

**Local and Regional Strategies for Improving Transportation System Efficiency: Case Studies of Vehicle Miles Reduction Programs Funded through the American Recovery and Reinvestment Act**

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## Abstract

Vehicle miles traveled (VMT) reduction programs have an important role to play in improving transportation system efficiency and energy efficiency in general. VMT reduction programs are an eligible use of many energy efficiency related funds managed by the Department of Energy (DOE) under the American Recovery and Reinvestment Act of 2009 (ARRA).

This document characterizes the general nature of VMT reduction projects funded by these programs and provides specific project case studies from three sub-categories of projects: bicycle/pedestrian infrastructure, mode shift and trip reduction programs, and community planning. The three programs profiled are: Mill Creek Restoration Project (Cincinnati, Ohio); Downtown: On the Go! (Tacoma, Washington); and Integrated Planning (Two Rivers-Ottawaquechee Regional Commission, Vermont). These and other local and regional efforts undertaking VMT reduction programs are successfully making progress toward reduced energy use in their communities while simultaneously providing economic stimulus and other non-energy benefits.

## Acknowledgments

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## Vehicle Miles Traveled Reduction Programs

Vehicle miles traveled (VMT) reduction programs have an important role to play in improving transportation system efficiency and energy efficiency in general. These programs, instead of relying on improved vehicle technology, encourage the use of other transportation modes that are inherently more energy efficient than single-occupant vehicles and allow reductions in the number and length of trips taken while maintaining or improving access to services and destinations (see Dierkers et al.). In addition, VMT reduction programs have many non-energy benefits including reduction in congestion, increased productivity, improved health, decreased transportation costs, economic and community development, and reduction in greenhouse gas and other pollution emissions. Because of the combination of energy and non-energy benefits, these programs are an important method for demonstrating the broad value of energy efficiency.

### VMT REDUCTION IN ARRA

VMT reduction programs are an eligible use of many energy efficiency related funds managed by the Department of Energy (DOE) under the American Recovery and Reinvestment Act of 2009 (ARRA). For example, under the Energy Efficiency and Conservation Block Grant (EECBG) program, VMT reduction fits into the transportation program category, one of thirteen eligible activities. State Energy Program (SEP) grants also consider VMT reduction programs as an eligible use of funds. The remainder of this document will characterize the general nature of VMT reduction projects funded by these programs and provide specific project case studies.

Figure 1.1: VMT Reduction Projects Funded by EECBG and SEP in Context of all Funded Projects

