pace technological improvements after the year 2000, we will meet our objective, shown as a horizontal line, through 2009. Stricter new car standards or a local inspection and maintenance program, if adopted, would improve this picture.

Objective #4: Reduce Total Emissions from Commerce and Industry

Current Conditions

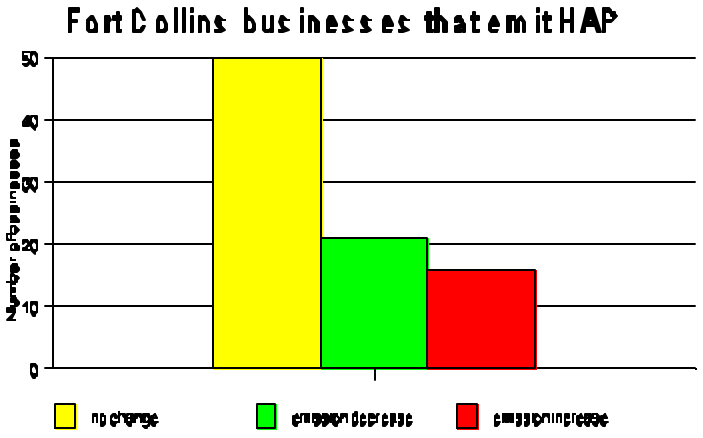
Commercial and industrial emissions are compiled in tons per day using State data in the Aerometric Information Retrieval System (AIRS). The chart at right shows emissions of high priority pollutants in tons per year. Businesses selected are: Colorado State University, Anheuser-Busch, Hewlett Packard, Poudre Valley Hospital, Fort Collins City Wastewater, and Symbios Logic.





The chart at left shows emissions of hazardous air pollutants (HAP) from Fort Collins businesses. HAP include chemicals like formaldehyde, benzene, hydrochloric acid, and hydrogen fluoride, which increase the chance of serious health problems, such as cancer and neurological diseases. Businesses that emit HAP include electrical shops, wood products shops, dry cleaners, gas stations and print shops.

The chart at right shows the number of businesses that changed HAP emissions. Decreases in HAP emissions were caused by improvements in operating procedures (resulting in emissions falling below reporting thresholds) and closings. Increases in emissions were caused by increased production at existing businesses and the inclusion of new businesses in the HAP inventory.



Actions

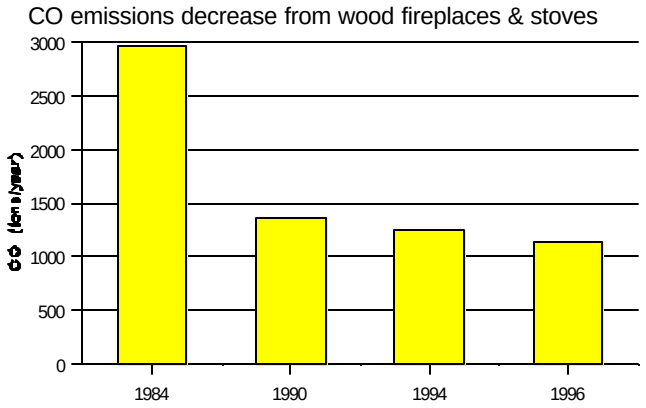
Strategies: 1996 - 1998	Strategies: 1999
1. Pollution Prevention (P_2)	
0 Voluntary Program: The P2 program fosters community-wide adoption of practices that reduce pollution, waste, and energy use at the source. Initially, the City provided supplemental funding for Larimer County's Pollution Prevention Coordinator, who has focused on the wood finishing, automotive, and hospitality sectors. As of 1998, the City has a quarter-time position dedicated to P2 community outreach. The City is a partner in a multiple-agency pilot project to provide P2 assessments at five selected businesses, and is also a charter government partner in USEPA's WasteWi$e program with a commitment to adopt and implement a waste reduction plan. The City sponsored a successful charrette to enhance networking and partnerships among P2 practitioners along the Front Range. In 1998, the City will update its "green" purchasing practices that call for the purchase of recycled products, and will also design a program to encourage P2 practices among start-up and expansion businesses.	ø Continue quarter-time staff assignment on P2 community outreach. Implement WasteWi$e reduction plan. Implement updated "green" purchasing practices. Implement program to encourage P2 practices among start-up and expansion businesses.

