MEASURES TO REDUCE GREENHOUSE GASES FROM TRANSPORTATION

TRANSPORTATION TRENDS

As the City of Fort Collins continues to grow, the transportation system must keep up with changing demands. This is accomplished through careful planning, proper maintenance and a focus on multimodal transportation. In Fort Collins, transportation is "about" more than roads and cars. The City Transportation Services strives to keep the community bicycle and pedestrian friendly, and to maintain an environment where travel is safe and convenient.

Growth of the city has resulted in growth in the transportation network and use of it. Table 8 indicates various statistics related to population and transportation network growth.

Table 8. Fort Collins Growth and Transportation Statistics

Fort Collins Growth Management Area Data	**1990**	**1995**	**1998**
Population *	87,758	99,726	108,981
Street Miles *	327	373	403
City Area (Sq. Mi.) *	41	44	46
VMT per day **	1,914,491	2,398,614	
1998 Mobility Report Card Data* **	**1990**	**1995**	**1998**
Population		117,559	133,735
VMT per day		2,225,000	2,801,000
VMT per housing unit		45	50
VMT per employee		40	42
Bicycle Volumes at 3 locations		19	21
Pedestrian volumes at 3 locations		971	1,387
Transfort Ridership		1,056,161	1,418,469

* Advance Planning "1998 TRENDS" Report

** 1990 VMT source: North Front Range 2015 Regional Transportation Plan

** 1995 VMT Source: North Front Range 2020 Regional Transportation Plan

*** 1998 Mobility Report Card, which covers a an areas slightly larger than the City limits

A very rapid rate in the growth of Vehicle Miles Traveled (VMT) has occurred over the last three years. Increased traffic congestion is beginning to negatively impact the quality of life for many citizens in Fort Collins. The compact development patterns envisioned under City Plan are intended to prevent urban sprawl, but these new land use patterns are only beginning to be constructed.

Many of the transportation measures outlined below support existing City goals to reduce "single occupant vehicle" (SOV) trips, while others focus on increased use of fuel efficient vehicles. Both approaches have benefits of saving money for motorists because of lower fuel consumption, in addition to reducing carbon dioxide tailpipe emissions.

CITY TRANSPORTATION POLICIES

The City has adopted numerous principles and polices for transportation that support greenhouse gas reduction.

T-1. The physical organization of the city will be supported by a framework of transportation alternatives that maximizes access and mobility throughout the City while reducing dependence upon the private automobile.

T-2. Mass transit will be an integral part of the city's overall transportation system.

T-3.1 Demand Management. The City will promote travel demand reduction measures that reduce automobile trips, such as telecommuting and in-home businesses, electronic communications, variable work weeks, and flextime.

T-4. Bicycling will serve as a viable alternative to automobile use for trip purposes.

T-5. The City will acknowledge pedestrian travel as a viable transportation mode, and will elevate it in importance to be in balance with all other modes. Direct pedestrian connections will be provided and encouraged from place of residence to transit, schools, activity centers, work, and public facilities.

ENV 1.1 Air Quality Objective 1 – Reduce the rate of growth of total vehicle miles of travel in the Fort Collins Community Growth Management Area.

ENV 1.5 The City will seek to continuously reduce total motor vehicle emissions by employing strategies both to slow the growth of VMT, by providing alternatives to motor vehicle travel in single occupant vehicles, and to reduce tailpipe emissions per mile of travel.

ENV 1.10 The City will use price mechanisms of the free market to help shift citizen and business choices toward actions that reduce air pollution, including removing the hidden cost subsidies of motor vehicle users, employing economic incentives and disincentives, and other market approaches.

ECON 1.3 The City will ensure easy access to employment centers and will also develop efficient transit networks and trip reduction programs, such as telecommuting, to reduce SOV trips.

TRANSPORTATION MEASURES

One "New" transportation measure and four "Pending" transportation measures were evaluated by the Staff Technical Team and the Citizen Advisory Committee.

NEW

- Increase Awareness of Fuel Consumption, by City Department

PENDING

- Lobby for More Stringent Fuel Efficiency Standards
- Support Fort Collins – Denver Commuter Rail
- Trash Districting
- Create satellite maintenance areas to minimize Parks employee travel

New transportation measures are presented below in order of their ranking, followed by Pending transportation measures.

Increase Awareness of Fuel Consumption, by Department

Status: New Measure
Staff Team Ranking: 6th out of 12 New Measures
Citizen Committee Ranking: 10th out of 12 New Measures

Estimated CO2 Savings in 2004: 61 tons/yr
Estimated CO2 Savings in 2010: 62 tons/yr

Supporting Policy Direction:

Resolution 97-51: Section2. That as a user of energy, ….the City shall also regularly evaluate the latest technologies utilizing alternative fuels for transportation and, to the greatest extent practicable, apply such technologies to the operation of city vehicles in order to provide energy efficient transportation.