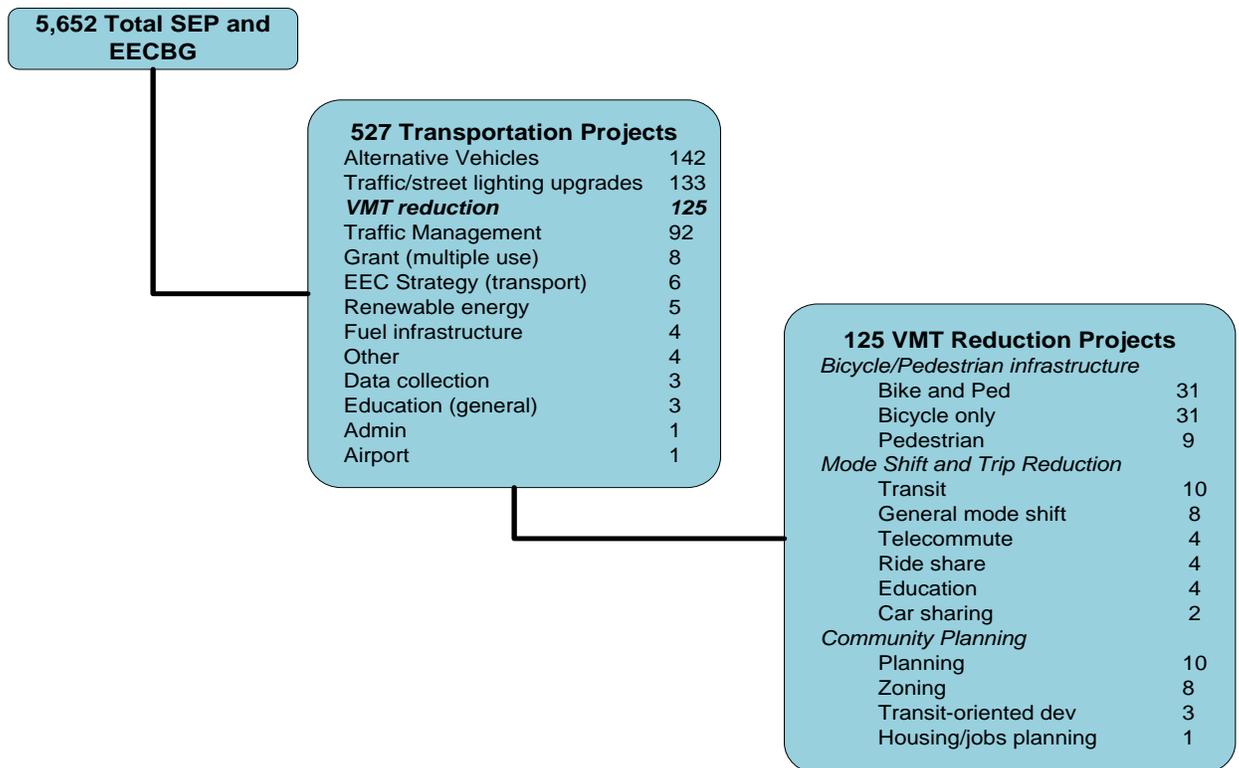


Figure 1.1 provides a categorization of funded transportation project types under the formula portion of the SEP and EECBG grant programs based on an ACEEE review of grantee reported data from DOE's Performance and Accountability for Grants in Energy (PAGE) system as accessed in early 2010. Of over 5,600 projects funded, 527 were transportation-related. Of these transportation-related projects, the most common project types, in descending order, were alternative vehicles, traffic light or street lighting improvements, VMT reduction programs, and traffic management. In Figure 1.1, the 125 VMT reduction projects identified by ACEEE are further broken into three broad sub-categories: bicycle/pedestrian infrastructure, mode shift and trip reduction programs, and community planning.

### **Bicycle and Pedestrian Infrastructure**

Bicycle and pedestrian infrastructure is the most common VMT reduction use of these ARRA funds. These projects included bike and pedestrian trails, bicycle and pedestrian master plans, marketing programs, on-street bike lanes, bicycle amenities (such as bike racks, lockers, and showers for riders), and bicycle sharing programs.

### **Mode Shift and Trip Reduction Programs**

These programs focus on directly encouraging residents and commuters to shift trips to modes of transportation other than single-occupancy vehicles. Many of the funded projects focused heavily on education and marketing around the variety of transportation options available in their community and the variety of benefits of reducing vehicle miles traveled. They included partnerships between employers and transportation-related agencies, telecommuting programs for local government employees and others, ride sharing programs for commuters, the implementation of car sharing programs, such as ZipCar, locally, and improved and expanded public transit services and infrastructure.

### **Community Planning Initiatives**

Projects that focused on community planning applied a wide variety of strategies to achieve vehicle miles traveled reductions. These include revised land-use zoning to encourage mixed residential and commercial uses and more compact development, corridor and neighborhood plans to integrate a variety of transportation options with economic revitalization proposals, transit-oriented development increasing compact land-uses around important transportation nodes, and incentives to encourage housing choices located near jobs and services.

### **VMT Reduction in the Context of other ARRA-funded Energy Efficiency Programs**

There are many possible reasons for the small number of VMT reduction projects compared to the total number of SEP and EECBG projects. The relatively long timeline required by many VMT reduction projects may not have been seen by local governments as best in keeping with the economic stimulus goals of ARRA or the immediate positive budget impacts available from shorter term projects, such as energy improvements in public buildings and government operations. Second, VMT reduction has historically been viewed by local governments less as an energy management issue and more as a community planning and quality of life issue. Additionally, it is possible that other stimulus funds, including those available through the Department of Transportation, were viewed by local governments as better suited to pursuing their VMT reduction goals. Finally, although the energy saving and economic stimulus impacts of VMT reduction programs can be quite large, reliable quantification of impacts can be complex due to the large number of variables involved (CSI 2009).