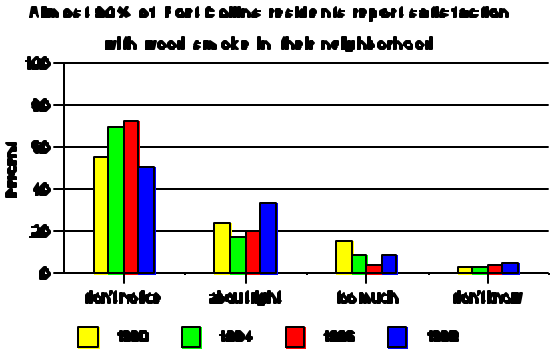
Strategies: 1996 - 1998	Strategies: 1999
2. New Source Review	
0 New Sources of Industrial/Commercial Emissions The City has begun to take an active role in the State permit review process by helping to register local sources with the State health department that are not now registered, tracking state regulatory revisions, commenting on new source permit applications, and providing citizens access to State-collected data on the location, type, and amount of point-source pollution emissions.	ø Continue to take an active role in the State permit review process.
A staff issue paper is being prepared to evaluate State new source review regulations and present options for City Council to adopt development-review requirements that go beyond the State rules. City Council action is expected by December 1998.	ø Implement development review requirements adopted by City Council.
3. Fugitive Dust	
Fugitive Dust Law Fugitive dust from land development activities is subject to three separate regulations: City nuisance code on dirt tracked onto the streets, enforced by the Engineering Department; City water/wind erosion control guidelines, enforced by Stormwater Utility; and State fugitive dust control regulations, enforced by Larimer County Health Department. These efforts are coordinated through contacts among the staff members involved. The Natural Resources Department also assists with enforcement of the State regulation by notifying land development applicants about the required fugitive dust controls and putting them in touch with County staff for follow-up.	Continue.

Objective #5: Reduce wood smoke emissions, and Objective #6: Reduce the Number of Non-certified Wood Stoves and Conventional Fireplaces

Current Conditions

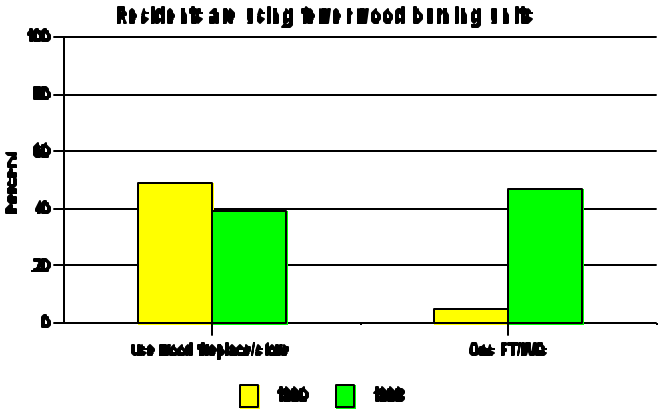
This chart shows the decline in carbon monoxide emissions from wood burning. This change is due to conversion of wood burning fireplaces to gas, the dismantling or upgrade of old, dirty-burning wood stoves to new, certified units, and a declining trend in solid fuel usage. Carbon monoxide (CO) emissions from wood burning have decreased 62% between 1984 and 1996, based on surveys of area residents.





Since 1992, the number of Fort Collins residents who are bothered by wood smoke has declined from 18% to between 8% with 92% of residents surveyed in 1998 saying wood smoke is about right or not noticeable.

Fort Collins' ZILCH program, wood smoke complaint line, and information program may be credited with having an additional effect on wood burning emissions, with a steady decline in the number of wood burning fireplaces and older, non-certified wood stoves since the program began in 1990.