Description:

A campaign would be conducted within City departments to raise awareness about how to reduce fuel consumption and about how much fuel is consumed. This campaign would encourage employees to:

- Eliminate unnecessary vehicle idling
- Link trips or optimize routes whenever possible

In addition, Fleets would provide each department with a standard monthly list of fuel consumption and publicize the information to encourage departments to be more conscious about vehicle usage and fuel consumption.

Implementing Department: Fleet Services

Recommended Timeframe for Completion: 2010

Estimated Implementation Cost: NA

Estimated Annual Operating Cost: $2,500 (2 week/year of existing staff time to generate and distribute the monthly reports)

Potential Funding Source(s): NA

Annual Cost Savings: A 2% reduction of the forecast 2010 fuel consumption of ~320,000 gallons would result in a saving of 6381 gallons. At an estimated cost of $1.00/gallon, the annual savings in 2010 would be $6,381.

Other Benefits:

- More efficient use of taxpayer dollars.
- Fuel cost savings can be used for other Fleets Services project/needs.
- Reduced consumption of non-renewable resources.

Lobby for More Stringent Fuel Efficiency Standards

Status: Pending Measure
Staff Team Ranking: 5th out of 12 Pending Measures
Citizen Committee Ranking: 2nd out of 12 Pending Measures

Estimated CO2 saving in 2004: 22,000 tons (at 10% of the fleet meeting the new std)
Estimated CO2 Savings in 2010: 121,000 tons (at 50% of the fleet meeting the new std)

Supporting Policy:

ENV 1.5 The City will seek to continuously reduce total motor vehicle emissions by employing strategies both to slow the growth of VMT, by providing alternative to motor vehicle travel in single occupant vehicles, and to reduce tailpipe emissions per mile of travel.

Description: Combustion of fuel from vehicles is responsible for 30% of all human-caused CO2 emissions globally. In Fort Collins, the transportation sector is predicted to emit 47% of all CO2 emissions in 2010, by far the largest contributor to emissions. Increasing the fuel economy of vehicles would significantly decrease the amount of fuel burned, and thus lower CO2 emissions.

The CAFÉ (Corporate Average Fuel Economy) standards were last raised in 1975 (with implementation beginning in 1985) to 27.5 MPG for cars and 20.6 MPG for light trucks, in response to the world energy crisis in the early 70's which was triggered by the OPEC oil embargo. Since that time, efforts to raise the standards have not been successful, in part due to resistance by the auto and petroleum industries, which claim that raising fuel efficiency standards would impose an undue economic burden on society. During this decade, however, numerous sources cite that affordable technology exists to increase fuel efficiency without compromising quality or comfort.

The greenhouse gas benefits from this measure are estimated conservatively because local government has little control over the outcome of lobbying activities. CO2 savings are estimated for only a portion of the fleet (half the fleet). It is assumed that the other half would not reflect any change in fuel economy. If 50% of the fleet met improved standards (e.g. 45 MPG for cars and 34 MPG for trucks, rather than 27.5 MPG for cars and 20.6 MPG for trucks), the CO2 savings would be 120,750 tons in 2010.

Implementing Department: City Manager's Office and Natural Resources

Recommended Timeframe for Completion: by 2010

Recommended Approach for Implementation:

I. Adopt changes to the City's 2000 Legislative Policy Agenda to include language specifically authorizing work on this issue

II. Designate one individual as having the responsibility to identify relevant bills/debates, actions at the state and national legislature and draft City response to them.

III. Establish working relationships with the Colorado Municipal League, National League of Cities, the Cities for Climate Protection Campaign, and other coalitions to leverage efforts to raise fuel efficiency standards.

Estimated Implementation Cost to the City: Zero

Estimated Annual Operating Cost: $2,500 (2 weeks EXISTING staff time)

Potential Funding Source(s): NA

Cost Savings to Citizens in 2004 (if 10% of fleet meets new stds):
$ 2,700,000

Cost Savings to Citizens in 2010 (if 50% of fleet meets new stds):
$ 15,000,000

Other Benefits:
1) Cost savings to citizens
2) in 2010, Reduce Air Pollution Emissions that contribute to visibility degradation and health problems
Reduce 290.3 tons Nitrogen oxides/yr
Reduce 14.4 tons volatile organic compounds/yr
Reduce 1608.0 tons carbon monoxide/ year
Reduce 2.7 tons of sulfur oxides/yr
Reduce 24.9 tons of particulate matter/yr
Reduced consumption of natural resources, including foreign fuel

Raising national fuel efficiency standards to 45 MPG for cars and 34 MPG for light trucks would save the United States over $200 billion in petroleum costs over the next ten years, and would save American families about $590 annually, for a net savings of $60 billion per year, according to a 1998 Surface Transportation Policy Project report.