The grantees undertaking VMT reduction programs are successfully making progress toward reduced energy use in their communities while simultaneously providing economic stimulus and other non-energy benefits. Three of these grantees are profiled in the next section.

## Case Studies of ARRA-Funded VMT Reduction Programs

### *MILL CREEK RESTORATION PROJECT – CINCINNATI, OHIO*

#### **Project Statistics**

<i>Grantee:</i>	City of Cincinnati, sub-granted to the nonprofit Mill Creek Restoration Project (MCRP)
<i>Grant Program:</i>	EECBG
<i>Project Title:</i>	Queen City-South Mill Creek Greenway Trail – Phase 2
<i>Location:</i>	Cincinnati, OH
<i>Project Type:</i>	Transportation – Bicycle and Pedestrian Infrastructure
<i>Project Cost:</i>	\$666,667 for Phase 2
<i>Leveraged Cost:</i>	\$500,000 2010 Clean Ohio Trail Fund grant for Phase 2 and \$405,000 2011 Clean Ohio Trail Fund grant for Phase 3
<i>EECBG Grant:</i>	\$100,000

#### **Project Description**

The Cincinnati-based nonprofit Mill Creek Restoration Project (MCRP), since renamed Groundwork Cincinnati - Mill Creek, has used its EECBG funds, which are administered through the City of Cincinnati Office of Environmental Quality, to advance the development of the planned 3.5 mile Queen City-South Mill Creek Greenway Trail. This trail is a high visibility segment of a longer 13.5 mile trail planned for the urban and industrial Mill Creek river corridor in Cincinnati, connecting Mill Creek neighborhoods downstream to the city center and upstream to suburban communities within the Mill Creek watershed or drainage basin. When complete, the Queen City-South Mill trail will link six residential neighborhoods, two business districts, a large park, and an arboretum. The multi-use trail will connect with existing streets, on-street bike lanes, transit stops, and pedestrian sidewalks and crossings. The intermodal transportation network is projected to increase walking, bicycling, and transit use while decreasing automobile use and fossil fuel consumption.



The Mill Creek trail will cross over a bridge at Laughing Brook, a wetland that MCRP constructed adjacent to the river.

MCRP applied its EECBG funds for the completion of property/utility surveys, public outreach and planning, an economic analysis, signage design, and preliminary landscape and engineering design for Phase 2 of the trail. In addition, EECBG funds are supporting preliminary engineering design for Phase 3 of the trail in 2011. Thanks in part to the EECBG

grant, MCRP has raised additional funds to support the completion of Phase 2 from the Clean Ohio Trail Fund, the Greater Cincinnati Foundation, Duke Energy Foundation, City of Cincinnati, and individual and business donors. MCRP aims to complete the final phase of the Queen City-South Mill Creek Greenway Trail by December 2012.

Mill Creek is a blighted and polluted urban river located in the geographic heart of the City of Cincinnati and within a major transit corridor that is undergoing slow but steady regeneration. The inner city neighborhoods located in and along the Mill Creek corridor are economically depressed, with high percentages of African Americans and historically rural poor whites. In some Mill Creek neighborhoods, the unemployment rate is as high as 29% and the percent of families living below the Federal poverty level ranges from 51% to 65%.

In 1999, the City of Cincinnati created its Mill Creek Greenway Trail Program following an intensive community-based planning process lead by MCRP. The MCRP now provides environmental education programming for over 3,000 students a year and serves as the project manager for the Mill Creek Greenway Trail Program that is designed to achieve multiple objectives, including: reducing vehicle miles traveled and fossil fuel consumption, demonstrating energy efficiency technologies, eliminating blight, revitalizing Mill Creek neighborhoods and communities, creating jobs, stimulating the local economy, increasing Mill Creek's visibility, regenerating the health of the river and its natural resources, improving air quality, and providing opportunities for bike commuting, multi-modal transportation, recreation, outdoor exercise, and environmental education.