Actions

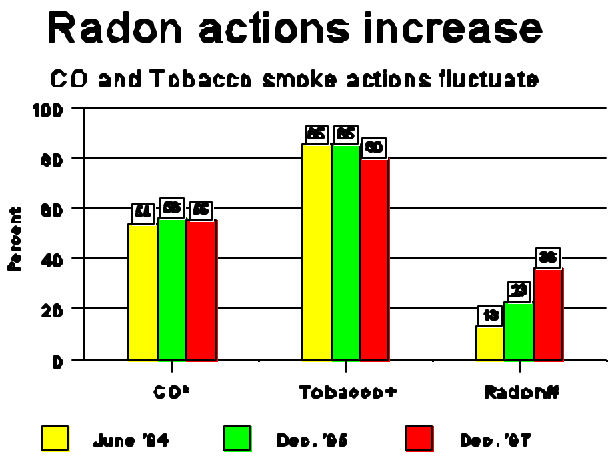
Strategies: 1996-1998	Strategies: 1999
1. ZILCH - Zero Interest Loans for Conservation Help	
0 ***Program:*** **Z**ero interest loans are provided to Fort Collins residents to help them convert wood burning fireplaces to gas, or upgrade or dismantle non-certified wood stoves to cleaner-burning, certified units. The repayment schedule and loan cap were reduced in 1996 to make payback quicker and loans more available. Over 300 wood burning units have been upgraded or dismantled since the program began in 1990. During the winter of 1997, the ZILCH program was restructured to target wood stoves and wood stove inserts where turnover is slowest and use is highest. The loan cap was raised to a maximum of $2,300 and the percentage loaned was directly tied to the amount of air pollution-reduction achieved. During 1998, a plan will be developed to incorporate radon mitigation for low-income households into the ZILCH loan program. A portion of the ZILCH money will continue to be used for wood stove/insert dismantlings and upgrades. The woodburning program will also target low-income families. A moratorium will be placed on wood fireplace upgrades. **0** ***Loan Fund:*** The revolving loan fund is capped at $90,000. Money is reloaned as it is paid back.	**ø** Implement the newly restructured ZILCH loan program. **ø** Request an additional $60,000 in the 2000-2001 budget, to bring the ZILCH loan fund to $150,000.

Strategies: 1996 - 1998	Strategies: 1999
2. Wood Smoke Survey	
Survey: A wood smoke survey was conducted in April 1996 to determine numbers of wood fireplaces and non-certified wood stoves, and to calculate wood smoke emissions and citizen attitudes. The survey instrument was updated in 1997. A wood smoke survey will be conducted in March 1998 and results will be incorporated into the 1999 Air Quality Action Plan update.	ø The next wood smoke survey will occur in 2000.
3. Clean Wood Burning Education	
Seasonal effort: The wood smoke education program runs from September through March. It encourages clean wood-burning techniques through articles in *Environmental News* and the *Fort Collins* Coloradoan, and through displays at local retailers and a traveling display.. Weekly reports on City Line and KCSU radio were discontinued in 1996.	ø Continue education program, media outreach, and articles.
4. Complaint Line	
Wood smoke complaints: The wood smoke complaint line has operated since 1989. Wood smoke complaints are addressed by informing all residents in the area of the complaint about City wood burning ordinances and proper wood burning practices. In stubborn cases, the problem residence is contacted directly, and, if needed, a smoke opacity reading is conducted by the County.	ø Continue.

Stategies: 1996 - 1998	Strategies: 1999
5. Regulations	
0 The cottonwood burning ban was rescinded in October 1996.	**ø** No further action.
0 The solid fuel-burning appliances law was upgraded in February 1997 to clarify regulations pertaining to installation of wood burning cook stoves.	**ø** No further action.
0 An ordinance requiring upgrade or dismantling of wood stoves and fireplaces at point-of-sale was proposed in 1996. Review of wood smoke concerns among residents and turnover of existing wood burning units indicated the current voluntary program was working.	**ø** No further action.
The point-of-sale ordinance will be reconsidered during the Air Quality Action Plan Update beginning in 1998.	**ø** Complete.

