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Regional Transportation and Land Use Decision Making in Metropolitan Regions: Findings from Four Case Studies

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REGIONAL TRANSPORTATION AND LAND USE DECISION MAKING IN METROPOLITAN REGIONS: FINDINGS FROM FOUR CASE STUDIES

Final Report

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16. Abstract

Throughout the United States, metropolitan regions face increasingly complex issues related to transportation and land use. The diffuse nature of decision making creates a need to better coordinate land use and transportation to address issues such as: congestion, infrastructure costs, and greenhouse gas emissions. Key players in this decision making are regional metropolitan planning organizations (MPOs) with transportation planning authority, regional planning responsibilities, and in some cases regional land use planning authority. The goal of this study was to describe and assess efforts by regional agencies to coordinate land use and transportation. Policies and processes in four key topic areas were examined: 1) Governance: formal and informal decision making approaches; 2) Coordination: strategies used to coordinate land use and transportation; 3) Growth Centers: policies to encourage development in higher density centers; and 4) Transportation Improvement Program (TIP): policies to incorporate smart growth criteria in TIP funding decisions.

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Executive Summary

Background: Throughout the United States, metropolitan regions face increasingly complex issues related to transportation and land use. The diffuse nature of decision making creates a need to better coordinate land use and transportation to address issues such as congestion, infrastructure costs and greenhouse gas emissions. Key players in this decision making are regional metropolitan planning organizations (MPOs) with transportation planning authority, regional planning responsibilities and, in some cases, regional land use planning authority.

Study goal: The goal of this study was to describe and assess efforts by regional agencies to coordinate land use and transportation. We examined policies and processes in four key topic areas:

- Governance: formal and informal decision-making approaches.
- Coordination: strategies used to coordinate land use and transportation.
- Growth Centers: policies to encourage development in higher density centers.
- Transportation Improvement Program (TIP): smart growth criteria used in TIP funding decisions.

Study methods: For this project we researched four case studies in metropolitan areas that are undertaking innovative efforts to coordinate land use and transportation on a regional scale:

- PSRC: Puget Sound Regional Council (Washington)
- Metro: Portland (Oregon)
- DRCOG: Denver Regional Council of Governments (Colorado)
- SANDAG: San Diego Association of Governments (California)

We reviewed the literature and published reports, conducted approximately 40 interviews, and conducted an online survey of over 450 individuals in the four regions (with an overall response rate of 44 percent).

Findings and transferable practices: This report describes our findings and transferable practices from the four case studies, grouped into four topic areas. Some of the findings include:

Governance

- Most of the critical players are involved in all four regions.
- Smaller municipalities, nongovernmental stakeholders and the public are less involved.
- The institutional complexity (e.g., number of jurisdictions, cross-boundary issues) has a significant effect on governance approaches.
- Land use authority is a key tool for agencies with regional land use powers (Metro and PSRC), while sales tax funding is a key tool for other regions (SANDAG and DRCOG).
- Elected official engagement is important to the success of regional governance.
- Coordinating with state transportation agencies is challenging in some regions.
- All four regions face cross-boundary issues, with Metro facing the most difficult issues due to its small size, commuter patterns and cross-state issues.

Transferable Governance Practices

Payment to elected officials for attendance at MPO meetings	SANDAG
Board manuals and local elected official training materials	DRCOG
Cross-boundary representation and committees	PSRC, Metro
Visualization materials to support outreach	Metro
Suburban leadership in regional planning efforts	SANDAG, DRCOG

Transportation – Land Use Coordination

- Transportation and transit funding are critical tools in coordinating with land use decision making.
- Transportation-land use coordination efforts received positive evaluations in all four case study sites, and respondents indicated that these efforts were improving.
- The relative influence of plans varies by region: regional land use plans were assessed as more influential in the cases with regional land use powers (Metro and PSRC), while transportation plans and funding were assessed as more influential in the cases without regional land use powers (SANDAG and DRCOG).
- Each region faces unique factors that affect transportation and land use coordination, including:
  - The small size of Metro relative to its commutershed
  - The geographic constraints on transportation and land use in the Puget Sound region
  - The large area and more limited number of geographic constraints in the Denver region
  - The geographic and jurisdictional constraints that limit urban expansion in the San Diego region

Transferable Coordination Practices

Transportation-land use concurrency requirements	Metro, PSRC
Joint meetings of transportation and land use policy boards	PSRC
MPO has transit planning authority, while transit agencies are operators	SANDAG
Close coordination with transit districts	All four regions
Integration of other regional topics (e.g., housing, open space, water)	SANDAG, DRCOG

Growth Center Policies and Grant Programs

- Grants need to complement other policies that support centers.
- Funding flexibility is important to local governments.
- Funding is small relative to regional need.
- All four regions face debate about giving fewer centers more funding or spreading funding out to maintain broad support for the program.
- Growth center grants have had limited impact thus far on private investment due to high costs, market concerns and local opposition to density.
- Growth center policies can be improved with more technical assistance, more funding, more investment in alterative transportation, and performance measures that reward municipalities for supporting center development.

Transferable Growth Center Practices

Regional plans designating centers to coordinate strategies across region	All four regions
Funding for light rail expansion to support development of centers	SANDAG, DRCOG
Grants to local governments to help develop growth centers	SANDAG, DRCOG, Metro
Development guidelines and design concepts for centers	SANDAG, PSRC

Transportation Improvement Program (TIP) Incentives

- TIP funding criteria (by itself) has a limited influence on land use decisions.
- TIP funding in the Portland metro area and Puget Sound has less influence because the MPOs provide a relatively small share of regional funding.
- TIP funding criteria are still important when combined with complementary policies (transit investment, growth center grants, etc.).

Transferable TIP Practices

TIP criteria favors projects that support regional land use goals	All four regions
TIP criteria favors projects that increase density or support a center	All four regions
TIP criteria award points for municipalities that sign regional compacts	Denver
MPOs publish detailed reports on TIP policy and scoring	SANDAG

Implications and further research: This study concluded with a forum in which the team presented the research results and obtained feedback on the findings implications and needs for future research.

Selected implications:

- Elected official leadership is critical, and more work could be done to educate and inform elected officials on regional issues.
- Direct federal funding or pass-through of funding directly to the regional level could improve coordination or regional policies, and bring into balance statewide mobility with regional livability.
- Strengthening of performance measures could encourage more MPOs to invest more into smart growth efforts.
- The Partnership for Sustainable Communities should consider more agency partners and review regulations and programs to support smart growth.
- MPOs need information clearinghouses to provide better technical assistance, governance information and timely responses to specific questions.
- More regions may need to explore regional sources of funding (e.g., sales tax) to support transportation and transit needs.
- State and federal agencies and funding should encourage cross-MPO and cross-jurisdiction efforts.

Selected future research:

- More research focused on governance and coordination
- Need for research to be translated into results for state and regional agencies
- Need for research on topics related to equity
- More work on visualization strategies and tools
- More research on performance measures for metropolitan regions
- Additional research on policy tools and their effectiveness

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1 Introduction & Background

Across the United States, metropolitan areas face a range of increasingly challenging issues related to transportation and land use. These issues include congestion, infrastructure costs, air quality, loss of open space and greenhouse gas emissions.

These issues are closely interrelated with the form and patterns of land use, but as Cervero[1] notes, the separation of land use and transportation decisions makes coordination efforts difficult. Decisions about land use, transportation and transit are spread across a range of entities, particularly because of the large number of municipal governments in these regions.

This complex context creates procedural coordination issues when decisions don't take into account spillover effects, cross-jurisdictional issues, or the timing of land use change, transit investment and infrastructure investment. In these cases, procedures or mechanisms are needed that bring decision makers together to better align their efforts.[2]

However, coordination efforts are also underpinned by different or competing objectives of policies and policy-making bodies. In these circumstances, there is a need to reconcile these substantive differences or conflicts through joint planning, policy change or negotiation on program implementation.[3]

The issue of coordination is not unique to metropolitan transportation and land use. In areas such as natural resources management and social services, government and nongovernment organizations confront similar concerns. To address these issues, many organizations have developed coordinated or collaborative governance approaches. These approaches assume that existing formal governance systems will continue, and examine the range of approaches to aligning activities.[4]

Coordinated and collaborative governance also assumes that it is difficult to create new organizations with the authority to encompass these problems - an assumption based on the many interrelated and large-scale issues that make a structural approach infeasible. For example, the Portland area's Metro has substantial regional powers, but lacks authority to fully address address land use and transportation issues related to interstate transportation corridors and cross-state and cross-metropolitan commuting. In these situations, an increasing use of collaborative planning efforts allows participating entities to retain their autonomy, but agree to work towards commonly identified objectives.[5] This approach also requires ongoing coordination strategies that help link the decision-making approaches of agencies, transit providers, local governments and other organizations.

The issue of coordination in relation to transportation and land use decision making has been addressed in a range of studies, but much less attention has been paid to *assessing* different structures and mechanisms. For example, several states have supported studies that identified strategies for coordinating

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[1] Cervero, Robert. "Growing Smart by Linking Transportation and Land Use: Perspectives from California." *Built Environment* 29, no. 1 (2003): 66-78.

[2] Alexander, Ernest R. "Interorganizational Coordination: Theory and Practice." *Journal of Planning Literature* 7, no. 4 (1993): 328-43. Rogers, David L., and David A. Whetten. *Interorganizational Coordination: Theory, Research and Implementation*. Ames: Iowa State University Press, 1982.

[3] Bührs, Ton. "Strategies for Environmental Policy Co-Ordination: The New Zealand Experience." *Political Science* 43, no. 2 (1991): 1-29.

[4] Agranoff, Robert, and Michael McGuire. *Collaborative Public Management*. Washington D.C.: Georgetown University Press, 2003. Ansell, Chris, and Allison Gash. "Collaborative Governance in Theory and Practice." *Journal of Public Administration Research and Theory* 18, no. 4 (2007): 543-71. Margerum, Richard D. "Evaluating Collaborative Planning - Implications from an Empirical Analysis of Growth Management." *Journal of the American Planning Association* 68, no. 2 (2002): 179-93.

[5] Gray, Barbara. *Collaborating: Finding Common Ground for Multiparty Problems*. San Francisco, CA: Jossey-Bass, Inc., 1989.

transportation and land use, including North Carolina, Virginia and Florida.[6] However, this research focused primarily on topics such as travel demand tools, forecasting and legislative options. As the North Carolina researchers highlighted, there is a need to identify institutional mechanisms that allow state and regional transportation planners "to reach out to local land use planners to increase collaboration among parties and improve planning outcomes." [7]

In many urban areas, Metropolitan Planning Organizations (MPOs) are working to improve coordination between transportation and land use decision making. MPOs are federally established organizations serving metropolitan regions with a population in excess of 50,000. They were created to ensure that existing and future expenditures for transportation projects and programs are based on a continuing, cooperative and comprehensive planning program. The MPOs are required by law and regulation to carry out certain transportation planning and coordination responsibilities. Part of this process is the programming of investments through a regional transportation improvement program (TIP), which MPOs must update regularly. MPO authority over land use varies by state, and most do not have any direct authority.

1.1 Goals and Objectives of Research Project

This research project starts with the assumption that institutional arrangements in metropolitan regions are complex, and regardless of efforts to change formal structures, coordinated decision making will be essential.

In discussing institutional arrangements, we refer to the range of formal and information structures and processes.[8] This includes structures created through legislation (e.g., MPOs), administrative action (e.g., regional transportation organizations), and less formal coordination mechanisms such as coordinating committees, cross-approval processes and funding incentives.

Our goal in this study is to document and assess the efforts to coordinate land use and transportation in metropolitan regions by focusing on two key dimensions:

- Regional governance: the structures, authority and informal arrangements developed to address regional issues in multicity metropolitan areas.
- Coordination mechanisms: specific tools or policies for encouraging coordination between land use and transportation decision making; in particular, the financial incentives for local governments.

The specific objectives of the study are to: (1) document and describe innovative case studies; (2) evaluate the case studies through interviews, an online survey and document review; (3) compare and contrast the findings; (4) analyze the findings to determine the lessons for practice and potential policy implications.

1.2 Methods

The project was led by a multidisciplinary team from the University of Oregon and Portland State University. The project also involved a team of graduate students working over two terms for the University of Oregon's Community Planning Workshop.

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[6] Hendricks, Sara J., and Karen Seggerman. "Incorporating Transportation Demand Management into the Land Development Process." Tampa, Florida: Center for Urban Transportation Research, University of South Florida, 2005. Miller, John S., Roger W. Howe, Ryan P. Hartman, and Arkopal K. Goswami. "Options for Improving the Coordination of Transportation and Land Use Planning in Virginia." Charlottesville, Virginia: Virginia Transportation Research Council, 2004. Rodíguez, Daniel A, and David R Godschalk. "The Connection between Land Use and Transportation in Land Use Plans." Raleigh, North Carolina: North Carolina Department of Transportation, 2003.

[7] Rodíguez and Godschalk, 2003, 40.

[8] Ostrom, Elinor. *Governing the Commons: The Evolution of Institutions for Collective Action*. New York, N.Y.: Cambridge University Press, 1990.

CASE SELECTION

The research team conducted a review of published literature, research reports, state agency documents, and Web sites to identify potential cases for investigation. We used three criteria for selecting the case study regions:

- Land use and transportation is being addressed on a regional scale.
- Region encompasses multiple municipalities and jurisdictions.
- Region is using grant programs and TIP funding to promote regional growth centers.

Based on this review, we selected four cases and obtained commitments from regional organizations to participate in the study:

PSRC Puget Sound Regional Council (Central Puget Sound, WA)
Metro (Portland, OR)
DRCOG Denver Regional Council of Governments (Denver, CO)
SANDAG San Diego Association of Governments (San Diego, CA)

BACKGROUND RESEARCH

For each case study, the research team reviewed documents, research reports and published research. The team conducted interviews with approximately 10 key individuals in each region addressing topics such as approaches to regional coordination and governance; incentive programs to coordinate transportation and land use; the role of regional plans; relevant policies; and cross-boundary issues.

The **stakeholder interviews** included a comparable cross-section of individuals in each region, including: (1) MPO staff, (2) MPO elected officials, (3) state agency officials, and (4) staff with transit agencies, regional agencies or federal agencies.

The team also conducted two group interviews with the Regional Project Evaluation Committee (RPEC) in Puget Sound and the Transportation Policy Advisory Committee (TPAC) in the Portland metro region using a similar interview format.

ONLINE SURVEY

For each case study we conducted an online survey of people involved in regional transportation and land use decision making, including local government staff and elected officials, state agency staff and regional agency staff. The survey asked respondents to evaluate several issues in their region, including:

- Regional governance and coordination of decision making
- Effectiveness of specific policies and programs in supporting coordination
- Regional trends related to transportation and land use planning

Individuals were notified of the survey by e-mail and asked to complete it online. After the initial e-mail, two follow-up reminders were also sent. The survey was sent to a total of 450 individuals in the four regions, and a total of 199 responded (response rate = 44 percent). A more detailed breakdown of the responses is provided in Table 1 below.

Table 1: Survey Respondent Information

Respondent information	PSRC	DRCOG	Metro	SANDAG
Survey sample size	101	117	163	69
Survey responses	61	59	44	35
Survey response rate	60%	59%	44%	35%
Organizational affiliation				
Federal government	0%	2%	0%	0%
State government	11%	9%	9%	3%
County government	15%	22%	2%	6%
City government	39%	49%	39%	71%
Tribal government	0%	0%	0%	0%
Port	7%	0%	2%	0%
Transit district	10%	4%	5%	3%
Private sector	7%	3%	11%	0%
MPO	2%	3%	9%	3%
Interest group	3%	3%	5%	0%
Community representative	2%	0%	16%	0%
Other	5%	5%	2%	14%

RESEARCH FORUM

On September 8-9, 2010, the findings from this research were presented at a forum in Portland, OR. The invitation-only forum involved at least two participants from each of the four case studies, researchers and officials from state and federal agencies.

The schedule of the forum included:

- Federal transportation context
- Context and background on cases by MPO staff from each case study area
- Presentation of findings by research team
- Federal legislative context by Congressman Oberstar (MN) and Congressman DeFazio (OR)
- Research panels on findings and future research needs
- Facilitated breakout sessions covering funding, governance, coordination mechanisms and policy

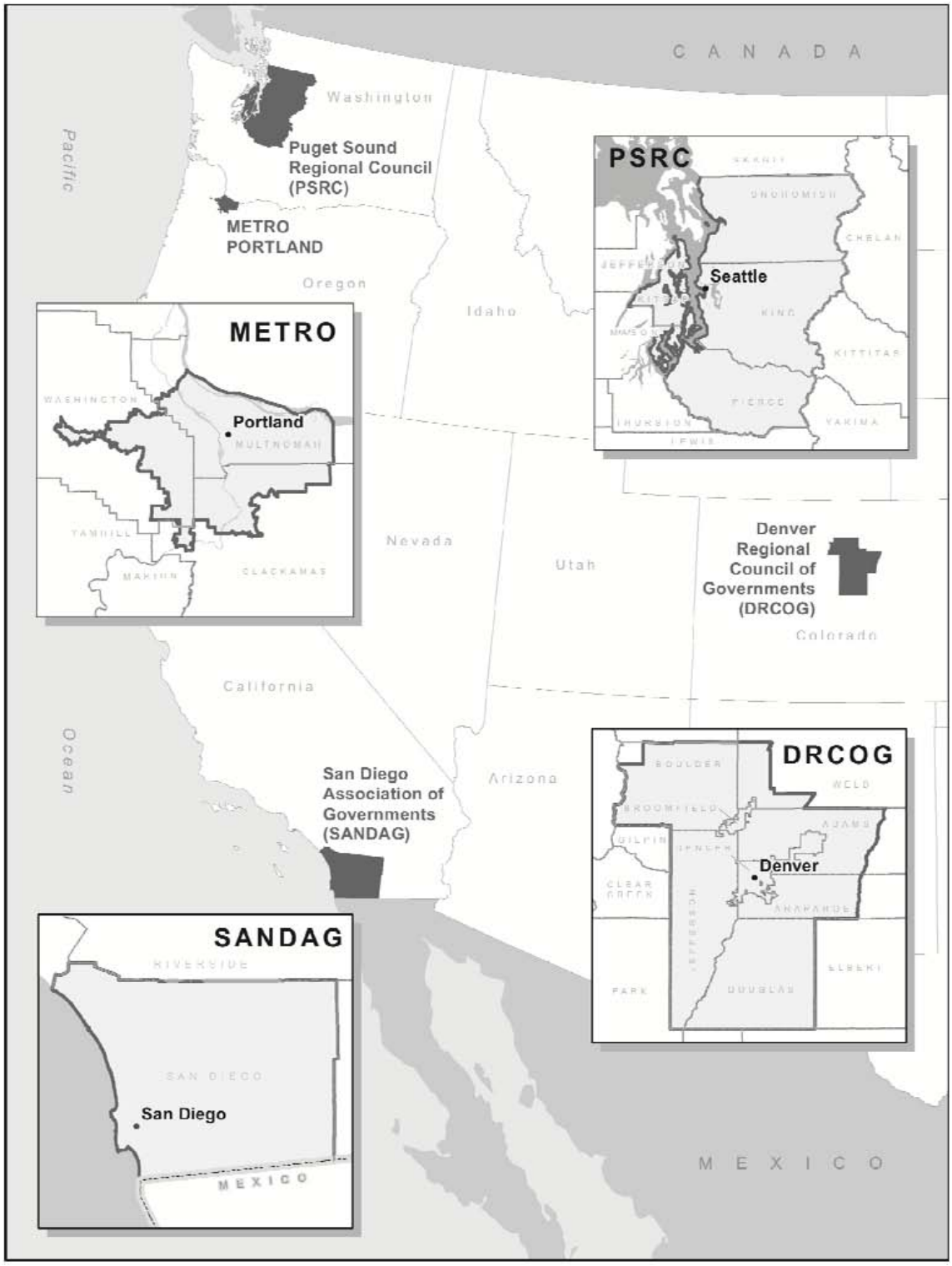
Information, notes and discussion from this forum were gathered by the research team and are summarized in the Appendix. The team used this information to refine the analysis and recommendations presented in this document.

Limitations and Caveats

Our methods have several limitations. Ideally, we could evaluate our cases using outcome data. However, the policies are relatively new, and many years of data are required to determine statistically valid trends. Our study provides an interim assessment of these policies using the opinions of regional stakeholders.

The interviews and surveys were designed to include a parallel set of participants for each case, but the committee composition and respondents varied. Also, respondents in different regions may have different expectations of performance. Finally, we rely on a relatively small set of respondents. For these reasons, we have been cautious in our cross-case comparisons and generalizations.

Figure 1: Report Case Studies



Source: InfoGraphics Lab, Geography Department, University of Oregon

2 Case Study Overviews

This section provides brief overviews of the four case study areas, and a summary of participant assessment of regional outcomes. A more detailed discussion of each case study is provided in Appendix 2.

As shown in Table 2, all four regions include medium-sized cities with varying geographic sizes and number of local jurisdictions. Washington and Oregon have state growth management legislation, while California and Colorado do not. Other state legislation affects land use and transportation decision making, such as California's affordable housing requirements.

Table 2: MPO Overview

Regional MPO	Metro Population	Area (sq miles)	Cities Counties	Agency Formation (Year)
Portland Metro (Metro)	1,400,000	463	25 Cities 3 Counties	1977
Puget Sound Regional Council (PSRC)	3,583,000	6,290	82 Cities 4 Counties	1959
San Diego Association of Governments (SANDAG)	3,200,000	4,526	18 Cities 1 County	1966
Denver Regional Council of Governments (DRCOG)	2,851,000	5,288	47 Cities 9 Counties	1955

2.1 Portland Metro (Metro)

The Portland metro area encompasses three counties (Clackamas, Multnomah, and Washington) and 25 cities, including Portland, Beaverton, Tualatin, Oregon City, Milwaukie, Gresham and Fairview. Approximately 1.4 million people live in Metro's region, with over 38 percent living in Portland. Metro covers 463 square miles, but the greater metropolitan area extends to a larger area, including across the Washington-Oregon border to the north (see Map 1).[9] The Metropolitan Service District (Metro for short) formed through a merger with the Columbia Region Association of Governments (CRAG). The Oregon Legislature approved the creation of Metro in 1977 and it was approved by voters in 1978. It began operating in 1979, adopted its first urban growth boundary, and was designated by the federal government as the region's MPO.

In 1995, Metro adopted the 2040 Growth Concept, which is the region's growth management policy that defines development in the metropolitan region through the year 2040. The 2040 Growth Concept directs most development to existing urban centers and along existing major transportation corridors, and promotes a balanced transportation system with a variety of transportation options.

The Regional Framework Plan (RFP), adopted in 1996, unites all of Metro's adopted land use planning

[9] Metro, Region, County, and City Areas. 2006. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=24905 (accessed January 2010).

policies and requirements into one document. The RFP brings together the 2040 Growth Concept, the Regional Urban Growth Goals and Objectives (RUGGOs), the Metropolitan Greenspaces Master Plan, and the Regional Transportation Plan (RTP). Oregon law requires that the RFP comply with the state's planning goals. The RFP contains policies on key regional growth issues, including accommodation of projected growth and the coordination of transportation and land use planning.

The RTP serves as the federal metropolitan transportation plan as well as the Transportation System Plan (TSP) required under the state's Transportation Planning Rule.[10] The first RTP was approved in 1982. The last update, the 2035 Regional Transportation Plan, was adopted in June 2010.

2.2 Puget Sound Regional Council (PSRC)

The PSRC covers nearly 6,300 square miles and encompasses four counties (King, Snohomish, Pierce and Kitsap) and 82 cities, including Seattle, Bellevue, Bremerton, Everett and Tacoma. The region contains over 3.5 million residents, with approximately 16 percent living in the City of Seattle. Puget Sound has many channels and waterways that make transportation systems challenging. Furthermore, populated areas tend to concentrate near the Sound, which creates land use challenges due to the sensitivity of natural areas.

The first regional planning organization was established in 1959 and designated as a federal MPO in 1973. The PSRC was formed in 1992. Under Washington law, the PSRC is also the designated regional transportation organization. The PSRC prepares the RTP, which satisfies both federal and state transportation requirements. Every one to two years the PSRC is required to complete a federally approved Unified Planning Work Plan (UPWP). The Council also prepares the regional Transportation Improvement Program (TIP).

Under the Washington Growth Management Act,[11] the PSRC prepared a long-range, integrated strategy called Vision 2040, which addresses regional environment, growth management, economic development and transportation. It was adopted in 2008 as a comprehensive update to previous plans and presents a numeric regional growth strategy, which allocates expected population and employment growth. A key component of Vision 2040 is the designation of regional growth centers and manufacturing and industrial centers. The Council is responsible for ensuring that the transportation-related provisions in local comprehensive plans are consistent with the regional plan. Transportation 2040, an update to the regional transportation plan, was adopted in May 2010, and serves as the functional transportation plan for Vision 2040.

2.3 San Diego Association of Governments (SANDAG)

SANDAG's boundaries coincide with San Diego County and encompass 18 cities, including San Diego, Carlsbad, Chula Vista and Oceanside. The SANDAG region covers more than 4,000 square miles and the total population estimated for 2009 is close to 3.2 million, with over half of this population living in San Diego.[12] SANDAG is bounded by Mexico to the south, the Pacific Ocean to the west, mountains to the east, and a military base to the north.

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[10] Oregon Administrative Rule Chapter 660, Division 12, available at http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_012.html

[11] Chapter 36.70a RCW (Revised Code of Washington), accessible at http://apps.leg.wa.gov/rcw/default.aspx?cite=36.70a

[12] SANDAG, "Demographics and Other Data: Fast Facts." http://www.sandag.org/resources/demographicsandotherdata/demographics/fastfacts/regi.htm (accessed January – February 2010).

Although SANDAG was not created until 1980, it was preceded by a comprehensive planning organization created in 1966 and designated as the MPO in 1970. In 1971, it was as designated the state's Regional Transportation Planning Agency; one year later, it was reestablished as a separate joint-powers authority, independent of county government.[13]

As a result of several proposals and reviews, the California Senate passed legislation in 2002 that strengthened SANDAG's authority in the region. The agency took over the regional transit planning and capital project development functions of the region's Metropolitan Transit System and the North County Transit District.

As the federal MPO, SANDAG is responsible for preparing a regional transportation plan and regional transportation improvement program. Under state law, SANDAG creates regional short-range transit plans and is responsible for coordinating the regional housing needs assessment.

In 2004, SANDAG completed a Regional Comprehensive Plan (RCP) deigned to guide how the region should grow in terms of housing, transportation, environment, energy and water. The RCP establishes a planning framework for integrating local land use with regional transportation decisions. The RCP does not supersede local government land use authority, but looks at these individual decisions as a whole, examines cumulative development trends, and creates incentives for smart growth planning.[14]

2.4 Denver Regional Council of Governments (DRCOG)

DRCOG's planning area, situated along Colorado's Front Range, encompasses nine counties and 47 cities, including Denver, Boulder, Aurora and Lakewood. The regional population is approximately 2.8 million people, with over 600,000 living in Denver.[15]

DRCOG was formed in 1968, but was preceded by an intercounty regional planning commission formed in 1955. Under state law it is authorized to make and adopt regional plans, but it does not have land use implementation authority such as zoning. With DRCOG's support, the Regional Transportation District (RTD) was formed in 1969 to manage the region's transit system. In 1971, DRCOG signed agreements with the RTD and the state to manage transportation planning throughout the region.

As a federal MPO, DRCOG is responsible for preparing a regional transportation plan and regional TIP. DRCOG also prepared a regional comprehensive, long-range strategy called Metro Vision. Metro Vision is an umbrella plan that addresses growth and development, transportation and the environment. Metro Vision provides the high-level policy context for more detailed plans, including the regional transportation plans and local government plans, but local compliance with the plan is voluntary.

2.5 Regional Outcomes

In our survey we presented participants with a range of outcome assessment questions to provide some assessment of regional trends. As shown in Table 3, a similar percentage of respondents agreed and disagreed that there was consistency between regional transportation decisions and local land use decisions. A similar split was found when they were asked about local land use decisions being consistent

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[13] SANDAG, "About SANDAG: History." http://www.sandag.org/ index.asp?fuseaction=about.history (accessed January – February 2010).

[14] SANDAG. *Regional Comprehensive Plan for the San Diego Region*. July, 2004. Document PDF available on SANDAG Web site: http://www.sandag.org/ index.asp?classid=12&fuseaction=home.classhome (accessed January – February 2010).

[15] *With One Voice*, DRCOG, 2009, p.2, http://www.drcog.org/documents/ 2009%20With%20One%20Voice%20Brochure%204%20web.pdf

with regional transportation decisions. In contrast, a strong majority in all regions believed that transit investment and bicycle and pedestrian investment supported regional growth centers. In contrast, the views about roadway investment supporting growth centers were more mixed. In all four regions, a sizable majority of respondents agreed that the region was making more efficient use of land, increasing transportation options and seeing more development within the region's growth centers.

Table 3 Metropolitan Outcome Assessment Questions

Question: Please rate your level of agreement or disagreement with the following statements:

	PSRC				DRCOG				Metro				SANDAG			
	Agree	Neither agree nor disagree	Disagree	Don't know	Agree	Neither agree nor disagree	Disagree	Don't know	Agree	Neither agree nor disagree	Disagree	Don't know	Agree	Neither agree nor disagree	Disagree	Don't know
Regional transportation decisions are consistent with local land use decisions	38%	21%	39%	2%	27%	45%	27%	2%	33%	27%	39%	0%	47%	32%	21%	0%
Local land use decisions are consistent with regional transportation decisions	30%	32%	36%	2%	27%	25%	46%	2%	32%	29%	38%	0%	36%	29%	33%	4%
Transit investment supports regional growth centers	65%	21%	13%	2%	77%	10%	10%	2%	66%	12%	21%	0%	64%	7%	22%	7%
Roadway investment supports regional growth centers	31%	34%	36%	0%	39%	33%	26%	2%	39%	21%	39%	0%	44%	26%	19%	11%
Bicycle and pedestrian investment supports regional growth centers	50%	32%	15%	4%	65%	12%	20%	2%	68%	12%	18%	3%	50%	36%	11%	4%
The region is making more efficient use of land as a result of regional efforts	48%	28%	23%	2%	47%	27%	26%	0%	66%	21%	12%	0%	68%	14%	15%	4%
The region is increasing transportation options as a result of regional efforts	60%	23%	17%	0%	77%	6%	16%	0%	69%	18%	12%	0%	64%	11%	18%	7%
There is an increasing trend of development within the region's growth centers	59%	30%	8%	4%	57%	29%	10%	4%	45%	33%	21%	0%	68%	14%	7%	11%
Sample size	53				48-49				33-34				27-28			

Note: Agree includes “agree” and “strongly agree” responses; Disagree include “disagree” and “strongly disagree” responses.

3 Regional Governance

We use the term "governance" to refer to the processes of governmental management, leadership and decision making in regions. At the regional level, governance is particularly complex because of the multitude of jurisdictions and organizations. MPOs and Councils of Government (COGs) serve as a forum for helping to govern across these regions. In approaching our analysis of governance, we consider both the formal and informal leadership structures and the ways in which they operate.

3.1 Regional Governance Findings

In our interviews and surveys, we asked people in each region about participation in regional decision making. We also reviewed the structure of governing boards and their approaches to membership and decision making.

Critical government players are involved: In all of the regions, a majority of survey respondents and interviewees indicated that the critical players were involved in transportation and land use decision making; local elected officials were kept well informed; and there was a high level of engagement among elected officials. The most common dissatisfaction expressed related to elected officials, with respondents noting elected officials' deficiencies in understanding regional processes, misrepresentation of constituencies, and inconsistencies between local views and regional vision. One significant challenge was the large number of elected officials across several regions and the difficulty of communicating with them.