Support Fort Collins – Denver Commuter Rail

Status: Pending Measure
Staff Team Ranking: 3rd out of 12 Pending Measures
Citizen Committee Ranking: 6th out of 12 Pending Measures

Estimated CO2 Savings in 2010: 15-50,000 tons

The population of the North Front Range (including Denver) is forecast to increase by 43% between now and 2020, and employment is projected to grow by 35%. If these trends continue, traffic congestion along the North Front Range will increase until most major roads reach their capacities. The North Front Range Transportation Alternatives Feasibility Study (NFRTAFS) will study a variety of "modal" and technology options for improving transportation along the North Front Range. Four passenger rail options are being studied, with the potential of using existing railroad corridors, highway medians, or other rights-of-way.

Recommended Action: Build transportation infrastructure in Fort Collins to accommodate or improve access to potential future rail links.

A commuter rail between Fort Collins and Denver could alleviate a significant number of commuter trips, and appears to have public support.

As of May 11, 1999, 83% of survey respondents indicated they would prefer to travel by rail between Fort Collins and Denver, rather than driving or taking the bus. See the North Front Range Transportation Alternatives Feasibility Study's Web site at www.nfrtafs.org

Trash Districting

Status: Pending Measure
Staff Team Ranking: 12th out of 12 Pending Measures
Citizen Committee Ranking: 8th out of 12 Pending Measures

Estimated CO2 Savings in 2010: 292 tons

Description:
Trash collection in Fort Collins is currently privatized, with six private haulers competing to provide services. Formation of City-contracted trash districts received serious consideration from City Council in the late '90's, but the Council has chosen not to pursue the idea for now. Trash districting would provide some greenhouse gas-reducing benefits by decreasing the number of miles driven by trash trucks. In addition, a districted system would allow the City to recover some of the costs of street damage and to expand recycling programs.

Under this scenario, a City-administered "districted' system would create routes for trash trucks. The City currently has about 250 miles of streets. If we assume that each of five companies drive two trucks per day on one quarter of the street system per day, this results in a total of 195,000 miles driven by trash trucks per year. An ideal districted system would result in only one truck covering a route, rather than five. If the number of trucks on the street were reduced to 1/5 of the original number, only 32,500 miles would be driven and 162,500 miles would have been reduced. This equates to savings of 293 tons of CO2.

Implementing Department: Natural Resources

Recommended Timeframe for Completion: Council has directed that trash districting be reconsidered again in 2001 in the event that other waste diversion efforts are as effective as desired.

Estimated Implementation Cost to the City: $ 81,000
Estimated Annual Operating Cost: $ 50,000

Potential Funding Source(s): City General Fund; User fees

Annual Cost Savings: Unknown

Other Benefits
- Increased neighborhood safety
- Increased neighborhood aesthetics
- Reduced air pollution.
- Reduced damage to City streets.
- Trash hauler savings from increased efficiency
- Increased opportunity for City government to implement other waste reduction measures.

Satellite Parks Maintenance Shops to minimize Parks employee travel

Status: Pending Measure
Staff Team Ranking: 9th out of 12 Pending Measures
Citizen Committee Ranking: 12th out of 12 Pending Measures

Estimated CO2 Savings in 2010: 13 tons/yr

Supporting Policy Direction:

> **Resolution 97-51:** Section2. That as a user of energy, ….the City shall also regularly evaluate the latest technologies utilizing alternative fuels for transportation and, to the greatest extent practicable, apply such technologies to the operation of city vehicles in order to provide energy efficient transportation.

Description:
Several years ago, the Parks Department conducted an informal study to identify the amount of extra time employees spent driving from the main Parks Shop to the parks. The results were dramatic, showing that more than a full FTE was spent just driving between Eudora Park and the Parks Shop. For this reason, the Parks Department purchased land adjacent to Eudora to establish a satellite maintenance shop, but funds were not provided to develop this location into a satellite shop.

Currently, the Parks Department is developing a Districting Plan to evaluate the most cost-effective approach for minimizing travel times, taking into account future as well as existing parks. The draft plan should be completed by December of 1999.

Implementing Department: Parks

Recommended Timeframe for Completion: 2010

Estimated Implementation Cost: Unknown

Estimated Annual Operating Cost: Unknown

Potential Funding Source(s): NA

Annual Cost Savings: As an example, if one FTE = 2000 hours, then driving at 20 MPH for 2000 hours equals 40,000 miles driven. At 20 MPG, this uses 2000 gallons of fuel. Reducing the amount driven to 1/3 would save $35,000 in reduced staff time and reduced fuel costs.

Other Benefits:
- More efficient use of taxpayer dollars.
- Cost savings can be used for other Parks project/needs.
- Reduced consumption of non-renewable resources.