Objective #7: Increase Indoor Air Quality (IAQ) Actions

Current Conditions



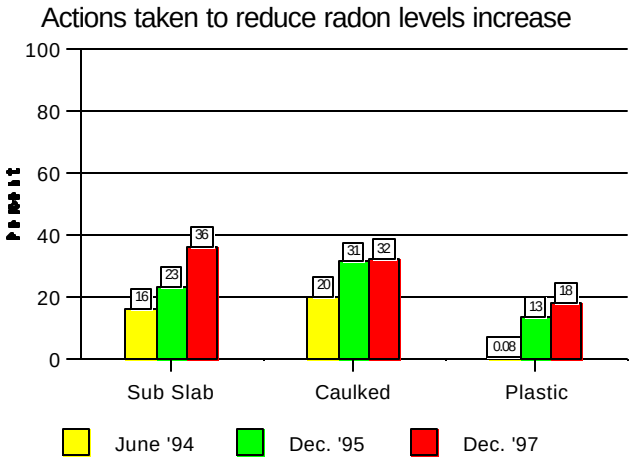
The chart at left shows actions taken by residents to reduce exposure to carbon monoxide, tobacco smoke and radon. Since the IAQ program began in 1994, it has focused heavily on radon testing and mitigation, therefore, most improvement is seen in that area.

* Residents who have their furnaces checked annually.

\+ Residents who do not allow anyone to smoke in their homes.

\# Residents who have installed radon mitigation systems in their homes after testing and finding radon levels of 4 picocuries per liter of air or higher.

Since 1994, more residents have taken action when radon levels exceeded 4 picocuries per liter of air (pCi/L), the level at which USEPA recommends action. Fort Collins and most of Colorado are in a USEPA Zone 1 radon area where natural levels tend to be above 4 pCi/L. The most effective way to reduce radon levels is to install a sub-slab soil depressurization system that draws radon gas from beneath the house and exhausts it to the outside air. Other actions, such as caulking and plastic barriers, can lower or dilute levels, but they are not as effective as sub-soil systems.



Strategies 1996-1998	Strategies 1999
1. Indoor Air Quality Issue Paper	
0 Indoor Air Quality (IAQ) Issue Paper In 1997, staff wrote an issue paper outlining "who is doing what" on indoor air quality in government and private sectors. The paper recommended an appropriate role for the City that complements, rather than duplicates, the efforts of others. Some specific problems and opportunities considered by the IAQ Issue Paper and subsequent recommendations: 1. Update of the tobacco smoke ordinance? (Participate in any citizen initiative.) 2. Institute a Pollution Prevention program for households patterned after the Master Naturalist Program? (Consider for inclusion into 2000-01 AQAP) 3. Continue to hold workshops on do-it-yourself radon mitigation? (Yes) 4. Develop a computer model of IAQ health risks by pollutant? (Being done by federal and university researchers.) 5. Discontinue IAQ strategy that focuses on the workplace? (Yes) 6. Work through neighborhood organizations to increase awareness and actions relating to IAQ? (Provide information through articles in various media.) 7. Provide public workshops on air toxics? (Consider during 1999.)	ø No further action.
0 IAQ Action Plan In 1998, staff developed an action plan based on the issue paper. New actions recommended by the IAQ paper:	ø Continue implementation.
Review Master Pollution Prevention Program during 1998/99 AQAP review	ø Continue review. **New:** Consider conducting a limited number of workshops for the general public dealing with both indoor and outdoor air pollution.

