
Area-Wide Rideshare Incentives

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■ Introduction

Area-wide rideshare incentives are aimed at encouraging commuters to use alternatives to driving alone to work, and encouraging employers to provide in-house programs that promote ridesharing among employees. In contrast to the chapter on Employer-Based Transportation Management Programs, this chapter focuses on state, regional and local public/private efforts and incentives to encourage employer involvement and employee participation in commute management programs. This chapter highlights three types of area-wide rideshare incentives or programs:

- (1) **Area-Wide Commute Management Organizations**
- (2) **Transportation Management Associations (TMAs)**
- (3) **State and Local Tax Incentives and Subsidy Programs**

It should be emphasized that these area-wide programs and incentives largely play a supportive or facilitative role, but one which can expand the effectiveness of employer-based transportation management programs undertaken on an individual firm or worksite basis. Most of the programs and incentives discussed here operate through employers. In other words, while some elements are directed to commuters themselves, most of the incentives and programs discussed facilitate employer efforts. Therefore, the results of these efforts are at least partially manifest in the emission reduction impacts of employer programs. To properly assess the impact of area-wide incentives, care should be taken not to double-count the ridesharing arrangements that are created through employer-based programs. Area-wide programs cause employers to do more than in their absence, but to credit the full impact of these programs to the employer could double-count employer efforts. Conversely, without employer-based programs, the efforts of area-wide programs and services would be far less affective.

It is important to understand the impetus for area-wide rideshare incentives and programs. Commute management organizations were largely an outgrowth of the two energy crises of 1973/74 and 1979. Many ridesharing agencies serving metropolitan areas were formed after the 1973/74 oil embargo. These programs largely focused on marketing rideshare options to the general public via roadside billboards and mass media campaigns. One of the greatest lessons learned from that period was the need to target employers, given their influence over employee commute and working patterns. Therefore, programs operated during the 1979 oil crisis focused their efforts through employers to better reach commuters that might be able to "pool" together or use other options to driving alone such as transit and bicycling.

The growth of rideshare programs prompted changes in state tax and vehicle regulation laws. These were often needed to remove barriers to employer commute subsidies and the use of vehicles for shared commuting arrangements. Finally, the concept of banding employers and other interested parties together in an employment center association for managing commute transportation prompted the formation of Transportation Management Associations or Organizations (TMA/TMO). Each type of area-wide rideshare incentive and program is described in detail below.

■ Description of Area-Wide Incentives and Programs

Area-Wide Commute Management Programs

Area-wide commute management organizations, also known as "third-party" ride-sharing agencies, promote ridesharing among the general public and assist employers in developing their own in-house programs aimed at inducing employees to use commute alternatives such as carpooling, vanpooling, transit, alternative work arrangements, such as flex-time, compressed work weeks, and other commute trip elimination reduction strategies such as telecommuting and satellite work centers. The concept of transportation brokerage is often used to describe commute management organizations and is inherent in the characterization as "third-party" organizations. These programs match the supply of commuter services (empty car, van and transit seats) to those in demand of such alternatives to driving alone. This is most often accomplished by offering carpool matching services, vanpool formation assistance, and the promotion of alternatives through marketing materials, staff and events.

One model of an area-wide commute management organization is a full-service commuter agency, which is joined with the regional transit operator, such as in Seattle. Another model is the commute network such as the Washington, D.C. Finders Network which joins local governments, TMAs and employer programs into a decentralized regional program.

Many area-wide programs, as mentioned above, were initially formed during the energy crisis of 1973/74. The Emergency Highway Energy Conservation Act of 1974 authorized the use of regular highway funds to establish and operate rideshare demonstration projects. Heretofore, the limited number of demonstration projects and employer programs had no dedicated source of public assistance. It should also be mentioned that the first federal agency to promote ridesharing was the Environmental Protection Agency, in response to the Clean Air Act of 1970. Of 38 early transportation control plans produced for metropolitan areas, 20 called for reductions in VMT to be achieved by ridesharing.

The FHWA's administration of the 1974 legislation produced over 100 rideshare demonstration projects in 34 states and 96 urban areas. In 1978, the Surface Transportation

Assistance Act replaced the Emergency Act and made ridesharing assistance a permanent federally funded program. The programs initiated in the 1970's were housed in state departments of transportation, metropolitan planning organizations, city or county government units, transit operations, universities, and other unique locations. Some of the programs, however, were abandoned, went dormant or were assumed by other organizations in the early 1980s.

A recent survey, performed by the Association for Commuter Transportation for the Federal Highway Administration, reveals the current status of area-wide commute management organizations and provides an inventory of the types of services provided. Of the public and non-profit entities surveyed, the primary reason for establishing the commute management program was either the energy crisis (public) or the interests of employers/local public officials (non-profit). The reasons for continuing the programs largely remains within these interests, although ordinances and air quality/growth concerns are certainly becoming important factors. The primary functions of these organizations are listed as promotion of alternatives and administration of programs, followed by matching and referral, with the third most common function listed as planning and evaluation.

Transportation Management Associations

Transportation Management Associations (TMAs), sometimes referred to as Transportation Management Organizations (TMOs), are a relatively recent institutional response to growing traffic and air quality problems in areas experiencing or projected to experience such problems. A general definition of TMAs is as follows:

"A TMA is a proactive organization formed so that employers, developers, building owners, local government representatives, and others can work together and collectively establish policies, programs and services to address local transportation problems."

The rationale behind the formation of TMAs lies in the synergy of collective action – multiple businesses banding together to address and accomplish more than any one employer, building operator or developer could do alone. TMAs attempt to solve transportation problems by providing services directly to members or by providing a vehicle for organized private sector involvement into public sector planning, decision-making, and projects. They are particularly beneficial for smaller and mid-sized employers who typically do not have the same kinds of resources as larger employers.

TMAs are as diverse as the areas and members they represent. Some are independent associations, organized as non-profit corporations and others involve existing business organizations assuming transportation management functions as part of their overall mission. Some TMAs are formed to fill a perceived void in their area, for example in a new developing suburban area where traditional transportation providers and planning functions are non-existent. Others are formed to augment existing services, especially in areas that have a base of employers active in transportation management that are looking to benefit from the synergistic aspects mentioned above.

Another distinction is policy versus service-oriented TMAs. Some TMAs concentrate on public and private sector education and advocacy. This is particularly true in areas where transportation or air quality problems are not yet acute and the TMA assumes the role of educator and facilitator. This is particularly critical in areas where a history of cooperation in the transportation area has not existed. Transportation planners, elected officials, employers and developers often bring very different perspectives to the table and the need for "learning each others lingo" and gaining an appreciation for various perspectives is critical to building partnership such as TMAs. Other TMAs, especially those in California, are increasingly providing services to member companies and to commuters in general. Services provided by TMAs can include:

- Ride matching services for carpools;
- Inter-company vanpool formation;
- Facilitating employee transportation coordinators networks;
- Operating a guaranteed ride home program (Reference Chapter on Employer-Based Transportation Management Programs);
- Surveying member employees and performing transportation audits;
- Operating activity center shuttle bus services;
- Coordinating alternative work hour programs; and
- Producing informational materials.