### **Project Timeline and Milestones**

- *1997-1999:* community planning process resulting in the creation of the Mill Creek Greenway Program
- *1999-2008:* over \$4 million raised to support the implementation of the greenway plan. Fifteen ecological and engineering studies completed. Twenty-eight greenway projects completed across two counties, including tree planting, creek and land restoration, sustainable design demonstration project, educational installations at schools, recruitment and training of volunteers, and construction of trails.
- *2009:* EECBG funds were used to complete public outreach, planning, and economic analysis for Phase 2 of the Queen City-South Mill Creek Greenway Trail.
- *2010:* EECBG funds were used to complete Phase 2 property/utility surveys, preliminary engineering design, signage and landscape design, and ecological improvements. In addition, the EECBG grant paid partial costs for a preliminary engineering design for the Phase 3 trail. Final design and construction of the Phase 2 trail was expected to be completed with non-EECBG funds by year-end.
- *2011:* Final engineering design, construction, and ecological improvements will be completed for Phase 3 using non-EECBG funds. This final phase of the Queen City-South Mill Creek Greenway Trail will be completed by December 2012.

### **Current and Expected Impacts and Outcomes**

While MCRP has made initial progress toward their goals, the system-wide benefits will not be fully realized until the entire 13.5 mile trail is completed in Cincinnati, and the Greenway Trail is extended across the region and throughout the Mill Creek watershed. This will require

ongoing fundraising and MCRP hopes to secure additional funds to help support the work ahead.

- *Energy Impacts:* The City will achieve reduced energy consumption and fossil fuel emission reductions as increased walking and biking become commonplace in the City, resulting in fewer VMT. The trail will be used for bike commuting to work and for short trips by Mill Creek residents. MCRP will install infrared counters to track trail usage and calculate energy savings each year. MCRP also plans to install motion detection LED lighting at street crossings and trailheads, which will have parking, bike racks, benches, and signage.
- *Economic Stimulus Impacts:* An economic analysis conducted by the University of Cincinnati Applied Economic Research Institute in the fall of 2009 concluded that developing the 13.5 mile Mill Creek Greenway Trail in the City of Cincinnati will create about 445 jobs, generate an economic stimulus impact or total industry output of at least \$52 million from expenditures alone, and result in an increase in local tax revenue of at least \$1.86 million.

- *Air Quality and Climate Change Impacts:* The Mill Creek Greenway Trail Program will help the City of Cincinnati to achieve reduced greenhouse gas emissions by reducing VMT and increasing carbon sequestration by reforesting the Mill Creek corridor.



Students participate in service learning projects along the Mill Creek trail as part of MCRP's environmental education programming.

- *Sustainable and Healthy Communities:* Another broad and lasting outcome of the EECBG grant is that the Mill Creek trail will help to make Mill Creek neighborhoods pedestrian and bicycle friendly, safely connect people to public transit, and increase physical activity in low income neighborhoods where children are at high risk for obesity and associated chronic diseases. MCRP is collaborating with health care organizations and neighborhoods to create more active community environments by building the trail and installing free and accessible outdoor exercise equipment and playgrounds along the trail.
- *Future Impacts:* Two other exciting things have occurred that are harbingers of continued reductions in energy consumption and fossil fuel emissions. First, Mill Creek neighborhood residents almost immediately started walking and bicycling on the half-mile trail constructed in Phase 1. Second, MCRP is now meeting with thirteen suburban communities who want to build their parts of the envisioned Mill Creek Greenway Trail network throughout the watershed and connecting to other regional, state, and national trails.

### **What Worked?**

MCRP believes that its community- and place-based, multi-objective, and collaborative partnership approach has been essential to its success and is essential for creating healthy and sustainable communities more generally. For example, hundreds of Mill Creek neighborhood volunteers provide the sweat equity for the Mill Creek Greenway Trail each year through their fieldwork, helping to restore wildlife habitat and reforest their river corridor. The City Health Department and Cincinnati Children's Hospital are collaborating with MCRP and Mill Creek neighborhoods to design and create more active community environments by building the trail, creating safe connections to it from residential areas, and installing free and accessible outdoor exercise equipment and playgrounds along the trail.