Limited involvement of nongovernmental stakeholders and the public: A consistent theme that emerged from open-ended comments about regional decision making was the lack of participation among smaller municipalities and nongovernmental stakeholders, particularly special districts and school boards. Many respondents also believed that there was a lack of public involvement in decision making.

Institutional complexity affects governance: One significant difference between the regions was the structure of their governing boards. As shown in Table 4, these differences begin with the number of jurisdictions encompassed in each region. The smaller number of local jurisdictions in the San Diego region allows all jurisdictions to regularly participate in regional governance. In contrast, Puget Sound and Denver rely more on executive committees. Portland's Metro has directly elected regional councilors, who represent districts in the region. This structure does not provide as many opportunities to engage other elected officials, and therefore Metro relies on many advisory committees.

Table 4 Governance Summary

Governance Aspects	Metro	PSRC	DRCOG	SANDAG
Cities and counties	25 cities 3 counties	72 cities 4 counties	47 cities 9 counties	18 cities 1 county
Size of executive committee	Council: 7 members	Executive Board: 32 members	Board of Directors: 57 members	Board of Directors: 24 members
Meetings	Weekly (work session or meeting)	Monthly	Monthly	Twice per month
Voting rules	Simple majority	Weighted by population	Simple majority (for regional plans)	Simple majority with option for weighted voting
Noncity / noncounty members	None	None	3 non-voting members appt. by Governor	9 non-voting members
Selected Standing subcommittees	• Metro Expo. and Recreation Commission • Metro Policy Advisory Comm. • Metro Technical Advisory Comm. • Joint Policy Advisory Comm. on Trans. • Metro Comm. for Citizen Involve. • Natural Areas Program Perf. Oversight Comm. • Metro Solid Waste Adv. Comm. • Metro Bi-State Coordinating Comm.	• Operations Comm. • Transportation Policy Board • Growth Management Policy Board • Economic Development District Board	• Regional Trans. Comm. • Administrative Comm. • Metro Vision Issues Comm • Advisory Comm. on Aging • Transportation Advisory Comm. • Firefighter Advisory Comm. • Water Quality Advisory Comm.	• Executive Comm. • Regional Planning Comm. • Transportation Comm. • Borders Comm. • Public Safety Comm.
Regional land use powers	Yes	Yes	No	No
Regional transportation planning powers	Yes	Yes	Yes	Yes
Regional transit planning authority	No—TriMet	No—Multiple transit agencies	No—RTD	Yes
Encompasses "commutershed"	No	Mostly	Mostly	Mostly
Other regional roles	• Open space • Solid waste • Regional facilities	• Economic development • Food planning	• Aging	• Open space • Borders • Public

Regional authority affects governance: As shown in Table 4, the authority of each regional agency differs considerably. All four are federally designated MPOs with direct control over regional allocation of federal transportation dollars. However, the regions differ in their control over *total* regional transportation expenditures, particularly in Portland and Puget Sound. In both San Diego and Denver, regional sales taxes provide important additional sources of funding to support transit investment, transportation and other activities. In Portland and Central Puget Sound, the regional agencies have land use authority.

These factors highlight some key differences in the way the four organizations approach regional governance:

- SANDAG: Relies more on its funding capacity for regional transportation, transit and open space, and to a lesser extent on its role in implementing state housing policy. It encompasses most of its commutershed, but cross-boundary commuter issues are growing.
- DRCOG: Relies more on its funding capacity for regional transportation and its close working relationship with the RTD; it also relies on a voluntary political commitment to the regional vision strategy. It encompasses most of its commutershed, but cross-boundary commuter issues are growing.
- Metro: Relies more on its land use authority and its close working relationship with TriMet; it controls a relatively small proportion of regional transportation funding. It relies on voluntary coordination with neighboring jurisdictions, particularly in relation to regional commutershed issues.
- PSRC: Relies more on its land use authority, but has had more complications working with the six transit districts in the region. It controls a relatively small proportion of regional transportation funding. It encompasses most of its commutershed, but cross-boundary commuter issues are growing.

Elected official engagement is important: The majority of respondents in all four case studies felt there is a high level of engagement of elected officials; this view was expressed by more respondents in SANDAG, Metro and DRCOG than in PSRC. Interviewees in all four regions noted that this engagement is critical for developing an atmosphere that supports regional roles in decision making, particularly in regions where regional land use is entirely voluntary.

Engagement at the regional level is most difficult in Denver and Puget Sound because of the large number of elected officials. This means that many elected officials are not participating in discussions and decisions on regional issues on a regular basis. It is particularly difficult in Denver because DRCOG has no regional authority and because term limits result in regular turnover of elected officials.

Coordination difficulties with state transportation agencies: In three of the regions, some of the highest percentages of "ineffective" ratings for coordination with the MPO were given to state transportation agencies. In part, this reflects the tension between competing goals of improving statewide mobility (DOTs) and addressing a range of regional livability issues (COGs and MPOs). For example, respondents in both Washington and Oregon noted that the automobile focus of their DOTs conflicted with regional integrated planning efforts. In California, this relationship is less of an issue because state law grants much more significant planning authority to MPOs over the state transportation agency.

Cross-boundary coordination issues: In all four regions, the efforts of other MPOs and neighboring counties and cities to coordinate with the MPO garnered mixed evaluations. In terms of MPO-to-MPO coordination, many respondents in three regions rated it as ineffective. For the category of neighboring counties and cities, a majority of respondents in all four regions indicated coordination efforts were ineffective. Efforts to coordinate across these boundaries are difficult because of the scale of the cross-regional issues, the additional transaction costs of working across these boundaries, and the lack of a forum for joint planning.

Portland's Metro is encountering the most significant barriers to coordination because of its small size relative to the regional commute patterns. These commute patterns extend into Washington state and neighboring metropolitan areas. Cross-boundary commuting is becoming more of an issue in the other three regions as well.

DRCOG has confronted challenges in coordinating long-range planning stemming from proposals for toll roads by public highway authorities. Also, air quality issues have required DRCOG to work with the North Front Range MPO.

3.2 Transferable Practices

The effectiveness of regional governance is a significant and timely topic in all four regions. In Puget Sound, the Portland metro area and San Diego, state legislative changes over many years have led to increased governance powers for the regional agencies. In Denver, there has been little state-level effort to augment the powers of DRCOG, leaving it to rely entirely on collaborative processes.

In each case, we identified several approaches, issues or initiatives that provide some practices that may be transferred or translated to other regions.

- SANDAG pays elected officials for their attendance at regional meetings, and holds most committee and subcommittee meetings on the same day. This creates a convenient arrangement for elected officials and encourages an atmosphere of regional engagement on "SANDAG meeting days."
- SANDAG uses a two-part voting system. Measures can pass with a simple majority based on representation. However, jurisdictions can call for a weighted vote based on population, and then the measure must pass both votes to be approved.
- In several regions, leadership from suburban elected officials has been important for gaining regional support and commitment. This leadership has helped offset concerns about the dominance of the central city.
- DRCOG has developed a board manual designed to quickly bring elected officials up to speed on regional authority, issues and decision making. The manual was developed when Colorado passed term limits, resulting in higher turnover among elected officials.
- Local governments in the DRCOG region created a voluntary regional agreement called the Mile High Compact (adopted in 2000) which calls for the signatories to: (1) adopt a comprehensive plan that includes a common set of elements; (2) use growth management tools such as urban growth boundaries; (3) link their comprehensive plans to Metro Vision; and (4) work collaboratively to guide growth and ensure planning consistency. As of December 2010, 46 of the 56 jurisdictions had signed the Compact, representing approximately 90 percent of the region's population.
- To improve communication and coordination, PSRC invites representatives from neighboring counties (outside the MPO boundary) to attend board and committee meetings, such as the Transportation Policy Board. The PSRC includes neighboring counties (outside the MPO boundary) as "associate members," and elected officials from those counties sit on policy boards.
- PSRC has used facilitators in the past to work through difficult issues at the committee level.

- PSRC includes neighboring counties outside its boundaries as associate members, and provides them ex-officio seats on its advisory policy boards. Reciprocally, PSRC officials sit on neighboring MPO policy boards.
- PSRC conducts "new electeds" workshops following each major election cycle to educate newly elected legislators on regional issues, procedures and decision making processes.
- Metro has created a Bi-State Coordination Committee that encompasses regional transportation coordination committees in Oregon and Washington. Its role is to review transportation and land-use issues of bistate significance and to present recommended actions to both state committees.
- CALTRANS provides planning grants for cross-boundary issues, which encourages MPOs to work together.
- MPOs in Oregon have formed a consortium, which has helped them collectively discuss coordination issues and approaches with the Oregon DOT and other state agencies.
- Visualization techniques for communicating complicated information, such as travelshed maps created by Metro, have been very important in communicating to elected officials and the public.

4 Transportation-Land Use Coordination

A second goal of this project was to examine and assess regional approaches to coordination. The need for coordination has long been a mantra in the literature and policy documents, but coordination is a complex issue on a regional scale.

4.1. Coordination Findings

In this section we discuss some of the general coordination trends. In later sections, we discuss the role that specific policies have played in helping to coordinate transportation and land use. The findings in this section are based on both our online survey and personal interviews about coordination efforts and trends.

Transportation and transit funding are critical tools: In all four regions, transportation and transit funding are critical tools in coordinating with land use decisions. In Denver and San Diego it is one of the few tools, but even in the growth management states of Washington and Oregon it was cited as highly important.

Transportation and land coordination is occurring: A majority of respondents in all four regions believed that transportation and land was "coordinated." The percentages of respondents indicating it as coordinated or very coordinated were highest in Metro (78 percent) and SANDAG (73 percent). DRCOG generated a relatively high percentage of "uncoordinated" responses (35 percent), but no respondents in the four regions indicated that it was "very uncoordinated."

Coordination is improving: In PSRC, Metro and DRCOG, a narrow majority of respondents believed that coordination was improving or improving considerably. A high percentage of SANDAG respondents indicated that coordination was improving (69 percent) and no respondents responded that things were getting worse.

The influence of plans and policies varies by region: In our interviews and surveys, we were also interested in the relative influence of various plans and policies in each region. In all four regions, the regional land use vision, long-range transportation plan and TIP were all listed by a high percentage of respondents as having an influence on land use-transportation coordination.

- In PSRC and Metro, the regional land use plan and transportation plan generated the highest percentage of respondents listing its influence as "moderate" or "strong." In part this reflects the growth management powers of both states. In Oregon, the Transportation Planning Rule serves as a regulatory mechanism to coordinate transportation and land use. In Washington, there is a concurrency provision in the state Growth Management Act that influences coordination.
- In DRCOG and SANDAG, the TIP generated the highest percentage of respondents listing its influence as "moderate" or "strong." Neither of these regional agencies has any land use authority or regulatory powers to link transportation and land use. Furthermore, both of these regions have passed a local option sales tax that funds transportation and transit investment (SANDAG's TransNet, and FasTracks in the Denver region).

Each region has unique geographic and contextual factors that affect its ability to coordinate transportation and land use:

- While Metro has regional land use authority, its jurisdiction is relatively small compared to the larger commutershed, which extends across the Washington border into Clark County and south as far as Salem, OR.
- The numerous Puget Sound channels and waterways make transportation development challenging and limit land development options. Also, sensitive natural areas are located in close

proximity to dense urban areas.

- DRCOG covers a large region that includes nine counties (plus a portion of a tenth county), which encompasses a significant portion of the commutershed but complicates efforts to promote voluntary and incentive-based coordination efforts.
- SANDAG boundaries coincide with San Diego County (over 4,500 square miles) and one regional state transportation district. The region is also geographically constrained by mountains, the ocean, the Mexican border and a military base. As a result, it has fewer cross-boundary coordination issues than the other regions, but the Mexican border adds a layer of complexity not present in the other regions.

4.2. Transferable Practices

- A key requirement in the Oregon Transportation Planning Rule (TPR) is that local governments evaluate proposed plan amendments and zone changes to consider whether they are consistent with adopted land use and transportation plans. This part of the TPR, referred to as Section 0060, is designed to assure that local governments consider the transportation impacts of changes to land use plans, address how needed transportation improvements will be funded, and minimize the traffic impacts of new development. The provision is controversial and continues to be the subject of debate.
- The Washington Growth Management Act contains a concurrency goal that must be addressed by local governments. The PSRC worked in consultation with the City of Bellevue and King County Metro to develop a template methodology for the incorporation of alternative modes into the regulatory or planning concurrency process within regional growth centers.
- Under state law, PSRC is required to review the transportation provisions of local government comprehensive plans to ensure that they are consistent with Vision 2040's multicounty planning policies, which also serve as the RTPO's "regional guidelines and principles" for regional and local transportation planning. PSRC formally certifies the provisions in the local plans. The PSRC Executive Board has made a determination that only jurisdictions whose provisions have been certified are eligible to compete for regionally managed transportation funding.
- At PSRC, the two primary land use and transportation policy boards (the Transportation Policy Board and Growth Management Board) meet periodically to discuss consistency between land use and transportation policies and programs.
- DRCOG works very closely with the RTD and local governments on long-range transit planning. The FasTracks funding for light rail corridors and stations is one of their key incentives for promoting development around growth centers. Moreover, DRCOG's plans identify 35 regional multimodal corridors and describe growth, development and transportation visions for each corridor.
- As a result of legislative changes, SANDAG is responsible for transit planning in the San Diego region, while the two transit districts are operational agencies. This has created a close link between SANDAG's regional growth centers policy and its transit planning and investment.
- Both DRCOG and SANDAG have additional regional responsibilities that interrelate with regional land use activities, and both are playing an increasingly important role. Until 2011, DRCOG had responsibilities relating to wastewater treatment infrastructure. It continues its duties as the Area Agency on Aging, which is having a growing influence on land use and transportation planning. SANDAG's Transnet tax provides significant funding for acquisition of open space and habitat areas that form a green belt along the eastern edge of the metropolitan area.

5 Growth Center Policies & Grant Programs

All four of the regions we studied have policies in place to encourage infill or development around centers. Each region has adopted a policy that provides grants to develop mixed-use centers, particularly ones located along existing or potential transit corridors. By concentrating development around mixed-use centers, regions are attempting to improve the viability of transit corridors and create walkable environments with a mix of services and amenities. These centers are hypothesized to reduce vehicle miles traveled (VMT) by promoting transit use and reducing local trips for services. Mixed-use centers can also serve low- and moderate-income populations through more affordable housing and reduced transportation costs.

5.1 Growth Center Grant Program Findings

In each of the cases, we asked interview and survey respondents how well their growth center grant programs were working and how they could be improved. In all four cases, the growth center grant programs are relatively new.

- **Funding needs to complement other policies**: A strong majority of respondents in all four regions indicated that the centers policy was encouraging local jurisdictions to focus more development in centers. For example, survey respondents in all four regions noted that these policies made living and working in these higher-density centers more desirable. Interview and survey respondents also emphasized that grant programs needed to be complemented with a combination of policies to support centers.
- **Funding flexibility is important**: Local governments noted that the growth-center grant programs were particularly helpful when they were flexible. These grants could fill in funding gaps from other sources that had more restrictions.
- **Grants are small relative to needs:** A common theme in interviews and open-ended comments was that the grant programs were relatively small in relation to overall need. For example, respondents in the SANDAG region cited the high cost of infrastructure investment to develop centers, and almost all of the respondents called for more funding in the grant program.
- **Debate about the number of designated centers**: In all four regions, survey respondents made divergent comments about the number of centers designated across the regions, which ranged from 29 to 92 (see Table 5). Some believed there should be fewer centers focused exclusively around rapid transit. Others believed that higher-density commercial and suburban centers would also aid regional transportation and land use goals.
- **Regional equity is an issue:** One of the challenges facing all four regions is the regional distribution of funding for growth centers. The goal of promoting higher-density, mixed-use centers served by transit naturally favors some jurisdictions over others, including areas already served by transit and areas containing higher densities that would support future transit ridership. This disproportion can produce political concerns about funding. For example, almost all of SANDAG's smart growth funding grants have been allocated to just four cities. Some of the different approaches reflect these tensions:
    - Since 2002, PSRC has concentrated on 27 regionally designated growth centers; it also has eight centers focused on manufacturing. In addition, the Rural Town Centers and Corridors Program was developed in 2004 to support more rural Main Street development needs.
    - SANDAG has defined seven "smart growth place types" in its Regional Comprehensive Plan, which includes metropolitan centers, urban centers, town centers, community centers, rural villages, mixed-use transit corridors and special use centers. It has designated nearly 200 "smart growth opportunity areas" that conform to these place types.

o Metro has designated 10 urban design types in its 2040 Growth Concept, including Regional Centers, Town Centers and Station Communities. The region contains 37 centers in addition to downtown Portland.

Table 5 Growth Center Programs[16]

	Metro	PSRC	DRCOG	SANDAG
Number of Centers	37	35 27 regional centers; 8 manufacturing and industrial centers	92	196 85 existing and planned 111 potential
MPO Region	463 sq. mi.	6,290 sq. mi.	3,608 sq. mi. Full area 5,288 sq. mi	3,608 sq. mi.
Term used	Centers	Centers	Urban centers	Smart growth opportunity areas
MPO definitions of centers[16]	"…the focus for redevelopment, multimodal transportation and concentrations of households and employment patterns."	"…relatively small areas of compact development where housing, employment, shopping, and other activities are in close proximity"	"… concentrated urban areas more dense and mixed in use than surrounding areas…[They] will be active, pedestrian- and bicycle-friendly places, with employment, housing and services nearby...[and] served by transit, either rapid transit or bus."	"…places that accommodate, or have the potential to accommodate, higher residential and/or employment densities. They are pedestrian-friendly activity centers that are connected to other activity centers by transit or could be in the future."
Types of Centers	Town Centers; Regional Centers	Regional Growth Centers, Manufacturing/ Industrial Centers	Mixed-use centers Activity centers, Regional corridors	Metropolitan Center, Urban Center Town Center Community Center Transit Corridor Special Use Center Rural Community

- **Targeted funding appears to have limited influence on private investment**: All four regions indicated that their growth centers policy was having limited influence on private investment, with 12 percent to 27 percent of survey respondents agreeing with this statement. Some of the challenges included:

[16] Sources: Metro, "State of the center: Investing in our communities" January, 2009. PSRC, "Central Puget Sound regional growth centers" December, 2002. DRCOG, "Metro Vision 2035: Growth and development supplement" August 20, 2008. SANDAG, "Smart growth definition, principles, and designations" Spring 2003.

o Finding developers convinced that there is a market for higher-density housing and supporting retail;

o The high cost of construction and development, reducing the affordability advantage of higher-density housing; and

o Local opposition to higher densities.

- **Improving centers policies**. When asked to list three things that could improve their region's centers policies, the improvements most commonly cited by online respondents included:
  o Technical assistance (top item in three of four regions): sharing best practices, assisting with financial analysis, education and training and consultant assistance.

  o More funding (among top three in all four regions): investment to enhance centers, planning grants, avoid spreading funding too thin, and fund other transportation enhancements to support centers (bus, biking, walking).

  o Encourage active transportation and transit: increase investment in biking and walking infrastructure that would support growth centers.

  o Integrate performance measures and prioritize funding: identify local and regional performance measures that reward municipalities for supporting centers.

  o Other commonly cited improvements included: land use policy changes to support mixed-use centers (PSRC-11 respondents); better listening to local needs (Metro-11 respondents); more information and analysis on growth centers and best practices (PSRC-5 respondents); modification of TIP criteria to favor centers more (DRCOG-5 respondents); and educate elected officials about land use policies (DRCOG-4 respondents).

5.2 Transferable Practices

- SANDAG has allocated $280 million over 40 years from TransNet sales tax funding for its Smart Growth Incentive Program.
- SANDAG has developed model guidelines for planning and design for pedestrians and smart growth centers, and has provided resources for local communities to work with the public in designing growth centers.
- In Denver, the RTD and its plan for expanding the light rail system through the FasTracks program (funded by a regional sales tax) is a key incentive for developing around growth centers.
- DRCOG sets aside funding in the TIP for station area and urban center planning, and its TOD program provides information, tools and resources to help local governments plan for transit-oriented development.
- Metro has initiated a Community Planning and Development Grant program to support planning and development activities within the urban growth boundary that advance the region's 2040 Growth Concept. The program is funded with construction excise tax revenue.
- Metro has developed a number of toolkits and handbooks that provide specific tools to complement strategies and policies identified in the RTP and the 2040 Growth Concept. These include the award-winning "Creating livable streets: Street design guidelines for 2040" and a "Community Investment Toolkit" that focuses on financial incentives, urban design and local building codes, and economically and ecologically sustainable employment and industrial development.
- PSRC has developed guidelines for designated urban centers and high-capacity transit station areas. It also has published a Design Guidelines Manual.

- Since 2002, PSRC has concentrated on regionally designated growth centers; it also has regionally designated centers focused on manufacturing. In addition, the small but significant Rural Town Centers and Corridors Program was developed in 2004 to support more rural Main Street development needs.
- Communities in all four regions found that an approved centers map helped provide a clear policy intention and willingness to support and invest in development around these centers. While the designation of centers carries more weight in growth management states, it has also been an important starting point for local planning in San Diego and Denver.

6 TIP Funding Incentives

One criterion for choosing our four case studies was that all of them were incorporating criteria into their TIP funding allocation to create incentives for smart growth. Transportation funding in all four regions is provided through a complex set of federal and state funding sources. Within certain constraints, funding rules allow regions to develop or weight their criteria to address regional needs. As a result, regions can add criteria such as "supports smart growth centers" to traditional funding criteria such as congestion relief or safety. In all four regions, this funding is augmented by regional funds generated by other taxes.

6.1 TIP Funding Incentive Findings

In our interviews and survey, we asked participants to assess the use of TIP criteria to create incentives for coordinating with regional land use decisions.

- **TIP funding has limited influence on land use decisions:** In all four case study regions, respondents assessed the effect of the TIP funding policy and criteria as being much greater on transportation decisions than on land use. In all four regions, approximately 80 percent of respondents assessed the TIP impact on transportation decision making as significant or very significant. In contrast, only 26-40 percent assessed the impact on land use as being significant or very significant.
- **TIP criteria emphasizing smart growth principles have limited influence:** In all four case study regions, interviewees and survey respondents indicated that the effect of utilizing smart growth criteria in TIP funding allocations was relatively minor because (1) the amount of TIP funding allocated using the smart growth criteria was a relatively minor portion of regional transportation investment, and/or (2) the smart growth criteria were a relatively small percentage of the funding criteria. For example:
    - In the Portland metro area, only $33 million of funding is allocated annually through the Metropolitan TIP, while a total of $800 million is spent across the region from all sources.[17]
    - In Puget Sound, only about 10 percent of the total TIP funds are allocated using growth center criteria.[18]
- **Despite limited influence, TIP criteria are still important:** In all four regions, interviewees and survey respondents indicated that the TIP allocation criteria promoting smart growth were important when combined with a set of complementary regional policies. For example, in several regions local officials noted that TIP funding was an attractive additional incentive to develop around centers when supported by the smart growth incentive grants and transit investment potential.

6.3. Transferable Practices

- SANDAG published a detailed report on its TIP policy, including explanations of how projects are scored through smart growth criteria.
- By California statute, 30 percent of state highway account funding is directed towards STIP projects. Of this amount, 75 percent of STIP funds are allocated to regional agencies by formula, with SANDAG receiving a 7.3-percent share of regional transportation improvement funds.
- Metro's MTIP funds are increasingly being linked to monitoring and outcomes in order to prioritize certain growth patterns. As a result, some rural and suburban areas feel that they are

[17] City Club of Portland. 2010. *Moving Forward: A Better Way to Govern Regional Transportation*. City Club of Portland Bulletin, 96(32), 1-67.
[18] Regional Transportation Commission. *Final Report*. Olympia, WA: Regional Transportation Commission, 2006.

less competitive for MTIP funds.

- Metro's MTIP technical ranking system awards up to 40 points (out of 100 points) for projects that support Metro's Region 2040 Land Use Goals.
- DRCOG's TIP policy awards up to six points (out of 100 points) for projects that are within or support an urban center; it awards three points for projects within the adopted Urban Growth Boundary/Area.
- DRCOG's TIP policy awards one point (out of 100 points) for eight different factors, including increasing population density, demonstrating progress towards developing an urban center, and signing the Mile High Compact.
- In PSRC, the approved policy for the region is that at least 10 percent of combined county and regional transportation funds from the federal Surface Transportation Program (STP) and Congestion, Mitigation and Air Quality (CMAQ) programs are to be set aside for nonmotorized projects in the four counties.
- In PSRC, new rules for the TIP must be tied to multicounty planning policies in Vision 2040. (Note: This study was conducted prior to these rules being implemented.)
- The PSRC uses a Regional Project Evaluation Committee (RPEC) to make recommendations on funding allocation criteria and specific projects. The RPEC is composed of representatives of municipal public works departments, transit agencies, the Governor's office, and Washington Department of Transportation district offices.

7 Implications and Further Research

On Sept. 8-9, 2010, the research team held a forum in Portland involving researchers, case study participants, elected officials, and representatives from federal, state and local government. The purpose of the forum was to review the information collected in this study and discuss the findings and its implications.

Forum participants heard presentations from Congressmen Peter DeFazio (OR) and James Oberstar (MN), as well as an update on federal activities from representatives of the Federal Highway Administration and the U.S. Department of Housing and Urban Development. In breakout sessions and panel discussions, participants were asked to consider the case study findings and discuss the implications for regional, state and national policy. This section of the report summarizes some of the implications identified during this forum.

Study Implications

ELECTED OFFICIAL LEADERSHIP

In both our case study research and the research forum, elected official leadership came up repeatedly as a key issue in the coordination of regional land use and transportation decision making. In several regions, it was noted that the leadership of suburban mayors was particularly important. All four regions contain one dominant large city with significant resources and clout. Therefore, when regional leadership emerged from suburban elected officials there tended to be less concern about central city dominance and more ownership of decisions. For example, suburban leaders in SANDAG, DRCOG and Metro have stepped forward to promote regionalism, while cities such as San Diego have appeared to step back to "allow nonurban champions."

The challenge in all four regions is to educate and inform elected officials about the complex regional governance and funding arrangements, while their priorities are more focused on local issues. Some participants noted that metropolitan efforts could benefit from better outreach materials and visualization scenarios. Several participants noted that efforts to address greenhouse gas emissions would not emerge in many regions without state or national policy to push the issue.

DIRECT METROPOLITAN FUNDING

In discussions around both coordination and funding, participants emphasized the important role that comprehensive regional planning and a comprehensive regional planning organization plays. One of the options proposed at the forum was to provide more direct federal funding to MPOs or to pass through more federal transportation dollars directly to the regional level. This approach is used in California, and reports in both Portland and Puget Sound recommended this option.[19] At a national level, direct funding would most likely be relevant only for the largest MPOs that have adequate staff and capacity. A number of benefits were cited in the research forum:

- Transportation policies and projects would be more closely aligned with other regional policies and projects.
- It would allow regions to move away from more single objective criteria, such as mobility, towards more multiobjective criteria such as livability.
- Direct funding would increase the influence of smart growth criteria in transportation allocation decision making because higher levels of funding would be affected.
- Participants noted that coordination efforts could improve if funding was tied to specific performance measures.

[19] See reports by City Club of Portland (2010) and Puget Sound Regional Transportation Commission (2006)

- Greater MPO control of funding would likely increase elected official engagement in regional governance.
- Direct funding could provide greater balance between metropolitan livability goals and state DOT mobility goals.

PERFORMANCE MEASURE LINKS

MPOs are increasingly focusing on a wide range of performance measures for metropolitan regions, such as emission trends, VMT trends and transit ridership. Some participants noted an opportunity to improve links between federal and state transportation funding and performance measures. Strengthening these performance measures could help ensure strategic investment, whether they are integrated into existing funding programs or linked to new initiatives.

PARTNERSHIP FOR SUSTAINABLE COMMUNITIES

The Partnership for Sustainable Communities initiative drew many positive comments from the U.S. Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U. S. Department of Transportation (DOT). Some of the specific recommendations emerging from the research forum included:

- Adding the Department of Health and Human Services as a fourth member of the Partnership;
- Creating a direct link between federal transportation funding and Partnership efforts; and
- Conducting a broad review of federal legislation to identify regulations and programs that may promote sprawl.

INFORMATION CLEARINGHOUSE

In discussions about policy and research, participants noted a need for central sources of information to assist MPOs. The information included:

- Technical assistance to answer specific issues for MPOs in a timely manner;
- Summaries of research findings to support MPO policy discussions;
- Information on governance strategies, options and techniques; and
- More work on tools to support regional efforts, such as performance measures, policy models and visualization tools.

EXISTING RESOURCES

Existing resources identified at the forum included:

- FHWA Toolkit on integrating land use and transportation decision making: http://www.fhwa.dot.gov/planning/landuse
- FHWA web site on context-sensitive design: http://www.fhwa.dot.gov/planning/csstp/csstransplan.htm
- FTA publication on transit-oriented development: http://www.fta.dot.gov/publications/publications11007.html
- FHWA information on scenario planning: http://www.fhwa.dot.gov/planning/scenplan/index.htm

REGIONAL FUNDING

One theme that emerged from the case studies and the research forum was the lack of sufficient state and federal transportation funding to address regional needs. In both San Diego and Denver, voter-passed sales taxes have provided MPOs and transit agencies with significant new sources of revenue to support transportation improvements, transit investment and open space protection (in Denver the sales tax

revenue is controlled by the RTD). This revenue has significantly increased the role of the MPOs in the region, and provided funding for a more diverse set of regional objectives. As federal and state sources are unlikely to address all regional needs, many metropolitan areas may need to explore these types of local funding options.

Regional Collaboration

All four regions faced cross-jurisdictional issues related to transportation and land use. The most common issues related to coordination among departments of transportation, neighboring MPOs, and adjacent local governments outside MPO boundaries. The MPOs in our study have undertaken a range of strategies to improve coordination efforts, including joint committees and cross-representation on boards. Participants also emphasized the important state and federal roles that could assist these efforts. Examples include: strategic funding that targets cross-MPO efforts and funding criteria that creates incentives for cross-jurisdictional work.

Future Research

The research project and forum also led to a number of questions and topics for future research. Several overarching themes came through about MPO-related research:

- The need for greater cooperation between federally funded transportation centers and MPOs with regard to research needs at the metropolitan level. Transportation generally has far less research on policy and planning topics.
- The need for more research focused on governance and coordination, including:
  - o Before-and-after evaluation of local government plans to determine how regional plans, strategies and processes have influenced local-level planning;
  - o Best practices in transportation collaboration for MPOs; and
  - o Lessons and findings from specific programs designed to promote coordinated planning efforts.
- The need for university research centers to provide more effective translation and synthesis of results for state and regional transportation agencies, including:
  - o Information clearinghouses that allow MPOs to incorporate the best sources and data, including information that can be displayed to decision makers in PowerPoint formats;
  - o Summaries of state-of-the-art practices and methodologies, such as trip generation, engaging low-income and minority communities, and partnership models; and
  - o Simple summaries that review and consolidate research and present evidence on both sides\in a simple FAQ (Frequently Asked Questions) format.
- The need for research on topics related to equity, including:
  - o Equity performance measures in regional transportation planning; and
  - o Impact and effects of transportation investment on low-income and minority communities.
- More work on visualization strategies at the local and regional levels to assist the public and elected officials in decision making, including:
  - o Sketch planning tools, such as those used in the Sacramento Blueprint planning process; and
  - o Visualization tools to help with infill development and development around mixed-use centers.