Most TMAs assume roles of both educator and service provider, and often the mix of roles evolves over time. TMAs tend to progress through several steps before becoming a mature, fully-operational service provider:

- (1) Initiation of the Idea – prompted by a real problem facing an activity center or the conviction of an opinion leader.
- (2) Appraisal of the Local Situation – performing a needs assessment to determine the role of transportation management programs in solving specific problems and of a TMA as the implementation mechanism.
- (3) Public and Private Sector Education – learning each others language and unique perspectives from which to build an action-oriented partnership.
- (4) TMA Start-Up Activities – formalizing the need for a partnership into a TMA by structuring the organization, its funding, membership and staffing.
- (5) Ongoing TMA Service Provision – providing a range of services to members and commuters and monitoring program results.

In describing the average TMA (a difficult task given the diversity), it is a non-profit (501-C-4) corporation with 10 to 30 members and an 8 to 15 member board of directors. The average staffing level is 1.5 full-time equivalents working with an average budget of \$141,000 per year. The cost per member employee to operate the TMA ranges from \$1.00 to \$18.00 per year. Finally, the start-up time necessary to move a TMA from concept to mature operation is 2 to 3 years. Recent mandates for employer participation in trip reduction programs (see chapter on Trip Reduction Ordinances) and public sector seed funding programs have put pressure on newer TMAs to become fully operational faster, but the evidence shows that patience is a key factor in TMA formation.

A recent study by the Urban Land Institute (ULI) provides an inventory of TMAs throughout the U.S. as of 1989. The ULI's TMA survey revealed a total of 72 associations throughout the U.S. (not counting business organizations that perform TMA activities). Twelve were classified as fully operational, 22 in a start-up mode, and the remaining 38 classified as organizing. Seed funding programs in Massachusetts, New Jersey and California have accelerated the TMA formation process, and indeed a total of 50 TMAs can now be found in California alone. While the majority of TMAs are in California or the Washington D.C. metropolitan area, TMAs can now be found in at least 16 states.

Finally, it should be stressed, as is the case with many of the area-wide incentives discussed in this chapter, that TMAs are not transportation management techniques in and of themselves. TMAs and other such partnerships are implementation mechanisms intended to create more effective individual programs supported by member employers, building owners, developers, public agencies, etc. TMAs prompt employers to offer services and incentives to their employees above and beyond those which they would provide in the absence of an association. However, the act of simply organizing a partnership does not, in and of itself, reduce trips and, thus, TMAs might be more properly considered a transportation management implementation mechanism than a trip reduction strategy per se.

State and Local Tax Incentives and Subsidy Programs

State, regional and local governments can also provide incentives to employers and commuters by offering tax incentives for participating in a ridesharing program, providing exemptions for shared ride arrangements, and by providing subsidy programs to facilitate new vanpools, transit ridership or carpooling.

Tax Incentives

A few states, notably California, offer tax incentives to employers who institute ridesharing, bicycling, and similar programs for their employees. In some cases, the tax incentive is a deduction, but the incentive also can be offered as a tax credit or accelerated depreciation of facility improvements. This is a means to prompt employers to finance in-house programs and especially to fund capital needs, e.g. vans, bus shelters, and showers and lockers for bicyclists. Many states have also brought their state taxation laws into line with the Federal Tax Reform Act of 1984 and 1986. Federal tax

codes allow employer-provided transit passes or subsidies worth up to \$21 to be non-taxable to the employee. Unfortunately, any employer-provided benefit above \$21 renders the entire amount taxable income. Employer-provided ridesharing and vanpooling subsidies are fully taxable according to the current tax code. Alternatively, employer-provided free parking is not taxable. While the \$21 exemption may encourage employer subsidization of transit, the inconsistencies and administrative burden of the taxation policy still provide a barrier to employer involvement.

State Exemptions

Most states regulate "common carriers" in order to protect the public from unsafe or unscrupulous transportation providers. When ridesharing became popular in the 1970's, many states modified their regulations to exempt shared ride commuter vehicles from many of these regulations. In some cases, this meant exempting these vehicles from the laws pertaining to charging passengers fares. This was generally clarified to exempt fares that recoup operating costs only. Other reforms extended and clarified safety regulations pertaining to vanpools and subscription buses or buspools. Additionally, state legislation was sometimes needed to clarify insurance and liability issues. For example, employer-sponsored vanpools are often exempted by worker's compensation law, on the assumption that the employees are not yet "on the clock" when commuting.

State and Local Subsidy Programs

A review of state tax and subsidy incentive programs revealed that the subsidy mechanism is far more popular than the former. Some of the reasons include the unpredictable nature of tax incentive revenue impacts and the flexibility inherent in subsidy programs. State subsidy programs most often involve vanpool formation, but some states subsidize innovative programs, such as TMAs, guaranteed ride home, and other programs operated by employers or public/private partnerships.

A good example of a state subsidy program is the one that was developed in Connecticut. The Connecticut Department of Transportation (ConnDOT), the Federal Highway Administration and a non-profit ridesharing brokerage firm designed a project where the state acquires vans using interest-free financing, which are then marketed for sale by rideshare organizations. The public-private partnership began with the initial program design put together by public and private sector representatives. Cooperation is also required for marketing and equipment purchase. By allowing presentations at their facilities, companies facilitate the formation of vanpools. During the first program year (1983), 27 vanpools serving 286 persons were formed. Ten of those were run by four Connecticut employers. About 178 fewer autos were on the road, and vehicle miles traveled were reduced by about 11,900 miles per day. As of February 1986, 728 commuters have been served with 65 vanpools. About 455 autos have been removed from Connecticut roadways during daily commuting times and vehicle miles traveled are being reduced by 27,083 miles/day.

Local subsidy programs might involve vanpool formation assistance, transit pass matching subsidy programs for employers, or TMA matching seed funding. Since local and regional governments have less taxing powers over employers and commuters than

the state or federal government, subsidy programs also seem the most popular. It should be stated, however, that except for rideshare vehicle exemption legislation, very few tax incentive or subsidy programs exist nation-wide. It is far more common for state and local governments to support public sector programs, like commute management organizations, which in turn assist employers in developing in-house programs and market to the general public.

■ Case Study Examples

Los Angeles, CA

The Los Angeles area provides perhaps the most comprehensive set of activities undertaken by state and local organizations to promote commuter ridesharing. Los Angeles provides examples of the nation's largest and oldest third-party commute management organization, several well-established TMAs, and the existence of state and local tax incentive and other programs to encourage employers to participate and relieve specific barriers to commuter rideshare programs.

Commuter Transportation Services, Inc.

Commuter Transportation Services, Inc. (CTS) is located in Los Angeles, California and has a stated mission of improving commuter mobility. This is achieved by applying the best human, technological, and other resources through a partnership of business, government, and individual actions to make the commute easier, more convenient and less costly. Principal benefits of CTS' work include relieving traffic congestion, improving commuter access to employment, improving air quality and conserving energy.

Commuter Transportation Services (also once known as Commuter Computer) is a private non-profit company founded in 1974, funded primarily by the California Department of Transportation (Caltrans) and the counties of Los Angeles, Riverside, San Bernadino and Ventura. Important contributions are also made by the City of Los Angeles, some of the 1,800 businesses, and over 3,600 worksites served.