A private developer, who is transforming an old brownfields property into a vibrant mixed-use project, located one block away from Mill Creek, supports the Mill Creek trail because it will help make his project more marketable by improving the appearance of the blighted river corridor and providing an attractive amenity for future tenants. MCRP is also collaborating with the Metropolitan Sewer District of Greater Cincinnati to identify joint "Green Infrastructure" projects where greenways and ecological regeneration can serve to prevent and reduce storm water from entering the combined sewer system. Less storm water in the combined sewers in turn reduces and prevents combined sewer overflows that otherwise dump untreated sanitary sewage into the river. Through this collaboration, MCRP and the sewer district will achieve cost savings and maximize the value of public and private investments. The sewer district is planning to host a Mill Creek Student Congress in the spring of 2011 for MCRP students.

In partnership with Cincinnati Public Schools, MCRP provides hands-on science lessons and service learning opportunities along the river for thousands of students each year. Starting in January 2011, MCRP will offer green career programming, with a focus on green technologies and fieldtrips to and facilitated discussions on cutting-edge energy projects in the Cincinnati region. Organizations associated with the City of Cincinnati's EECBG grant will be assisting in this effort, including the Greater Cincinnati Energy Alliance and the City Office of Environmental Quality.

Finally, MCRP is collaborating with the City Planning Department that is spearheading work to create an integrated Unified Development Code for the City that embraces livability principles, and to assist in planning for four major community initiatives: the Mill Creek Greenway Trail, the city's streetcar project, the sewer district's Lower Mill Creek sub-basin, and a "Communities of the Future" project in one Mill Creek neighborhood. These projects will reduce energy consumption, increase energy efficiency, create pedestrian and bicycle friendly neighborhoods, improve the environment (air and water quality), promote transit, create jobs, support affordable housing, and make Cincinnati a better place for all of its residents to live, work, and play.

### **What Would Be Done Differently?**

Based on its experience, MCRP has come to believe more strongly that energy goals must be thoroughly integrated and embedded in environmental, housing, economic development, public health, and transportation goals, particularly in urban and economically depressed communities. As a result, in the future MCRP will seek to engage all appropriate agencies in

the Partnership for Sustainable Communities that has been forged between the U.S. Environmental Protection Agency, U.S. Department of Housing and Urban Development, and U.S. Department of Transportation, as well as continue to work toward these inter-related goals with the U.S. Department of Energy.

**Contact Information**

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**Additional Resources**

Groundwork Cincinnati Mill Creek - Greenways page - Includes project updates, maps, studies, and other related documents: <http://groundworkcincinnati.org/greenways.php>

Mill Creek Watershed Greenway Master Plan:  
[http://groundworkcincinnati.org/Documents/master\\_plan.pdf](http://groundworkcincinnati.org/Documents/master_plan.pdf)

## DOWNTOWN: ON THE GO! – TACOMA, WASHINGTON

### Project Statistics

<i>Grantee:</i>	City of Tacoma, Washington
<i>Grant Program:</i>	EECBG
<i>Project Title:</i>	Downtown: On the Go! Transportation Partnership, Phases 2 and 3
<i>Location:</i>	Tacoma, WA
<i>Project Type:</i>	Transportation – Mode Shift and Trip Reduction Program
<i>Project Cost:</i>	\$150,000
<i>Leveraged Cost:</i>	Commitments totaling between \$50,000 and \$150,000 annually have been received to continue the program after the EECBG grant ends
<i>EECBG Grant:</i>	\$150,000

### Project Description

The City of Tacoma, Washington allocated \$150,000 of its \$1.4 million EECBG grant to a downtown Tacoma transportation-focused program named Downtown: On the Go! (DOTG). The program is a partnership between 18 downtown businesses and the Tacoma-Pierce County Chamber (the local business association), the City of Tacoma, and Pierce Transit (the local transit agency). The partnership aims to educate employers, employees, and anyone whose daily life includes travel in downtown Tacoma about transportation choices and the real costs of auto-centric development. The members of the partnership also work together to implement programs and services that encourage use of alternatives to single-occupancy vehicles, advocate for improved transportation choices, and promote better integration between transportation planning and land use policies.

