

**Proposed Project Applications
2012 – 2017 Transportation Improvement Program (TIP)**

I. Introduction

Background

Every four years, the Denver Regional Council of Governments (DRCOG) announces a call for projects to apply for federal Congestion Mitigation/Air Quality (CM/AQ) funds through their Transportation Improvement Program (TIP) process. These funds support local initiatives to improve air quality and reduce congestion in the Denver region. There is approximately \$10-14M available over four years in the 2012-2015 cycle to support air quality-related projects. Regional Air Quality Council (RAQC) staff proposes to submit two separate applications for funds:

- 1) Advanced Fleet Technology Project
- 2) Ozone Outreach and Education Project.

These projects are detailed below. DRCOG has developed specific evaluation criteria for scoring Air Quality Improvement projects. The scoring criteria are provided in Table 1.

Table 1 – Air Quality Improvement Project Scoring

Evaluation Criteria	Maximum Points
Diesel Emissions Reduction Projects	4
Greenhouse Gas Reductions	6
Other Air Pollution Reductions (VOC, NOx, CO, PM)	26
Cost-Effectiveness (\$/lb. pollution reduced)	26
Environmental Justice (Location of project)	3
Overmatch (beyond 20% required match)	9
Metro Vision Implementation and Strategic Corridor Focus	18
Sponsor-Related Metro Vision Implementation	8
Total	100

Goals

Governor Ritter directed the RAQC to coordinate with state and local governments to reduce vehicle miles traveled and emissions from the transportation sector. Project applications are designed to address the Governor’s directives with input from government agencies, the private sector, stakeholder groups and citizens of the Denver metropolitan region. In addition, RAQC projects will meet DRCOG’s TIP policy criteria.

II. Advanced Fleet Technology Project

This project is designed to support the goals of DRCOG’s Metro Vision 2035 Plan by assisting with the development of an environmentally sensitive and efficient transportation system that protects human health and environmental quality by achieving and maintaining ambient air quality standards.

RAQC staff proposes a \$6.1M project for an advanced fleet technology project within the seven-county Denver metro region including environmental justice areas in the region. RAQC has worked with area public and private fleets to leverage resources to implement this effort. Because regional air quality is linked to vehicle emissions, this project focuses on reducing vehicle emissions through retrofits, repairs and replacement activities. Currently, SAFETEA-LU and the DRCOG TIP process give priority to diesel retrofit projects due to their cost-effectiveness. The project will focus on criteria and associated greenhouse gas emissions reductions as well as fuel use reductions.

With the inter-agency goals stated above, the RAQC approached interested fleets in the Denver region to gauge their interest. Individual fleet requests were compiled into a large project to address the regional transportation and air quality goals. The primary reason the RAQC chose this strategy was to leverage expertise and resources to gain economies of scale and reduce costs for participating fleets. Local fleet interest is driven primarily by the sustainability goals within the respective organizations.

Proposed Project Components

Global Positioning Systems

GPS units will be installed on gasoline and diesel powered school buses, public works fleets vehicles and police vehicles. These units allow fleets to implement idle reduction strategies to reduce emissions and fuel usage and route optimization strategies to reduce emissions and VMT. Another air quality benefit for public works fleets is the ability to track street sanding efforts and reduce sand on the road to optimum levels.

Diesel and Gasoline Retrofits

Retrofit technologies will be installed on diesel powered school buses, public works fleets, private over-the-road trucks and police cars. Equipment includes diesel oxidation catalysts and idle reduction equipment.

Truck Facility Electrification Demonstration Project

Currently, trailers loaded with frozen food and other goods are parked and idle while the tractor is prepared or en route. This idling can last up to 8 hours per day. The project replaces older, dirtier diesel-only operated refrigeration units with newer, cleaner hybrid diesel/electrical units. By replacing these units with the hybrid/electrical refrigeration units and plugging the refrigeration units into the grid, no pollutants are emitted. This project is targeted to environmental justice areas.

Vehicle Advanced Repair Project

A contributor of mobile source emissions that is currently not being addressed through the area's Inspection and Maintenance Program are evaporative emissions. These emissions come from leaks in the vehicle's engine and fuel system. An effort with CDPHE will be developed to repair these gasoline powered high-emitters. Another project will be to test the utilization of an On Board Diagnostics (OBD) Project.

Electric Vehicle Demonstration Project

Area school districts and public works fleets are interested in purchasing electric and hybrid-electric vehicles and installing charging infrastructure at their fleet facilities. The RAQC will assist with the purchase of 150 electric vehicles and charging infrastructure. In addition, the RAQC will begin to promote electric vehicle purchases to the public by focusing on the environmental benefits and tax credits/rebates for these vehicles outlined in HB 1331. It is estimated that up to 3,000 vehicles will be purchased through this effort. The RAQC will also work with state and local agencies to develop public charging infrastructure across the Denver metropolitan area.

Heavy Duty Hybrid and Alternative Fueled Vehicles

Area school districts, public works fleets and private fleets are interested in purchasing hybrid, hydraulic launch assist, compressed natural gas and other alternatively fueled vehicles for transit, maintenance and trash collection services.

Budget

The table below details the type of equipment and total pieces of equipment to be purchased for area fleets. The total project is \$6.1M federal and \$1.5M local match. Local match is secured from participating fleets through in-kind resources and cash match required to implement the project.