Employee transportation and commuter matching services are offered as a public service. CTS works through employers and designated company coordinators to promote ridesharing among employees. CTS also assists "unaffiliated" commuters via an on-line telephone matching system. The organization provides matchlists to employees, "master" lists to coordinators, and processes commute data into commute management plans for each primary employer client. CTS also provides employers and commuters with transit information and vanpool vendor information.

CTS also promotes other supportive transportation strategies among employers, developers, local government and other groups. For example, CTS coordinates a TMA Roundtable and numerous Employee Transportation Coordinator (ETC) networks. The

organization promotes sound program planning through a series of pamphlets on parking management, developer programs, TMAs, etc. Finally, CTS researches and disseminates information on new strategies, such as Guaranteed Ride Home and Telecommuting.

Approximately 250,000 commuters are registered with CTS. Over 120,000 commuters are currently sharing rides as a result of registering with CTS or through contact with other ridesharers that have been served by CTS. Assuming that some 3 million commuters travel every day in the region, and 14.5 percent carpool or vanpool, then CTS claims responsibility for 120,000 of the 435,000 daily ridesharers, or 28 percent of those sharing a ride. However, it should be remembered that many of these carpoolers are also responding to ridesharing programs and information provided by their employer and this statistic should be viewed in light of both the employer and CTS influence on ridesharing.

According to CTS, an individual can save as much as \$2,000 per year by riding with one other, depending upon the frequency and length of the commute. These savings are primarily in gasoline, vehicle wear and tear, auto maintenance, tolls, and parking. CTS reported the cost for placing an individual into a ridesharing arrangement is approximately \$120.00.

Nearly 340,000 individuals have been placed into ridesharing arrangements by CTS since its inception. Ridesharers have saved more than \$800 million in transportation expenses, prevented over 80,000 tons of air pollutants from being produced, reduced over 2.8 billion vehicle miles during peak commute hours, and conserved more than 155 million gallons of gas. During the last quarter of FY 1989/90 (April-June 1990), CTS placed over 10,000 commuters into car-, van-, and buspools for a VMT savings of 160 million miles. It should be remembered, however, that CTS is by far the largest and most comprehensive commute management organization in the U.S. While the existence of a mandatory rideshare regulation in some of the counties served by CTS has enhanced CTS' role as a ridesharing facilitator. CTS does illustrate the integral role that a commute management organization can play in promoting and maintaining the use of alternative commute modes.

Warner Center Transportation Management Organization

Warner Center is located in the west San Fernando Valley, 25 miles from downtown Los Angeles. It is a 1,100 acre master-planned community with several large employers, multi-tenant office buildings, retail centers, and high and low density residential development. Over 40,000 employees work in Warner Center with 50,000 projected by build-out in 1995. In 1982, several of the largest employers and landowners established the Warner Center Association. This group operated transportation management programs, a day care facility and several other functions. That effort, supported by Commuter Transportation Services and the City of Los Angeles, formed over 100 carpools and 12 vanpools. Additionally, the City of Los Angeles passed an "interim control ordinance" in Warner Center establishing a \$600 fee for each trip generated by new development in the p.m. peak hour.

After the passage of Regulation XV (reference chapter on Trip Reduction Ordinances) in December of 1987, the Warner Center Transportation Management Organization (WCTMO) was formed in 1988 and incorporated in 1989, largely as an outgrowth of the efforts of the Warner Center Association. A full-time staff and office was established and services developed. As of 1990, 22 employers and developers belong to the TMO, representing 28,000, or 70 percent of the center's employment. Services include:

- Assistance in complying with government regulations;
- Assistance with developing employer programs;
- Coordination of center-wide promotional events;
- Provision of on-site, on-line carpool matching;
- Establishment of more frequent and direct transit service to the center by local transit operators;
- Coordination of Employee Transportation Coordinator network;
- Administration of vanpool/buspool subsidy program (both state subsidy program and city funding from developer fees);
- Administration of guaranteed ride home program;
- Establishment of a bicycle club;
- Distribution of bus passes; and
- Establishment of a private commuter bus service.

The results of these efforts have paid-off quite handsomely. An 1987 independent survey of employees in Warner Center, who worked for members of the Warner Center Association was compared to an WCTMO survey of member employees. The mode split proportions are:

	1987	1989
Drive Alone	84.0 percent	75.0 percent
Carpool	9.7 percent	16.0 percent
Vanpool	2.2 percent	4.0 percent
Other	4.1 percent	5.0 percent

The WCTMO reports having placed over 1,000 new carpoolers, 990 new vanpoolers in 71 vans and recruited 280 new public transit riders. Finally, the indicator driving the air quality requirements, average vehicle ridership (employees/vehicles) increased from 1.15 in 1989 to 1.34 in 1990.

These statistics need to be viewed in a certain light to fully appreciate the role of the TMA. Natural forces and the in-house efforts of employers contribute significantly to the increases in carpooling and vanpooling. However, the WCTMO administers programs that employers and commuters can only access through the organization, such as certain vanpool subsidies and the guaranteed ride home program. Additionally, the WCTMO is largely responsible for carpools and vanpools that were arranged among workers from different companies, through their matching and coordination efforts.

State and Local Tax Incentive and Subsidy Programs

California is one of the only states to have a comprehensive set of tax incentives in place to benefit employers and employees who participate or establish rideshare programs and arrangements. These "State Rideshare Tax Incentives" were enacted in 1988 and 1989. During the state's tax law changes in the mid-1980's to bring the state consistent with the Federal Tax Reform Acts, these incentives were abolished, having been established as part of earlier legislation. After considerable input from employers and interested agencies, California reinstated many of these provisions, retroactively, to allow for various deductions and exclusions from personal and corporate taxes. These employee and employer rideshare provisions include the following:

Employee:

- A personal exemption of rideshare costs from gross income for vanpooling, buspooling and mass transit use; and
- A tax credit for non-employer-sponsored vanpool expenses.

Employer:

- A deduction for the following allowable expenses;
 - Vanpool subsidies
 - Transit pass subsidies
 - Preferential parking
 - Facility improvements
 - Providing company vans or buses
 - Transportation allowance
- An accelerated schedule of depreciation for facility improvements;
- A tax credit for purchasing vans (higher credit for smaller firms);
- A tax credit for leasing vans; and
- Limitations on provision of free-parking as a tax-free incentive.

Additionally, several state and regional rideshare subsidy programs are in place in southern California. The state offers a vanpool subsidy program for employers, TMAs, and individual groups of commuters to help underwrite the purchase of leasing costs of

new vanpools. Additionally, the City of Los Angeles offers a subsidy of \$5 per month per employee for firms with less than 100 employees. For firms with over 100 employees, the city requires that if the employer offers free or subsidized parking to employees, it must also offer to subsidize \$15 toward the monthly cost of a transit pass.