The program began with a one-time grant from the Washington State Department of Transportation. This grant ended in June 2009. The EECBG grant is intended to fund the continuation of the program in the near term, allowing for the identification of ongoing, sustainable funding and the establishment of a sustainable organizational structure.



Tacoma's second PARK(ing) Day, during which nine parking spots were turned into parks for the day by different groups. DOTG hosted a walking tour of these spots during the lunch hour.

Since receiving the EECBG grant, Downtown: On the Go! has accomplished a series of achievements that have moved the program closer to organizational sustainability:

- Created a formal board of directors, consisting of management and leadership of 21 downtown businesses, organizations, and public agencies
- Established a supportive network of local leaders that includes the City Council, City Manager, Transit CEO, Chamber of Commerce CEO, and Downtown Business Improvement Area members to build greater local commitment to the mission
- Worked closely with other organizations and programs to imbed DOTG resources into the work of other organizations with mutually beneficial goals
- Built a network of supporters and brand recognition via frequent events, a monthly newsletter, Facebook page and other social media, and development of a new Web site
- Received the 2010 Washington State Governor's *Commute Smart Community Award*, which recognizes innovative communities that are driving the future of the state's commute trip reduction efforts

Additionally the partnership has developed a number of smaller projects and programs that further promote its mission. These projects are described below.

- Worked with the county-wide transit agency on its system redesign process. With DOTG as the convener, downtown commuters and DOTG board members gave input to the transit agency in order to improve the downtown portion of the system redesign plan.
- In cooperation with the City of Tacoma, DOTG has created a plan and RFP to recruit a car-sharing program to downtown Tacoma.
- DOTG piloted a small business support program to help small employers with fewer than 100 full-time equivalent employees provide additional transportation choices to their employees.
- DOTG hosted many public forums, including a transportation and land use debate among City Council candidates.
- With a goal of improving the awareness of walkable distances, encourage active lifestyles, and promote downtown assets, DOTG developed five downtown walking maps.
- DOTG acted as a member of the Mobility Master Plan Steering Committee.
- DOTG partnered on the development of Tacoma's first paid on-street parking program and on a series of Bike Month events including the Bike-to-Work Week Commuter Picnic.

### **Project Timeline and Milestones**

*June 2008 to June 2009 – Phase 1: Inception of the Transportation Partnership*

*July 2009 to August 2010 – Phase 2: Planning for Sustainability*

*December 2009: EECBG grant received*

*September 2010 to December 2015 – Phase 3: Implementation*

**Current and Expected Impacts and Outcomes**

Goals for the project include: (1) Working with downtown employers toward a goal of an 11% reduction in drive-alone trips by 2015 (a goal that is part of Washington State's and the City of Tacoma's climate action plan objectives and is projected to result in annual reduction in carbon emissions of 11,093 tons) and (2) Working with downtown leaders to determine the feasibility of and sustainable funding for a permanent transportation management association (TMA).

Now that DOTG has an established work plan, goals, and a Board of Directors structure to guide the achievement of these goals, it can get to work on implementing its programs and services. These will move DOTG towards the 11% reduction in the drive alone rate by 2015. Among large downtown Tacoma businesses, data has recently shown that the drive-alone rate went up in 2009–2010 due to commute habits at three very large hospital worksites. Fortunately, all three hospitals are represented on the DOTG Board, and so DOTG is working with those board members to bring this rate down. Through its planned programs and services as well as additional outreach to board members, it is on target to meet the goals for reduction in the downtown drive-alone rate by 2015.



Participants in the first of DOTG's WALK Tacoma 2010 fall walking series. Throughout each of the five Fridays in October, a group walked one of the five WALK Tacoma walking map routes during the lunch hour.

Because of initial success and the commitment of the downtown business community, major strides have been made in establishing sustainable funding. The City of Tacoma has committed to providing one-third of DOTG's annual budget, the transit agency has verbally committed to another one-third, and the local Business Improvement Area is considering an additional portion. Additional groups will soon be approached for further funding.