Some additional specific research needs identified through the forum included:

- Research on performance measures at the metropolitan scale, including types and methods.
- Additional research on policy tools and their effectiveness in influencing decision making, which also requires more collaboration between state DOTs and university transportation centers to design policy-oriented studies.
- Need for new research around the assumptions, targets, scenarios and strategies related to greenhouse gas reduction efforts.
- Studies that would assist local governments in understanding how to undertake redevelopment efforts faster and more effectively, including case studies, best practice lessons, and studies gathering information from multiple perspectives.

REGIONAL TRANSPORTATION AND LAND USE DECISION MAKING IN METROPOLITAN REGIONS FINDINGS FROM FOUR CASE STUDIES

APPENDIX 1: DETAILED RESEARCH FINDINGS

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1 APPENDIX OVERVIEW

This appendix summarizes the research findings from four metropolitan case studies: Central Puget Sound (Washington), Portland (Oregon), Denver (Colorado), and San Diego (California). All four cases were selected because of the institutional structures and mechanisms being used to coordinate land use and transportation on a regional level. This report presents the detailed finings, which are organized into the four objectives of the research project:

- **Section 2 Regional Governance**: regional arrangements, participation in decision making, relationships among organizations.
- **Section 3 Transportation and Land Use Coordination**: evaluation of coordination efforts, including the influence of plans and policies.
- **Section 4 Centers Policy**: evaluation of specific programs to create incentives for mixed use and/or transit-oriented centers.
- **Section 5 Transportation Improvement (TIP) Funding**: evaluation of efforts to use TIP funding as an incentive to improve land use decisions.

1.1 METHODS

The project was led by a multidisciplinary team from the University of Oregon and Portland State University. The project also involved a team of graduate students working over two terms for the University of Oregon's Community Planning Workshop.

CASE SELECTION

The research team conducted a review of published literature, research reports, state agency documents, and Web sites to identify potential cases for investigation. We used three criteria for selecting the case study regions:

- Land use and transportation is being addressed on a regional scale,
- Region encompasses multiple municipalities and jurisdictions, and
- Region is using grant programs and Transportation Improvement Program (TIP) funding to promote regional growth centers.

Based on this review, we selected four cases and obtained commitments from regional organizations to participate in the study:

- **PSRC** Puget Sound Regional Council (Central Puget Sound, Washington)
- **Metro** Portland (Portland, Oregon)
- **DRCOG** Denver Regional Council of Governments (Denver, Colorado)
- **SANDAG** San Diego Association of Governments (San Diego, California)

BACKGROUND RESEARCH

For each case study, the research team reviewed documents, research reports, and published research. The team conducted interviews with approximately ten key individuals in each region, addressing topics such as: approaches to regional coordination and governance, incentive programs to coordinate transportation and land use, the role of regional plans, relevant policies, and cross-boundary issues.

The **stakeholder interviews** included a comparable cross-section of individuals in each region, including: (1) MPO staff, (2) MPO elected officials, (3) state agency officials, and (4) staff with transit agencies, regional agencies, or Federal agencies.

The team also conducted two group interviews with the Regional Project Evaluation Committee (RPEC) in Puget Sound and the Transportation Policy Advisory Committee (TPAC) in the Portland Metro region using a similar interview format.

ON-LINE SURVEY

For each case study we conducted an online survey of people involved in regional transportation and land use decision making, including local government staff and elected officials, state agency staff, and regional agency staff. The survey asked respondents to evaluate several issues in their region, including:

- Regional governance and coordination of decision making
- Effectiveness of specific policies and programs in supporting coordination
- Regional trends related to transportation and land use planning

Individuals were notified of the survey by e-mail and asked to complete it online. After the initial e-mail, two follow-up reminders were also sent. As shown in Table 1, the survey was sent to a total of 450 individuals in the four regions, and a total of 199 responded (response rate = 44%).

Table 1.1: Survey Respondent Information

	PSRC	DRCOG	Metro	SANDAG
Survey sample size	101	117	163	69
Survey responses	61	59	44	35
Survey response rate	60%	59%	44%	35%
Organizational Affiliation				
Federal Government	0%	2%	0%	0%
State Government	11%	9%	9%	3%
County Government	15%	22%	2%	6%
City Government	39%	49%	39%	71%
Tribal Government	0%	0%	0%	0%
Port	7%	0%	2%	0%
Transit District	10%	4%	5%	3%
Private Sector	7%	3%	11%	0%
MPO	2%	3%	9%	3%
Interest Group	3%	3%	5%	0%
Community Representative	2%	0%	16%	0%
Other	5%	5%	2%	14%

RESEARCH FORUM

On September 8-9, 2010, the findings from this research were presented at a forum in Portland, Oregon. The invitation-only forum involved at least two participants from each of the four case studies, invited researchers, and officials from state and Federal agencies. The schedule of the forum included:

- Federal transportation context
- Context and background on cases by MPO staff from each case study area.
- Presentation of findings by research team
- Legislative context by Congressmen Oberstar (MN) and DeFazio (OR)
- Research panels on findings and future research needs
- Facilitated breakout sessions covering: (1) funding, (2) governance, (3) coordination mechanisms, and (4) policy.

Information, notes and discussion from this forum were gathered by the research team and is summarized in the Appendix. The team used this information to refine the analysis and recommendations presented in this document.

LIMITATIONS AND CAVEATS

Our methods have several limitations. Ideally, we could evaluate our cases using outcome data. However, the policies are relatively new, and many years of data are required to determine statistically valid trends. Our study provides an interim assessment of these policies using the opinions of regional stakeholders.

The interviews and surveys were designed to include a parallel set of participants for each case, but the committee composition and respondents varied. Also, respondents in different regions may have different expectations of performance. Finally, we rely on a relatively small set of respondents. For these reasons, we have been cautious in our cross-case comparisons and generalizations.

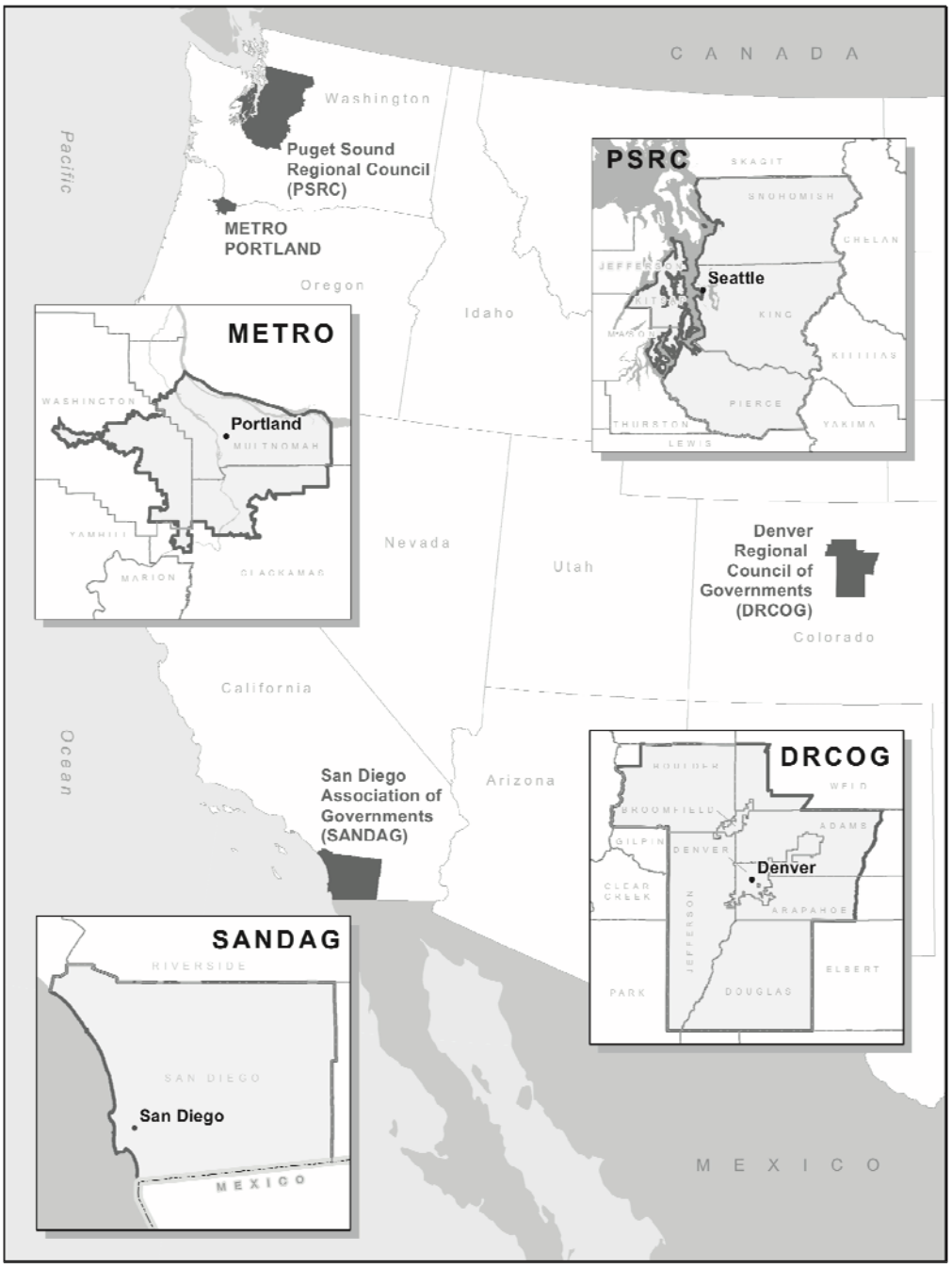
1.2 OVERVIEW OF CASE STUDY AREAS

Transportation planning in all four case study regions is led by a federally designated Metropolitan Planning Organization (MPO). As shown in Table 1.2, all four regions include medium-sized cities with varying geographic sizes and number of local jurisdictions. Washington and Oregon have state growth management legislation, while California and Colorado do not.

Table 1.2: MPO Overview

Regional MPO	Metro Population	Area (sq miles)	Cities Counties	Agency Formation (Year)
Portland Metro (Metro)	1,400,000	463	25 Cities 3 Counties	1977
Puget Sound Regional Council (PSRC)	3,583,000	6,290	82 Cities 4 Counties	1959
San Diego Association of Governments (SANDAG)	3,200,000	4,526	18 Cities 1 County	1966
Denver Regional Council of Governments (DRCOG)	2,851,000	5,288	47 Cities 9 Counties	1955

Figure 1.1: Case Study Regions



Source: InfoGraphics Lab, Department of Geography, University of Oregon

PORTLAND METRO (METRO)

Portland Metro encompasses 3 counties (Clackamas, Multnomah, and Washington) and 25 cities, including Portland, Beaverton, Tualatin, Oregon City, Milwaukie, Gresham, and Fairview. Metro covers

463 square miles, but the greater metropolitan area extends to a larger area, including across the Washington-Oregon border to the north (see Map 1-2). [1] Metro was created in 1977 when the State Legislature approved the creation of the Metropolitan Service District (MSD). In 1978, as approved by voters, MSD was combined with Columbia Region Association of Governments (CRAG). In 1979, Metro began operation with legal authority over the Urban Growth Boundary (UGB), solid waste planning, and the zoo.

In 1995, Metro adopted the 2040 Growth Concept. The 2040 Growth Concept is the region's growth management policy that defines development in the metropolitan region through the year 2040. The 2040 Growth Concept directs most development to existing urban centers and along existing major transportation corridors, and promotes a balanced transportation system with a variety of transportation options.

The Regional Framework Plan (RFP), adopted in 1996, unites all of Metro's adopted land use planning policies and requirements into one document. The RFP brings together the 2040 Growth Concept, the Regional Urban Growth Goals and Objectives (RUGGOs), the Metropolitan Greenspaces Master Plan, and the Regional Transportation Plan (RTP). Oregon state law requires that the RFP comply with Oregon's statewide planning goals. The RFP contains regional policies on key regional growth issues, including accommodation of projected growth and the coordination of transportation and land use planning. The RFP is the basis for coordination of the comprehensive plans and implementing regulations of the cities and counties in Metro.

The Regional Transportation Plan (RTP) is the transportation system plan for the Portland metropolitan region. The RTP serves as the Federal metropolitan transportation plan as well as the TSP required under the state's transportation planning rule. The first RTP was approved in 1982. The latest update to the RTP, the 2035 Regional Transportation Plan, was adopted in June 2010.

PUGET SOUND REGIONAL COUNCIL (PSRC)

The PSRC covers nearly 6,300 square miles and encompasses four counties (King, Snohomish, Pierce, and Kitsap) and 82 cities, including Seattle, Bellevue, Bremerton, Everett, and Tacoma. Puget Sound has many channels and waterways that make transportation systems challenging. Furthermore, populated areas tend to concentrate near the Sound, which creates land use challenges due to the sensitivity of natural areas.

The first regional planning organization was established in 1959 and designated as a Federal Metropolitan Planning Organization (MPO) in 1973. The Puget Sound Regional Council was formed in 1992. Under Washington State law the PSRC is also the designated regional transportation organization (RTPO). The PSRC prepares the Regional Transportation Plan (RTP), which satisfies both Federal and state transportation requirements. Every one to two years the PSRC is required to complete a federally approved Unified Planning Work Plan (UPWP). The Council also prepares the regional Transportation Improvement Program (TIP).

[1] Metro, Region, County, and City Areas. 2006. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=24905 (accessed January 2010).

Under the Washington Growth Management Act,[2] the PSRC prepared a long-range, integrated strategy called *Vision 2040*, which addresses regional environment, growth management, economic development, and transportation. It was adopted in 2008 as a comprehensive update to previous plans, and presents a numeric Regional Growth Strategy, which allocates expected population and employment growth throughout the region. A key component of *Vision 2040* is the designation of regional growth centers and manufacturing and industrial centers. The Council is responsible for ensuring that the transportation-related provisions in local comprehensive plans are consistent with the regional plan. *Transportation 2040*, an update to the regional transportation plan, was adopted in May 2010, and serves as the functional transportation plan for Vision 2040. It provides for a transportation system consistent with the regional vision.

San Diego Association of Governments (SANDAG)

SANDAG's boundaries coincide with San Diego County and encompass 18 cities, including San Diego, Carlsbad, Chula Vista, and Oceanside (see Map 1-3). The SANDAG region covers more than 4,000 square miles and the total population estimated for 2009 is close to 3.2 million, with over half of this population living in the City of San Diego.[3] SANDAG is bounded by Mexico to the south, the Pacific Ocean to the west, mountains to the east, and a military base to the north.

Although SANDAG was not created until 1980, it was preceded by a comprehensive planning organization created in 1966. The CPO was designated as the Metropolitan Planning Organization in 1970. In 1971 it was designated the state Regional Transportation Planning Agency, and one year later it was reestablished as a separate joint powers authority, independent of county government.[4]

As a result of several proposals and reviews, the California Senate passed legislation in 2002 that strengthened SANDAG's authority in the region. The agency took over the regional transit planning and capital project development functions of the region's Metropolitan Transit System and the North County Transit District.

As the Federal MPO, SANDAG is responsible for preparing a regional transportation plan and regional transportation improvement program (RTIP). Under state law, SANDAG creates regional short-range transit plans and is responsible for coordinating the regional housing needs assessment. The State Legislature also requires SANDAG to develop a Regional Comprehensive Plan, which is a nonregulatory regional land use plan.

Denver Regional Council of Governments (DRCOG)

Situated along the Front Range of Colorado, the Denver Regional Council of Governments (DRCOG), DRCOG's planning area includes nine counties and 48 cities, including Denver, Boulder, Aurora, and

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[2] Chapter 36.70a RCW (Revised Code of Washington) accessible at http://apps.leg.wa.gov/rcw/default.aspx?cite=36.70a

[3] SANDAG, "Demographics and Other Data: Fast Facts." http://www.sandag.org/resources/demographics_and_other_data/demographics/fastfacts/regi.htm (accessed January – February 2010).

[4] SANDAG, "About SANDAG: History." http://www.sandag.org/index.asp?fuseaction=about.history (accessed January – February 2010).

Lakewood. The region in 2010 is home to some 2.7 million people, with over 460,000 living in the City of Denver.[5]

The Denver Regional Council of Governments (DRCOG) was formed in 1968, but was preceded by an intercounty regional planning commission formed in 1955. With DRCOG's support, Regional Transportation District (RTD) was formed in 1969, tasked with managing the region's transit system, and in 1971, DRCOG signed agreements with the RTD and state to manage transportation throughout the region.

As a Federal MPO, DRCOG is responsible for preparing a regional transportation plan and regional transportation improvement program (RTIP). DRCOG also prepared the regional land use strategy called Metro Vision. Metro Vision's goals and policies aim to *influence* the direction, shape, size and other characteristics of the region's built environment; however, participation in the plan is voluntary.

[5] *With One Voice*, DRCOG, 2009, p.2, http://www.drcog.org/documents/2009%20With%20One%20Voice%20Brochure%204%20web.pdf

2 REGIONAL GOVERNANCE

2.1 OVERVIEW

We use the term governance to refer to the processes of government management, leadership, and decision making in regions. At the regional level, governance is particularly complex, because of the multitude of jurisdictions and organizations. Metropolitan Planning Authorities (MPOs) and Councils of Government (COGs) serve as a forum for helping to govern across these regions. Our assessment involves a description of the formal leadership structures and how these structures operate. Through interviews and surveys we also explored some of the informal rules and norms that guide decision making.

2.2 PORTLAND METRO (METRO)

In this section, we describe the governance structure in Portland Metro and review the results of our interviews and survey about regional governance.

Description of Metro Governance

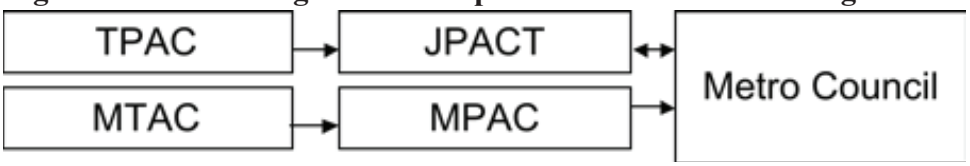
Metro is unique among the case study MPOs because it is the only MPO governed by elected officials. The Metro president is regionally elected and presides over a six-member Metro council. The Council sets Metro's policy agenda and appoints all members of Metro's committees, commissions, and boards. The six Metro districts elect the six council members every four years in nonpartisan races.

A number of committees play a key role in land use and transportation coordination in the region:

- Metro Policy Advisory Committee (MPAC) is a committee of local government representatives and citizens who advise the Metro Council on policy issues.
- Metro Technical Advisory Committee (MTAC) is a 37-member committee of planners, citizens, and business representatives that provides detailed technical support to MPAC.
- Joint Policy Advisory Committee on Transportation (JPACT) is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and make recommendations to the Metro Council.[6]
    - Bi-State Coordination Committee is a subcommittee of JPACT and Southwest Washington Regional Transportation Council (RTC). The Committee reviews transportation and land-use issues of bistate significance and presents recommended actions to JPACT and RTC.
- Transportation Policy Alternatives Committee (TPAC) provides technical input to JPACT on transportation planning and funding priorities for the Portland metropolitan region.

[6] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3. (accessed January- February 2010), introduction.

Figure 2.1 Metro Regional Transportation Decision Making Process



Metro's legal authority derives from ORS Chapter 238, Metropolitan Service Districts, and the Metro Charter that was approved by voters in 1992. Metro's charter states that Metro's primary responsibility is regional land-use planning. Metro's regional land-use planning responsibilities must be carried out in a manner consistent with Oregon's Statewide Land Use Planning Goals. These include:

- Goal 12, Transportation, and the Transportation Planning Rule (TPR). The TPR requires most cities and counties and the state's six MPOs to adopt transportation system plans (TSPs) that consider all modes of transportation, energy conservation, and avoidance of reliance on any one mode of transportation. Metro's RTP (Regional Transportation Plan) serves as the TSP required under Goal 12. TSPs must be consistent with the Oregon Transportation Plan adopted by the Oregon Transportation Commission.[7]
- Goal 14, Urbanization, which requires establishment of urban growth boundaries (UGBs) to identify and separate urbanizable land from rural land. UGBs are intended to provide sufficient buildable lands to accommodate urban growth for a minimum twenty-year planning period. Metro is responsible for establishing and managing the regional UGB within the Portland metropolitan area.

Analysis of Metro Governance

As shown in Table 2.1, a majority (66%) of respondents in the Portland Metro region believed that all of the critical players were involved. A high percentage of respondents believed that both local government staff (59%) and elected officials (67%) were kept well informed. Respondents also agreed there was a high level of engagement among elected officials in the region (67%). Interviewees indicated that the Metro regional council was an important means for regional coordination, but some survey respondents noted tensions between the policies of Metro and Portland compared to smaller municipalities in the region.

[7] Metro, *Regional Framework Plan*. December, 2005. Document PDF available on Metro Website: http://www.oregonmetro.gov/index.cfm/go/by.web/id=432/level=3. (accessed January-February 2010),, 1-9.

Table 2.1: Regional Decision Making in Metro

Survey Question: Focusing on regional transportation and land use decision making, please rate your level of agreement or disagreement with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Responses
All of the critical players are involved in regional transportation decision-making	2%	21%	10%	52%	14%	0%	41
Local government staff are kept well informed on regional decision-making	2%	14%	17%	45%	14%	7%	41
Local elected officials are kept well informed on regional decision-making	2%	17%	12%	48%	19%	2%	41
There is a high level of engagement among elected officials in the region	2%	19%	12%	43%	24%	0%	41
There is consistency between Metro Council decision-making and technical committee decision-making/recommendations	7%	17%	19%	43%	10%	5%	41

Survey respondents were also asked to assess how effective various organizations were in coordinating transportation and land use decisions with Metro. As shown in Table 2.2, the highest percentage of "somewhat effective" and "very effective" responses were given to local governments within Metro (70%) and transit districts (76%). In contrast, 54% of respondents believed that neighboring counties and cities outside of Metro are "somewhat" or "very ineffective" at coordinating transportation and land use decision making with Metro. These views were echoed in interviews, reflecting the difficulty that Metro faces of having a small jurisdiction in a region whose commutershed extends far beyond its boundaries, including into Washington State. Some of these neighboring areas have also had less restrictive land use policies and faster growth rates, increasing the pressures on the regional transportation system.

Table 2.2: Coordinating with Metro

Survey Question: Please rate how effective the following organizations are at coordinating transportation and land use decision making with Metro:

	Very Ineffective	Somewhat Ineffective	Neither Effective nor Ineffective	Somewhat Effective	Very Effective	Don't Know	Responses
ODOT	18%	21%	12%	50%	0%	0%	33
Local governments within Metro	8%	16%	3%	65%	5%	3%	36
Other MPOs	3%	17%	31%	17%	0%	33%	35
Neighboring couties and cities outside Metro	24%	32%	18%	11%	3%	13%	37
Special Districts	11%	24%	21%	13%	0%	32%	37
Federal Highway Administration (FHWA)	8%	29%	8%	21%	13%	21%	37
Transit Districts	0%	5%	13%	42%	34%	5%	37

2.3 Puget Sound Regional Council (PSRC)

In this section, we describe the governance structure in central Puget Sound and review the results of our interviews and survey about regional governance.

Description of PSRC Governance

Puget Sound Regional Council was formed through an interlocal agreement entered into by its members in 1992, including the four counties, most of the 82 cities, and other agencies identified in Washington state law for regional transportation planning organizations. The Governor of the State of Washington

designates the Puget Sound Regional Council, under Federal MPO statutes. The PSRC includes four counties; King, Kitsap, Pierce, and Snohomish. The PSRC serves as the regional MPO under Federal law and the Regional Transportation Planning Organization (RTPO) under state law.[8] PSRC has the authority to carry out MPO and RTPO (Regional Transportation Planning Organization) functions, as well as additional responsibilities spelled out under the agency's interlocal agreement.

Washington State requires RTPOs to complete a Unified Planning Work Plan (UPWP) every one to two years. In order to receive funding, the Federal Highway Administration (FHA) and the FTA must approve this plan. The PSRC is governed by the General Assembly, which is made up of the local elected officials of all member agencies in the PSRC jurisdiction. The General Assembly meets at least once a year to vote on major regional decisions, approve the budget, and elect new officers. The integrated environmental, growth management, economic development, and transportation long-range strategy is adopted by the General Assembly. The Executive Board carries out delegated powers and responsibilities between meetings of the General Assembly. It is comprised of 30 members who approximate the proportional representation principle of one-person, one-vote.

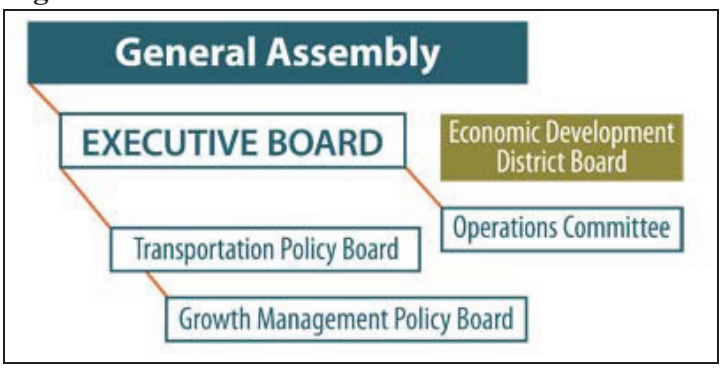
Advisory boards, including the Operations Committee, the Transportation Policy Board, the Economic Development Board, and the Growth Management Board, make recommendations to decision-makers on the Executive Board. These boards are also comprised of local elected officials in a manner that approximates proportional representation. In the case of the Transportation Policy Board and Growth Management Policy Board, there are also nonvoting members that represent other interests, including environmental groups, business and labor, and community groups. There are also more than a dozen advisory committees that consist of staff from member jurisdictions and agencies.

Because they are separate sovereign nations, tribes are not officially required to plan under state law. A total of eight federally recognized Native American tribes are located within the PSRC jurisdiction. Some have full membership in the Regional Council, and others have associate membership. These tribes play an important role in advising PSRC on key environmental, land use, and economic issues, and help coordinate planning efforts.

PSRC's Transportation Policy Board includes elected officials from local government, the Washington Department of Transportation (WSDOT), the state Freight Mobility Strategic Investment Board, transit operators, ports, tribes, and the Puget Sound Clean Air Agency, as well as ex-officio members from business, labor groups, community groups and other organizations.[9] The Council's Growth Management Policy board includes county and city elected officials, as well as ex-officio representatives of homebuilders, public health agencies, community, and environmental interests.

[8] Biennial Budget and Work Program (2010-2011), p.5
[9] Biennial Budget and Work Program (2010-2011), 5.

Figure 2.2 PSRC Governance Structure



Source: http://www.psrc.org/about/boards

Joint meetings have been held between members of the Transportation Policy Board and Growth Management Board. An initial joint meeting was held in 1999 during the development of the area's previous regional transportation plan to encourage consistency between regional growth management and transportation planning. Three joint meetings were held between 2006 and 2008 during the development of Vision 2040. A joint meeting was also held in 2010 as Transportation 2040 was being developed.

Analysis of PSRC Governance

In response to a survey question concerning involvement in regional decision making, 75% of respondents from the sample agreed or strongly agreed that all the critical players are involved (see Table 2.3). Seventy percent agreed or strongly agreed that local elected officials were kept well informed about regional decision making, while a lower percentage (58%) agreed or strongly agreed that there is a high level of engagement among elected officials.

Table 2.3: Regional Decision Making in PSRC

Survey Question: Focusing on regional transportation and land use decision making, please rate your level of agreement or disagreement with the following statements:

Question	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Responses
All of the critical players are involved in regional transportation decision-making	4%	16%	5%	56%	19%	0%	57
Local government staff are kept well informed on regional decision-making	0%	11%	4%	68%	18%	0%	57
Local elected officials are kept well informed on regional decision-making	2%	15%	9%	55%	15%	5%	55
There is a high level of engagement among elected officials in the region	0%	18%	21%	47%	11%	4%	57
There is consistency between Executive Board decision-making and technical committee decision-making/recommendations	5%	9%	11%	44%	28%	4%	57

A key to effective governance is how well various organizations coordinate with one another in decision making about land use and transportation. As required by the State Growth Management Act, Vision 2040 includes multicounty planning policies that set the overall policy direction of the region. For example, the first policy of Vision 2040 calls for the region to "coordinate planning efforts among

jurisdictions, agencies and federally recognized Indian tribes . . . to facilitate a common vision" (MPP-G-1).

As shown in Table 2.4 below, 73% of the survey respondents in the sample felt that local governments were either somewhat or very effective in coordinating decision making with PSRC; for transit districts, the percentage was 69%; for Washington DOT, 56%; and for FHWA, 42%. Respondent opinions about organizations that were somewhat or very ineffective in coordinating with PSRC were highest for the Washington DOT (32%) and neighboring counties and cities outside PSRC jurisdiction (33%).

Table 2.4: Coordinating with PSRC

Survey Question: Please rate how effective the following organizations are at coordinating transportation and land use decision making with PSRC:

	Very Ineffective	Somewhat Ineffective	Neither Effective nor Ineffective	Somewhat Effective	Very Effective	Don't Know	Responses
WashDOT	15%	17%	13%	41%	15%	0%	54
Local governments within the PSRC	6%	15%	7%	54%	19%	0%	54
Other MPOs	4%	13%	16%	16%	0%	51%	55
Neighboring couties and cities	9%	24%	26%	15%	0%	26%	54
Special Districts	11%	15%	26%	20%	0%	28%	54
FHWA	13%	13%	17%	31%	11%	15%	54
Transit Districts	5%	5%	9%	56%	13%	11%	55
Other (please specify) TIB	0%	0%	0%	50%	50%	0%	2

In the interviews that we conducted, there were a variety of opinions expressed about regional governance, but several themes emerged. Many of the interviewees said there is strong leadership at both the board and staff levels for coordinating land use and transportation. In particular, they said that elected officials on the Transportation Policy Board play a strong role in crafting and presenting the updated transportation plan to other elected officials and the public.

The Regional Staff Committee is also an important forum for comprehensive coordination across issue areas, including growth management and transportation. The committee brings together planning directors, public works directors, economic development directors, and senior staff from state and Federal agencies (including FHWA, FTA, EPA).

A number of interviewees also noted the importance of the Regional Project Evaluation Committee (RPEC) as a vehicle for evaluating transportation projects. The RPEC brings together local transportation staff from across the cities, counties, and transit agencies in the PSRC region.

2.4 San Diego Association of Governments (SANDAG)

In this section, we describe the governance structure in San Diego and review the results of our interviews and survey about regional governance.