Montgomery County, MD

Montgomery County is located between the Metropolitan areas of Washington, D.C. and Baltimore, Maryland. This high growth county experiences high levels of traffic congestion and worsening air quality. The county government operates the area-wide commute management organization, Montgomery County Rideshare. Additionally, several existing and emerging TMAs exist within the county, including the Transportation Action Partnership in the growing North Bethesda area. Finally, while the State of Maryland does not offer tax incentives or subsidy programs for employers or ridesharers, Montgomery County itself has some innovative subsidy programs. Each is discussed below. In addition, Montgomery County has a very innovative, progressive, and comprehensive growth management program, which includes an adequate public facilities ordinance.

Montgomery County Rideshare

Montgomery County offers one of the most innovative, full service ridesharing networks in the nation, placing an average of 240 commuters a month into carpools, vanpools, and transit. Because ridesharing also leaves the roads less congested, provides increased development potential for the county, reduces government expenditures on road maintenance, and improves air quality, as well as benefitting local residents and companies, the Montgomery County Department of Transportation Ridesharing Unit and affiliated programs have been set up to provide free ridesharing assistance to area employers, residents, and employees. The assistance takes a number of forms. The Unit and its affiliates work with employers to help them develop successful ridesharing programs. They provide free matchlists of people with similar commuting origins, destinations, and times, to those who request them. The county also operates a transit system, Ride On, which serves as an intra-county circulator and feeder to the Washington area Metro bus and rail system.

The County DOT's Ridesharing Unit administers the Fare-Share program which makes mass transit passes available to employers at a substantial discount provided that they then sell them to their employees at an additional discount. The Unit also administers a program which provides a \$200 per month initial subsidy to new vanpools that meet certain requirements. Montgomery County DOT, in partnership with the private sector, operates seven programs that furnish personalized assistance to employees and residents of the county. Montgomery County offers assistance to employers who are willing to create a program tailor-made to the employer's needs. Some examples of assistance include:

- **Presentations to Management** which gives facts and figures on company costs and expected benefits, case studies of local experiences, specific action plans to promote ridership.
- **Presentations and Campaigns** include "Ridesharing Days" displays, posters, banners, balloons, brochures, and slides.
- **Technical Assistance with Program Development and Execution** offer consultation; sample materials; referrals; matchlist application production, distribution, and processing; response to employee questions or management requests, one-point-of-contact with county for transportation matters.

Many Montgomery County employers actively participate in ridesharing programs. Some activities undertaken by area employers are:

- Appointing an Employee Transportation Coordinator;
- Reserving a few of the best parking spaces for ridesharers;
- Setting up a display stocked with transit schedules;
- Opposing rideshare posters;
- Hosting ridesharing days for employees;
- Publicizing ridesharing in a company newsletter;
- Paying for emergency cab fares for ridesharing employees, i.e., guaranteed ride home (GRH);
- Joining Fare Share and providing discount employee transit fares; and
- Distributing matchlist applications "desk-to-desk".

Some results of these employer rideshare programs aided by Montgomery County are as follows:

• Employee Transportation Coordinators appointed	510
• Employee presentations or "Ridesharing Days" held FY89	240
• Active matching applicants	8,100
• Operating pools formed and assisted	1,790
• Transit riders placed by county offices FY90	400

The county suggests other avenues for employers to participate and suggests innovative transportation solutions which has been titled "Keep Montgomery County Moving Committee." This active group of business and civic leaders meets with Montgomery County Department of Transportation officials and has developed a host of innovative concepts to insure the mobility of Montgomery County:

- Neighborhood subscription shuttles;
- Custom maps of transit service for builders and developers Fare Share for employers;
- School Share for high schools;
- Realtor's Transportation Kit for real estate offices;
- Adopt-a-shelter (bus shelters) Program;
- Chamber of Commerce Transportation Programs; and
- Outreach to new residents through "Great Connections" brochure.

Transportation Action Partnership of North Bethesda, Inc.

The Transportation Action Partnership (TAP) was incorporated in February 1987 as a voluntary, non-profit partnership of the local community and county government. TAP was formed to improve the ease of traffic within and through North Bethesda, a suburb of Washington, D.C. and a rapidly growing sector of Montgomery County, Maryland.

The organizational structure of TAP's members consists of area employers, private developers, commercial property owners, public sector agencies, and other private and public individuals and organizations with an interest in the commercial viability and quality of life in the area. As of April 1990, TAP had 33 members and just opened a position for a part time assistant to the director. TAP is governed by a Board of Directors whose 10 members are elected at the Annual Meeting from the TMA's private sector membership.

TAP's goals are to minimize access to, and optimize mobility within, the service area for those who reside, work, shop, and commute there. TAP's short-term goal is to develop a program of joint private/public sector activities to improve current mobility within and through the service area, within the existing constraints of area infrastructure and current policies on growth and development.

TAP offers a variety of services. It promotes local transportation services including rideshare matching and transit information. It develops and promotes new transportation services and publishes the Transportation Service Directory, Commuting Alternative Manual "how-to" handbook for area employers, and bimonthly TAP newsletters to inform members of activities and local transportation concerns.

TAP participates in a continuing cooperative county planning process designed to monitor traffic conditions, infrastructure development, land use, and commuting patterns in the service area. The results of this process are used to identify critical needs and problem areas and recommend appropriate public and private responses.

State and Local Tax Incentive and Subsidy Programs

Montgomery County also operates several innovative subsidy programs for both county employees and all county employers and their employees. It should be remembered that unlike most areas of the country, Montgomery County is the primary government entity, controlling land use, transportation, and schools. Individual cities and towns have far less power and do not have taxation authority. Since the State of Maryland does not have any state-wide tax incentives or subsidy programs, Montgomery County has determined that county-operated subsidy programs are the best means to offer incentives to employers and employees alike for the promotion of commute alternatives.

One county program is called the Government Employee Transit Incentives (GET-IN). It offers \$15 monthly discount for switching from driving alone to either public transportation, Maryland Commuter Rail (MARC) service, or vanpooling. In order to become eligible for the GET-IN program, employees turn in their parking permits and receive a GET-IN membership card.

In addition to this financial benefit, there is a Guaranteed Ride Home (GRH) Program. Vanpoolers, carpoolers and transit riders who need to leave work unexpectedly in an emergency are eligible to receive a refund of their taxi or transit cost. The emergency taxi or transit fares are paid by the employee's department using the County Government's petty cash procedure. Reimbursement occurs after supervisor approval. A survey of carpoolers, vanpoolers and transit riders revealed that during the 12 months of 1988, three individuals out of 300 eligible employees used the GRH incentive at a total cost to the county of \$135.

In terms of subsidy programs available to all county employers, Montgomery County also offers a vanpool subsidy program. The county will help organize new vanpools and refer potential riders. The driver can ride for free and have personal use of the van at a small mileage charge. The county also has two vanpool programs set up, one for leased vans and the other for owner-operated vans and it offers information to the operator on the proper insurance and registration needs. The county offers a total of \$2,100 in vanpool payment subsidies scheduled over 18 months. Since the program's inception, 22 vanpools have taken advantage of the program.

Many times these vans can be set up by the employer as in Louisiana Land and Exploration. This 325 employee company placed 59 percent of their employees into the vanpool mode using 21 vans. The incentive behind their program is that the vanpool costs each participant \$5 to \$10 dollars a month depending on proximity to work, while a single occupant vehicle parking cost is \$4 to \$10 a day.