Strategies 1996-1998	Strategies 1999
Solicit the assistance of a graduate student to complete an IAQ resource list for use by businesses and individual households.	
Form an ad-hoc committee to identify the top three to five IAQ issues in Fort Collins and develop program recommendations for 2000-01 AQAP.	**New:** Establish a liaison with the state health department and Larimer County Department of Health and Environment to better utilize existing IAQ staff resources.
Establish a liaison with Poudre Fire Authority and Public Service Company to assist them in (1) taking the lead in educating HVAC contractors about carbon monoxide (CO) and (2) providing residents with information and assistance about indoor CO.	
Find alternative outlets for radon kit sales such as one or more of the City's customer service counters and/or non-profits such as the American Cancer Society and the American Lung Association.	
Encourage the state health department to seek more funding for IAQ programs.	ø Continue.
Encourage the state health department to develop registration/certification guidelines for radon, asbestos and lead-paint remediation contractors.	ø Continue.
Identify and explore ways to better address IAQ problems in rental property.	ø Begin implementation.
Continue to update radon potential mapping data until stable results are achieved.	ø Continue as needed.
Review any citizen proposal to update tobacco smoking ordinance. Participate in advisory and support role.	ø Continue as needed.

Strategies 1996-1998	Strategies 1999
2. IAQ Survey	
1 IAQ Survey: Continue biennial survey schedule. IAQ survey was conducted in the fall of 1997 to determine residents' knowledge of specific IAQ issues and whether they were taking appropriate actions to reduce exposure to indoor air pollutants. Results will be used in 1998 to re-evaluate the program.	ø Continue a biennial survey schedule. The next survey is scheduled for 2000.
3. Regulations	
1 Radon Information Law Council passed a radon law in March 1997, requiring radon risk, testing, and mitigation information be provided to all residential home buyers at point of sale.	ø Continue implementation
Council also directed staff to reconsider mandated testing at point of sale and mandated installation of radon mitigation systems in new constructions during subsequent Air Quality Action Plan biennial review. Re-evaluation will begin in 1998.	ø Complete re-evaluation.
In 1998, radon building standards for *new* constructions will be adopted into Building Code.	ø Continue to implement through building permit process.
In 1998, staff will begin working on radon building standards for *existing* constructions.	ø Complete incorporation into Building Code and implement through building permit process.

Strategies 1996-1998	Strategies 1999
4. Indoor Air Quality (IAQ) Education and Information	
0 Overall Program: Continued to inform residents and encourage actions pertaining to radon, carbon monoxide, tobacco smoke formaldehyde, lead-based paint, asbestos, and other household toxics. Three radon workshops were held in 1996: one on radon risk, testing and mitigation; the other two on radon mitigation for do-it-yourselfers.	ø Continue.
Additional Radon workshops will be held in 1998.	ø Continue.
***0 Radon--Education Committee*:** The Education Committee, made up of realtors, radon inspectors, builders, citizens and City staff, worked to increase the number of houses tested for radon by educating buyers at point-of-sale. The committee's work was completed in 1997.	ø No further action.
0 Radon mitigation in new homes: In 1997, Natural Resources staff worked with building departments in Fort Collins and Larimer County to encourage builders to voluntarily install radon mitigation systems in new homes. This will continue in 1998.	ø Continue.

Supporting Policy Directions

This section deals with two actions: (1) those that strengthen our efforts to improve air quality; and, (2) those that provide the scientific basis by which we measure our success to allow for periodic resetting of goals and strategies:

Specific activities:

1 Intergovernmental Partnerships at the state, county and city levels;

1 Data collection and monitoring; and,

0 Legislation.

Intergovernmental Partnerships

Strategies: 1996 - 1998	Strategies: 1999
1. City, County, State Government	
1 Liaisons: Liaison process will be completed in 1998 to annually coordinate air quality work plans of the City with County and State health departments, to increase effectiveness and avoid duplication of effort.	ø Continue.
2. Local Government	
0 Air Toxic Partnership: Air Toxics Partnership, including health officials from cities, counties, State and federal agencies, reviewed City strategies and programs to reduce risks from air toxics.	ø Continue to maintain network of contacts.
0 Local Environmental Government Staff: LEGS, an ad-hoc Front Range group, considered improved interaction between city, county, State and federal agencies.	ø Continue to maintain a network of contacts with staff in other local government agencies, especially along the Front Range, through groups such as LEGS, National Association of Local Government Environmental Professionals (NALGEP), the Colorado Municipal League (CML), etc.