Description of SANDAG Governance

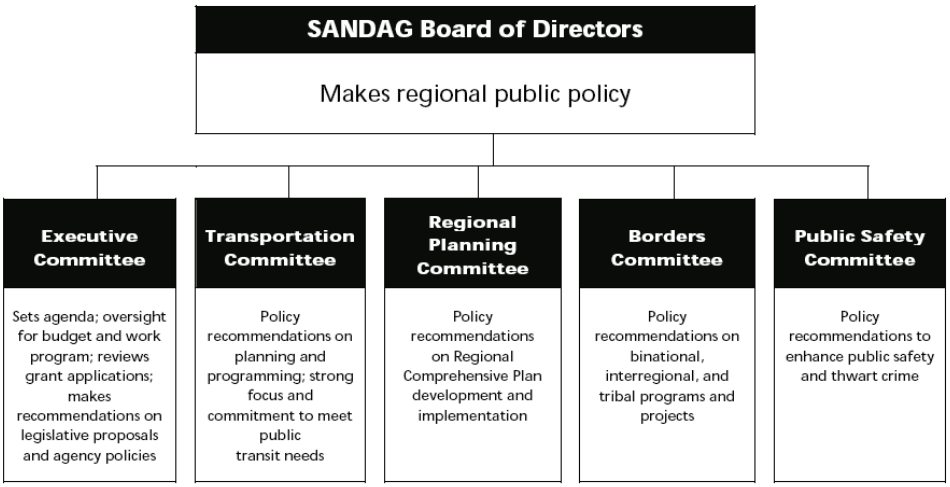
Several factors make the governance structure in the San Diego region less complex than other metropolitan regions. First, SANDAG boundaries coincide with San Diego County and encompass 18 other local governments in its region. Second, the region is bounded by the Mexican border to the south, mountains to the east, the ocean to the west, and Pendleton Marine Base to the north. Third, as a result of legislative changes, SANDAG oversees both transit planning and all transportation planning in the region. The two transit districts are operational entities, but SANDAG is responsible for network planning and system expansion. The California Transportation Agency (CALTRANS) is responsible for cross-regional corridor projects and operations, but SANDAG oversees most of the regional transportation planning. Fourth, SANDAG's Federal and state funds are supplemented by a half cent sales tax called TRANSNET, which provides over $14 billion in funding over 40 years for transportation, transit, and open space.[10]

SANDAG is governed by a board of directors composed of elected officials from the region's 19 local governments. The Board uses a two part voting system. Each jurisdiction gets one vote (with the City of San Diego receiving 2 votes), which means that measures require 11 of 20 votes to pass. Any jurisdiction may also call for a weighted vote based on population, and successful measures require a majority of the weighted vote.

The Board is supported by an Executive committee and five standing committees (See Figure 2.3). The voting membership of standing committees is composed of representatives from: San Diego City, San Diego County, and four members from across the region. Board and committee members are paid for their time to attend meetings, and most meetings take place on Fridays at the SANDAG offices. For most committees, each jurisdiction is represented by one primary elected official and an alternate, and most have at least 3 of the 5 elected officials participating in some committee. As one local elected official noted, "every person on our council has some regional appointment."

[10] Barbour, Elisa, and Michael B. Teitz. "Blueprint Planning in California: An Experiment in Regional Planning for Sustainable Development." In *Toward Sustainable Communities: Transition and Transformations in Environmental Policy*, edited by Daniel A. Mazmanian and Michael E. Kraft, 171-200. Cambridge, MA: MIT Press, 2009.

Figure 2.3: SANDAG Governance Structure



Source: SANDAG 2010. Program Budget FY 2011. San Diego, CA: San Diego Association of Governments.

Analysis of SANDAG Governance

In response to a survey question about involvement in decision making, 75% of respondents agreed or strongly agreed that all of the critical players were involved in decision making (see Table 2.5). A high percentage of respondents also believed that staff and elected officials were kept well informed.

Seventy-two percent of respondents believed there was a high level of engagement among elected officials, with only 9% disagreeing. This view was echoed in interviews with staff and elected officials, who indicated that elected official attendance was often around 95%. Furthermore, several interviewees cited examples of the active role of elected officials. One elected official noted that he regularly e-mails his fellow councilors to update them on SANDAG meetings, because he "never wants them to learn about them in the press." Other elected officials noted that they provided briefings at council meetings, and one mayor would go through each SANDAG agenda in detail with the City Manager and Director of Public Works.

Table 2.5: Regional Decision Making in SANDAG

Survey Question: Focusing on regional transportation and land use decision making, please rate your level of agreement or disagreement with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Responses
All of the critical players are involved in regional transportation decision-making	3%	6%	12%	42%	33%	3%	30
Local government staff are kept well informed on regional decision-making	3%	0%	15%	48%	30%	3%	30
Local elected officials are kept well informed on regional decision-making	3%	3%	18%	45%	27%	3%	30
There is a high level of engagement among elected officials in the region	3%	6%	12%	48%	24%	6%	30
There is consistency between SANDAG Board of Directors decision-making and technical committee decision-making/recommendations	3%	6%	21%	48%	21%	0%	30

Local governments also highly involved with SANDAG because of the significant role that it plays in allocating Federal, state and local transportation dollars. SANDAG's smart growth funding, technical assistance, transit investment and open space funding also have a significant effect on local governments.

On the regulatory side, SANDAG helps implement the California Regional Housing Needs assessment program. Under state law, each region must project housing needs by cost categories and demonstrate how they will be accommodated in the region. SANDAG negotiates with each jurisdiction in the region to accommodate a cross section of housing units, and the region's Smart Growth Concept Map plays an important role in allocating the higher density housing to transit-oriented locations.

According to our survey respondents, many organizations in the region are effective in coordinating transportation and land use with SANDAG (see Table 2.6). Respondents indicated coordination as effective or very effective including: 80% for local governments, 74% for transit districts, and 63% for the California Department of Transportation (CALTRANS). The highest percentage, for people rating coordination as ineffective, included CALTRANS (13%), neighboring cities and counties (16%), and special districts (13%).

Compared to other regions, SANDAG has clear authority for regional transportation and transit planning, while CALTRANS and the two transit districts are primarily responsible for operations and maintenance. SANDAG also benefits from being the sole large metropolitan area within CALTRANS Region 11. Furthermore, there has been a history of staff movement between CALTRANS and SANDAG, including SANDAG Executive Director Gary Gallegos.

According to interviewees, some of the more complex coordination arrangements relate to surrounding counties, Indian Tribes, and Mexico. Cross-county commuting is relatively small but increasing as people commute over 100 miles to access less expensive housing in Riverside or Imperial Counties. Development activities of Indian Tribes have raised travel issues in rural areas, leading SANDAG to create a Tribal Committee and liaison staff. The region also confronts over 40,000 daily commuters across the Mexican border along with significant freight movement, leading to a cross-border committee and working groups.

Table 2.6: Coordinating with SANDAG

Survey Question: Please rate how effective the following organizations are at coordinating transportation and land use decision making with SANDAG:

	Very Ineffective	Somewhat Ineffective	Neither Effective nor Ineffective	Somewhat Effective	Very Effective	Don't Know	Responses
Caltrans	0%	13%	17%	43%	20%	7%	29
Local governments within SANDAG	3%	3%	10%	48%	32%	3%	30
Other MPOs	0%	0%	29%	3%	3%	65%	30
Neighboring couties and cities outside SANDAG	3%	13%	26%	10%	0%	48%	30
Special Districts	13%	0%	23%	13%	0%	52%	30
Federal Highway Administration (FHWA)	3%	6%	13%	29%	0%	48%	30
Transit Districts	0%	3%	10%	47%	27%	13%	29

2.5 Denver Regional Council of Governments (DRCOG)

In this section, we describe the governance structure in the Denver region and review the results of our interviews and survey about regional governance.

Description of DRCOG Governance

DRCOG's Board of Directors consists of representatives from the 57 participating local governments (nine counties and 48 cities). The Governor also appoints three non-voting representatives to the Board of Directors.

DRCOG utilizes both standing committees and ad hoc committees. The authority and criteria for membership for standing committees are defined by its Articles of Association, agreements, statute, or by Board authorization. Ad hoc committees are created to review specific issues within a specified timeframe.

As shown in Figure 2.4, two significant standing committees are the Regional Transportation Committee and the Metro Vision Issues Committee. These two bodies address many of the transportation planning issues in the Denver region. The Metro Vision Issues Committee oversees regional planning efforts, including the coordination of land use and transportation planning.

DRCOG has limited regulatory authority. DRCOG has authority over only transportation funding and has no real authority over land use other than its voluntary Urban Growth Boundary/Area (UGB/A) and the voluntary Mile High Compact group. As a result, land use planning occurs almost entirely at the local level in the Denver region.

In addition, there is virtually no state role in regional land use decision making. Colorado does not have any state-mandated municipal government planning requirements and Colorado Department of Transportation (CDOT) does not get involved land use issues.

Figure 2.4. DRCOG Committee Structure

Source: Board Resource Manual Section 1, p. 55 (http://www.drcog.org/index.cfm?page=BoardHandbook)

Analysis of DRCOG Governance

As shown in Table 2.7, 78% of

survey respondents either agreed or strongly agreed that key players are involved in the regional transportation and land use decision making. Only 15-16% of respondents disagreed that both staff and elected officials are kept informed on regional decision making. Nearly 75% of the respondents indicated that there was a high level of engagement among elected officials in the region. A small majority (57%) agreed that there is consistency between DRCOG board decisions and technical committee recommendations.

Table 2.7: Regional Decision Making in DRCOG

Survey Question: Focusing on regional transportation and land use decision making, please rate your level of agreement or disagreement with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Responses
All of the critical players are involved in regional transportation decision-making	0%	11%	9%	59%	19%	2%	54
Local government staff are kept well informed on regional decision-making	0%	15%	9%	57%	17%	2%	54
Local elected officials are kept well informed on regional decision-making	0%	16%	18%	52%	10%	4%	50
There is a high level of engagement among elected officials in the region	0%	9%	14%	52%	22%	3%	58
There is consistency between DRCOG Board of Directors decision-making and technical committee decision-making/recommendations	0%	15%	22%	44%	13%	6%	54

According to our survey respondents, local governments and the Regional Transit District (RTD) were some of the most effective in coordinating with DRCOG (see Table 2.8). The responses for the Colorado Department of Transportation (CDOT), neighboring counties, and special districts were more varied, with a narrow majority rating their efforts as ineffective or very ineffective.

The interview findings were generally consistent with the survey responses: internal coordination within the MPO (between participating local governments and the Regional Transit District) was rated as more effective than external coordination (with CDOT, neighboring jurisdictions and MPOs, and special districts).

Individuals interviewed in the DRCOG region generally agreed that land use-transportation coordination was occurring, but some questioned the effectiveness of the efforts. A number of interviewees commented on the importance of multimodal, mixed-use integrated development, such as RTD's FasTracks, in facilitating coordination. FasTracks is a taxpayer-funded Regional Transit District program to rapidly increase the amount of transit services (light rail and bus rapid transit, or BRT) in the region. Other key issues driving coordination in the Denver metro region are the rapid pace of residential development in rural areas and water availability.

Table 2.8: Coordinating with DRCOG

Survey Question: Please rate how effective the following organizations are at coordinating transportation and land use decision making with DRCOG:

	Very Ineffective	Somewhat Ineffective	Neither Effective nor Ineffective	Somewhat Effective	Very Effective	Don't Know	Responses
CDOT	13%	23%	13%	34%	11%	6%	53
Local governments within DRCOG	4%	8%	15%	53%	21%	0%	53
Other MPOs	8%	10%	15%	23%	2%	42%	52
Neighboring couties and cities outside DRCOG	19%	25%	15%	10%	4%	27%	52
Special Districts	23%	15%	21%	17%	6%	19%	53
Federal Highway Administration (FHWA)	9%	11%	21%	32%	8%	19%	53
RTD	2%	9%	9%	57%	21%	2%	53

Interviewees indicated that DRCOG's strongest means for coordination lies within its staff and its ability to bring people together through the MPO. Efforts such as the Planner Idea Exchange (a forum for member government land use and transportation planners and other local government staff to share information and ideas, as well as learn about best practices) and Metro Quest (a interactive computer tool that allows policy makers, business leaders and the general public to visualize alternative land use scenarios) were cited as having a significant positive effect on coordination. Moreover, these coordination efforts have helped create a more unified DRCOG (Board and staff) that creates peer pressure for a regional approach and perceptions of interdependence among the participants.

One of the challenges facing DRCOG is coordination with the development of toll roads. The major toll road in the region is E-470, a circumferential freeway ringing the outer edge of the urbanized area. Several interviewees suggested that the toll road was creating capacity in areas where the MPO was not planning for it (or modeling it in the regional transportation plan) and that the capacity was inducing new development.

Almost all of the interviewees believed that DRCOG has strong leadership, even if it is lacking in authority and funding. Because of the lack of authority, many believe that DRCOG must have strong leadership through its Board and its staff. The voluntary agreements such as the Mile High Compact and the Urban Growth Boundaries/Areas UGB/A were also cited as strong leadership tools due to the personal and political consequences of noncompliance.

Term limits were also cited as a barrier to regional coordination; this barrier was stated mostly in terms of education and communication. Locally elected officials build relationships working on shared problems, and these relationships are lost when term limits are reached.

3 TRANSPORTATION & LAND USE COORDINATION

3.1 OVERVIEW

A second goal of this project was to examine the mechanisms and strategies that regions use to coordinate transportation and land use. The need for coordination has long been a topic in the literature and policy documents, but coordination is complex to examine.

In this section we discuss some of the general coordination trends, and in later sections we review findings about specific mechanisms used in each region.

In our online survey, we asked officials in each region to assess how well transportation and land use is coordinated, and trends in coordination over the past five years. In the following sections we discuss the survey and case study findings by site.

3.2. PORTLAND METRO (METRO)

In this section, we describe the regional approaches to land use and transportation coordination, and review the results from our survey about coordination activities and individual mechanisms.

DESCRIPTION OF METRO COORDINATION MECHANISMS

Metro has a number of plans and programs that work together to help foster coordination between land use and transportation, and includes the following:

The **Regional Framework Plan** (RFP) unites all of Metro's adopted land use planning policies and requirements into one document. The RFP contains regional policies on key regional growth issues, including accommodation of projected growth and the coordination of transportation and land use planning. The subjects addressed in the framework plan include but are not limited to: management and amendment of the Urban Growth Boundary (UGB); urban design and settlement patterns; housing densities; transportation and mass transit; coordination with Clark County, Washington; and planning responsibilities mandated by state law.

The 2040 Growth Concept is the region's growth management policy that defines development in the metropolitan region through the year 2040. The 2040 Growth Concept directs most development to existing urban centers and along existing major transportation corridors, and promotes a balanced transportation system with a variety of transportation options.

The **Regional Transportation Plan (RTP**) is the transportation system plan for the Portland Metro region. The RTP serves as the Federal metropolitan transportation plan as well as the TSP required for compliance with Oregon's statewide planning Goal 12 and the transportation planning rule (TPR). A number of the state's TPR requirements (including Section 0060) are designed to assure that local governments consider the transportation impacts of changes to land use plans, address how needed transportation improvements will be funded, and minimize traffic impacts of new development.

ANALYSIS OF METRO COORDINATION MECHANISMS

A significant majority or respondents (73%) believed that transportation and land use decision making in the Portland Metro region was coordinated or very coordinated, with 22% listing it as uncoordinated or very uncoordinated (see Table 3.1). When asked about coordination over the last five years, 51% believed it was improving, 27% believed it was staying the same, and 12% believed it was getting worse.

Table 3.1: Coordination in Portland Metro

Question: Thinking about the METRO region, how coordinated is transportation and land use decision making?

	Response %
Very Uncoordinated	2%
Ucoordinated	20%
Neither Coordinated nor Uncoordinated	7%
Coordinated	51%
Very Coordinated	22%
Don't Know	0%
Responses	**41**

Table 3.2: Coordination Trends in Metro

Question: In the past 5 years, would you say that the coordination of transportation and land use decision making in the Metro region is:

	Response %
Getting Considerably Worse	5%
Getting Worse	7%
Staying the Same	27%
Improving	34%
Improving Considerably	17%
Don't Know	10%
Responses	**41**

In our survey we also asked respondents to assess the influence of a range of mechanisms for coordinating transportation and land use. In the Portland Metro region, the regional land use and transportation plans generated the highest percentage of "moderate influence" and "strong influence" responses. Other elements that generated a high percentage of moderate and strong influence percentages included the Urban Growth Management functional plan, the Metropolitan TIP, the Oregon Department of Transportation, and Metropolitan Transportation modeling.

Interviewees noted that one of the difficulties with coordination efforts is the regional travelshed issue. Travelsheds cross the boundaries of Metro, cover several of the region's Area Commissions on Transportation, and cross several ODOT district boundaries. This compounds an already complex coordination setting, particularly since areas such as Clark County, Washington, and the towns of Newburg and Dundee are experiencing high rates of growth. While interviewees noted that a Bi-State Committee and the ACTs have helped facilitate some communication, some respondents commented that Metro needs to increase its effort to coordinate with the neighboring jurisdictions.

Table 3.3: Assessment of Metro Coordination Mechanisms

Rate the influence that each of the following has on coordinating transportation and land use decision making in Metro:

Question	No Influence	Some Influence	Moderate Influence	Strong Influence	Don't Know	Responses
Regional Framework	3%	31%	36%	25%	6%	36
Regional Transportation Plan	0%	19%	14%	67%	0%	36
2040 Growth Concept	0%	22%	33%	44%	0%	36
Future Vision	14%	37%	20%	14%	14%	35
Urban Growth Management Functional Plan	0%	31%	28%	39%	3%	36
Metro Transportation Improvement Program	3%	22%	22%	50%	3%	36
Transit Oriented Development Program	14%	33%	36%	14%	3%	36
Oregon Department of Transportation programs/policies	3%	22%	44%	28%	3%	36
Regional Travel Options Grants	9%	40%	29%	9%	14%	35
Metro Transportation Modeling	3%	17%	50%	25%	6%	36
Air Quality Conformity Requirements	14%	22%	47%	6%	11%	36
Other (please specify)	0%	0%	0%	100%	0%	2

3.3 Puget Sound Regional Council (PSRC)

In this section, we describe the regional approaches to land use and transportation coordination, and review the results from our survey about coordination activities and individual mechanisms.

Description of PSRC Coordination Mechanisms

Two regional decision making bodies—Transportation Policy Board and Growth Management Policy Board—play a critical role in coordinating land use and transportation. There have been joint meetings on occasion of members of the Transportation Policy Board and Growth Management Board to encourage consistency between the regional growth management and transportation plans.

Washington State's Growth Management Act (GMA) is an important part of the framework for land use and transportation coordination. The GMA requires local governments with common borders or related regional issues to ensure that their plans are coordinated and consistent (RCW 36.70A.100). Regional

coordination and consistency are implemented primarily through countywide planning policies. In the central Puget Sound region, there is also a requirement for multicounty planning policies which provide a common planning framework for regional, county-level, and local planning.

In addition, under the GMA, **concurrency** is one of 14 goals which local governments must consider in land use planning. The goal is intended to ensure public facilities are adequate to serve new development at the time of occupancy without decreasing service levels below locally established minimum standards. Local governments have the authority and responsibility to provide acceptable levels of service for their communities, but this discretion is constrained by the Growth Management Hearings Board[11] finding that local governments cannot avoid the concurrency requirement entirely by manipulating the standard to allow uncontrolled development. In addition, approximately half of the state's highways are designated to be of statewide significance. In 1998, the Washington Legislature amended the GMA to specifically exempt these highways from the concurrency provision. Level of services standards for state facilities that are not of statewide significance are jointly set by WSDOT and regional transportation planning organizations such as PSRC, in cooperation with WSDOT.[12]

Under state law, PSRC is required to review the transportation provisions of local government comprehensive plans to ensure that they are consistent with Vision 2040's multicounty planning policies, which also serve as the RTPO's regional guidelines and principles for regional and local transportation planning. PSRC formally certifies the provisions in the local plans. The PSRC Executive Board has made a determination that only jurisdictions whose provisions have been certified are eligible to compete for regionally-managed transportation funding.

The new transportation improvement program (TIP) must be tied to multicounty planning policies in Vision 2040. The multicounty planning policies required by the Growth Management Act articulate the overall policy direction of the region and provide the foundation for transportation planning and investment decisions. Since 2003, PSRC's TIP process has focused on funding centers and connecting corridors between centers. The revised multicounty policies adopted in 2008 cover a complete range of topics spanning environment, development patterns, sustainability and health, housing, economy, transportation, and public services. The policies state more explicitly that funding to designated centers is a priority. The overarching transportation goal in the multicounty policies is to develop a safe, cleaner, integrated, sustainable, and highly efficient transportation system that supports the regional growth strategy, promotes economic and environmental vitality, and contributes to better public health. An implementation action in Vision 2040 calls for revising the TIP process to address these updated policy goals and principles.[13]

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[11] A Hearings Board is a three-member quasi-judicial panel that reviews cases regarding the adequacy of comprehensive plans adopted under the state's Growth Management Act.

[12] Washington State Department of Transportation, "Concurrency, Land Use, and the State Transportation System, May 2007)

[13] Our study took place just after Vision 2040 was adopted, but prior to the adoption of Transportation 2040. As a result, the last TIP process was conducted in a period of transition and was informed by previous multicounty planning policies, which were adopted in 1995.

ANALYSIS OF PSRC COORDINATION MECHANISMS

A majority or respondents (56%) believed that transportation and land use decision making in the Puget Sound region was coordinated or very coordinated, with 24% responding that it was uncoordinated, and 19% indicating it was neither coordinated nor uncoordinated (see Table 3.4). When asked about coordination over the last five years, 54% believed it was improving, 29% believed it was staying the same, and 14% believed it was getting worse.

Table 3.4: Coordination in PSRC:

Thinking about the PSRC region, how coordinated is transportation and land use decision making?

	Response %
Very Uncoordinated	0%
Ucoordinated	24%
Neither Coordinated nor Uncoordinated	19%
Coordinated	46%
Very Coordinated	10%
Don't Know	2%
Responses	**59**

Table 3.5: Coordination Trends In PSRC

In the past 5 years, would you say that the coordination of transportation and land use decision making in the PSRC region is:

	Response %
Getting Considerably Worse	2%
Getting Worse	12%
Staying the Same	29%
Improving	45%
Improving Considerably	9%
Don't Know	3%
Responses	**58**

Survey respondents were asked to rate the influence of various land use-transportation coordination mechanisms used in the PSRC area. The mechanisms that generated the highest percentages as having a moderate to strong influence included Vision 2040 (73%), Transportation 2040 (74%), and the Washington Growth Management Act (74%). The mechanisms generating the highest percentages as having 'no to some influence' included Transit Oriented Development funding (55%), SMART corridors (57%) and Rural Town Centers and Corridors Program (67%).

Interviewees pointed out the importance of having regional and local plans internally and externally consistent to achieve coordination. In particular, they noted that state highway plans and investments can sometimes work at cross purposes to regional land use and transportation coordination efforts.

Table 3.6: Assessment of PSRC Coordination Mechanisms

Rate the influence that each of the following has on coordinating transportation and land use decision making in PSRC:

Question	No Influence	Some Influence	Moderate Influence	Strong Influence	Don't Know	Responses
Vision 2040	2%	21%	27%	46%	4%	52
Destination 2030/Transportation 2040	7%	17%	33%	41%	2%	54
Transportation Improvement Program (TIP)	6%	30%	30%	33%	2%	54
Transit Oriented Development (TOD) funding	13%	42%	24%	9%	13%	55
WSDOT programs/policies	13%	24%	29%	33%	2%	55
Multi-County Planning Policies	4%	35%	35%	24%	4%	55
Washington State Growth Management Act	4%	20%	29%	45%	2%	55
State Implementation Plan for Air Quality	7%	37%	24%	24%	7%	54
Statewide Transportation Enhancement Funding	9%	38%	31%	9%	13%	55
SMART Corridors	13%	44%	27%	5%	11%	55
Rural Town Centers and Corridors Program	18%	49%	13%	7%	13%	55
Regional Economic Strategy	11%	34%	42%	9%	4%	53
Designated Regional Growth Centers	4%	22%	36%	36%	2%	55
Other (please specify)	100%	0%	0%	0%	0%	1

3.4 San Diego Association of Governments (SANDAG)

In this section, we describe the regional approaches to land use and transportation coordination, and review the results from our survey about coordination activities and individual mechanisms.

Description of SANDAG Coordination Mechanisms

Barbour and Teitz[14] note that SANDAG was the first MPO in California to adopt a Regional Growth Management Strategy (1993). This was later replaced by the Regional Comprehensive Plan (2002), which identified a network of Smart Growth Centers. These factors allow SANDAG to bring together a range of policies and programs to coordinate transportation and land use planning.

[14] "Blueprint Planning in California."

The Regional Comprehensive Plan has no direct authority, but its designation of growth centers increases the potential for future transit investment and makes the centers eligible for grants. Also, the regional transportation plan and transportation improvement program (TIP) both integrate centers investment into funding criteria, which make a designated center in a local government region important.

ANALYSIS OF SANDAG COORDINATION MECHANISMS

The overall assessment of coordination and trends in San Diego was positive. A high percentage of respondents listed land use and transportation as being coordinated or very coordinated (73%), and a sizable majority also believed it had been improving over the past five years (69%). These trends reflect the structural advantage of SANDAG in terms of its transportation planning authority, transit planning authority, and the significant funding overseen by the organization.

Table 3.7: Coordination in SANDAG

Thinking about the SANDAG region, how coordinated is transportation and land use decision making?

	Response %
Very Uncoordinated	0%
Ucoordinated	9%
Neither Coordinated nor Uncoordinated	18%
Coordinated	61%
Very Coordinated	12%
Don't Know	0%
Responses	**33**

Table 3.8: Coordination Trends in SANDAG

In the past 5 years, would you say that the coordination of transportation and land use decision making in the SANDAG region is:

	Response %
Getting Considerably Worse	0%
Getting Worse	0%
Staying the Same	30%
Improving	48%
Improving Considerably	21%
Don't Know	0%
Responses	**33**

The interviews and survey revealed that no *single* mechanism strongly influences the coordination of land use and transportation decisions. Instead, several mechanisms mutually reinforce their coordination efforts. For local jurisdictions struggling to accommodate their share of affordable housing under state law, the growth centers provide an option for locating this higher density housing. City and SANDAG staff noted that one indicator of the growing importance of centers has been the increased debate about the criteria for choosing centers and the interest by local governments in having centers designated in their area.

Some of the coordination challenges include addressing interjurisdictional issues, including U.S.-Mexican border travel patterns. Several interviewees noted that this travel includes a significant number of residents who live in Mexico and commute daily across the border.

Table 3.9: Assessment of SANDAG Coordination Mechanisms

Rate the influence that each of the following has on coordinating transportation and land use decision making in SANDAG:

Question	No Influence	Some Influence	Moderate Influence	Strong Influence	Don't Know	Responses
Regional Comprehensive Plan (RCP)	3%	13%	37%	33%	13%	30
2030 Regional Transportation Plan: Pathways for the Future	0%	20%	27%	40%	13%	30
2008 Regional Transportation Improvement Program (RTIP)	3%	13%	33%	40%	10%	30
Sustainable Communities Strategy	13%	13%	30%	27%	17%	30
Caltrans programs/policies	3%	17%	33%	33%	13%	30
Smart Growth Concept Map	3%	7%	47%	33%	10%	30
TransNet Smart Growth Incentive Program	3%	20%	37%	33%	7%	30
Intelligent Transportation Systems (ITS)	13%	13%	27%	13%	33%	30
Transportation Enhancement Activities Program	10%	27%	20%	10%	33%	30
Integrated Regional Infrastructure Strategy	3%	14%	24%	14%	45%	29
Other (please specify)	0%	0%	0%	80%	20%	5

3.5 Denver Regional Council of Governments (DRCOG)

In this section, we describe the regional approaches to land use and transportation coordination, and review the results from our survey about coordination activities and individual mechanisms.

Description of DRCOG Coordination Mechanisms

DRCOG uses RTD's FasTracks program to facilitate transportation-land use coordination by helping to fund multimodal, mixed-use integrated development. In addition, DRCOG voluntary agreements such as the Mile High Compact and the UGB/A help to ensure that transportation decisions are in line with smart land use goals. Also, driving DRCOG coordination are the Urban Centers policy and the process of

allocating transportation improvement program (TIP) points to meet land use goals as outlined in the Metro Vision 2035 Plan.

ANALYSIS OF DRCOG COORDINATION MECHANISMS

The overall assessment of transportation and land use coordination in the region was mixed. While 52% of respondents believed that decision making is coordinated or very coordinated, 35% of respondents believe that decision-making is not coordinated (see Table 3.10). As shown in Table 3.11, 54% of respondents indicated that coordination is improving or improving considerably, while 38% indicated that it is staying the same. Seven percent of respondents thought coordination is getting worse.

Table 3.10: Coordination in DRCOG

Thinking about the DRCOG region, how coordinated is transportation and land use decision making?

	Response %
Very Uncoordinated	0%
Ucoordinated	35%
Neither Coordinated nor Uncoordinated	13%
Coordinated	47%
Very Coordinated	5%
Don't Know	0%
Responses	**55**

Table 3.11: Coordination Trends in DRCOG

In the past 5 years, would you say that the coordination of transportation and land use decision making in the DRCOG region is:

	Response %
Getting Considerably Worse	0%
Getting Worse	7%
Staying the Same	38%
Improving	45%
Improving Considerably	9%
Don't Know	0%
Responses	**55**

Survey respondents were asked to rate the influence of various land use-transportation coordination mechanisms used in the DRCOG area. The mechanisms that generated the highest percentage of moderate to strong influences included the Regional Transportation Plan (77%), the Transportation Improvement Program (77%), and the Metro Vision 2035 Plan (64%). The mechanisms that generated the highest percentage of no to some influence responses included CDOT policies (41%), TDM funding (51%), intelligent transportation systems funding (49%), Ridearrangers program (66%) and the traffic signal improvement program (57%).

Comments by respondents focused on the fact that land use and transportation coordination is left largely to the decisions of local leadership. Others addressed the automobile-centric role of CDOT in the region, the influence of FasTracks, and the DRCOG Board's sustainability goals, which are still in development and are scheduled for adoption in 2011.

An additional issue becoming increasingly important in the Denver region is the regional travelshed. In particular, rural and unincorporated areas are generating increased travel. In these areas there is also more political opposition to regional transportation and land use planning.

Table 3.12: Assessment of DRCOG Coordination Mechanisms

Rate the influence that each of the following has on coordinating transportation and land use decision making in DRCOG:

Question	No Influence	Some Influence	Moderate Influence	Strong Influence	Don't Know	Responses
Metro Vision 2035 Plan	0%	35%	37%	27%	2%	52
2035 Metro Vision Regional Transportation Plan (2035 MVRTP)	2%	21%	45%	32%	0%	53
2008-2013 Transportation Improvement Program (TIP)	9%	13%	43%	34%	0%	53
Station Area Master Plan (STAMP) Funding Pool	6%	19%	32%	23%	21%	53
Colorado State Department of Transportation (CDOT) programs/policies	15%	26%	17%	40%	2%	53
Congestion Mitigation Program	17%	34%	23%	17%	9%	53
DRCOG Travel Demand Management (TDM) Funding Pool	13%	34%	21%	15%	17%	53
Intelligent Transportation Systems (ITS) Management and Operations Funding Pool	17%	32%	19%	9%	23%	53
RideArrangers Program	28%	38%	17%	4%	13%	53
Traffic Signal Systems Improvement Program	25%	32%	21%	11%	11%	53
Small Communities Technical Assistance Program	11%	26%	19%	4%	40%	53
Planner Idea Exchange	8%	19%	35%	12%	27%	52
Other	0%	0%	0%	50%	50%	2

4 CENTERS POLICY

4.1 OVERVIEW

One of the goals of many transportation and land use coordination efforts is to encourage more growth around higher density, mixed-use development centers. The theory behind this goal is that development around higher density areas can reduce the demand for nonwork travel, as people are able to access commercial locations by walking or biking. Furthermore, higher density housing which is located adjacent to public transit (bus, train or light rail) increases the potential for transit ridership. This is particularly true for people living in affordable housing, because they are more dependent upon public transit.

The private development market faces a number of challenges in developing mixed use centers, including the higher cost of mixed use development, public perceptions about high density housing, the difficulty of assembling land in existing urban areas, and urban policies that support dispersed, low density development.[15] For these reasons and others, many regions are promoting growth in centers by providing incentives to both local governments and developers.