Montgomery County's Fare Share program involves the county selling various fare media to employers at a discount if they in turn sell the transit passes to their employees

at a matched discount. For example, if a \$20 Metrorail farecard is sold to the employer for \$15, it is, in turn, sold to employees for \$10 or less. A total of 2,800 employees currently participate and, of these, 1,400 are new transit riders.

■ Program Impacts

Transportation Impacts

Most of the incentives and programs discussed here are largely supportive of employer programs of the type described in the chapter on Employer-Based Transportation Management Programs. Therefore, to correctly evaluate the impacts of commute management organizations, TMAs, and state/local incentives the additive impacts of these programs above and beyond those of employer programs need to be estimated.

Presented here are the self-reported or estimated transportation impacts in terms of mode shift or vehicle miles of travel (VMT) reduction. As previously discussed, TMAs are transportation management implementation mechanisms and not a direct trip reduction strategy in and of themselves. Therefore, TMA effectiveness is also manifest in the impacts reported by employers. In fact, the only comparative evaluation performed to date reports on the drive alone mode share and changes over time. For five TMAs, the data show that the percentage change in the drive alone rate, since the first survey was taken, ranged from -5 percent to 13 percent, producing some very confusing results (Data from Pleasanton, San Ramon, Contra Costa, Walnut Creek, and Irvine CA as reported in Dunphy and Lin, 1990). This is largely because a host of other programs and exogenous events were taking place at the same time that the TMA was operating. Similarly, data show that the drive alone rate was 6-7 percent lower at firms that were members of the TMAs versus employers in the city not affiliated with the TMA. However, local traffic mitigation ordinances, a few strong individual employer programs within the TMA, and exogenous variables may explain these differences more than does the existence of a TMA.

Finally, the limited existence of state and local tax incentives and subsidy programs also largely support employer programs. However, some program elements provide for eligibility among unaffiliated groups of commuters. For example, the Connecticut vanpool acquisition and interest free loan program had resulted in 65 new vanpools with 728 commuters. These vans, over half of which were not affiliated with a single employer, reduced over 450 vehicle trips and reduced over 27,000 vehicle miles of travel daily.

Estimating the overall impacts for commute management organizations (acknowledging the potential for double counting with employer programs) largely relies on the self-reporting of the organizations themselves and some national comparative analyses from the late 1970's and early 1980's. Each source of data has inherent problems. The self-reported statistics are sometimes self-serving as area-wide rideshare organizations tend

to credit any changes in commuting behavior to their efforts. The comparative data is largely based on programs that operated during the energy crises, and the environment for ridesharing has changed dramatically since then. First, during the energy crises, ridesharing was "sold" as a means to save costs and cope with limited gasoline supplies. Since then, fuel prices have generally dropped relative to the cost of living (acknowledging the 1990 crisis on the Saudi Peninsula) and, not surprisingly, the mid-1980's witnessed a significant decline in ridesharing. Demographic pressures for suburbanization of jobs and the changing composition of the family made driving alone the only viable alternative for most commuters.

However, in the late 1980's and early 1990's, ridesharing became a renewed alternative for several reasons. Tremendous economic growth in many urban areas brought with it traffic congestion and concomitant air quality problems from mobile sources. Given that traditional transit arrangements did not serve or could not serve suburban employment and residential concentrations, ridesharing, especially carpooling and vanpooling, is once again becoming more popular. The growing reliance on employers to affect mobile sources, manifested in trip reduction ordinances, has created a resurgence of ridesharing interest and a renewed role for commute management organizations. The operation and performance of these entities is somewhat different than that analyzed in the late 1970's and early 1980's.

Mode Share

The impact of area-wide rideshare programs on mode share (the proportion of commuters in various modes: drive alone, carpooling, transit, etc.) reveals that the market penetration of most commute management organizations is relatively limited and therefore the impact on area-wide mode share is limited or unclear. These organizations tend to work with an area's largest employers and while these firms represent a significant number of area commuters, the vast majority of commuters do not work for employers that utilize the services of these organizations. Clearly, the employees working for firms that work with the commute management organizations tend to use non-drive alone alternatives more than the general population. For example, the comparative mode split for CTS client employees versus the general population reveal this finding as shown in Table 1.

In summary, 28 percent of CTS client employees tended to use commute alternatives to driving alone as compared to 21 percent of all commuters in southern California. This compares to 1982 data from five cities (including Los Angeles) analyzed as part of the National Ridesharing Demonstration Program evaluation. That analysis showed that 26 percent of commuters who worked for firms that were in contact with the rideshare agency used commute alternatives, as compared to 18 percent for employees of those firms with no contact and 20 percent for all employees. This same study concluded that the area-wide impact was limited as only 2-3 percent of existing carpoolers credited these programs with directly assisting them in their shared ride arrangement and another 8 percent credited their employer's in-house program. Therefore, over 80 percent of carpoolers began sharing a ride as a result of more informal means.

Table 1. Primary Transportation Mode

Mode	CTS Client Employees (1987) Percent	Area Commuters (1989) Percent
Drive Alone	72.0	79.0
Carpool	16.0	14.0
Vanpool	1.0	0.5
Bicycle/Walk	1.0	1.0
Motorcycle	1.0	0.0
Public Bus	8.0	4.0
Private Bus	0.0	0.5
Other	1.0	1.0

Again, it should be noted that the data were collected at a time when ridesharing was at a low. Most ridesharing was likely occurring based on the personal needs of individual commuters. The predominant suburban employment patterns, coupled with two-worker households and mandatory employer participation are starting to create new markets for ridesharing. CTS' services are in tremendous demand by employers and the key question may become how many ridesharing arrangements would fail or how many more vehicles would be on the road in the absence of area-wide commute management organizations. (Until Fall 1990, CTS had the benefit under the Regulation XV Trip Reduction Ordinance of being the only entity other than the employer themselves who was approved by the regional air quality district to process employee surveys, a required element of Regulation XV compliance. Since that time, a number of other organizations and methods (computer programs) have been approved to perform this compliance requirement of Regulation XV.) How much higher would the area's drive alone share be in the absence of an organized program to assist employers and commuters? The answer is clearly speculative, but makes an argument for considering these programs as insurance policies against additional traffic or as a program that is key to maintaining the existing proportion of commuters using alternatives.

VMT Reduction

CTS has estimated a vehicle miles of travel (VMT) savings of 2.8 billion daily miles among the 340,000 commuters that CTS has placed into ridesharing modes since its inception in 1974. In 1989, CTS reported an annual VMT reduction of roughly a half a billion miles. Unfortunately, most of the comparative data on VMT, especially data that estimate the area-wide impact of reducing VMT, is based on data from the 1970's.