Budget for Advanced Fleet Technology Project (2012-2015)

	Number of Units	Total Cost
GPS	1,000	\$ 500,000
Diesel/Gasoline Retrofits	1,000	\$ 1,800,000
Truck Facility Electrification Demonstration Project	10	\$ 260,000
Vehicle Advanced Repair Project	300	\$ 215,000
Electric Vehicle Demonstration Project	3,150	\$ 2,500,000
Hybrid/Alternative Fueled Vehicles	25	\$ 750,000
Project Development & Implementation		\$ 1,625,000
Total		\$ 7,650,000
Federal Request		\$ 6,120,000
Match		\$ 1,530,000

III. Ozone Outreach and Education

The RAQC has been working for the past 12 years to educate the public, local governments and businesses about ozone pollution and ways to help reduce it. Due to a new, more stringent standard set by the U.S. Environmental Protection Agency (EPA), the Denver region will require extensive regulatory and voluntary efforts to bring ozone levels down below healthy limits.

In 2005, the RAQC secured funding to launch a large-scale multi-media outreach and education campaign and has built a higher level of awareness around the pollutant over the past six summer ozone seasons. Now that the foundation for understanding has been laid, it is time to deepen the knowledge base by giving citizens the sense of urgency required for change and amend messaging to reflect an increased focus on the transportation sector.

Specific details for the project will be developed in consultation with project partners and selected consultants but an outline of the proposal is detailed below. At this time, the RAQC Board has emphasized the need for comprehensive public outreach for ozone in light of regulatory changes and the potential for significant changes in the upcoming state implementation plan (SIP). Based on data collected over the past six years, the RAQC has demonstrated the ability to manage a successful outreach program that has established an increase in awareness and behavior change among Denver residents.

These proposed initiatives, detailed below, will include transportation-related outreach, large-scale media, public and local government outreach as well as environmental education.

Public Outreach

As Geoff Anderson from Smart Growth America indicated in his presentation to the RAQC in July, public outreach is a crucial part of facilitating change in environmental behavior. Using communication as a tool to educate and inform can assist leaders in reaching desired outcomes for important issues. The RAQC recognizes the importance of such a communications effort on ground-level ozone in tandem with regulatory planning efforts to ensure that citizens, businesses and government work together to bring ozone levels down. Specifically, education connecting transportation/land use issues and air quality needs to be clarified and accurately and creatively promoted. A public education campaign surrounding these strategies will be essential for understanding and achieving a new environmental economy in the Denver area.

The RAQC has worked with its partners at the Colorado Department of Health and Environment (CDPHE) and other organizations for 12 years to educate the public about ozone pollution and has seen increases in the level of awareness throughout the Denver metro region. Although much has been done already, additional outreach is needed if desired ozone levels are to be attained into the future. This effort will build on past efforts and take the campaign to the next level with the addition of messaging that will help to close the loop on how transportation, land use, fuels and personal choices affect air quality in the region.

Inclusions:

- Paid advertising – a media buy to include TV, outdoor, radio and online advertising. Would also include production of new ads and consultants to assist with message and graphic development.
- Public relations – a concerted public relations element combining earned media, social marketing, social media, events, grassroots, traditional marketing and Spanish-language translations.
- Web site enhancements – building on the existing web structure and adding interactive features, integrate new messaging and interface with paid media.
- Partnership building – working with partners to ensure message penetration.
- Environmental education – Partner with the GO3 Project to bring ozone education into middle and high schools with a focus on environmental justice communities.

Local Government

Local governments have long been a partner to the RAQC's ozone outreach activities but new standards are pushing leaders to think outside the box. The RAQC has the ability to assist local governments in developing new policies that can have a real impact on air quality in the metro area, yet the document to guide these discussions is in need of updating. In addition, outreach will be required to make leaders aware of its existence and relationship and stakeholder building will be necessary to the success of the tools and policy efforts.

Inclusions:

- Providing tools and technical assistance to local governments to assess air quality implications of local decisions.
- Outreach to local governments – general outreach, participation in events, materials tailored to a specific area with a focus on environmental justice areas.
- SIP outreach – support for SIP measures including development of materials and participation in events or initiatives.

Transportation

Recent modeling data shows on-road mobile sources (vehicles) contribute to approximately 25 percent of the VOCs and 35 percent of the NOx in the Denver metropolitan region – the two main sources of ozone pre-cursor emissions. The RAQC and its partners aim to assist transportation management organizations/associations (TMOs/TMAs), local governments, non-profits and businesses in integrating air quality messaging into existing channels. Based on the unique needs of each organization, varying resources may be needed to achieve appropriate goals.

Inclusions:

- Transportation Demand Management (TDM) marketing and outreach – support for TMOs/TMAs, local governments, businesses and nonprofits with the focus of integrating air quality messaging.

Budget

Consulting – funds for analysis, web site enhancements, public relations and advertising firms to integrate and create campaign messaging and outreach. These levels are in line with 2010 allocations.

Paid media – a media buy to include television, radio, outdoor and online ads. Levels indicated in the table would keep the RAQC's advertising at 2010 frequency throughout the campaign.

Local government – line items would include event support, materials tailored for individual areas and a technical assistance for local governments.

Education – the initiation of an ozone pollution education program for use in area middle and high schools as well as technological enhancements to the existing program. Partnership with GO3 Project.

Transportation - support for area TMOs/TMAs, nonprofits, local governments and businesses to tailor ozone materials or support individual initiatives with regards to integration of air quality and transportation messaging.

Project Development and Implementation – resources needed to develop, manage, administrate, implement, oversee and analyze the project.

The table below details the categories for funding indicated above. The total project is approximately \$3.4M with \$2.7M federal and \$674,000 local match. Local match is secured from project partners through in-kind and cash resources required to implement the project.

Budget for Ozone Outreach (2012-2015)

Category	Total
Consulting	\$ 480,000
Paid Media	\$ 1,500,000
Local Gov.	\$ 130,000
Education	\$ 70,000
Transportation	\$ 200,000
Project Development and Implementation	\$ 995,000
Total	\$ 3,375,000
Federal Request	\$ 2,701,000
Match	\$ 674,000