4.2 PORTLAND METRO (METRO)

In this section, we describe the Portland Metro centers policy and review survey results about coordination activities and individual mechanisms.

DESCRIPTION OF METRO CENTERS POLICY

The Metro Transportation Improvement Program (MTIP) prioritizes transportation projects and awards more points to those projects that meet the goals of the 2040 Growth Concept functional plan. The 2040 Growth Concept identifies key growth centers and encourages high density development in priority land use areas such as town centers, regional centers, and corridors. The Urban Centers policy in the Growth Concept identifies guidelines for about 85 high-density, mixed-use, pedestrian- and transit-oriented activity nodes. These centers fall into one of three categories, including Mixed-Use Centers, Activity Centers, and Regional Centers. The Growth Concept's Rural Town Centers program examines the role of smaller, outlying communities in the region's rural areas.

The Oregon transportation and planning agencies oversee a joint program that provides Transportation Growth Management (TGM) grants which provide funding for planning purposes at the local level to promote development in transit-based centers. However, it is a statewide program with limited funds, with no direct connection between TGM grants and the 2040 Growth Concept.

[15] Dunphy, Robert T. *Developing around Transit : Strategies and Solutions That Work*. Washington, D.C.: Urban Land Institute, 2004. See also: Schwanke, Dean, and Urban Land Institute. *Mixed-Use Development Handbook*. 2nd ed. Washington, D.C.: ULI, 2003.

In 2009, Metro Council initiated a competitive grant process for planning and development within the urban growth boundary. The grants are funded by a construction excise tax, and in June 2009 the Council approved $3.7 million for its first 17 projects.[16]

ANALYSIS OF METRO CENTERS POLICY

Survey respondents provided mixed results regarding the effects of the 2040 Growth Concept. A majority (74%) of the respondents "agree" or "strongly agree" that the 2040 Growth Concept has influenced local jurisdictions to focus more development within centers. A combined 37% "disagree" or "strongly disagree" that the funding for centers has been allocated to the most appropriate areas in the region. This echoes the equity issues that the interview participants discussed in noting that oftentimes both rural and urban areas feel underrepresented.

Survey respondents generally agreed that the most effective aspect of the 2040 Growth Concept is its focus on regional centers and corridors, providing the region with a framework for long-term growth and development as well as helping jurisdictions to prioritize their planning projects. When asked how the 2040 Growth Concept could be improved, several respondents suggested that Metro increase cooperation and efforts to work with local jurisdictions to understand what is important to them and their individual cities.

Survey results also reveal that 66% of the respondents "agree" or "strongly agree" that transit investments support regional growth centers, but less than half (45%) believe that there is an increasing trend of development within the region's growth centers. Also, 68% believe that bicycle and pedestrian investment supports regional growth centers.

Several survey respondents noted that there is limited funding to support growth centers, and a new community planning and development grant program began only in 2009. Therefore, while many jurisdictions would like to develop 2040 design concepts (such as centers and corridors), there simply is not enough money for everyone to do so.

Table 4.1: Assessment of Metro Centers Policy

Question: Please rate your level of agreement or disagreement with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Responses
The 2040 Growth Concept supports what local jurisdictions were doing already	3%	31%	36%	31%	0%	0%	35
The 2040 Growth Concept has influenced local jurisdictions to focus more development within centers	6%	3%	14%	56%	19%	3%	35
There are significant incentives for local jurisdictions to promote growth within centers	3%	22%	39%	25%	8%	3%	35
The 2040 Growth Concept funding has been allocated to the most appropriate areas in the region	8%	31%	39%	17%	0%	6%	35
The 2040 Growth Concept has significantly influenced private investment	11%	19%	42%	14%	3%	11%	35

[16] Metro. 2010. Community planning and development grants. Accessed August 25, 2010: http://www.oregonmetro.gov/index.cfm/go/by.web/id=33050

4.3 Puget Sound Regional Council (PSRC)

In this section, we describe the PSRC centers policy and review the results from our survey about coordination activities and individual mechanisms.

Description of PSRC Centers Policy

A key component of Vision 2040 is the designation of regional centers. The region designates regional growth centers and manufacturing and industrial centers. Designated regional growth centers have been identified for housing and employment growth, as well as prioritized for regional funding. Regional manufacturing and industrial centers are locations for increased employment. The region directs growth and development toward a limited number of designated regional growth centers. Originally PSRC had 21 regional centers, which was increased to 27 centers in 2008. Since 2003, PSRC has provided a regional framework for designating these regional centers, with eight designated regional manufacturing and industrial centers.

Vision 2040 also acknowledges the importance of other center-type places that are not designated regionally, but may be established locally. Those centers should also be prioritized to receive more localized sources of funding. Indeed, Vision 2040 calls for every municipality in the region to identify one or more locations for center-type development to occur.

Development standards and regulations established locally for residential and commercial development, especially in centers, are used to accommodate a broader range of project types consistent with the regional vision. These incentives also help to increase the percentage of new development and redevelopment built at higher performing energy and environmental standards. [17]

The centers are also supported in the Regional Transportation Plan (Transportation 2040). A major PSRC policy focus is providing transportation improvements to a center or centers and the corridors that serve them. Centers are defined as regional growth centers and regional manufacturing and industrial centers as identified in Vision 2040. [18]

Analysis of PSRC Centers Policy

As noted in Table 4.2, 74% of respondents agreed or strongly agreed with the statement that PSRC's centers policy was influencing local jurisdictions to focus more on development within centers. This view was supported by comments in the interviews. However, 40% of respondents disagreed that there were significant incentives for local jurisdictions to promote growth centers, while 40% agreed or strongly agreed. Twenty-six percent of respondents believed that the centers policy was significantly influencing private development, while 28% disagreed or strongly disagreed.

Twenty-four percent of respondents indicated that they disagreed or strongly disagreed that there has been an equitable distribution of centers, whereas 52% felt that it had been equitable. Concerns about the allocation of centers across the region were also raised in the interviews. Ongoing tension exists between those who would prefer to give priority to regional centers versus those who believe that funding should

[17] PSRC Multicounty Planning Policies Appendix C, p. 7.

be focused on local centers; but, according to interviewees, these tensions appear to be lessening over time.

Table 4.2: Assessment of PSRC Centers Policy

Question: Please rate your level of agreement or disagreement with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Responses
The Designated Regional Growth Centers policy supports what local jurisdictions were already doing	0%	28%	22%	44%	2%	4%	50
The Designated Regional Growth Centers policy has influenced local jurisdicions to focus more development within centers	0%	6%	18%	52%	22%	2%	50
There are significant incentives for local jurisdictions to promote growth within centers	0%	40%	20%	28%	12%	0%	50
The geographic distribution of Designated Regional Growth Centers has been equitable	6%	18%	22%	34%	18%	2%	50
The Designated Regional Growth Centers policy has significantly influenced private investment	4%	24%	36%	24%	2%	10%	50

4.4 San Diego Association of Governments (SANDAG)

In this section, we describe the SANDAG centers policy and review the results from our survey about coordination activities and individual mechanisms.

Description of SANDAG Centers Policy

SANDAG's growth center policy is called the Smart Growth Incentive Program. The program is based on the Regional Concept Plan, which identifies a range of smart growth centers, ranging in scale and intensity from metropolitan and urban centers to town and community centers. These areas are emerging or have the potential to become areas with compact, higher density, mixed-use, pedestrian-oriented activities.[19] The program was launched as a $17 million pilot in 2005 using Federal transportation funding. In 2009, SANDAG began a 40-year program funded through an allocation of two percent of the annual TransNet revenues (approximately $4.8 million in FY 2009).[20]

The program funds either planning or capital projects. Planning projects include activities that encourage alternative transportation, infill development, internal mobility, or sense of place. Capital project funding can be used for "public infrastructure projects and planning activities that will support compact, mixed use development focused around public transit, and will provide more housing and transportation choices."[21]

Analysis of SANDAG Centers Policy

As shown in Table 4.3, 84% of respondents believe that SANDAG's Smart Growth Centers policy was influencing local jurisdictions to focus more on development within centers. Fifty percent of respondents indicated that the policy supported what local jurisdictions were doing already.

[19] Barbour and Teitz. "Blueprint Planning in California," 171-200.

[20] SANDAG. 2010. "Smart Growth Incentive Program: Guidelines and Call for Projects. FY 2009-FY 2010.

[21] SANDAG. 2008. "Final 2008 Regional Transportation Improvement Program." San Diego, CA: San Diego Association of Governments, p. 3.

Overall, three themes emerged from the interviews and survey regarding SANDAG's centers policy. First, the policy was still in its infancy and too early to evaluate—particularly given the recent collapse of the real estate market.

Second, the policy needs more funding to have a significant impact. In fact, when asked how the Smart Growth Incentives program could be improved, 8 of the 15 open-ended answers noted a need for more funding because of the significant infrastructure investment required for these centers.

Third, the importance of the policy varies considerably by local jurisdiction. In centrally located cities with transit access, the policy is consistent with plans and trends already underway and the grants help accelerate many of these efforts. Of the thirty Smart Growth Incentive grants allocated in the first two rounds, 14 were allocated to the City of San Diego and 10 were allocated to the three central cities. Not surprisingly, officials in these jurisdictions were very positive about the program and its impacts In coastal areas where the increasing cost of land drives private-market increase in density and mixed-use development, these grant programs are less important. Only two grants have been awarded to these types of communities. Suburban and rural areas show much less public acceptance of high density development, and because many of these areas have limited transit access, development is focused around "rural villages" and "community centers."

One common theme across all of these jurisdictions was that centers were means by which local jurisdictions could meet state affordable housing requirements. As noted above, SANDAG is responsible for coordinating the California Regional Housing Needs Assessment (RHNA). The state requires SANDAG to work with local jurisdictions to determine household growth in the region and project how local jurisdictions throughout the region will accommodate a sufficient quantity and range of housing in their general plans. One indication of *planning* improvements is demonstrated by the outcomes of this housing needs assessment process. The 2030 plan fell far short of accommodating the housing needs across the region. The 2050 plan projected higher growth rates, but was able to accommodate regional housing needs.

The centers policy also highlighted some tensions about the program. Some interviewees and survey respondents believed there were too many types of centers across the region. This array of centers means that almost every jurisdiction has a designated center, but this broad definition may also diffuse the impact of the policy. SANDAG staff indicted that some of the outlying jurisdictions are beginning to work on smart growth development, but they are not connected to transit so it is more difficult to obtain grant funding. Thus far, this distribution has not seemed to create discontent. When asked whether the program funding has been allocated to the "most appropriate areas in the region," 70% of the respondents (n = 30) agreed or strongly agreed with this statement, and similar views were expressed in the interviews. However, both local government and SANDAG staff expressed concern about support for the program if only a few jurisdictions are successful in obtaining funding.

Table 4.3: Assessment of SANDAG Centers Policy

Question: Please rate your level of agreement or disagreement with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Responses
The TransNet Smart Growth Incentive Program supports what local jurisdictions were doing already	0%	26%	19%	48%	4%	4%	26
The TransNet Smart Growth Incentive Program has influenced local jurisdictions to focus more development within centers	0%	7%	11%	67%	15%	0%	26
There are significant incentives for local jurisdictions to promote growth within centers	4%	26%	26%	33%	11%	0%	26
The TransNet Smart Growth Incentive Program funding has been allocated to the most appropriate areas in the region	0%	15%	11%	52%	19%	4%	26
The TransNet Smart Growth Incentive Program has significantly influenced private investment	4%	19%	33%	22%	4%	19%	26

4.5 Denver Regional Council of Governments (DRCOG)

In this section, we describe the DRCOG centers policy and review the results from our survey about coordination activities and individual mechanisms.

Description of DRCOG Centers Policy

DRCOG has legal authority only over transportation funding and has no authority over land use other than its voluntary Urban Growth Boundary/Area (UGB/A) and the voluntary Mile High Compact group. The Metro Vision plan also lays out voluntary strategies to increase infill and density through urban centers, freestanding communities, transit corridors, and rural town centers.

Metro Vision 2035 states that DRCOG does not "address development activity occurring on specific parcels of land; that is the responsibility of local jurisdictions." Metro Vision's goals and policies "aim to *influence* the direction, shape, size and other characteristics of the region's built environment."[22] Rather than acting as a regulatory body concerning land use planning, DRCOG acts as a facilitator and uses its limited Federal funds that utilize regional transportation mechanisms and structures to promote its land use goals.

DRCOG's Metro Vision 2035 outlines the formation of urban centers, rural town centers, and freestanding communities for the purpose of decreasing urban sprawl and increasing infill. The Vision also identifies various transportation corridors. Through its transportation programs and TIP funding DRCOG exercises influence on land use.[23]

[22] *Metro Vision 2035*, DRCOG, 2007, p. 11, http://www.drcog.org/documents/MetroVision2035FinalPlanIntro-Ch%202.pdf

[23] See Transportation Planning in the Denver Region, pp. 29-37

DRCOG also works collaboratively with local governments and the Regional Transit District (RTD) in developing Transit Oriented Developments (TODs). The development of TODs goes hand-in-hand with the implementation of FasTracks throughout the region, which is a taxpayer-funded RTD program to rapidly increase the amount of transit services (light rail and bus rapid transit, or BRT) in the region. In addition, DRCOG serves as a source of information for local governments on TODs.[24]

ANALYSIS OF DRCOG CENTERS POLICY

As shown in Table 4.4, 59% of respondents agreed or strongly agreed that the Urban Centers Policy supports what jurisdictions are already doing, 22% neither agreed nor disagreed, and 14% disagreed. There was a similar distribution when respondents were asked whether the policy was influencing local jurisdictions to focus more development within centers. When asked whether incentives for local jurisdictions were significant, only 20% agreed, while 53% disagreed and 24% neither agreed nor disagreed. Many of the comments related to these questions highlighted the voluntary nature of the Metro Vision plan and the strong influence of local control.

The survey responses revealed mixed responses regarding the equitable distribution of funding for urban centers. The debate about equitability was also reflected in comments. While some respondents remarked that centers are available only in a few locations, others commented that there are too many Urban Centers, diluting their influence and success.

Table 4.4: Assessment of DRCOG Centers Policy

Question: Please rate your level of agreement or disagreement with the following statements:

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	Don't Know	Responses
The currently adopted Metro Vision 2035 Plan Urban Centers policy supports what local jurisdictions were doing already	0%	14%	22%	55%	4%	4%	49
The currently adopted Metro Vision 2035 Plan Urban Centers policy has influenced local jurisdictions to focus more development within centers	2%	12%	24%	55%	6%	0%	49
There are significant incentives for local jurisdictions to promote growth within centers	12%	41%	24%	20%	0%	2%	49
The geographic distribution of Urban Centers has been equitable	4%	22%	39%	24%	0%	10%	49
The currently adopted Metro Vision 2035 Plan Urban Centers policy has significantly influenced private investment	8%	29%	39%	12%	0%	12%	49

[24] See With One Voice, p. 6

5 TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

5.1 OVERVIEW

In the United States, Metropolitan Planning Agencies are responsible for allocating Federal funding for maintenance and improvements through a Transportation Improvement Program (TIP). This allocation typically happens on a biannual basis, and state and metropolitan approaches to allocating this funding vary considerably. Funding is allocated across a region based on a number of criteria, such as safety and congestion relief. These criteria are determined by the MPO as part of its regional transportation plan, which must be approved by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

One emerging trend in some metropolitan areas is to include criteria related to smart growth or centers policies in the TIP process. A 2005 report by CH2MHill for the Atlanta Regional Commission identified five different MPOs that have used the criteria in this way.[25] One of the criteria for choosing our cases was that all four MPOs were incorporating smart growth criteria in their TIP process.

5.2 PORTLAND METRO (METRO)

In this section, we describe the Portland Metro policy criteria and process, and review the results from our survey.

DESCRIPTION OF METRO TIP CRITERIA AND PROCESS

The MTIP includes projects and programs that are administered by Metro, ODOT, TriMet, and SMART. Metro updates the MTIP every two years.[26] The MTIP is essential to the implementation of the Regional Transportation Plan (RTP). The RTP includes more projects than can be afforded by the region in any single year; therefore, the MTIP development process is used to determine a priority schedule year by year for projects included in the RTP.[27] In an effort to facilitate the integration of transportation and land use planning, the primary policy objective of the MTIP and the allocation of funding is to "leverage economic development in priority 2040 land use areas through investment to support centers, industrial areas, and UGB expansion areas with completed concept plans."

The MTIP uses a 100-point technical ranking system to prioritize transportation projects. The points are grouped as follows:

- 25 points: congestion relief; use of alternative travel modes
- 40 points: support of Metro's Region 2040 Land Use Goals

[25] CH2MHill. "Integration of Quality Growth Policies into Transportation Planning." 14 pp. CH2MHill, Portland, Oregon: Prepared for the Atlanta Chamber of Commerce, 2005.
[26] Metro. "Metropolitan Transportation Improvement Program." http://www.oregonmetro.gov/index.cfm/go/by.web/id=3814/level=4. (accessed January-February 2010).
[27] Metro, 2008-2011 Metropolitan Transportation Improvement Program. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=3814/level=4. (accessed January-February 2010), 1.

- 20 points: safety hazard correction
- 15 points: cost effectiveness

Analysis of Metro TIP Criteria and Process

As shown in Figure 5.1, 79% of respondents believe that the TIP criteria have a significant or very significant influence on transportation decision making, while only 7% listed it as insignificant, and 11% believe it is neither significant nor insignificant. In contrast, 47% of respondents believe that the TIP criteria have a significant or very significant influence on land use decision making, while 25% believed it is insignificant, and 21% believe it is neither significant nor insignificant.

The interviews highlighted some of the reasons for the mixed views on the effect of the TIP criteria and process. First, only about $33 million per year go to the MTIP, out of about $800 million spent yearly in the whole region on transportation. So while the MTIP criteria have symbolic significance, expressing the view that "this is where we want the region to go," their impact is still relatively minimal because the amount of funding attached to the MTIP is a small fraction of the regional transportation investment.

Second, interviewees noted that the MTIP process is still relatively new, so it is difficult to tell how effective the MTIP criteria have been so far in helping Metro meet its transportation and land use goals. The rating system has not been fully developed and a quantitative analysis has not yet been done to assess this issue.

Third, the Federal MTIP funding is more flexible than other state funds. Specifically, interviewees noted that the MTIP policies have strategic importance because of their flexibility to fund projects (such as bicycle and pedestrian) with these funds that are otherwise not possible through other funding sources.

Both the interviewees and survey respondents commented on the controversy over how the MTIP funds should be allocated throughout the region (i.e., based on specific outcomes or more widely distributed throughout the region). Respondents noted that Metro is moving toward a more outcomes-based method in order to prioritize certain growth patterns. As a result, some of the region's more rural and suburban areas that are not designated 2040 growth centers believe they are not getting their fair share of the project funding.

Table 5.1: Evaluation of Metro TIP Criteria

Question: Please rate the significance of the 2010-13 MTIP evaluation criteria on the following:

	Very Insignificant	Insignificant	Neither Significant nor Insignificant	Significant	Very Significant	Don't Know	Responses
Effect on transportation decisions across the region	0%	7%	11%	61%	18%	4%	28
Effect on land use decisions across the region	0%	25%	21%	43%	4%	7%	28

5.3 Puget Sound Regional Council (PSRC)

In this section, we describe the PSRC TIP policy criteria and process, and review the results from our survey.[28]

DESCRIPTION OF PSRC TIP CRITERIA AND PROCESS

Projects listed in the Transportation Improvement Program (TIP) are selected based on regional transportation, economic, and land use policy criteria.

As noted in the previous chapter, a major PSRC policy focus is providing transportation improvements to a center or centers and the corridors that serve them. Centers are defined as regional growth centers and regional manufacturing and industrial centers as identified in Vision 2040. Areas specified as employment clusters also qualify as center areas. Also, a minor portion of PSRC's TIP process is the Rural Town Centers and Corridors program, which was developed in 2004 to support projects that integrate rural highway corridor development with local rural town Main Street style development needs.

The PSRC-managed Federal funds come from three programs: Surface Transportation Program (STP), Congestions Mitigation & Air Quality (CMAQ), and Federal Transit Administration (FTA) The TIP process differentiates between regional (PSRC) and county selection processes for projects. Although the counties are asked to use the same selection criteria as the PSRC for regional projects, county projects generally select more locally focused projects, helping to ensure that local needs are not overlooked. For both county and regional transportation funds, the approved policy of the region is to set aside at least 10% of the combined estimated STP and CMAQ funds available for programming for nonmotorized projects in the four counties.

The Regional Project Evaluation Committee (RPEC) is responsible for making recommendations to the Transportation Policy Board on criteria, specific projects for Federal transportation funding, and approaches to dealing with related transportation planning issues. Members of RPEC include public works directors, and representatives from transit agencies, the Governor's office, and Washington State Department of Transportation (WSDOT) district offices in the region.

All TIP projects controlled by PSRC's competitive selection process are approved using a 100-point system.[29] The point criteria vary slightly depending on whether the funds come from the STP, CMAQ, or the FTA. For projects to be selected by PSRC for FTA and STP funds, the following point system is used:

- 70 points: Projects that Support and Serve Centers (includes: 30 points for benefit to center; 20 points for system continuity; 20 points for long-term benefit for meeting projected travel demand)
- 20 points: Air Quality and Climate Change (projects that substantially reduce emissions of greenhouse gases and other air pollution)

[28] As noted above, the last TIP process was conducted shortly after the adoption of Vision 2040 and prior to the adoption of Transportation 2040. Vision 2040 calls for an update of the TIP process to included factors such as health impacts and greenhouse gas emissions.
[29] 2010-2013 Regional TIP: Appendix C.

- 10 points: Project Readiness/Financial Plan (projects for which all prerequisites for obligation will have been met by the time the funds are requested)

Analysis of PSRC TIP Criteria and Process

As shown in Table 5.2, a high percentage of respondents (81%) believe the TIP evaluation criteria have a significant or very significant effect on transportation decisions in the central Puget Sound region. As expected, survey respondents also felt that the effect was much more significant for transportation decisions than for land use decisions.

Most of those interviewed believe that the TIP criteria are working well to guide the distribution of funds. In addition, some interviewees noted that even though the funding allocated using these criteria represent only about 10% of the total TIP funds, the criteria relating to centers tend to leverage additional investment from local jurisdictions.

Table 5.2: Evaluation of PSRC TIP Criteria

Question: Please rate the significance of the 2010-13 MTIP evaluation criteria on the following:

	Very Insignificant	Insignificant	Neither Significant nor Insignificant	Significant	Very Significant	Don't Know	Responses
Effect on transportation decisions across the region	0%	2%	17%	48%	33%	0%	46
Effect on land use decisions across the region	4%	22%	36%	31%	2%	4%	45

5.4 San Diego Association of Governments (SANDAG)

In this section, we describe the SANDAG policy criteria and process, and review the results from our survey.

Description of SANDAG TIP Criteria and Process

SANDAG first incorporated smart growth criteria in its Regional Transportation Improvement Plan (RTIP) in 1997.[30] The criteria have been updated several times, the last change coming in 2008 through an ad hoc working group. SANDAG's RTIP provides smart growth criteria for the four types of RTIP funding, which account for 5% to 20% of the competitive scoring criteria:

- Highway Corridors (serves smart growth centers = 5% of criteria)
- HOV Connector (serves regional corridors or transit routes = 20% of criteria)
- Freeway Connector (serves regional corridors or transit routes = 15% of criteria)
- Transit (serves smart growth centers = 15% of criteria)

In each of these categories, SANDAG has developed guidelines for how projects are scored. For example, highway corridor projects can receive up to 9 points if they serve: (1) existing or planned Metropolitan or

[30] CH2MHill. "Integration of Quality Growth Policies into Transportation Planning." 14 pp. CH2MHill, Portland, Oregon: Prepared for the Atlanta Chamber of Commerce, 2005.

Urban Centers (5 points), (2) existing or planned Special Use Centers (3 points), and (3) potential urban or Special Use Centers (1 point). A project receiving 7 or more points receives the full 5% allocation in the RTIP scoring process.

Analysis of SANDAG TIP Criteria and Process

As shown in Table 5.3, almost 80% of survey respondents rated the TIP evaluation criteria as having a significant effect on transportation decisions. While 31% indicted it is having a significant effect on land use decisions, an equal percentage rated its effect as insignificant. When asked an open-ended question about the specific influences of the TIP on local land use decision making, most respondents could not cite an example. One respondent commented: "I can't think of an example where the RTIP criterion has specifically affected a land use decision. The reverse is true. Appropriate land use decisions have affected RTIP decisions."

The reason for this assessment is explained in both the interviews and TIP data. Interviewees noted that the smart growth components were only a small proportion of the overall TIP criteria, and scoring on the smart growth criteria was not always a critical factor in obtaining funding.

An analysis of the criteria and funding decisions in SANDAG's 2008 RTIP supported this contention:

- None of the 10 freeway connector projects scored any points for serving regional and/or corridor transit routes (15% of criteria).
- Of the 13 transit projects that were funded (out of 43 proposed), ten scored at least 7 out of 15 points and the top five all scored between 8.5 and 15 points. Only five projects (out of 43) that scored 7 points or higher were not funded.
- Under the category of highway connectors, 19 projects were funded from 52 proposals. Of these 19, 11 scored zero or 1 for serving smart growth areas (out of 5), and only one funded project received all five points.[31]

As with the Smart Growth Incentives Program, the TIP funding allocation by itself provided limited incentives to coordinate transportation and land use. However, when combined with each other and with the need to accommodate affordable housing and the increasing cost of land, funding allocation helps reinforce policies of supporting growth in centers. As two survey respondents noted, the effects are subtle and somewhat distant:

> "Local agencies are made aware of upcoming improvement projects and realize that land use decisions must work in conjunction with the transportation system."
>
> "It provides additional rationale for local jurisdictions to focus on smart growth development within their planning areas."

[31] SANDAG. 2008. "Final 2008 Regional Transportation Improvement Program." San Diego, CA: San Diego Association of Governments.

Table 5.3: Evaluation of SANDAG TIP Criteria

Question: Please rate the significance of the 2010-13 MTIP evaluation criteria on the following:

	Very Insignificant	Insignificant	Neither Significant nor Insignificant	Significant	Very Significant	Don't Know	Responses
Effect on transportation decisions across the region	7%	7%	7%	50%	29%	0%	14
Effect on land use decisions across the region	8%	23%	31%	23%	8%	8%	13

5.5 Denver Regional Council of Governments (DRCOG)

In this section, we describe the DRCOG policy criteria and process, and review the results from our survey.

Description of DRCOG TIP Criteria and Process

DRCOG's TIP covers a six-year window of time, slightly longer than the federally mandated four years. The first four years of the TIP contain committed projects. The following two years are limited to carryover projects from the previous four years.

DRCOG directly selects projects funded by three Federal funding sources: STP-Metro, STP-Enhancement, and CMAQ. Starting in 2007, DRCOG also began sourcing TIP funds though Federal Transit Administration funding. Currently three separate processes are used for selecting transportation projects to receive Federal funds within the TIP area. DRCOG, CDOT, and RTD each select projects over which they have authority. DRCOG, as the region's federally designated MPO, is charged with development and approval of the TIP. While the three authorities work to focus their efforts toward areas of overlap between the projects, DRCOG has the final authority in what gets funded. [32]

The three agencies have undertaken four efforts to improve coordination in project selection: (1) utilizing "strategic corridors" as the unifying theme, (2) participating in each other's meetings on project selection, (3) concurrence of DRCOG project selections with RTD and CDOT, and (4) holding interagency reviews on draft TIP project lists.[33]

In addition to three separate criteria for project selection within the TIP, three separate criteria also are used for eligibility. RTD and CDOT have their own eligibility requirements, but DRCOG has the final approval. Additionally, the TIP must implement State Implementation Plan (SIP) Transportation Control Measures (TCMs) to meet air quality requirements as per Metro Vision RTP findings.[34]

[32] Policy on Transportation Improvement Program Preparation, DRCOG, 2006, pp. 1-6 http://www.drcog.org/documents/20072012TIPPolicyAmendedFinal0106.pdf
[33] Policy on Transportation Improvement Program Preparation, DRCOG, 2006, pp. 1-6 http://www.drcog.org/documents/20072012TIPPolicyAmendedFinal0106.pdf
[34] Ibid, pp. 6-7.

The DRCOG eligibility of specific projects is based upon the project type, consistent with the *2035 Metro Vision RTP*. Generally, DRCOG projects that involve highways require CDOT concurrence; projects that involve transit require RTD concurrence. The number of new funding requests that can be put forth by municipalities and counties depends on the population or employment (P/E) size of the locality.[35]

The first phase of project selection entails selecting new projects by way of ranked lists on point scales, to a maximum of 75% of the total unprogrammed funds. Projects must score a minimum of 50 points on a 100-point scale to be selected, even given the funding targets.

The second phase of the selection process, which covers the remaining 25% of NYP funds, is more qualitative. Factors considered in this assessment include: financial equity of project awards, cost savings from merging projects, projects in strategic corridors, project readiness, and projects in very small communities.[36]

Finally, DRCOG's TIP policy awards one point for any of the following eight factors:

- Preserves open space
- Demonstrates progress in developing an urban center or freestanding community town center
- Increases population density
- Establishes an urban reserve planning area
- Adopts senior-friendly development policies
- Establishes a stormwater utility or equivalent level of commitment
- Implements alternative mode plans
- Signs the Mile High Compact[37]

Analysis of DRCOG TIP Criteria and Process

As shown in Table 5.4, 88% of survey respondents believe that the TIP evaluation criteria have a significant or very significant effect on transportation decisions. While 26% believe they have a significant or very significant effect on land use decisions, 36% believe their effect is very insignificant or insignificant.

Several themes emerged from the interviews and open-ended survey responses. First, a number of respondents indicated the need for more funding to be allocated through the TIP process. Second, respondents and interviewees commented that funding still favors highway projects and road capacity as opposed to transit or bike-ped projects. However, respondents also noted the flexibility of funding for multimodal and bike-ped projects, compared to other sources of funding.

As in the other regions, DRCOG's competitive TIP funding criteria have raised tensions about the distribution of funding across the region. Efforts to decrease the tendency towards "spreading of the political peanut butter" have increased criticism of the policy favoring urban centers.

[35] Ibid, p. 11.
[36] Ibid, p. 19.
[37] Ibid, p. 85.

Table 5.4: Evaluation of DRCOG TIP Criteria

Question: Please rate the significance of the 2010-13 MTIP evaluation criteria on the following:

	Very Insignificant	Insignificant	Neither Significant nor Insignificant	Significant	Very Significant	Don't Know	Responses
Effect on transportation decisions across the region	0%	5%	8%	63%	25%	0%	40
Effect on land use decisions across the region	5%	31%	38%	21%	5%	0%	39

6 REGIONAL OUTCOMES

The primary goal of this study is to assess the efforts by regional agencies to coordinate land use and transportation. As noted in the Methods section, the ultimate question of whether coordination is improving is difficult to answer because it is hard to measure. We do not attempt to correlate regional indicators with our assessment of governance and coordination efforts. However, we believe our findings must be placed in the context of transportation and land use performance trends.

Table 6.1 summarizes information from national-level sources that use consistent methodologies across metropolitan regions. This data is based on metropolitan area definitions, which does not always match MPO boundaries. We have also included alternative measures of transportation recently published by Cortright[38] (see inset box). These measures attempt to address some of the flaws of the Travel Time Index summarized in the *Urban Mobility Report*, including measurement problems with traffic speeds and volumes and its failure to consider trip length.