In 1975, a U.S. DOT report made an estimate of the VMT reduction potential from area-wide carpool programs. This study projected that it was reasonable to assume that 20-40 percent of an area's work force could be exposed to carpool programs and related incentives. Of those exposed, 10-25 percent would form new rideshare arrangements. Given these two assumptions, the range of total VMT reduction would be 0.5-2.0 percent and the range of work trip VMT reduction would be 1.5 to 7.0 percent. Another forecasting exercise estimated that if all large employers promoted ridesharing in an area, work trip VMT could be reduced by 6.6 percent, non-work trip VMT would increase by 1.4 percent due to a vehicle left at home, and an overall VMT reduction of 1.7 percent for all travel. This last assumption is important to air quality plans for ridesharing as new, complex trip chaining patterns and use of a vehicle left at home may skew the VMT reduction projections made for employer-based transportation management programs.

Actual VMT reduction, estimated from 15 area-wide programs operating in 1977, was 0.05-0.28 percent for all travel and 0.14-1.0 percent for work trips. These estimates were inflated to account for indirect impacts of commuters who are indirectly influenced to rideshare, but the results are still less, on average, than those forecasted by the earlier U.S. DOT study. In fact, the Los Angeles data from 1977 showed that the 40 million mile reduction in VMT accounted for 0.07 percent of all VMT and 0.2 percent of work trip VMT. The difference between the forecasted and the actual reductions likely is due to the inability of many programs to penetrate the commuter market by failing to work

directly with a significant proportion of employers in a given area. Again, this may be very different for commute management organizations operating in the 1990's as more mandatory trip reduction requirements on employers are instituted in non-compliance areas. It should also be pointed out that another study of employer-sponsored programs in 1974 revealed that work trip VMT was reduced by 23 percent among 197,000 employees participating. Such impressive results, however, are diluted when included in area-wide VMT totals for all work trips or all travel. The key, then and now, is replicating these impressive results for a majority of employers and commuters, not just among a few motivated firms.

Examples of annual VMT reductions include 1978 data for the Golden Gate Vanpool Project in the San Francisco Bay Area, which estimated that the 40 operating vans had removed 280 daily vehicle trips among 440 persons and reduced VMT by 19,300 daily miles. Similarly, two year data for a Minneapolis program in the late 1970's revealed that 1,900 new ridesharers resulted in 890 fewer daily vehicle trips and a decrease of 28,000 daily vehicle miles of travel. For area-wide commute management programs to be properly evaluated in the new era of employer demand for assistance, more up-to-date information on VMT reduction is needed to assess the role of these organizations as both inducing new rideshare arrangements among unaffiliated commuters and supporting and maintaining the commuters that are prompted to use alternatives based on their employer's program. This role of area-wide rideshare programs as maintaining existing levels of commute alternative usage may be giving way to a renewed role that is invaluable in supporting mandatory employer programs and contributing to the significant reduction in VMT afforded by wider participation by employers.

Air Quality Impacts

A reduction in area-wide VMT traditionally has been the primary measure used to gauge the effectiveness of traffic management techniques that reduce the demand for travel. VMT reductions can be translated into emission reductions for key, harmful pollutants. For example, the trip reduction regulation (Regulation XV) enacted by the South Coast Air Quality Management District is aimed at increasing the average a.m. period commute vehicle occupancy from about 1.13 to 1.5 riders per automobile. The area-wide impacts of this shift are estimated to be a reduction of vehicle trips of almost 10 percent (740,000 vehicle trips per day) and a VMT reduction of 25 percent (14.8 million miles per day). These reductions assume 100 percent of the employers targeted by the regulation participate and meet the targets. If so, the minimum results expected from Regulation XV are a CO reduction of 100-216 tons per day, a NO_x reduction of 16-34 tons and a ROG reduction of 11-24 tons.

Area-wide rideshare programs will play a vital role in reaching these emission reduction targets. Organizations such as commute management agencies and TMAs have existing relationships with employers and can undertake a considerable amount of the educative process necessary to garner effective action among employers. These organizations also provide many of the important services needed by employers to meet the trip reduction targets, such as ride matching and vanpool facilitation. These functions are important,

because they offer the potential for reducing trips by matching employers from different firms into carpools and vanpools. By having these regional resources, therefore, employers can foster additional trip reductions that would not be possible with an independent program and more easily reach their targets. In areas without employer requirements, area-wide programs are beginning to devote considerable time and resources into educating commuters and employers as to the air quality benefits of ridesharing. This is supported by the key role played by commute management organizations during the "Better Air Campaigns" implemented in the Denver and Phoenix urban areas (reference the chapter on Limitations and Restrictions on Vehicle Use).

■ Program Costs and Other Considerations

Program Costs and Cost Effectiveness

As with the reported transportation impacts, much of the comprehensive, comparative data on program costs are based on area-wide program evaluations performed in the late 1970s. More recent cost data are available for area-wide programs and TMAs, but the information largely is limited to total program costs.

Early Cost Effectiveness Evaluation

As part of the Evaluation of Carpool Demonstration Projects performed in 1978 for the FHWA, the annual program costs, cost per new carpooler, carpool trip and VMT reduced were summarized for 22 projects funded as part of the Emergency Highway Energy Act described earlier. As seen in Table 2, the average annual program cost was \$140,000, which translated into a cost of \$47 per new carpooler placed and 2.4 cents per vehicle mile reduced.

As the surviving programs matured and added services, such as vanpool provisions, program costs increased. Data collected in 1982 for seven of the largest and most comprehensive projects (San Francisco, Los Angeles, Stamford (CT), New Jersey, Philadelphia, Minneapolis, and Seattle) revealed an annual program cost range of \$200,000 to \$1.9 million, with an average annual cost of \$760,000.

Recent Cost Information

A survey recently performed by the Association for Commuter Transportation for the FHWA reveals recent cost figures for area-wide rideshare programs. Non-profit organizations report an annual program cost of between \$19,000 and \$7.3 million.

TMA Cost Information

Several comparative sources of information on TMAs have reported the total cost and cost per member employee. Total operating costs for mature programs were reported

Table 2. Cost Effectiveness of Area-Wide Rideshare Programs

Location	Annual Project Cost	Estimated Annual Cost per New Carpooler	Estimated Cost per Carpooler Trip	Estimated Cost per Vehicle Mile Reduced
Tucson	\$ 58,000	\$ 7	\$.015	\$.003
Los Angeles	660,000	85	.18	.089
Sacramento	85,000	32	.07	.011
San Diego	210,000	98	.21	.030
Denver	125,000	88	.19	.042
Connecticut	65,000	23	.05	.005
Boise	45,000	75	.16	.043
Louisville	65,000	9	.02	.005
Boston	325,000	37	.08	.021
Minneapolis	60,000	13	.028	.003
Omaha	84,000	69	.15	.038
Raleigh	20,000	26	.06	.018
Portland	190,000	26	.06	.013
Pittsburgh	134,000	71	.15	.034
Rhode Island	70,000	46	.10	.016
Dallas	60,000	38	.08	.015
Fort Worth	30,000	15	.033	.007
Houston	220,000	112	.24	.038
San Antonio	160,000	34	.07	.017
Seattle	215,000	99	.22	.064
Washington, DC	110,000	11	.024	.006
Milwaukee	100,000	12	.027	.010
Average	\$ 140,000	\$ 47	\$.10	\$.024

Source: F. Wagner, Evaluation of Carpool Demonstration Projects, FHWA, 1978.

by these different sources as \$60,000 to \$410,000 annually. The various sources reported average annual operating costs of \$140,000 to \$200,000. This information included 12 TMAs operating throughout the U.S. and in existence from 2-7 years. The cost per member employee (not cost per person placed into ridesharing) was reported as \$1 to \$18 for one source and \$1 to \$76 for another. The \$76 figure is from the Contra Costa Centre Association and includes the cost of non-commute related programs, such as child care. The average cost per worker was estimated at \$6 to \$7. Since TMAs generally provide a supportive function to employer programs, estimating the cost per person placed into a ridesharing arrangement or the cost per VMT reduced would be redundant.