DOTG staff believes that the EECBG funds have been the critical funding mechanism allowing them to achieve a sustainable organizational structure, build a solid work plan, and continue forward under a sustainable funding structure.

**What Worked?**

First and foremost, the partnership between the City of Tacoma, Pierce Transit, and the Tacoma-Pierce County Chamber has provided the extensive knowledge base of staff, connections to the downtown business community, and administrative and marketing capacity for what was once merely a concept and is now a program developing into a full-fledged organization.

As well, the decision to first focus on a sustainable organizational structure, including development of a vision, mission, and work plan, has been critical to the continued success of DOTG. Because the vision and mission have been embraced by the business community, it has been easy to demonstrate that the program has the buy-in of community leaders. In turn, this has increased the potential for sustainable funding sources. This solid foundation and interest have created buzz and excitement around DOTG as a legitimate stakeholder in transportation and land use issues in Tacoma's downtown.

Interestingly, and to the surprise of DOTG board and staff, the downtown walking maps have proved to be the biggest “win” so far. DOTG convened the partners on the project, and in doing so established critical partnerships among the downtown business community. Because DOTG delivered a quality product on a short timeline, it garnered respect among the partners and the downtown community more generally. In addition, the maps increased awareness of DOTG and have gotten people out of their offices and walking. Events related to the maps have been well attended. The maps have expanded downtown commuter awareness of DOTG and they have helped to dramatically increase the organization’s number of Facebook “fans” over the course of just four months.

### **What Would Be Done Differently?**

In retrospect, after seeing the success of the program after a short time and with a relatively small amount of funding, DOTG leaders would have requested a larger portion of the EECBG funds from the City. This larger dollar amount could have enabled DOTG to further develop the programs and services offered while also developing a sustainable organization more quickly. Through the focus on organizational development, DOTG has created a robust work plan, but currently has limited funds and staff to implement the plan. A more substantial initial budget would have enabled DOTG to provide immediate value to target audiences while also building the Board of Directors and potential for ongoing funding. However, the amount received has served the organization well, and the remaining EECBG grant funds are being focused toward service delivery.

### **Contact Information**

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### **Additional Resources**

Downtown: On the Go! materials hosted by the Downtown Tacoma Business Improvement Area:  
<http://www.tacomabia.org/index.php/GettingAround/DowntownOntheGo/TransportationPartnership/>

Downtown: On the Go! Web site: [www.downtownonthego.org](http://www.downtownonthego.org)

*INTEGRATED PLANNING – TWO RIVERS-OTTAUQUECHEE REGIONAL COMMISSION,  
VERMONT*

**Project Statistics**

Grantee:	Two Rivers-Ottauquechee Regional Commission
Grant	EECBG
Program:	
Project Title:	Integrated Planning
Location:	Orange County and Windsor County, Vermont
Project Type:	Transportation – Community Planning
Project Cost:	\$165,000
Leveraged	No leveraged funds have been obtained yet. However, EECBG dollars have
Cost:	been used as matching funds in the application by a number of municipalities in applying for around \$50,000 in Municipal Planning Grant funds from the VT Department of Economic, Housing and Community Development.
EECBG Grant:	\$129,337 (\$42,337 through Orange County and \$87,000 through Windsor County)

**Project Description**

The Two Rivers-Ottauquechee Regional Commission (TRORC) aims to create a multi-jurisdictional process for energy and transportation efficiency planning for Orange and Windsor Counties in Vermont. This effort is intended to follow the strong growth in interest in the topic among towns within the region. Many of the towns have formed energy committees, however, before this project began, energy issues had seen little focus at the regional level or institutionalization at the local level.



With the EECBG funds, the Commission is working to modify its regional plan and provide technical assistance to help update municipal plans to address reduction of greenhouse gases and vehicle miles traveled. According to Vermont’s Municipal and Regional Planning and Development Act (24 V.S.A. Section 4347), regional plans are to be used to guide future development to promote “health, safety, order, convenience, prosperity and welfare of the inhabitants,” as well as to “reduce the wastes of financial, energy, and human resources which result from either excessive congestion or excessive scattering of population.” Furthermore, regional plans are used in the development of review proceedings under Act 250 of Vermont’s Land Use Law and serve as the policy basis for regional decision making for certain funding programs. Municipal plans guide zoning, subdivision, and transportation regulations.