Strategies: 1996 - 1998	Strategies: 1999
3. State Implementation Plan Update (SIP)	
0 Redesignation Status: Although Fort Collins is designated "non-attainment" with respect to the federal carbon monoxide (CO) standard, Fort Collins has not violated the Federal air quality standard for CO since 1991, and is therefore eligible to apply for attainment status. If it is decided to apply for re-designation, the application would be prepared by the City in cooperation with the North Front Range Planning Council and the State Air Pollution Control Division, and would be adopted by the Air Quality Control Commission.	ø No further action. ø The State may initiate studies to determine whether certain State regulation can be rescinded because they are no longer needed to meet federal requirements. If so, the City should participate in such studies.
4. Benchmark Study	
0 Survey During 1997, the City began working with the Air Quality Advisory Board to identify "first class" air pollution control programs, and where applicable, apply their techniques to Fort Collins. This project is expected to be completed in 1998.	ø Evaluate the potential for future benchmarking projects within the City.
5. Cities for Climate Protection Campaign	
0 Participation Join with other cities to reduce greenhouse gas emissions, mostly CO_2 from energy use. Council adopted a resolution in 1997 stating the intent to conduct an energy audit, set a reduction target, and develop an action plan to meet the target. The energy audit, reduction target and action plan are expected to be completed in 1998.	ø Implement the action plan.

Data Collection & Monitoring

Strategies: 1996 - 1998	Strategies: 1999
1. Action Plan Update (this document)	
0 Review: Review monitored data and air quality indicators. Review implementation of strategies and propose future actions.	ø Prepare 2000 - 2001 Action Plan Update.
2. Air Quality Monitoring Plan	
0 Current identified needs include: C Continue visibility monitoring, integrate visual and optical data C Special source apportionment study of PM-2.5, followed by regular PM-2.5 monitoring C Reevaluate the permanent CO and PM-10 monitoring sites C Study to determine if pollutants concentrate in valleys.	ø Continue to update the Air Quality Monitoring Plan every two years.
3. Education	
0 ***Air Quality Data Reporting****:* Report carbon monoxide, ozone, and visibility data in the *Coloradoan* and on channel 14. Air quality data is no longer reported on KCSU or City Line (the City's information help line).	ø Continue.

Strategies: 1996 - 1998	Strategies: 1999
3. Education (continued)	
O ***Improve delivery of data***	
C Use pictures, not just data, to show visual air pollution levels.	ø Completed.
C Simplify communication of air quality data and trends to increase awareness and encourage behavior change.	ø Completed.
C Publicize A.Q. actions the City takes on its own.	ø Completed.
C Survey residents biennially to determine air quality awareness, effectiveness of information program, and basis of public's concerns regarding air quality.	ø Conduct survey.
C Introduce new air quality logo and theme.	ø Completed.
C Promote *Breathing Lessons* as part of new air quality campaign to encourage residents to take action to improve indoor and outdoor air quality.	ø Continue.
4. Special Monitoring Studies	
0 Visibility Monitoring: The City's visibility monitoring includes optical (attenuation from our transmissometer, nephelometer and aethalometer) and visual (scene monitoring and time-lapse video) data collection.	ø Continue.
0 PM-2.5 (particles smaller than 2.5 µm) In 1998, the Northern Front Range Air Quality Study produced an estimated source apportionment for fine particles.	ø Determine if sampling equipment can be borrowed from the State to conduct PM-2.5 monitoring on a temporary basis.
0 Carbon Monoxide In 1998, the City evaluated the location of the permanent CO site relative to the changing traffic pattern over the next ten years, as part of the CO redesignation process.	ø No further action.

State Legislation

Strategies: 1996 - 1998	Strategies: 1999
Legislation	
Monitor legislative actions The City will continue to follow pertinent legislation and join forces with other contistituents where appropriate. We anticipate no major legislative efforts at this time.	ø Continue.