Markets Served

Area-wide rideshare incentives and related programs principally serve home-to-work trips in urban areas of 50,000 population or greater. Since this type of work trip only accounts for 25-33 percent of all trips made in most urban areas, the impact of commute management on area-wide VMT is limited. However, the commuter market represents the best potential for grouping riders and removing vehicle trips and reducing VMT. Additionally, as is the case with the Los Angeles area, many harmful pollutants are generated in the morning hours from stationary sources, so that mitigating the effects of mobile sources in the same period is advantageous. The commuter trip has also been shown to be disproportionately harmful considering the phenomenon of a "cold start" when the commuter sets out in the morning and a "hot soak" when the vehicle is parked at the work-end and continues to produce evaporative emissions even after the engine is turned off.

It should be mentioned that area-wide rideshare programs also have had an impact on other travel markets, albeit a limited and sporadic effect. For example, some attempts have been made to group school trips as one parent drives children from several families to and from school. Additionally, many ridesharing programs eliminate the need or ability to make midday trips. For example, vanpoolers do not have their vehicle available to make business trips or run errands during the work day. This has often been a significant barrier to creating shared ride arrangements as commuters feel a real or perceived need to have a vehicle available during the day. Finally, some programs have attempted to use commuter vehicles during the day for other trip purposes. For example, a non-profit group called THEM, Inc., attempted to use commuter vans during the mid-day for senior shopping and recreational trips in Boston. The project experienced limited success, but was hampered by liability issues concerning the vehicle and various rider groups and the logistical problems associated with such an extensive use of the same vehicles.

Areas of Uncertainty

The primary area of uncertainty regarding area-wide rideshare incentives and programs is the difficulty in determining causality between area-wide promotional efforts and specific travel (VMT) and air quality (emission) impacts. This uncertainty is produced from two sources. First, as mentioned earlier, area-wide commuter management organizations, TMAs, and state or local tax incentives and subsidies are largely supportive of in-house employer programs. No evaluation has estimated the impact of these programs above and beyond that attributable to the employer programs. Clearly, these efforts improve the effectiveness of employer-based ridesharing programs, produce results among unaffiliated commuters, and serve to maintain existing levels of shared ride modes. It is a difficult task at best to separate out the impacts of these programs above and beyond those reported for employers or to speculate the increase in VMT or emissions if these programs did not exist.

Second, little independent, comparative evaluation has been performed on area-wide efforts since the initial assessments produced in the late 1970s. What information is available is largely self-reported, and inherent in this approach are biases that cannot be controlled across programs. As employer-based trip reduction efforts become an important strategy for addressing traffic congestion, growth, and air quality concerns, the need for contemporary, rigorous evaluations is clear.

Finally, a crucial issue in considering the effectiveness of ridesharing programs is the issue of the use of any vehicle left at home. While total VMT has been shown to decrease, additional short trips may be made by family members with access to the vehicle left at home. Additionally, if one worker in a household is sharing a ride with someone else, the other family commuter may have to make more circuitous trips before and after work for child care, shopping and other errands.

■ Implementation Considerations

Area-Wide Commute Management Programs

The primary recommendation for urban areas with commute management organizations is to reinforce their role of supportive maintenance in assuring that ridesharing levels do not slip region-wide while employer programs attempt to increase the number of trips removed via commute alternatives. Their experience in working with employers and testing innovative strategies should be parleyed along with newer efforts, such as TMAs and trip reduction ordinances. It should also be noted that these organizations alone serve to group commuters that are not affiliated with any employer program. While a significant proportion of ridesharing arrangements are made informally between family members, neighbors or co-workers, many commute

management organizations have realized an important role in maintaining carpools and vanpools as they replace exiting ridesharers.

Perhaps the greatest asset of commute management organizations is their regional commuter data base. These organizations maintain large data bases with which to match individuals from the same or neighboring firms. Attempts to balkanize the data base by establishing unique data sets at TMAs, individual employers and at other agencies should be avoided. Rather, small data sets for an adjacent area are quite useful if maintained in a complementary fashion with the regional data base. In fact, area-wide data bases can be downloaded for site specific programs, updated and expanded. One issue emerging from the new role for air quality agencies is that the employee data that are collected for compliance purposes tends to create a very powerful data base, one that is potentially different than that of the commute management organization's. The ability to create a single data base is worthy of consideration.

Regional rideshare matching data bases should have the following characteristics to be optimally successful in inducing commuters to use alternatives:

- The requestor should be given accurate, useful, timely and comprehensive information on potential matches, and information on all alternatives should be included.
- Personalization and follow-up will maximize use of the "matchlists." Commuters are often reluctant to contact a stranger, so the information should also be provided to the TMA or employer's in-house coordinator so that follow-up and face-to-face meetings can be arranged.
- The data base should be updated and purged regularly. A rapidly mobile work force means that information that is more than six months old is likely to be unusable.
- Create a flexible data base that can be segregated by type of commuter and allow the data base to be downloaded into forms for use by individual companies, TMAs or for special events.
- Assure that security features are built into the system so that employers and commuters can be confident that the information is not used for other purposes and to maintain confidentiality within a single employer.
- Provide for on-line, interactive matching for those calling-in for information or for use by remote locations at employers or TMAs that experience "walk-in" requests.

For regions or areas without commute management organizations, the primary consideration concerns the careful definition of roles and responsibilities. If mandatory employer participation becomes a priority implementation measure for non-attainment areas, inter-organizational relationships between transportation policy, service provision and air quality regulatory bodies need to be considered. In areas without commute management organizations or TMAs, careful consideration needs to be given to the types and sources of assistance to employers. In some cases, an existing organization,

such as the regional planning agency or other transportation agency may assume this role. In other cases, new organizations may be necessary to fill the unique void. Contacting areas that have faced and resolved these issues is an important step in determining the appropriate entity to serve employers and unaffiliated commuters as new requirements are contemplated.