Excess Miles and Hours is calculated by taking the mean travel distances and time in metropolitan areas and subtracting the mean distance and time from the best performing metropolitan areas (defined as 90th percentile performers). "The 90th percentile represents the performance that is close to the best that is achieved in practice and that deviations from this level represent transportation 'costs' … from a performance that falls below this level."[39]

Peak Period Travel Distance is calculated from *The Urban Mobility Report,*[40] which assumes that 50% of all travel occurs during peak periods. Peak travel distance (total vehicle miles traveled) is 50% of the sum of freeway and arterial miles.

In addition to compiling existing performance data for each region, our survey presented participants with a range of outcome assessment questions to provide additional perspectives on regional trends.

As shown in Table 6.2, a similar percentage of respondents agreed and disagreed that there was consistency between regional transportation decisions and local land use decisions. A similar split was found when they were asked about local land use decisions being consistent with regional transportation decisions.

In contrast, a strong majority in all regions believed that transit investment and bicycle and pedestrian investment supported regional growth centers. In contrast the views about roadway investment supporting growth centers was more mixed.

[38] Cortright, Joe. (2010). *Measuring Urban Transportation Performance: A Critique of Mobility Measures and a Synthesis*. CEOs for Cities.
[39] Ibid, p. 50.
[40] Schrank, D., & Lomax, T. (2009). *Urban Mobility Report*. College Station: Texas Transportation Institute.

In all four regions, a sizable majority of respondents agreed that the region was making more efficient use of land, was increasing transportation options, and was seeing more development within the region's growth centers.

Table 6.1: Trend Data for Metropolitan Areas

	Metro	PSRC	DRCOG	SANDAG
Population[41]				
2000 Population	1,583,138	2,712,205	1,984,887	2,674,436
2000 Urbanized Area (square miles)	474	954	499	782
2000 Density (population per square mile)	3,340	2,844	3,979	3,419
Air Quality[42]				
Percent of Days Good Air Quality Index 1998	90.1%	91.5%	55.3%	59.5%
Percent of Days Good Air Quality Index 2008	70.7%	89.2%	54.8%	40.3%
Percent Change in Good Air Quality Days	-27.5%	-2.6%	-1.0%	-47.7%
Housing Composition	**Metro**	**PSRC**	**DRCOG**	**SANDAG**
Total housing units 2009	904,735	1,443,978	1,063,508	1,142,276
Percent single family housing 2009	67.30%	63.70%	67.60%	60.30%
Change in total housing units (2005-2009)	5.20%	5.81%	5.25%	2.54%
Percent change single family housing 2005-09	1.11%	0.63%	-0.18%	-2.54%
Percent change multi-family (2-9 units) 2005-09	0.54%	0.57%	-0.29%	1.15%
Percent change multi-family (10+ units) 2005-09	-1.09%	-0.66%	0.44%	1.69%
Percent change mobile home 2005-09	-0.55%	-0.58%	0.00%	-0.19%
Housing Affordability (GRAPI: Gross rent as % of household income)	**Metro**	**PSRC**	**DRCOG**	**SANDAG**
GRAPI Less than 20% (2009)	22.9%	23.7%	22.2%	17.6%
GRAPI 20%-29.9% (2009)	26.0%	27.9%	26.2%	23.6%
GRAPI 30% or more (2009)	51.1%	48.4%	51.6%	58.8%

[41] Source: US Census Bureau.
[42] Source: US Environmental Protection Agency.

	Metro	PSRC	DRCOG	SANDAG
Percent change in GRPI less than 20% (2005-09)	6.9%	-6.9%	-8.0%	7.4%
Percent change in GRPI 20%-29.9% (2005-09)	19.6%	13.1%	1.5%	-0.4%
Percent change in GRPI 30% or more (2005-09)	8.5%	18.2%	3.5%	11.8%
FHWA Transportation Measures[43]	**Metro**[44]	**PSRC**[45]	**DRCOG**[46]	**SANDAG**[47]
Average Peak Period Miles Per Day	16.0	18.8	17.0	19.8
Average VMT per capita per day	20.1	22.5	24.0	23.7
Other Transportation Measures[48]	**Metro**	**PSRC**	**DRCOG**	**SANDAG**
Excess Miles: Peak Period Travel (per peak period traveler)	8	689	260	945
Excess Hours: Peak Period Travel (per peak period travel)	5	31	30	33
Change in Average Peak Period Travel Dist (2001-2007)	4	344	130	472
Change in Average Peak Period Travel Distance (1982-2001)	-14.6%	5.8%	-14.8%	2.2%
Change in Average Peak Period Travel Distance (2001-2007)	-4.6%	-0.8%	-0.6%	-4.1%

[43] Federal Highway Administration. (2009). Highway Statistics 2007: Urban Mobility Report. Washington: US Department of Transportation.
[44] Data for Portland OR-WA.
[45] Data for Seattle WA.
[46] Data for Denver-Aurora CO.
[47] Data for San Diego CA.
[48] Cortright, *Measuring Urban Transportation Performance*.

Table 6.1: Metropolitan Outcome Assessment Questions

Question: Please rate your level of agreement or disagreement with the following statements:

	PSRC				DRCOG				Metro				SANDAG			
	Agree	Neither agree nor disagree	Disagree	Don't know	Agree	Neither agree nor disagree	Disagree	Don't know	Agree	Neither agree nor disagree	Disagree	Don't know	Agree	Neither agree nor disagree	Disagree	Don't know
Regional transportation decisions are consistent with local land use decisions	38%	21%	39%	2%	27%	45%	27%	2%	33%	27%	39%	0%	47%	32%	21%	0%
Local land use decisions are consistent with regional transportation decisions	30%	32%	36%	2%	27%	25%	46%	2%	32%	29%	38%	0%	36%	29%	33%	4%
Transit investment supports regional growth centers	65%	21%	13%	2%	77%	10%	10%	2%	66%	12%	21%	0%	64%	7%	22%	7%
Roadway investment supports regional growth centers	31%	34%	36%	0%	39%	33%	26%	2%	39%	21%	39%	0%	44%	26%	19%	11%
Bicycle and pedestrian investment supports regional growth centers	50%	32%	15%	4%	65%	12%	20%	2%	68%	12%	18%	3%	50%	36%	11%	4%
The region is making more efficient use of land as a result of regional efforts	48%	28%	23%	2%	47%	27%	26%	0%	66%	21%	12%	0%	68%	14%	15%	4%
The region is increasing transportation options as a result of regional efforts	60%	23%	17%	0%	77%	6%	16%	0%	69%	18%	12%	0%	64%	11%	18%	7%
There is an increasing trend of development within the region's growth centers	59%	30%	8%	4%	57%	29%	10%	4%	45%	33%	21%	0%	68%	14%	7%	11%
Sample size	53				48-49				33-34				27-28			

RESEARCH STUDY DOCUMENTS

Main Report:

Margerum, Richard D., Susan Brody, Robert Parker, and Gail McEwen. 2011. Regional Transportation and Land Use Decision Making in Metropolitan Regions: Findings from Four Case Studies.

Appendix 1

Margerum, Richard D., Susan Brody, Robert Parker, and Gail McEwen. 2011. Regional Transportation and Land Use Decision Making. Appendix 1: Detailed Research Findings.

Appendix 2

Margerum, Richard D., Susan Brody, Robert Parker, and Gail McEwen. 2011. Regional Transportation and Land Use Decision Making. Appendix 2: Detailed Case Study Summaries.

Appendix 3

Margerum, Richard D., Susan Brody, Robert Parker, and Gail McEwen. 2011. Regional Transportation and Land Use Decision Making. Appendix 3: Forum Proceedings.

Regional Transportation and Land Use Decision Making in Metropolitan Regions
Findings from Four Case Studies

Appendix 2: Detailed Case Studies

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2011

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APPENDIX OVERVIEW AND METHODS

This appendix contains detailed summaries of the four case studies researched for this project: Central Puget Sound (Washington), Portland (Oregon), Denver (Colorado), and San Diego (California). All four cases were selected because of the institutional structures and mechanisms being used to coordinate land use and transportation on a regional level.

The project was led by a multidisciplinary team from the University of Oregon and Portland State University. The project also involved a team of graduate students working over two terms for the University of Oregon's Community Planning Workshop.

CASE SELECTION

The research team conducted a review of published literature, research reports, state agency documents, and Web sites to identify potential cases for investigation. We used three criteria for selecting the case study regions:

- Land use and transportation is being addressed on a regional scale,
- Region encompasses multiple municipalities and jurisdictions, and
- Region is using grant programs and Transportation Improvement Program (TIP) funding to promote regional growth centers.

Based on this review, we selected four cases and obtained commitments from regional organizations to participate in the study:

- **PSRC** Puget Sound Regional Council (Central Puget Sound, Washington)
- **Metro** Portland (Portland, Oregon)
- **DRCOG** Denver Regional Council of Governments (Denver, Colorado)
- **SANDAG** San Diego Association of Governments (San Diego, California)

BACKGROUND RESEARCH

For each case study, the research team reviewed documents, research reports, and published research. The team conducted interviews with approximately ten key individuals in each region addressing topics such as: approaches to regional coordination and governance, incentive programs to coordinate transportation and land use, the role of regional plans, relevant policies, and cross-boundary issues.

The **stakeholder interviews** included a comparable cross-section of individuals in each region, including: (1) MPO staff, (2) MPO elected officials, (3) state agency officials, and (4) staff with transit agencies, regional agencies, or Federal agencies.

The team also conducted two group interviews with the Regional Project Evaluation Committee (RPEC) in Puget Sound and the Transportation Policy Advisory Committee (TPAC) in the Portland Metro region using a similar interview format.

ONLINE SURVEY

For each case study we conducted an online survey of people involved in regional transportation and land use decision-making, including local government staff and elected officials, state agency staff, and regional agency staff. The survey asked respondents to evaluate several issues in their region, including:

- Regional governance and coordination of decision making
- Effectiveness of specific policies and programs in supporting coordination
- Regional trends related to transportation and land use planning

Individuals were notified of the survey by e-mail and asked to complete it online. After the initial e-mail, two follow up reminders were also sent. As shown in Table 1, the survey was sent to a total of 450 individuals in the four regions, and a total of 199 responded (response rate = 44%).

Table 1 Survey Respondent Information

	PSRC	DRCOG	Metro	SANDAG
Survey sample size	101	117	163	69
Survey responses	61	59	44	35
Survey response rate	60%	59%	44%	35%
Organizational Affiliation				
Federal Government	0%	2%	0%	0%
State Government	11%	9%	9%	3%
County Government	15%	22%	2%	6%
City Government	39%	49%	39%	71%
Tribal Government	0%	0%	0%	0%
Port	7%	0%	2%	0%
Transit District	10%	4%	5%	3%
Private Sector	7%	3%	11%	0%
MPO	2%	3%	9%	3%
Interest Group	3%	3%	5%	0%
Community Representative	2%	0%	16%	0%
Other	5%	5%	2%	14%

RESEARCH FORUM

On September 8-9, 2010, the findings from this research were presented at a forum in Portland, Oregon. The invitation-only forum involved at least two participants from each of the four case studies, invited researchers, and officials from state and Federal agencies. The schedule of the forum included:

- Federal transportation context

- Context and background on cases by MPO staff from each case study area
- Presentation of findings by research team
- Legislative context by Congressmen Oberstar (MN) and DeFazio (OR)
- Research panels on findings and future research needs
- Facilitated breakout sessions covering: (1) funding, (2) governance, (3) coordination mechanisms, and (4) policy.

Information, notes, and discussion from this forum were gathered by the research team and summarized in the Appendix. The team used this information to refine the analysis and recommendations presented in this document.

LIMITATIONS AND CAVEATS

There are several limitations in our methods. Ideally, we could evaluate our cases using outcome data. However, the policies are relatively new, and many years of data are required to determine statistically valid trends. Our study provides an interim assessment of these policies using the opinions of regional stakeholders.

The interviews and surveys were designed to include a parallel set of participants for each case, but the committee composition and respondents varied. Also, respondents in different regions may have had different expectations of performance. Finally, we relied on a relatively small set of respondents. For these reasons, we have been cautious in our cross-case comparisons and generalizations.

DETAILED CASE STUDY: PORTLAND METRO

The Metropolitan Service District (Metro) encompasses three counties (Clackamas, Multnomah, and Washington) and 25 cities, including Portland, Beaverton, Tualatin, Oregon City, Milwaukie, Gresham, and Fairview. This summary describes Metro's history, governance structure and responsibilities, and activities related to land use and transportation.

MPO HISTORY AND CONTEXT

Portland Metro covers 463 square miles, but the greater metropolitan area extends to a larger area, including across the Washington-Oregon border to the north.[1] Metro formed through merging with the Columbia Region Association of Governments (CRAG). The Oregon Legislature approved the creation of Metro in 1977; it was approved by voters in 1978. It began operating in 1979. Metro adopted its first urban growth boundary and was designated by the Federal government as the region's metropolitan planning organization (MPO). Metro also became responsible for solid waste planning, and operation of the Washington Park Zoo.

In 1979, Metro created the Joint Policy Advisory Committee on Transportation (JPACT).[2] JPACT is a 17-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region, as well as make recommendations to the Metro Council.[3] The following section will detail the history of Metro's major planning documents.

REGION COVERED BY MPO

The Metro region stretches from the Columbia River to neighborhoods along the Willamette River in Wilsonville, and from the foothills of the Coast Range near Forest Grove to the banks of the Sandy River at Troutdale. The Cascade Range provide the region with dramatic views of Mt. Hood, Mt. St. Helens, Mt. Rainer, and Mt. Adams.[4]

The physical size of Metro's jurisdictional boundary is 463.2 square miles (see Figure 1), which includes land in Clackamas, Multnomah, and Washington counties in Oregon, and Clark County in Washington. There are 399.5 square miles of land within the urban growth boundary, of which 24% is in Clackamas County, 46% is in Multnomah County, and 30% is in Washington County.[5] Clark county land is not included in the urban growth boundary. The land encompassed in Metro's boundary accounts for 4.7% of the state's total land area.[6]

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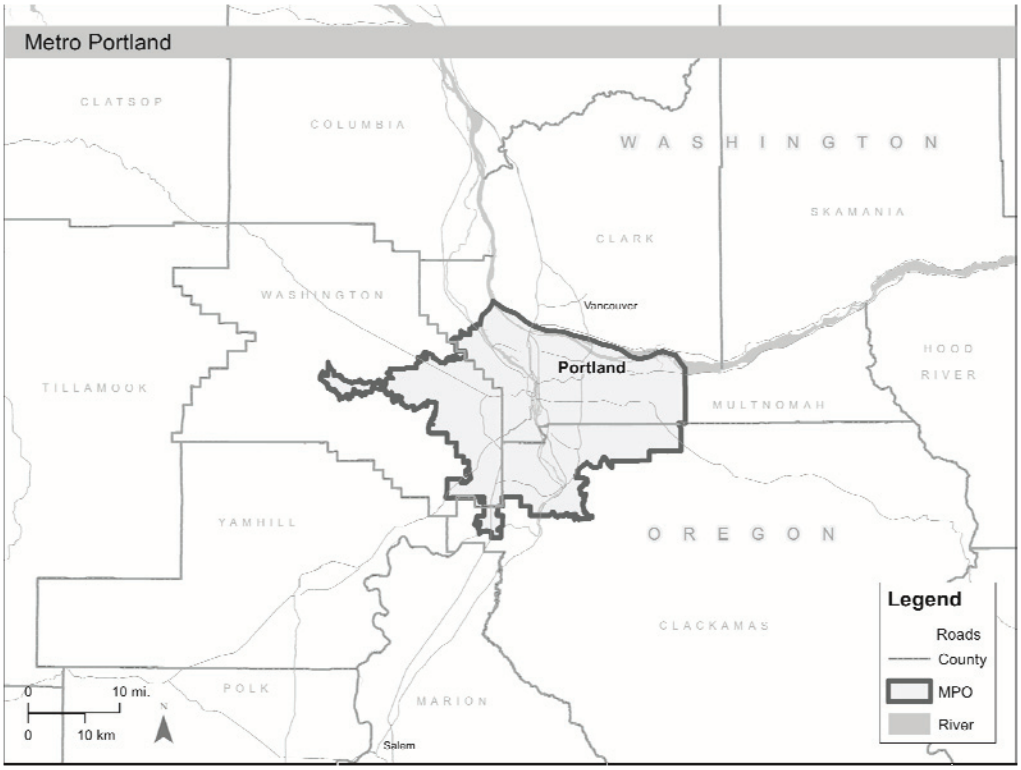
[1] Metro, Region, County, and City Areas. 2006. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=24905 (accessed January 2010).
[2] Metro. "Joint Policy Advisory Committee." http://www.oregonmetro.gov/index.cfm/go/by.web/id=305 (accessed January-February 2010).
[3] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3 (accessed January- February 2010), introduction.
[4] Metro, "Welcome to Metro." http://www.oregonmetro.gov/ (accessed July 2010).
[5] Metro, *Region, County, and City Areas.* 2006. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=24905. (accessed January 2010).
[6] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3. (accessed January- February 2010), i.

Figure 1. Metro Region



Prepared by: InfoGraphics Lab, Geography Department, University of Oregon

In 2005, Metro was home to just under 1.4 million people, which is 38.4% of the state's population. There are 41 individual jurisdictions within the four counties that comprise the Metro region. The Portland-Vancouver Metropolitan Area is expected to add just over one million more people in the next 25 years (see Table 1). This increase is expected to increase demands for the region's transportation system and transit.[7]

[7] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3. (accessed January- February 2010), ch.2, 5.

Table 1. Population Forecast for Metro Counties

County	2005	2035	% Increase
Multnomah Subareas			
Portland City and Neighborhoods	538,078	679,782	26%
East Multnomah County	144,722	199,918	38%
Clackamas	373,400	743,000	99%
Washington	501,400	756,300	51%
Three-County Subtotal	1,557,600	2,379,000	53%
Clark (WA)	403,504	718,402	78%
Four-County Total	1,961,104	3,097,402	58%

Source: Metro, 2035 Regional Transportation Plan. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3 ch.2, 5

Since 2000, international migration accounted for about 30% of the population growth in the metropolitan region. Regional research indicates that the areas with highest percentage of in-migration tend to be receiving populations that are lower income and more ethnically and culturally diverse. These in-migration areas also tend to be less well served by transit, bicycle, and pedestrian facilities, creating a need for investment to address transportation equity for populations.8

The average age in the greater Portland-Vancouver region has dropped since the 2000 census. This drop is expected to continue until about 2011, after which the proportion of people over 65 is expected to increase. In 2000, about 10.5% of the population in the Portland-Vancouver area was over 65; by 2030, that number is forecasted to be 17%. This aging population will require transportation facilities designed to serve people with a range of physical abilities.9

Over the past 30 years, the Metro region's economy has experienced job growth, shifts in job types, and growth in traded sector businesses. From 1975 to 2005, the area's job growth has doubled-- from 500,000 jobs in 1975 to one million in 2005. About three-quarters of those jobs were added in nontraded (service) sectors. The remaining jobs were added in traded-sector industries such as high technology, distribution and logistics, and apparel manufacturing. In the long term, job growth is anticipated to remain strong in these areas, with a 74% increase in employment predicted for the four-county area by 2035.10

[8] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3. (accessed January- February 2010), ch.2, 6.
[9] Ibid, ch.2, 7.
[10] Ibid, ch.2, 7.

MPO STRUCTURE

Metro is governed by elected officials, which include the president, councilors, and the auditor. The president is regionally elected and presides over the Council, sets its policy agenda, and appoints all members of Metro's committees, commissions, and boards. The six council members are elected by the six Metro districts every four years in nonpartisan races. The auditor is elected regionally and operates independently of the Metro Council. The auditor is responsible for Metro's annual financial statements and for conducting performance audits of the various departments and programs. The chief operating officer is appointed by the Council and charged with the duties of carrying out Council policies, managing Metro operations, and overseeing a workforce of more than 1,600 employees.[11]

In 2001, Metro's Transportation Department combined with the Growth Management department, consolidating into a single Planning and Development department to both improve efficiency and reduce costs. This department is responsible for the Regional Transportation Plan (RTP) and the Metropolitan Transportation Improvement Program (MTIP).

MPO FUNDING

Metro obtains its funding from a beginning fund balance and from revenues. The beginning fund balance is money that is carried over from previous fiscal years, as well as the proceeds from voter-approved bonds, reserves stipulated for specific purposes, and money for cash flow needs. Of Metro's total resources, 54% comes from current revenues; 49% of this is generated by fees from enterprise activities.[12] The largest of Metro's enterprise activities is solid waste disposal, and its revenues are derived from fees charged on solid waste deposited at Metro's transit stations.

Another source of revenue is the Metro excise tax, which is paid by users of Metro facilities and services in accordance with the Metro Charter and Metro Code. This tax supports the costs of general government activities, such as the Council office, elections expense, and lobbyist functions, as well as various department activities. Additional sources of revenue include various grants, interest earnings, and donations.[13]

ADVISORY COMMITTEES

The Metro Policy Advisory Committee (MPAC) is a committee of local government representatives and citizens mandated by the Metro Charter. The role of MPAC is to advise the Metro Council on policy issues. MPAC was established by the Metro Charter in 1992, and it is comprised of 21 voting members representing cities, counties, special districts, and the public, and six nonvoting members including a representative from the Oregon Department of Land Conservation and Development, Port of Portland, cities in Clackamas County outside the UGB, cities in Washington County outside the UGB, the City of Vancouver, Washington, and Clark County, Washington. Additionally, three Metro Councilors participate as nonvoting liaisons. Specifically, MPAC advises the Metro Council on the amendment or adoption of

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[11] Metro. "About Metro." http://www.oregonmetro.gov/index.cfm/go/by.web/id=24201/level=1 (Accessed January 2010).

[12] Metro. "Finances and funding." http://www.oregonmetro.gov/index.cfm/go/by.web/id=24271/level=2 (accessed February 2010).

[13] Metro. "Finances and funding." http://www.oregonmetro.gov/index.cfm/go/by.web/id=24271/level=2 (accessed February 2010).

the Regional FrameworkPlan. Discussion or action items addressed by the committee include issues such as regional transportation, urban growth boundary management, and other planning issues.

To provide input from the technical level, the Metro Technical Advisory Committee (MTAC), a 37-member committee of planners, citizens and business representatives, provides detailed technical support to the Metro Policy Advisory Committee (MPAC). MTAC is governed by bylaws that are included in the MPAC bylaws.[14]

REGIONAL LAND USE PLANNING

The adoption of the Metro Charter in 1992 gave Metro the responsibility of developing a Future Vision and a Regional Framework Plan (RFP). The Future Vision, which was adopted in 1995, is a nonregulatory plan examining ecological, economic, and community issues across a greater nine-county region. The document was prepared by a Future Vision Committee to help guide the RFP and provide a starting point for evaluation criteria for each element of the RFP. [15]

2040 GROWTH CONCEPT

The 2040 Growth Concept is Metro's long-range growth management strategy. Between 1992 and 1994, Metro studied different growth management strategies using urban development analysis tools and forecasting technologies. Each option was analyzed by evaluating its effects on land consumption, travel times and distances, open spaces and air quality, and various other urban landscapes. Three Growth Concepts emerged from this analysis: (1) growing out, (2) growing up, and (3) neighboring cities. A fourth option was to do nothing.[16]

In 1994, the final 2040 Growth Concept was created, drawing on the best qualities of these four options, as well as the findings from extensive public involvement activities. This plan was unanimously supported by the Metro Policy Advisory Committee and it was adopted by the Metro Council in 1995.[17]

URBAN GROWTH MANAGEMENT FUNCTIONAL PLAN

Following the adoption of the 2040 Growth Concept, Metro adopted the Urban Growth Management Functional Plan in 1996. The purpose of this plan was to implement the regional goals and objectives that had previously been adopted as the Regional Urban Growth Goals and Objectives (RUGGOs). Included in the RUGGOs were the Metro 2040 Growth Concept and the RFP.[18] The Functional Plan contains regional policies on key regional growth issues, such as accommodation of projected growth, regional parking policy, and the coordination of transportation and land use planning.[19]

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[14] Metro. "Metro Policy Advisory Committee." http://www.oregonmetro.gov/index.cfm/go/by.web/id=31111 (accessed January-February 2010).
[15] Future Vision Commission, *Future Vision Report*. March, 1995. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=29886/level=3 (accessed January-February 2010), 4, 6.
[16] Ibid, 4.
[17] Ibid, 5.
[18] Metro, *Urban Growth Management Functional Plan*. April, 2007. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=274/level=3 (accessed January-February 2010), 4.
[19] Metro, *The Nature of 2040*. June, 2000. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=29882 (accessed January-February 2010), 12.

The Urban Growth Management Functional Plan contains policies that recommend and require changes to city and county comprehensive plans, as well as implementing ordinances. Also included are binding requirements and nonbinding recommendations for cities and counties in the region. In order to allow Metro's cities and counties enough flexibility to meet requirements, the plan is structured to allow local jurisdictions the choice of either being held to performance standard requirements, or requesting prescriptive requirements.[20]

One element of the Urban Growth Management Regional Functional Plan is the Regional Parking Policy. The policy was developed in response to Oregon's Transportation Planning Rule that calls for reducing vehicle miles traveled per capita and restricting construction of new parking spaces. The policy requires cities and counties to amend their comprehensive plans to require no more parking than the minimum stated in the Regional Parking Ratio.[21]

Regional Framework Plan

In 1997, the Metro Council adopted the Regional Framework Plan (RFP). The RFP is a comprehensive set of policies on issues of regional significance such as land use, transportation, water quality, and natural areas. The RFP implements its policies through a set of specific purpose functional plans.[22]

The RFP has indirect authority over land use decisions in the Metro area. The RFP ensures the implementation of its policies through the use of designated functional plans. As stated in implementation policy 7.3.4, the RFP policies shall be applied to Metro land use, transportation, and greenspace activities. The functional plans and other land use activities shall be consistent with these policies. Policy 7.5.1 states that Metro's policy is to develop limited purpose functional plans that are consistent with the RFP. Policy 7.5.2 identifies these functional as the vehicles for requiring changes in city and county comprehensive plans in order to achieve consistency and compliance with the RFP.[23]

In order to properly implement RFP policies through the functional plans at the local level, RFP policy 7.7.2 recognizes the role of cities, counties, and special districts within the Metro region to amend their comprehensive plans to conform to the functional plans adopted by Metro.[24] The RFP also contains policy requirements for local jurisdictions to comply with the RFP.

Metro requires all cities and counties to adopt a comprehensive plan consistent with the RFP within two years of the plan's approval by the Oregon Department of Land Conservation and Development. Metro Council also has the power to adopt provisions to adjudicate and determine the consistency between local plans and the RFP.[25]

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[20] Metro, *Urban Growth Management Functional Plan*. April, 2007. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=274/level=3 (accessed January-February 2010), 4.
[21] Ibid, 13.
[22] Metro, *The Nature of 2040*. June, 2000. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=29882 (accessed January-February 2010), 3.
[23] Ibid, ch.7, 2-3.
[24] Metro, *Regional Framework Plan*. December, 2005. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=432/level=3 (accessed January-February 2010), ch. 7, 6.
[25] Metro, *Regional Framework Plan*. December, 2005. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=432/level=3 (accessed January-February 2010), ch. 8, 2-6.

SPECIFIC POLICIES RELATING TO LAND USE/TRANSPORTATION INTEGRATION

Within the RFP many land use policies specifically relate to the integration of land use and transportation (see Table 2). These policies range from urban design to residential design, and from street design to transportation management. Many of these policies refer directly to the 2040 Growth Concept, stating that growth patterns and land use must occur as directed by the 2040 Growth Concept, and that these policies will work to implement it. What follows is a list of RFP policies that are specific to Metro's efforts to integrate transportation and land use planning.

TRANSIT ORIENTED DEVELOPMENT PROGRAM

In 1997, Metro developed its innovative Transit Oriented Development (TOD) Program to help facilitate mixed-use development along transit lines to encourage increased use of public transit. The TOD program specifically pursues the 2040 Growth Concept by providing public investments to developers to build more densely, and to focus on creating walkable environments. Metro realizes that in many places, the market does not allow for intense mixed-use development with a high number of dwelling units per acre. Also, rising construction costs have made it economically unfeasible to build multistory buildings in many areas, especially in the suburbs of the region. By recognizing this, the TOD program identifies and removes barriers to the creation of transit villages, main streets, and mixed-use urban centers that the 2040 Growth Concept envisions.[26] This program demonstrates Metro's strong, active support of transportation and land use planning integration.

The TOD program uses public investments to help shape Metro's desired development patterns in the region. Metro influences development through its planning and regulatory policies, but TOD is the only Metro program that delivers "bricks and mortar" incentives.[27] In 1998, the TOD program was the first in the nation to obtain authorization to use Federal transit funds to acquire TOD development sites for private development. This authorization is codified in the Federal Transit Authority Joint Development Policy, stating that "a development project is a transit project if it is physically or functionally connected to transit and enhances the transit system."[28] This authorization began the U.S. Department of Transportation's acceptance of a close relationship between development patterns and travel behavior, thus recognizing the importance of integrated transportation and land use planning.[29]

Table 2: Examples of Regional Framework Plan Policies[30]

Policy	Description
1.2.1	Ensure that development in the region occurs in a coordinated and balanced fashion by: • Providing infrastructure concurrent with pace of growth

[26] Metro. "Transit-oriented Development." http://www.oregonmetro.gov/index.cfm/go/by.web/id=140 (accessed February 2010).
[27] Metro, *Annual Report 2007: Transit-Oriented Development and Centers Program*. March, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=140 (accessed February 2010), 2.
[28] Metro Planning Department, *Transit-Oriented Development Program Process and Examples*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=140 (accessed February 2010), 3.
[29] Metro. "Transit-oriented Development." http://www.oregonmetro.gov/index.cfm/go/by.web/id=140 (accessed February 2010).
[30] Metro, *Regional Framework Plan*. December, 2005. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=432/level=3 (accessed January-February 2010), ch. 2, 2-12.

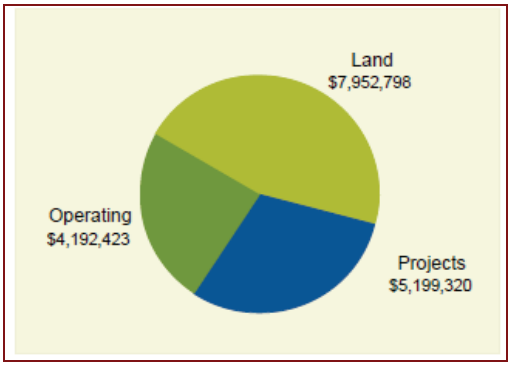
Policy	Description
	• Creating a balanced transportation system with less dependence on private automobiles
1.10.1	Support the identity and functioning of communities through incentives and regulations to guide development and redevelopment that: • Promotes pedestrian "friendly" areas. • Reinforces nodal, mixed-use, neighborhood-oriented design. • Includes concentrated, high-density, mixed-use urban centers.
1.10.2	Encourage pedestrian- and transit-supportive building patterns to minimize the need for auto trips and to create a development pattern conducive to face-to-face community interaction.
1.11.1	Coordinate growth in cities outside the UGB through cooperative agreements which provide for green corridors through rural reserves to serve as a link between Metro areas and other cities
1.15.2	Develop a regional strategy for enhancement of Centers, Station Communities, and Main Streets in the region
1.16.2	Protect and improve the region's existing neighborhoods by providing access to walking, bicycle, and transit, where possible.
2.4.1	Ensure that the identified function, capacity, and level of service of transportation facilities are consistent with applicable regional land use and transportation policies as well as adjacent land use patterns.
2.13.1	Plan local street systems to complement planned land uses and to reduce dependence on major streets for local circulation.
2.15.1	Plan for an appropriate level, quality, and range of public transportation options to serve the region and support implementation of the 2040 Growth Concept.
2.32.1	Implement a regional transportation system that supports the 2040 Growth Concept through the selection of complementary transportation projects and programs.