Some planning strategies that will be encouraged through this process include zoning changes to encourage concentrated, mixed use development in areas close to existing services while limiting new development of rural land, streetscape design standards oriented toward pedestrians rather than automobiles, and energy efficiency oriented regulations and incentives regarding the siting, construction, and design of subdivisions. Taken together, this series of

policy changes will continue to have impacts on development, transportation, and energy use long after the EECSBG funds have been expended. In addition to this project, TRORC is using its other EECSBG funds to implement a transportation energy use analysis (including a streetlight inventory, municipal fleet fuel usage study, and a park-and-ride needs assessment), public building energy efficiency measures, and public outreach and education on energy efficiency.

### **Project Timeline and Milestones**

The key milestones and success metrics are provided below.

- Baseline energy studies will evaluate municipal energy use for each town in Orange County. (Metric: baseline study completed)
- Update of regional plan using municipal energy use estimates from baseline studies. This will include updates to the transportation, housing, environmental, energy, and land use elements. (Metric: successful update of TRORC Regional Plan)
- Technical assistance will be provided to towns in Orange County as they update or create their individual municipal transportation and energy plans. TRORC will create a package for municipalities of model language for municipal plans and for zoning, subdivision, and transportation regulations to promote energy-efficient development. (Metrics: number of updated municipal plans, development of model language for land use regulations, and number of towns provided with technical assistance on updating town plans and land use regulations)

Timeline:

- *January 2010:* Project launched
- *Launch through December 2012:* Provide energy-related technical assistance to around 25 towns
- *June 2011:* Energy baseline completed
- *Fall 2011:* Model language for zoning, subdivisions, and transportation developed
- *May 2012:* Direct planning assistance provided to 3-6 towns on municipal energy-related plan updates
- *December 2012:* Regional plan updated to include a new energy chapter and to integrate energy issues into other chapters

### **Current and Expected Impacts and Outcomes**

While it is still early in the multi-year planning processes, a number of near-term successes have been achieved. A number of towns and other regional organizations are coming to the Commission for technical assistance on energy issues, including help in organizing a conference on regional energy issues. Public awareness of local energy programs has been significantly increased through the ramped up outreach effort. Additionally, the work that the Commission is doing in other project areas of its EECSBG grant, such as public building energy use and streetlight improvements, are building interest and buy-in for the long-term policy and planning changes to be encouraged through the integrated planning project.

Additionally the EECBG funds have provided an invaluable opportunity to leverage additional funds. In December 2010, five towns that the Commission has assisted received the results of their municipal planning grant applications. A small amount of the EECBG funds has been used as matching funds in these applications, which was intended to strengthen the applications to the Vermont Department of Economic, Housing and Community Development.

**What Worked?**

Despite the growing interest in the topic, the new focus on the integration of energy issues into regional and municipal planning would not have happened without the catalytic EECBG funds. The data from the baseline survey alone will allow communities to know their energy use for the first time, learn about energy efficiency opportunities that are most applicable to them, and understand their performance relative to neighboring towns.

Additionally, the project has begun to engage the high level of volunteer interest of energy committees in the region's towns. As the planning process continues, the Commission will look to the committees to help actively engage the issues with the citizens of each town.

**What Would Be Done Differently?**

Although the integrated planning project continues to be seen as very important within the Commission because of its long-term and lasting energy impacts, staff members have been surprised at the large volume of interest in near-term energy efficiency projects such as street lighting. While shifting funds to the projects with immediate impacts is tempting, what is really needed are strategies for developing sustainable funding sources to support multiple initiatives that will create both near- and long-term energy savings.

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**Additional Information**

Information on the project is available on the Two Rivers-Ottawaquechee Regional Commission Web site: [www.trorc.org](http://www.trorc.org)

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