Transportation Management Associations

The "TMA Handbook: A Guide To Forming Transportation Management Associations," produced for the Federal Transit Administration, includes a series of useful recommendations (1). Each chapter discusses an element of TMA formation and operation, such as organizational structure or budget and funding. The primary "tip" from each chapter is listed below:

- **Reason for Forming a TMA** – The first rule to remember is that a TMA cannot succeed without major support from the business community, and its formation must address a critical problem facing its private sector members.
- **TMA Development** – TMA development activities are very time consuming, often requiring one to two years before the TMA can be fully operational. Patience, persistence, and commitment are needed to assure that the TMA will be effective.
- **Work Plan Preparation** – Develop a realistic work plan early in the process of forming the TMA. The work plan should guide the TMA by establishing goals and objectives and by defining budget needs and staffing requirements.
- **Organizational Structure** – The type of organization formed – its legal status and membership – should be a vehicle to accomplish the goals and objectives that the TMA is working toward, and not become a set of objectives in and of itself.
- **Staffing** – Assure that a TMA is well staffed with professionals possessing the appropriate skills and with clear direction.
- **Services** – Develop a package of services that is tailored to the members' needs, that addresses key mobility or air quality issues, and that allows for some early successes from which to build.
- **Budget and Funding** – While public seed funding may be an important catalyst to TMA development, self-sufficiency on the part of the private sector should be an overriding goal of the association.
- **Measuring and Evaluating Effectiveness** – In order to ensure a long term commitment from the private sector, the TMA needs to show its members and funders what they are getting for their investment. This is accomplished through an ongoing evaluation program that monitors results against program objectives.

State/Local Tax Incentives and Subsidies

Recommending appropriate state or local legislation designed to offer incentives to employers and employees is extremely situation-specific. Reciting the major reasons for implementing those measures, however, is an important step in determining their potential application in various areas.

State and local incentives, subsidies and related legislation serve several important purposes. First, many barriers that are identified to the widespread implementation of employer-based trip reduction programs can be resolved through legislative enablement or reform. For example, tax, safety and liability laws can be clarified to avoid serving as barriers to forming vanpools. State enablement of certain types of organizations, such as special assessment districts, can reinforce partnership efforts, such as TMAs.

Tax incentives, in the form of investment tax credits or accelerated depreciation, can prompt employers and developers to provide facilities and equipment conducive to ridesharing. Finally, subsidy programs can be important "pump primers" to enlist employer involvement and share in the initial risk of trying something new for employees. Such programs are based on the hope that the employers will see the benefits of continuing the subsidies on their own to satisfy employee demands or comply with regional or local mandates. Also, some subsidy programs can target commuters directly, when employer involvement is unlikely or impractical. For example, vanpool subsidies tied to corridor reconstruction projects can aid in the formation of vanpools among commuters using the affected facilities, regardless of where they are employed.

Finally, the greatest state/local incentive or subsidy issue concerns the taxation of commute benefits. Employer-provided free parking is not now considered taxable income for the employee, whereas most subsidies for commute alternatives are taxable income. This serves as a significant barrier to realizing more aggressive employer programs and creates an inequity between free parking, which encourages driving alone, and using commute alternatives. Efforts to change this inequity, at the state and federal level, are currently underway but are yet to be resolved. While the tax-free limit on employer-provided transit subsidies has recently been increased from \$15 to \$21 per month, further resolution could occur by either taxing the free parking benefit or further limiting the taxation of commute subsidies so as to achieve a more equitable balance.

Area-Wide Rideshare Incentives

Perhaps the most significant recommendation that can be made, applying to all types of area-wide rideshare programs, is the need to clarify roles among transportation providers, planning agencies, and air quality agencies vis-a-vis employers. Employers can be confused by several seemingly competitive offers made from an area's commute management organization, the TMA serving the employment center, and from a state-wide subsidy program. With air pollution control or air quality management districts becoming involved in employer programs, it is no wonder that many employers feel

inundated with offers of assistance. In addition, consulting firms also offer assistance to employers in the development of in-house programs. Vendors offer various services such as vanpool formation. Employers often feel overwhelmed by the need to comply with a requirement on the one hand and many offers for assistance on the other. It is not uncommon for employers, new to the concept of commute management, to become confused and make erroneous assumptions about the motives of public service organizations and programs, sometimes mistaking them as consulting assistance.

A careful delineation of roles and responsibilities of various entities is recommended prior to development of area-wide programs, especially those being formed in support of a trip reduction ordinance. A prudent approach would be to maximize the effective allocation of all resources.

Where existing **commute management organizations** exist, they might offer a basic level of service to employers including information on Transportation Management Associations, specialized consultants, and publicly supported subsidy programs. Given limited resources, these organizations can best focus on providing rideshare matching services and serve as a clearing house for a variety of information.

Air quality agencies or air pollution control districts can play a variety of roles ranging from command and control regulatory approaches to more flexible voluntary approaches which offer considerable options to employers on how to attain stated air quality objectives. Air agencies also have the potential to build substantial regional transportation databases which can be valuable sources of information to transportation planners, providers, and policy makers over time.

Transportation Management Associations (TMAs) ordinarily are geographically oriented and can be a valuable resource to employers in a single employment center, corridor, or area. TMAs offer member companies both economies of scale in delivering services (such as vanpool leasing) and efficiencies (by providing a trained staff) that directly benefit members in implementing ridesharing programs. TMAs, as employer collaboratives, are more attuned to specific needs of each employer and can provide more tailored services than can area-wide commute organizations. TMAs, in addition, can be expected to play a larger role as employer trip reduction programs are expanded so as to apply to larger numbers of smaller employers.

Many **states** and some **local and regional governments** offer financial support to TMAs, commute management organizations, and employers. These programs can be very effective if specifically targeted at the provision of options to solo-driving and services directly related to use of alternative modes.

Regardless of how an area organizes to implement trip reduction programs, a careful and deliberate approach which anticipates resource needs and constraints is essential, preferably prior to adoption of a program.

■ Bibliography

1. Harold Katz & Associates, Inc., "TMA Handbook: A Guide to Forming Transportation Management Associations," prepared for Commuter Transportation Services, Inc. and the Southern California Association of Governments in cooperation with the Federal Transit Administration, Los Angeles, 1988.
2. Dunphy, Robert and B. Lin, "Transportation Management through Partnerships," Urban Land Institute, Washington, D.C., 1990.
3. Association for Commuter Transportation, "Transportation Management Association Directory," Washington, D.C., 1989.
4. Comsis Corporation, "Public-Private Partnerships in Transportation: A Casebook for Local Elected Officials," prepared for the Department of Transportation, Washington, D.C., 1986.
5. Comsis Corporation, "Status Report on TMA Development in California: Findings and Update," prepared for the California Department of Transportation, Sacramento, CA, 1991.
6. Alan M. Voorhees, Inc., "TSM: An Assessment of Impacts," prepared for UMTA, VA-06-0047, Washington, D.C., 1978.
7. Schreffler, Eric N., "Employer Involvement in the Work Trip: A Trend Toward Employer Associations," Working Paper 83-1, Center for Transportation Studies, MIT, Cambridge, MA, 1983.
8. Cambridge Systematics, Inc., "Paratransit for the Work Trip: Commuter Ridesharing", prepared for UMTA, Washington, D.C., 1982.
9. Booth, Rosemary and R. Waksman, "National Ridesharing Demonstration Program, Comparative Evaluation Report," DOT-TSC-UMTA-85-17, U.S. Volpe National Transportation Systems Center, Cambridge, MA, August 1985.
10. Association for Commuter Transportation, "National Commuter Transportation Survey: People and Programs," prepared for FHWA, Washington, D.C., 1990.
11. Wagner, Fred, "Evaluation of Carpool Demonstration Projects," FHWA, Washington, D.C., 1978.