To obtain Metro's desired development goals, TOD strategies include: buying land for future transit-oriented projects, purchasing TOD easements on projects, and providing site improvements.

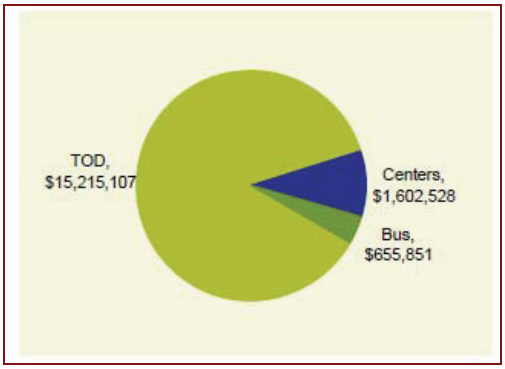
Through the 2009 fiscal year, TOD has spent or allocated over $17 million, with funds allocated to land acquisition, projects, and operating costs (see Figure 2). Three categories of TOD programs are eligible for funding: transit-oriented developments, frequent bus stop sites, and regional or town centers identified in the 2040 Growth Concept plan.

Figure 2. TOD Program (1997-2007)

Expenditures by Type



Expenditures by Program



Source: Metro, *Annual Report 2007: Transit-Oriented Development and Centers Program*. March, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=140

The project review process consists of five steps:

1. Determine Base Case (project without TOD funding)
2. Determine TOD Case (project with TOD funding)
3. Determine Ridership Delta (transit riders utilizing transit as a result of a TOD)
4. Capitalize farebox revenue over thirty years (transit fare revenues that would be generated by the ridership delta)
5. Compare to cost premiums; the project with the lower of the two numbers is operative (this is almost always the TOD)

Each TOD project involves many layers of funding. For example, the $14.8 million Milwaukie North Main Village included ten sources of funding, including $455,000 from the Metro Centers program. [31]

Regional Transportation Planning

As a federally designated MPO, Metro is required by law to coordinate regional transportation planning, which includes the distribution of transportation funds through both the RTP and the MTIP. The area covered by an MPO's transportation planning activities is considered the Metropolitan Planning Area (MPA). At a minimum, this area must include the delineated urbanized areas, areas that are expected to be urbanized within the next 20 years, and areas that are within the Air Quality Maintenance Area Boundary.[32]

[31] Metro Planning Department, *Transit-Oriented Development Program Process and Examples*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=140 (accessed February 2010), 14.

[32] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3 (accessed January- February 2010), 1-4.

The RTP is designed to cover at least a 20-year period, and to be updated every three to five years. To prepare for a scheduled update, development throughout the Metro region determines whether growth and associated travel demand occurs as forecasted. Metro reviews its population and employment forecasts annually, and updates them at least every five years.[33]

In 1991, Oregon's Land Conservation and Development Commission (LCDC) adopted the Oregon Transportation Planning Rule (TPR), which implements the State Land Use Planning Goal 12, Transportation. The TPR requires most cities and counties as well as the state's four MPOs to adopt transportation system plans that consider all modes of transportation, energy conservation, and avoidance of reliance on any one mode of transportation. In Metro, the previously drafted RTP became the now required transportation system plan. The RTP must be consistent with the Oregon Transportation Plan, which was adopted in 1992 and amended in 2006 by the Oregon Transportation Commission.[34]

In 1982, the Metro Council approved the first Regional Transportation Plan (RTP). The current RTP was completed in 2007. A revised 2035 Regional Transportation Plan was adopted in June 2010. This update is the first to incorporate the 2040 Growth Concept, the Regional Framework Plan, and the State's Transportation Planning Rule.

Forecasts show that $9.07 million of reasonably expected revenue will be available in the Metro region from 2007 to 2035. Of this total, $3.73 million is comprised of state and Federal funds and the remaining $5.34 million is from local funds. Federal funds account for 41% and local funds 59% of reasonably expected revenue.

PROCESS FOR DEVELOPING REGIONAL PLAN

Metro leads the process of transportation planning through consultation and coordination with Federal, state, regional, and local governments, resource agencies, and other stakeholders with interest in or affected by the planning process. These activities are guided by a federally mandated decision-making framework. Metro has many planning partners, including the 25 cities and counties within the region, ODOT, the Oregon Department of Environmental Quality, Port of Portland, South Metro Area Rapid Transit (SMART), TriMet, and state and Federal agencies such as the FHWA and the FTA.

Since the Portland-Vancouver metropolitan area extends into Washington, Metro coordinates on bistate issues with the City of Vancouver, Clark County, Port of Vancouver, Southwest Washington Regional Transportation Council (RTC), C-Tran (Clark County's public transportation service), Washington Department of Transportation, Southwest Washington Air Pollution Control Authority, and other Clark County governments in Washington. RTC is the federally designated MPO for the Clark County portion of the Portland-Vancouver metropolitan region.[35]

Four advisory committee bodies facilitate the regional consultation, coordination, and decision-making structure of Metro: JPACT, Metro Policy Advisory Committee (MPAC), Transportation Policy Alternatives Committee (TPAC), and Metro Technical Advisory Committee (MTAC). Additionally, the Metro Committee for Citizen Involvement (MCCI) provides advice to the Metro Council on how to best

[33] Ibid, 7-31.
[34] Ibid, 1-9.
[35] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3 (accessed January- February 2010), 1-2.

engage the public in the planning process. On bistate issues, the Bi-State Coordination Committee advises the RTC, JPACT, and the Metro Council. Ultimately, all transportation-related actions (including Federal MPO actions) are recommended by JPACT to the Metro Council. The Council can either approve the recommendations, or refer them back to JPACT for reconsideration. Final approval of recommendations requires concurrence from both JPACT and the Council.[36]

The RTP includes two separate layers of planned projects and programs that respond to Federal, state, and regional planning mandates. The first layer is the financially constrained system of investments responding to Federal planning requirements and based on Metro's financial forecast. The second is the illustrative system of investments responding to regional and state planning requirements, and assumes that significant new revenue must be identified in order to provide an adequate transportation system over the RTP planning period from 2008 to 2035.[37]

PUBLIC INVOLVEMENT

In addition to the advisory committees, Metro uses a variety of methods to involve the public in the RTP development process. To involve stakeholders, Metro held nine stakeholder workshops in the fall of 2006 to update the policy in the 2035 RTP. These workshops involved 127 people and 50 community organizations and government entities. Four of the workshops were held with Metro's advisory committees. Five were held with business and community groups representing specific public interests, public responsibilities, or groups that have historically been underrepresented in the Portland Metropolitan Region's transportation planning and decision-making process. In September and October of 2006, Metro held separate bicycle and pedestrian workshops with pedestrian and bicycle planners from local and state governments, advocacy groups, and the private sector to obtain input on Metro's bicycle and pedestrian needs.[38]

To gather the public's opinion and input throughout the RTP development process, Metro conducted a scientific public opinion survey. This survey was designed to complement and supplement information gathered from prior public input and engagement activities by soliciting a statistically accurate measure of the public's values and transportation needs. During the research phase for the 2035 RTP update process, an interactive project site on the Metro Web site included an online survey, fact sheets, and an update process. From October 15 through November 15, 2007, four Metro Council public hearings as well as a public comment period addressed a discussion draft of the 2035 RTP posted online. Metro also utilized media outreach in the form of press releases newsletters, fact sheets, and summary reports documenting the results of major tasks.[39]

SPECIFIC POLICIES FOR LAND USE AND TRANSPORTATION INTEGRATION

Coordination of land use and transportation planning as described in the RTP is strongly linked to the 2040 Growth Concept. Adopted in 1995, the RTP identifies the building blocks essential to integrating transportation and land use planning. The success of this 2040 Growth Concept relies on achieving the RTP's goals. The 2040 Design Types developed by the 2040 Growth Concept presents a land-use

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[36] Ibid, 1-3.
[37] Ibid, 1-3.
[38] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3 (accessed January- February 2010), 1-16.
[39] Ibid, 1-17.

hierarchy which serves as a framework for prioritizing RTP investments. The RTP therefore prioritizes projects where the Growth Concept dictates land use and density. Additionally, the RTP responds to long-term visions through a "systems approach" that views the transportation system as an integrated system, thus shifting the emphasis from moving vehicles to moving people and goods throughout the region.[40]

The RTP identifies ten goals with corresponding objectives and actions. Actions related to the integration of transportation and land use planning include:

- Action 1.1.2: Coordinate land use and transportation decisions to ensure identified function, design, and capacity of transportation facilities are consistent with regional system concepts and support adjacent land use patterns.
- Action 1.1.5: Create incentives for development projects in 2040 target areas, and promote transit-supportive design and infrastructure.[41]
- Action 3.1.14: Analyze a 3-minute radius from 2040 centers and work with local jurisdictions to develop bicycle and pedestrian networks that use a variety of facility types.[42]
- Action 7.1.4: Remove barriers and reinforce compact development patterns to encourage walking and bicycling to basic services and nearby activities as a way to integrate exercise into daily activity.[43]
- Action 9.2.3: Ensure that land use decisions protect public investments in infrastructure and encourage compact development patterns to reduce transportation infrastructure costs of serving development.
- Action 9.2.5: Develop agreements between transit service providers and local jurisdictions on the provision of transit service and the build-out of priority 2040 land use areas and related street infrastructure.[44]

Concerns about the Plan

The Bicycle Transportation Alliance (BTA) and the Coalition for a Livable Future (CLF) have both recently spoken out in criticism of the 2035 RTP. Critics argue that the plan focuses too much investment on highway widening and road projects, and falls short in measures to reduce greenhouse gas emissions.[45] The BTA says that the plan is "not sufficient towards changing the overall reliance on automobiles and the associated consequences." The Coalition also criticized Washington County specifically for trying to build their way out of congestion by building more roads. [46]

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[40] Ibid, 3-3.
[41] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3 (accessed January- February 2010), 3-8.
[42] Ibid, 3-12.
[43] Ibid, 3-20.
[44] Ibid, 3-23.
[45] Coalition for a Livable Future. 2008. "Shift the Balance on Transportation: Coalition for a Livable Future's Analysis of the 2035 Regional Transportation Plan Update" Portland, OR.
[46] Maus, Jonathon. "Burkholder responds to criticism of Metro's Regional Transportation Plan." November 18th, 2009. Blog post on http://bikeportland.org/2009/11/18/burkholder-responds-to-criticism-of-metros-regional-transportation-plan/ (accessed February 2010).

In response to these criticisms, Metro Councilor Rex Burkholder noted that changing people's mindsets is a slow and difficult process. Burkholder stated, "I think our policies are very bold. We're one of the first to have an outcomes-based planning model using real performance measures, using real traffic counts, looking at environmental health. It's not easy, that's why it's incremental.[47]

Requirements for Local Transportation Plans

The State Transportation Planning Rule (TPR) requires that most cities and counties within Metro's jurisdictional boundary adopt a local Transportation Systems Plan (TSP) in their comprehensive plans. These are required by the TPR as well as by Federal law to be consistent with the policies and guidelines in the RTP.[48] By state law, the RTP must include recommendations and requirements for the local TSPs. Specific requirements include:

- Consistency with the policies, objectives, motor vehicle level-of-service measure and modal targets, system maps, and functional classifications found in chapter one of the 2035 RTP.[49]
- Consistency with the 2020 population and employment forecast contained in either chapter two of the 2004 RTP, or the alternative forecast found in chapter seven of the 2035 RTP.
- Compliance with the elements of the RTP implementation strategy found in chapter six of the 2035 RTP.

Local TSPs must identify transportation needs for a 20-year period, including needs for regional travel within the local jurisdiction. The local TSP development process begins with identifying local transportation needs, and then appropriate strategies or solutions are identified through a two-phase process of system-level and project-level planning.

Once a local TSP is completed, Metro reviews the plan and amendments prior to its adoption. After the TSP is adopted, Metro will complete a final consistency review, and once Metro deems it consistent with the RTP, the TSP will be forwarded to the Department of Land Conservation and Development (DLCD) for consideration for state review.[50]

Regional Transportation Trends and Issues

The following section outlines a number of unique transportation issues that currently impact the Metro service area.

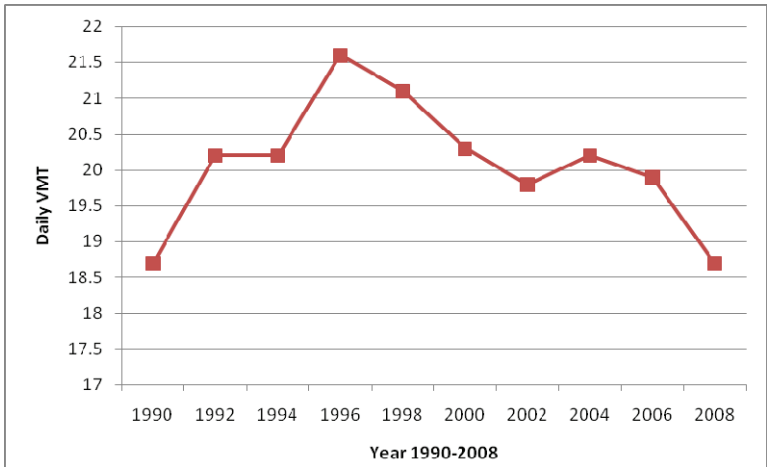
Commuting

Most commuters in the Metro region travel to work in private vehicles, but between 1990 and 2000 private vehicle commuting actually decreased slightly.[51] However, the daily VMT per person increased

[47] Ibid.
[48] Metro, 2035 Regional Transportation Plan. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3 (accessed January- February 2010), 7-15.
[49] Ibid, 7-14.
[50] Ibid, 7-16.
[51] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3 (accessed January- February 2010), ch. 2, 8.

about 8%, from 18.7 miles in 1990 to 20.3 miles in 2004. While most commuters (68%) spend less than 30 minutes commuting to work, the share of people in the region who commute for more than 30 minutes one way increased. However, the average commute time in the region grew by only six minutes between 1990 and 2000, from 19 to 25 minutes.[52] As shown in Figure 3, VMT reached a peak in the mid to late 1990s, and has since decreased.

Figure 3. Portland-Vancouver Daily Per Capita VMT



Source: Metro, *1990-2008 Daily VMT*. 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=16340/level=4

TRANSIT

The current regional transit system is comprised of light rail, bus, park-and-ride lots, paratransit, streetcars, and commuter rail service. Between 1990 and 2000, ridership on bus and light-rail lines in the Metro region increased by 58%, which is nearly double the percentage growth rate in population. Approximately 52 miles of MAX light rail lines operated by TriMet currently run through Portland, connecting Gresham, Hillsboro, Beaverton, Clackamas, the Portland Expo Center, and the Portland International Airport with downtown Portland. In September 2009, the MAX Green Line began operation on the east side of the Portland Metro area, connecting Clackamas with Portland State University. An additional MAX line from Portland State University to Milwaukie is expected to open in 2015; a line to Vancouver, Washington, is in the planning stages.

Regional bus service is provided by TriMet and the South Metropolitan Area Rapid Transit (SMART). TriMet bus service includes 93 routes covering 892 miles. SMART buses serve Wilsonville, and connect with bus services in Portland, Tualatin, Canby, and Salem.[53]

CONGESTION

Congestion in the Metro region is greatest on the freeways and interstate highway system. Federal planning regulations require that MPOs maintain a Congestion Management Process (CMP).The CMP includes a performance monitoring program that informs needed capital investments and system

[52] Ibid, ch. 2, 9.

[53] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3 (accessed January- February 2010), ch. 2, 12.

management strategies to improve performance of the existing roadway infrastructure. In addition to traditional congestion management strategies, nontraditional approaches have been developed to manage congestion, including Intelligent Transportation System strategies, High Occupancy Vehicle lanes, employer incentives, and Safe Routes to School strategies.[54]

SPECIAL ISSUES

One of Metro's largest transportation projects is the rebuilding of the I-5 bridge that crosses the Columbia River, linking Portland with Vancouver. The current bridge is congested, fails to meet earthquake standards, has inadequate bike and pedestrian facilities, and cannot accommodate rapid transit.

In July 2008, the Locally Preferred Alternative (LPA) was selected to be a single replacement bridge with light rail extending north to Clark College. One expected outcome of the LPA is that it will support and attract transit oriented development in both Portland and Vancouver along the new light rail line. Over the next year, Metro will face key concerns, including bridge financing and tolling options, design of the I-5 bridge, pedestrian and bike pathways, light rail route and station locations and design, sustainability plan, and mitigation plan.[55]

Another issue with regional implications is enhancement of transit service between the city of Lake Oswego and downtown Portland. After completing an Environmental Impact Statement, a Locally Preferred Alternative will be determined. The three alternatives for consideration are enhanced bus service, a streetcar line, and a no-build option. Should the enhanced bus service or the streetcar option be chosen, construction on the project will begin in 2014 to open for operation in 2016.[56]

TRANSPORTATION IMPROVEMENT PROGRAM

The Federal government requires all MPOs to produce a Transportation Improvement Program documenting the schedule of transportation investments over a four-year period. The Metropolitan Transportation Improvement Program (MTIP) is the federally required document identifying how all Federal transportation money will be spent in the Metro region. The MTIP includes projects and programs that are administered by Metro, ODOT, TriMet, and SMART. Metro updates the MTIP every two years.[57]

The MTIP is essential to the implementation of the Regional Transportation Plan (RTP). Federal law requires that all transportation projects using Federal funds be included in the MTIP, as well as be approved in the RTP. The RTP approves more projects than can be afforded by the region in any single year; therefore, the MTIP development process is used to determine a priority schedule year by year for projects included in the RTP. To receive Federal funds for highway and transit projects, the MTIP must describe the project and its air quality effects, identify Federal funding and local matching funds, and develop a schedule and phasing of the project with funding commitments. Additionally, the MTIP must

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[54] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3 (accessed January- February 2010), ch. 2, 17-18.
[55] Oregon Department of Transportation and Washington Department of Transportation. "Columbia River Crossing." http://columbiarivercrossing.org/ (accessed January 2010).
[56] Metro. "Lake Oswego to Portland Transit Project." http://www.oregonmetro.gov/index.cfm/go/by.web/id=227/level=3 (accessed March 2010).
[57] Metro. "Metropolitan Transportation Improvement Program." http://www.oregonmetro.gov/index.cfm/go/by.web/id=3814/level=4 (accessed January-February 2010).

also describe other significant state or locally funded projects that could potentially affect the region's compliance with Federal air quality standards. [58]

The first MTIP was adopted in 2002 for the period 2002-2005. The most recent 2010-2013 update of the MTIP was completed in August 2009.[59]

Federal Funding Direct to MPO

Federal sources of funding are allocated through Federal transportation legislation in several different forms.[60] For road-related projects, Congress provides revenues to Metro through the FHWA. These funds go first to ODOT, next to Metro (and the state's other MPOs); then Metro distributes these funds to its cities and counties. For transit-related projects, Congress provides revenues through the FTA to Metro, TriMet, and SMART.[61]

Forecasts show that Metro can reasonably expect $9.070 million to be available in the region between 2007 and 2035. Of this, $3.732 million is state and Federal funds, and the remaining $5.388 million is local funds. Federal funds account for 41% and local funds 59% of reasonably expected revenue.[62]

State DOT Funded from Federal Funds and State Funds

Oregon's revenues for state transportation projects come from the State Highway Trust Fund. This fund obtains its revenue from the statewide gas tax (which has not been increased since 1993), vehicle registration fees, and weight mile taxes on trucks. These funds are distributed by ODOT and the Oregon Transportation Commission in accordance with state statutes. Of these funds, ODOT historically distributes about 28.8% of money to the Metro region.[63]

Metropolitan Funded

Metro generates funding for transportation projects in the form of special funds and levies. These include property taxes, vehicle parking fees, Port of Portland transportation improvement fund revenues, street utility fees, and the Washington County Urban Road Maintenance District. Metro also supports Local Improvements Districts (LIDs), which are special districts where a group of commercial property owners agree to provide money in addition to their taxes for public improvements and services. For example, a LID in the Portland Central Business District contributed to the construction of the streetcar project.[64]

Local or Direct Funded

Transportation project funding comes from several local sources. Typically 40% of the local portion of the State Highway Trust Fund goes to Oregon's cities and counties. The local gas tax in both Multnomah

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[58] Metro, *2008-2011 Metropolitan Transportation Improvement Program*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=3814/level=4 (accessed January-February 2010), 1.
[59] Ibid, 4.
[60] Ibid.
[61] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3 (accessed January- February 2010), 5-2.
[62] Ibid, 5-7.
[63] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3 (accessed January- February 2010), 5-3.
[64] Ibid, 5-5—5-6.

and Washington counties is another local source of funding. TriMet passenger fares and other revenues contribute to local funding, as does the TriMet and SMART payroll tax.[65] Development-based sources are another form of funding on the local level. These fees are collected by local governments based on the development or use of land, and include system development charges, Traffic Impact fees, Urban Renewal funding, and developer contributions.[66]

PARTIES INVOLVED IN TIP PROCESS

To develop the MTIP, Metro works with the local, regional, state, and Federal jurisdictions that own, operate, or regulate the region's transportation systems. This includes 25 cities, three counties, two park districts, TriMet, SMART, ODOT, Oregon Department of Environmental Quality, the Port of Portland, FHWA, FTA, and the city of Vancouver and Clark County in Washington.[67] The MTIP development process is initiated by Metro, but the work for it begins at the local level. City and County officials receive input from citizens through the local planning process, and the officials later share their local transportation needs with JPACT. Further public input is considered at the regional level when JPACT and Metro review the MTIP for final approval. Once the MTIP is adopted by the Metro Council, it is submitted to the Oregon Transportation Commission (OTC) for approval and inclusion in the State Transportation Improvement Plan (STIP).[68] All funds allocated to projects in the MTIP must be included without change in the STIP.[69]

MTIP CRITERIA

In order to determine the schedule of transportation projects to be funded, a project prioritization process is necessary. Project prioritization is the process of identifying which projects in the RTP project list will be prioritized for funding from forecasted revenues.[70] In an effort to facilitate the integration of transportation and land use planning, the primary policy objective of the MTIP and the allocation of funding is to "leverage economic development in priority 2040 land use areas through investment to support centers, industrial areas, and UGB expansion areas with completed concept plans." Other MTIP policy objectives include:

- Emphasize modes that do not have other sources of revenue
- Complete gaps in modal systems
- Develop a multimodal transportation system
- Meet the average annual requirements of the State Implementation Plan for Air Quality for the provision of pedestrian and bicycle facilities[71]

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[65] Ibid, 5-4.
[66] Ibid, 5-5.
[67] Metro, *2008-2011 Metropolitan Transportation Improvement Program*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=3814/level=4 (accessed January-February 2010), 2.
[68] Metro, *2035 Regional Transportation Plan*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=137/level=3 (accessed January- February 2010), 7-27.
[69] Metro, *2008-2011 Metropolitan Transportation Improvement Program*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=3814/level=4 (accessed January-February 2010), 3.
[70] Ibid, 10.
[71] Ibid, 11.

Qualitative criteria for project selection addresses the project's relationships to regional policy, some of which directly address the integration of land use and transportation planning. These policies include:

- Regional goals and system definitions contained within the RTP
- Metro's "Creating Livable Streets" Design Guidelines
- Environmental Justice considerations
- The State Transportation Planning Rule
- Provisions of the Clean Air Act Amendments of 1990, and the associated State Implementation Plan which pertains to air quality[72]

Another method that the MTIP uses to prioritize transportation projects is a 100-point technical ranking system. The points are divided up as follows:

- 25 points: congestion relief/use of alternative travel modes
- 40 points: support of Metro's Region 2040 Land Use Goals
- 20 points: safety hazard correction
- 15 points: cost effectiveness

This 100-point technical ranking system clearly shows the prioritization of projects that address the integration of transportation and land use, since 65 points can be awarded to projects in areas that encourage density and alternative modes.[73]

CONCLUSION

As this report shows, Metro has taken many steps throughout its history as an MPO to integrate transportation and land use planning. One of Metro's greatest assets, and what makes it unique, is its regulatory control over the local jurisdictions within its boundaries. These local jurisdictions must follow Metro's land use and transportation plans, and their own plans must be approved by and be developed in conjunction with Metro.

Metro has developed several plans and documents to integrate transportation and land use planning, including the Regional Transportation Plan, Future Vision, 2040 Growth Concept, Urban Growth Management Functional Plan, Regional Framework Plan, and the Metropolitan Transportation Improvement Program.

The Future Vision (a conceptual, long-range planning document containing values and vision statements) acts as the starting point from which the policies in the Regional Framework Plan are developed. The policies in this plan are then implemented through a set of functional plans that were developed to serve specific functions, such as the Urban Growth Management Functional Plan.

Metro forecasts that in twenty-five years, about one million more people will be living in the Metro area, which will challenge the goal of accommodating this growth within the current urban growth boundary.

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[72] Metro, *2008-2011 Metropolitan Transportation Improvement Program*. January, 2008. Document PDF available on Metro Web site: http://www.oregonmetro.gov/index.cfm/go/by.web/id=3814/level=4. (accessed January-February 2010), 12.
[73] Ibid, 12.

While long-term trends remain to be seen, the downward trend in vehicle miles travelled and growing trend in transit use are two potential indicators of successful transportation and land use coordination.

DETAILED CASE STUDY: CENTRAL PUGET SOUND

The Puget Sound Regional Council (PSRC) is the MPO and Regional Transportation Planning Organization (RTPO) for the central Puget Sound region. This summary describes the PSRC's history, governance structure, and transportation and land use responsibilities.

MPO HISTORY AND CONTEXT

The function of the PSRC is to develop policies and make decisions about transportation planning, economic development, and growth management in the four-county, central Puget Sound region.[74] The first regional planning organization was established in 1959 and designated as a Federal Metropolitan Planning Organization (MPO) in 1973. By 1974, the region was already taking steps to connect the transportation plan with land use planning. The Central Puget Sound region adopted the Transportation System Plan with a 15-year vision in conjunction with an agricultural land use study. Five years later, in 1979, the region also adopted a long-range land use plan.[75] The 1990 Washington Growth Management Act initiated several changes. The regional planning organization was reorganized into the PSRC in 1991. The same year the Governor designated the PSRC an MPO under Federal law and RTPO under state law.

REGION COVERED BY MPO

The PSRC includes four counties (King, Kitsap, Pierce, and Snohomish) and 82 cities, including Seattle, Bellevue, Bremerton, Everett, and Tacoma. The geography is diverse, and includes urban, rural, and natural resource lands. Numerous hills, mountains, and lakes surround the urbanized region, with elevation ranging from sea level to over 14,000 feet (see Figure 1).[76] The numerous Puget Sound channels and waterways make transportation development and access challenging and limits land development options. The central Puget Sound region covers an area of nearly 6,300 square miles. The total land area incorporated makes up only 7% of the region; however over half of the population resides in this incorporated area.[77] King County, home to the metropolis of Seattle, is the largest county and the most populated.

74 PSRC History, PDF downloaded from http://www.psrc.org/about/pubs p. 1.
75 Ibid, 2.
76 PSRC Vision 2040, PDF downloaded from http://www.psrc.org/about/pubs p. 8.
77 Puget Sound Trends, Population Change in Cities, Towns, and Counties, July 2001, p. 3.

Figure 1. PSRC Region

Prepared by: InfoGraphics Lab, Geography Department, University of Oregon

Table 1. 2007 PSRC Regional Profile

Jurisdiction	Population	Area (Square Miles)
King County	1,861,000	2,126
Kitsap County	245,000	396
Pierce County	791,000	1,679
Snohomish County	686,000	2,089
Regional Total	3,583,000	6,290

Source: Vision 2040, p. 8, Washington State Office of Financial Management, 2007.

The population is forecasted to increase by 1.7 million people by 2040. As shown in Table 2, Kitsap, Pierce, and Snohomish Counties are expected to grow by over 50% in the forty-year time period between 2000 and 2040. The majority of the growth will likely occur in already urbanized areas. Although King County is also expected to experience a significant population increase, the rate of King County's projected growth is much lower than the other three.

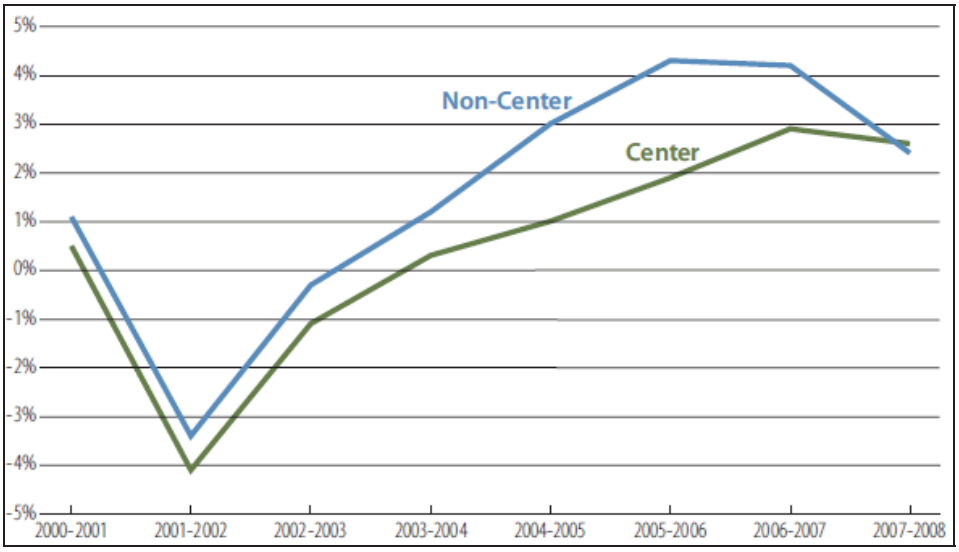
Table 2. PSRC Population Forecast

Jurisdiction	2000	2040	Increase	% Increase
King	1,737,034	2,401,521	664,487	38%
Kitsap	231,969	376,794	144,825	62%
Pierce	700,820	1,125,752	424,932	61%
Snohomish	605,986	1,084,068	478,082	79%
Regional Total	3,275,809	4,988,135	1,712,326	52%

Source: Vision 2040, p. 8, Washington State Office of Financial Management.

Figure 2 illustrates regional employment trends for the entire Puget Sound area as well as for designated regional growth centers (identified in Figure 4). The figure highlights employment growth over the last decade as well as the downturn from the recent national recession.

Figure 2. Percent Change in Employment, 2000-2008



Source: Puget Sound Trends, *Employment in Regional Growth Centers*, October 2009, p. 1.

Regionally, 8.6% of the population is living in poverty.[78] According to the 2008 American Communities Survey, the highest concentration of poverty in the region is in Pierce County, while the lowest concentration is in Snohomish County. The median age across all member counties is 36.[79] In terms of racial and ethnic make-up, the area is predominately white. In the central Puget Sound region, minorities comprise 23.6 percent of the population.[80] Asian Americans make up the largest subset minority population. King County, and specifically Seattle, has the highest concentration of racial and ethnic diversity in the region.

MPO Structure

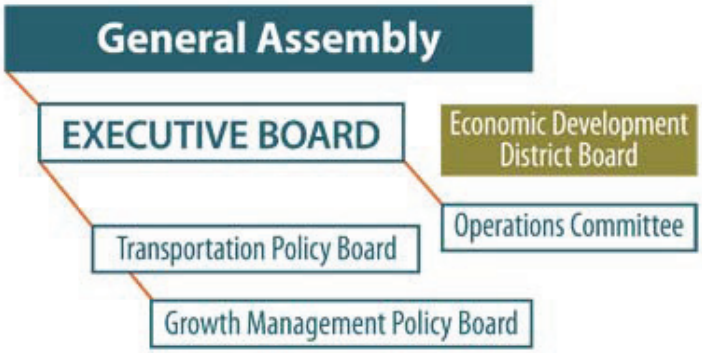
The PSRC serves as the regional MPO under Federal law and the Regional Transportation Planning Organization (RTPO) under state law. Washington State requires RTPOs to complete a Unified Planning Work Plan (UPWP) every one to two years. In order to receive funding, the Federal Highway Administration (FHA) and the FTA must approve this plan.[81]

The PSRC is governed by the General Assembly, which is made up of all voting member agencies in the PSRC jurisdiction (see Figure 3).[82] The General Assembly meets at least once a year to vote on major regional decisions, approve the budget, and elect new officers. The growth management vision is adopted by the General Assembly.

[78] PSRC 2010-2013 TIP, Appendix C, 64.
[79] WSDOT Web site, http://www.wsdot.wa.gov/planning/regional/psrc.htm
[80] PSRC 2010-2013 TIP, Appendix C, p. 57

[82] PSRC Bylaws (2009), p. 1.

Figure 3. PSRC Governance Structure



Source: http://www.psrc.org/about/boards

The Executive Board is appointed by the General Assembly and carries out delegated powers and responsibilities between meetings of the General Assembly. The Executive Board is authorized to make technical amendments to the Regional Growth Strategy.

Advisory boards including the Operations Committee, the Transportation Policy Board, the Economic Development Board, and the Growth Management Board make recommendations to decision-makers on the Executive Board. In addition, a joint meeting of members of the Transportation Policy Board and Growth Management Board began in 1999 to encourage consistency between the regional growth management and transportation plans. Additionally, 14 advisory committees fall under four categories including: PSRC advisory, transportation, funding, and data.[83]

Because they are separate sovereign nations, tribes are not officially required to plan under state law. A total of eight federally recognized Native American tribes are located within the PSRC jurisdiction. These tribes play an important role in advising PSRC on key environmental, land use, and economic issues, and to help coordinate planning efforts.

REGIONAL LAND USE PLANNING

The Washington State Growth Management Act (GMA) (RCW 36.70A.210), adopted in 1990, provides 14 statewide planning goals and provides minimum requirements that must be met by all local land use plans. The GMA concurrency goal is important because the state mandates that development can occur only where there is already adequate road infrastructure and other public facilities present. However, these goals do not have regulatory authority and the concurrency goal does not apply to state highways.[84] Also guiding *Vision 2040* are the Federal and state Clean Air Acts and the Federal Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).[85]

Vision 2040 has four important focus areas: (1) transportation; (2) growth management; (3) economic prosperity; and (4) the environment. In all four areas, the preferred growth alternative (1.7 million

[84] WDOT-land concurrency pdf, p. 4.
[85] UPWP, p. 5.

additional people and 1.2 million additional jobs by 2040) is used as the benchmark for decisions and planning purposes.[86]

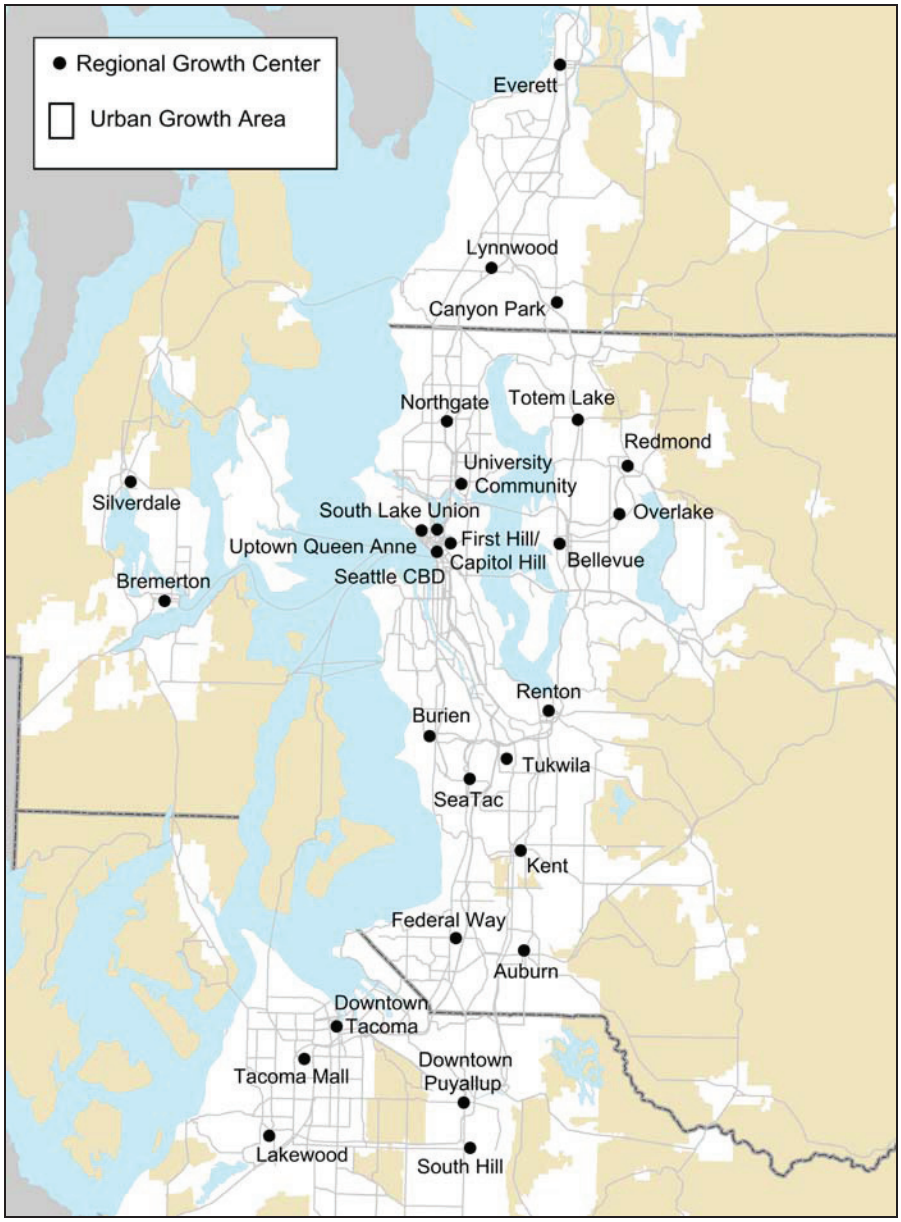
The central theme of the document is people, prosperity, and planet, which emphasize a triple-bottom-line approach.[87] Climate change also appears in *Vision 2040* goals, trends and challenges, strategies, and performance measures. *Vision 2040* establishes annual average greenhouse gas (GHG) emissions as a performance measure to monitor in the plan. It further commits the agency to the development of a regional air quality guide and a climate change action plan, working with other agencies and partners to develop greenhouse gas emission reduction targets.

Vision 2040 is organized around a "sustainable environment framework" which seeks to attend to the needs of future generations while addressing the needs of our own day. It was adopted in 2008 as a comprehensive update to previous plans and presents a numeric Regional Growth Strategy which allocates expected population and employment growth to groups of "regional geographies" throughout the region. Growth rates in rural areas are to be significantly decreased from past patterns and trends. A key component of Vision 2040 is the designation of regional growth centers and manufacturing and industrial centers.

The Council is responsible for ensuring that the transportation-related provisions in local comprehensive plans are consistent with the regional plan. Transportation 2040, an update to the regional transportation plan, was adopted in May 2010 and serves as the functional transportation plan for Vision 2040. It provides for a transportation system that implements the regional vision.

[86] Vision 2040 Final Environmental Impact Statement (2008), p. 1.
[87] Vision 2040, p. 6.

Figure 3. PSRC Designated Centers



Source: **Central Puget Sound Region, http://www.psrc.org/data/gis/map-catalog/**

The American Metropolitan Planning Organization references this plan as an outstanding example for MPOs working to integrate transportation, the environment, land use, and economic development into one plan. In 2008, the PSRC received an award for Outstanding Regional Achievement in Metropolitan Planning Organizations.[88]

[88] American Metropolitan Planning Organization Web site, http://www.ampo.org/awards/index.php (accessed January 2011).

STATE AND FEDERAL REQUIREMENTS

The Vision is consistent with the planning regulations of the national Clean Air Act and the standards in the Washington Environmental Policy Act, as well as provisions outlined in the environmental review process. The PSRC also works with the Puget Sound Clean Air Agency to identify steps to improve air quality beyond the minimum standards.

Under the Washington State Growth Management Act of 1990, multicounty planning policies are required in the densely populated King, Kitsap, Pierce, and Snohomish Counties of Washington.[90] Local governments in the four-county region have agreed to use the PSRC to develop these policies. Multicounty planning policies articulate the overall policy direction of the region and serve as a common framework for local, countywide, and regional planning. The multicounty policies are grouped into six topic areas: environment, housing, transportation, development patterns, economic development, and public services.

PLAN DEVELOPMENT PROCESS

The Vision is shaped by PSRC board members, elected officials, and public input, and is grounded in data collected for the region on economic, environmental, and population trends.

The Growth Management Board (GMB) plays an important role in plan development. The GMB is responsible for regional environmental planning and coordination, ensuring sustainable development, and addressing the impact of climate change. The board is made up of elected officials and citizens from a diverse range of backgrounds and geographic areas within the region. GMB includes representatives from local government, business and labor, environmental, and community organizations.[91]

The PSRC has a citizen participation plan that requires early and continuous public participation in the development of the regional growth management strategy.[92] The PSRC has a grant from the Federal government to develop and maintain a regional database. This database serves to forecast and monitor economic, demographic, and travel conditions in the region, and plays an important role as the foundation for local and regional planning.[93]

PLAN APPROVAL PROCESS

Before the Vision is approved, the plan goes through a thorough public review process. In addition, the GMB, the TPB, and the Economic Development District Board conduct an initial review.[94] The growth management vision is eventually adopted by the General Assembly. The General Council must make amendments to the multicounty planning policies. The Executive Board, however, is authorized to make technical amendments to the Regional Growth Strategy.[95]

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[89] Vision 2040 Appendix C 1, p. 2.
[90] The Washington State Growth Management Act with Applications for the central Puget Sound Region, www.psrc.org/assets/2428/gma.pdf, p. 1.
[91] Biennial Budget and Work Program (2010-2011), p. 5.
[92] PSRC Bylaws p. 6.
[93] PSRC2009-2011upwp p. 5.
[94] Vision 2040 Appendix 1, PDF downloaded from http://www.psrc.org/about/pubs p. 7.
[95] Vision 2040 Appendix A-1 p. 7.

IMPLEMENTATION

Much of the implementation of *Vision 2040* occurs through local planning actions. Cities and counties are directly responsible for implementing countywide planning policies. County-level plans carry significant weight; all other plans must be consistent with them. The PSRC provides technical assistance to build support for implementing *Vision 2040* and incorporating *Vision 2040* provisions into local plans.[96] Regional process review is done in the form of implementation monitoring and performance monitoring by the PSRC.

Because *Vision 2040* has a strong emphasis on creation and improvement of "centers," the PSRC encourages the use of transfer of development rights, the purchase of development rights, and conservation incentives. Development standards and regulations for residential and commercial development, especially in centers, are used to accommodate a broader range of project types consistent with the regional vision. These incentives act to increase the percentage of new development and redevelopment to be built at higher performing energy and environmental standards.[97]

REGIONAL TRANSPORTATION PLANNING

The Regional Transportation Plan (RTP) serves as a framework for local transportation plans in the region. The legal and regulatory basis is a combination of Federal and state law.

Under the Federal Clean Air Act, the RTP must be updated periodically and must plan for at least a 20-year time horizon. More significantly, the Federal transportation legislation, known as SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users), requires each MPO to develop a regional transportation plan every four years. The legislation requires the transportation vision to be in line with eight SAFETEA-LU planning factors.

The multicounty policies required by the Washington Growth Management Act of 1990 provide direction for transportation planning and investment decisions and form the policy framework for development of *Transportation 2040.* The multicounty policies cover the following categories: environment, development patterns, housing, economy, transportation, and public services.[98] Under Federal law, the plan must identify all transportation facilities, include a financial plan, and indicate proposed transportation enhancement activities.[99]

Under state law, PSRC must prepare a regional transportation strategy and a transportation plan.[100] The strategy must identify existing or planned transportation facilities, include a financial plan, and be based on least-cost planning methodology. In addition, the state requires the plan to assess regional development patterns, capital investment, and other measures necessary to make the most efficient use of existing transportation facilities. The state calls for a strong focus on alternate transportation modes and transportation measures in regional corridors. It also requires MPO plans to implement adopted growth strategies to coordinate high capacity mass transit with other types of transit. The state requires the MPO

[96] Biennial Budget and Work Program (2010-2011), p. 14.
[97] PSRC Multicounty Planning Policies Appendix C, p. 7.

[99] PSRC Functions and Mandates, PDF from http://www.psrc.org/about/pubs p. 1.

[100] Vision 2040 Appendix 1, p. 1.

transportation plan to be consistent with county, local, and state transportation plans.[101] Other state transportation statutes that apply include the Transportation Demand Management Act, the Commute Trip Reduction Act, and the High Capacity Transit Act.[102]

Under a Washington Supreme Court ruling in 1999, if the local and regional plans are not consistent, the regional plan will prevail (City of Des Moines v. the PSRC).

PLAN DEVELOPMENT PROCESS

The transportation plan update process which resulted in *Transportation 2040* was recently completed in May 2010. The Transportation Policy Board (TPB) played a key role in plan development, along with a number of internal transportation committees. For example, the PSRC must submit a commute trip reduction plan for the region to the Commute Trip Reduction Committee. The citizen participation plan also required early and continuous public participation in the development of the regional transportation plan.[103]

The PSRC performed an analysis of CO_2 emissions both for comparison of alternatives in the long-range transportation plan and for the Environmental Impact Statement (EIS). The agency has formed a Climate Change Technical Working Group to develop these analyses. Specifically, PSRC is working with both EPA and FHWA to update its transportation models to output GHG emissions.[104]

PLAN CONTENT

The overall purpose for *Transportation 2040* is to select the best alternative in order to "best provide the mobility required to support a growing population to the year 2040, sustain the region's environment and economic vitality, improve system safety and efficiency, and enhance the region's overall quality of life."[105] The plan addresses mobility needs for both personal and commercial trips in the region, across all future modes of travel, including ferries, nonmotorized, aviation, transit, and roadways. Congestion alleviation for both personal trips and freight is cited as the key goal in Transportation 2040.[106]

Transportation 2040 includes an increase in transit services, an increase in bike trails and sidewalks (a proposed 553 miles of new off-road trails), an increase in passenger ferries, and a "status quo" level of car ferry service.

Transportation 2040 will implement a comprehensive transit strategy, including completion of additional *Link* light rail extensions to Everett, Tacoma, and Redmond. In addition, plans call for 100% more service than 2006 peak periods and over 80% more service off-peak. All-day service with high frequencies of every 15 minutes would be emphasized.[107]

Data and new technology are a key component to improving existing transportation modes in

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[101] PSRC Functions and Mandates, p. 1.
[102] Biennial Budget and Work Program, p. 5.
[103] PSRC Bylaws, p. 6.
[104] USDOT, Transportation and Climate Change Clearing House, climate.dot.gov/state-local/integration/case-studies/
[105] 2010 Transportation 2040 Draft, Executive Summary, p. 3.
[106] 2010 Transportation 2040 Draft, Executive Summary, p. 6.
[107] 2010 Transportation 2040 Draft, Executive Summary, p. 12.

Transportation 2040. The plan includes an aggressive program of advanced technology on arterials and freeways. It also includes better signal coordination, active traffic management, new and expanded traveler information services, and transit-specific technologies. The Intelligent Transportation Systems (ITS) and the SMART corridors/CMP (Congestion Management Process) are aimed at monitoring and accessing existing mobility conditions to improve quality and efficiency of future transportation services and infrastructure.

In addition, the region recognizes increased tolling as a part of the region's future.[108] Added tolls are planned for high occupancy vehicle lanes, freeways, bridges, ferries, and arterial road tolls, as well as implementation of vehicle miles-traveled fees.[109]

The PSRC is focusing on "level-of-service standards for transportation on the movement of people and goods instead of only on the movement of vehicles." By doing this, the Council is able to address nonmotorized, pedestrian, and other multimodal types of transportation options in concurrency programs – both in assessment and mitigation. There is also emphasis placed on tailoring concurrency programs for centers and other subareas to encourage development that can be supported by transit.[110]

REGIONAL TRANSPORTATION TRENDS AND ISSUES

In the central Puget Sound region, 74% of residents have a valid driver's license, which is slightly above the national average. The total number of licensed vehicles in the region is 3,100,348, which is slightly less than the total population.[111] Vehicles miles traveled (VMT) per capita is currently at 22.9 miles per day in the region. The regional VMT leveled off during the 1990s and has been declining slightly since 1999 when levels peaked at 24.2 VMT per capita.

The recent decrease may be attributed to increased transit usage (regional transit ridership was up 19.6 percent from 1999 to 2007), and to rising fuel prices. These per capita numbers do not account for VMT in the region from residents living outside the four-county area.[112]

Commuter rail, light rail, and public buses are becoming an increasingly integral part of the region's transportation system. Sound Transit serves as the regional transit provider, formally called the Central Puget Sound Regional Transit Authority. The region's five local transit agencies include Community Transit in Snohomish County, Everett Transit for the City of Everett, King County Metro Transit serving King County, Kitsap Transit for Kitsap County, and Pierce Transit serving Pierce County. In addition, the City of Seattle operates the monorail and streetcar services.[113] In terms of transit ridership, approximately 367,500 people in the region take a bus each day and 5,800 use rail.

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[109] 2010 Transportation 2040 Draft, Executive Summary, p. 6.

[111] WSDOT Web site, http://www.wsdot.wa.gov/planning/regional/psrc.htm

[112] Puget Sound Trends, *Trends in Vehicle Miles Traveled*, September 2008, p. 2.

[113] Draft Transportation 2040, Chapter 4: Transportation, p. 11.

Ferry transportation is an important component of the Puget Sound transportation system. Ferries operate along seven separate designated routes in the central Puget Sound region, six of which are auto routes and one a passenger-only route.[114] Nearly 11,800 people in the entire region use the ferry system daily.[115]

A number of freeways traverse the Puget Sound region that greatly impact the commutershed and land use patterns of the region. Interstate-5 runs north-south through the central Puget Sound region and experiences heavy congestion during peak travel times. Interstate-405 is largely east of Seattle, running north-south through Bellevue. In addition, Intertstate-90 is the only freeway in the region that heads east-west.

TRANSPORTATION IMPROVEMENT PROGRAM

Under SAFETEA-LU, PSRC is responsible for creation of a Transportation Improvement program (TIP). Federal law mandates that TIP plans have a four-year horizon and be updated every three years. Both the USDOT and the Washington Governor must approve the TIP.[116] TIP amendments are approved monthly by the Federal government.

Transportation funding is limited, so most jurisdictions try to leverage funds and create partnerships to make the most of available funds. Strategies to leverage funds include working with WSDOT and the Transportation Improvement Board to leverage state and Federal funds using PSRC funds. The Regional TIP has been in effect since 1983. The finalized TIP must demonstrate compliance with regional plans, local and county visions, *Vision 2040*, and *Destination 2030/Transportation 2040.* This contributes to consistency among all levels of government, as well as between land-use and transportation visions and plans.

TIP FUNDING SOURCES

WSDOT is responsible for selecting projects to receive Federal funds from programs such as Interstate Maintenance, the Bridge Program, and the National Highway System program. WSDOT also manages funds from several statewide competitive Federal programs such as the Transportation Enhancements Program and the Safety Program. In addition, WSDOT and other state agencies are responsible for distributing state transportation funds.[117]

Cities counties, ports, transit agencies, and other local governing bodies approve use of local funds. With local funds, only regionally significant projects with air quality impacts are required to be included in the Regional TIP. Funds also come from grants from other agencies.[118] Public agencies, tribes, and jurisdictions are all eligible to apply for funding.

Figure 4 shows a breakdown of all transportation projects included in the 2010-2013 Regional TIP by funding source. Although the PSRC Transportation Policy Board (TPB) approves all projects included in the Regional TIP, PSRC has direct control over only 11% of total funds. Also note that the majority of

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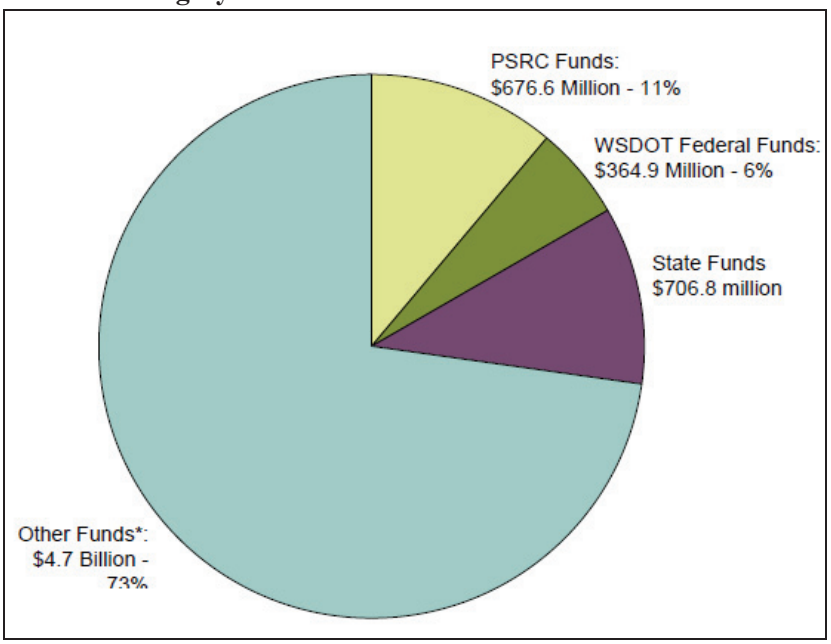
[114] Puget Sound Trends: Ferry Ridership, June 2010, p. 1.
[115] 2010 Transportation 2040 Draft, Executive Summary, p. 26.
[116] PSRC Functions and Mandates (2006), p. 1.
[117] Policy Framework for PSRC Federal Funds (2009), PDF downloaded from http://www.psrc.org/about/pubs p. __.
[118] Policy Framework for PSRC Federal Funds (2009).

TIP funds (73%) are categorized as ”other.” This category of ‘other’ includes local funds, earmarks, and any other Federal grants not administered by PSRC or WSDOT.[119]

Figure 4. TIP Funding by Source



Source: PSRC 2010-2013 TIP, p. 5.

The PSRC-managed Federal funds can be broken down into three Federal programs: the Surface Transportation Program (STP), the Congestion Mitigation and Air Quality (CMAQ) program, and the Federal Transit Administration (FTA) funds.[120] The following is a brief overview of these three specialized PSRC managed funds.

The Surface Transportation Program (STP) funds are the most flexible; they can be used for a wide variety of transportation projects. STP funds are programmed using a shared regional-countywide process that has been in place since 1995. STP funds fall into two categories: these are urban (STP/U) and rural (STP/R) funds.[121]

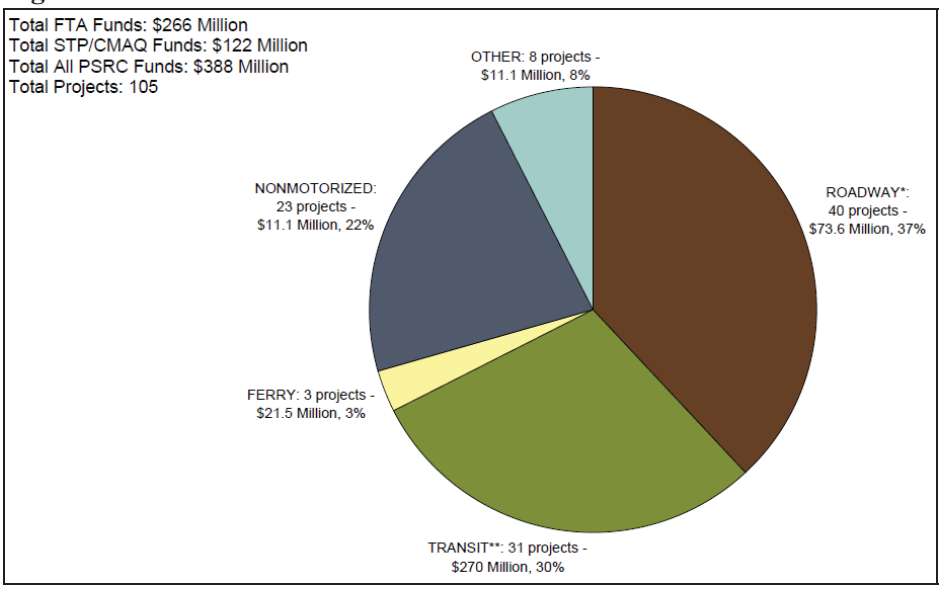
The Congestion Mitigation and Air Quality (CMAQ) funds must go towards improving air quality by increasing the efficiency of existing transportation facilities, or reducing travel demand on those facilities. The air quality criterion outlined in the TIP process evaluates projects for their potential to eliminate single occupant vehicle trips and reduce vehicle miles traveled (VMT). CMAQ funds also support TIP projects that promote alternative fuels and the reduction of idling.[122] For the 2011 fiscal year, PSRC is estimating a total of $37.80 million in available CMAQ funds.

FTA funds may go only toward transit projects in urbanized areas. The following is a pie chart depicting

[119] PSRC 2010-2013 TIP, p. 5.
[120] 2010-2013 Regional TIP: Appendix C: Policies and Procedures, p. 18.
[121] TIP 2010-2013 Appendix C, p. 22.
[122] 2010-2013 Regional TIP: Appendix C: Policies and Procedures, p. 33.

all competitive funds controlled by PSRC, broken down by primary transportation mode.[123]

Figure 5. PSRC Controlled Funds



Source: PSRC 2010-2013 Draft TIP, p. 3.

TIP Criteria & Decision Making

Projects included in the Transportation Improvement Program (TIP) are selected based on regional transportation, economic, and land use policy criteria.

A Regional Project Evaluation Committee (RPEC) makes recommendations to the Transportation Policy Board on criteria and specific projects for Federal transportation funding. Members of RPEC include local government public works directors, representatives from transit agencies, the Governor's office, and Washington State Department of Transportation district offices in the region.[124]

The Council's Transportation Policy Board includes representatives from local government, the WSDOT, the state Freight Mobility Strategic Investment Board, transit operators, ports, tribes, the Puget Sound Clean Air Agency, businesses, labor groups, community groups, and other organizations.[125]

A major PSRC policy focus is providing transportation improvements to a center or centers and the corridors that serve them. Centers are defined as regional growth centers and regional manufacturing and industrial centers as identified in *Vision 2040*.[126] Areas specified as employment clusters also qualify as center areas. The Rural Town Centers and Corridors program was developed in 2004 to support projects that integrate rural highway corridor development with local rural town "Main Street" style development needs.

Regional (PSRC) and county selection processes are differentiated for projects included in the TIP. Although the counties are asked to use the same selection criteria as the PSRC, county projects generally

[123] PSRC 2010-2013 Draft TIP, p. 3.

[125] Biennial Budget and Work Program (2010-2011), p. 5.

select more locally pertinent projects, helping to ensure that local needs are not overlooked in place of the regional growth vision.[127] For both county and regional transportation funds, the approved policy of the region is to set aside at least 10 percent of the combined estimated STP and CMAQ funds available for programming during the 2009 project selection process for nonmotorized projects in the four counties.[128]

TIP POINT SYSTEM

All TIP projects controlled by PSRC's competitive selection process are approved using a 100-point system.[129] The point criteria vary slightly depending on whether the funds come from the STP, CMAQ, or the FTA. Points allocated for PSRC-selected TIP projects for FTA and STP projects are divided as follows:

- **70 points: Corridors Serving Centers**
  1. These 70 points can further be broken down into:
  2. Benefit to Regional Growth, Manufacturing/Industrial and/or Locally Identified Center = 30 Points. Ideal candidate projects for these subcriteria provide a benefit to a center or centers by improving access to the center for multiple modes, serving multiple user groups, including those without full-time access to cars, and are adjacent to dense, mixed-use areas that are likely to generate significant use of the project.
  3. System Continuity = 20 Points. Ideal candidate projects improve a corridor in logical segments, preventing the creation of missing links or gaps, thereby improving access to a center or centers.
  4. Long Term Benefit/Sustainability = 20 Points. Ideal candidate projects for these criteria provide a long-term solution for meeting projected travel demand for people or goods to a center, considering environmental issues, land use strategies, transportation efficiency, and health impacts.
- **20 points: Air Quality and Climate Change.**

  Ideal candidate projects are ones that substantially reduce emissions of greenhouse gases and other air pollutants or will substantially reduce fine particulates from diesel exhaust; and the air quality benefits will occur by 2015.

- **10 points: Project Readiness/Financial Plan.**

  Ideal candidate projects have shown that all prerequisites for obligation will have been met by the time the funds are being requested and that regional funding will be sufficient to complete the project or phase of the project.[130]

The points allotted to the air quality criterion for projects seeking CMAQ funds are guaranteed to be equal to a minimum of one-third the total possible points. CMAQ projects use a very similar point criterion system; however, there is increased emphasis on the air quality and climate change criterion.

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[127] 2010-2013 TIP Criteria, Appendix C, p. 40.
[128] Ibid, 11.
[129] 2010-2013 Regional TIP: Appendix C, p. 34.
[130] 2010-2013 TIP Criteria, Appendix C, p. 34.

CMAQ Projects can earn a maximum of 40 points as opposed to 20. As a result, there are only 50 points available to CMAQ projects that meet corridors serving centers criteria.[131]

CONCLUSION

The population of the central Puget Sound region is expected to continue to grow in the coming decades and this growth, combined with the geographic constraints of the region, will heighten transportation pressures in the region.

The PSRC faces significant governance challenges due to the large number of local jurisdictions in the region. Regional planning efforts are also complicated by the large number of transit districts operating in the region. Regional planning efforts are also constrained by the relatively limited control of transportation investment at the regional level.

Although several plans have been produced for the region, the history of growth management is relatively short. With each successive plan, the PSRC has been placing more emphasis on integrative regional transportation and land use planning. One key area of emphasis is its growth centers policy, which is supported by countywide policies, grant programs, and transportation incentives.

[131] 2010-2013 TIP Criteria, Appendix C, p. 53.

DETAILED CASE STUDY: SANDAG

The San Diego Association of Governments (SANDAG) is the metropolitan planning organization of San Diego and San Diego County. This summary describes SANDAG's history, governance structure and responsibilities, and activities related to land use and transportation.

MPO HISTORY AND CONTEXT

The first regional planning organization was formed by San Diego County in 1966 and called the Comprehensive Planning Organization (CPO). The CPO was created as the long-range planning department within the San Diego County government to address transportation and other regional planning issues. It was a voluntary association, headed by representatives of the agencies that wished to be part of the organization.

In 1970, the Governor of California designated the CPO as the Metropolitan Planning Organization to assure countywide coordination and to serve as the technical and informational resource for local governments. One year later, the state designated it the Regional Transportation Planning Agency. In 1972, the members of the planning organization reestablished the organization as a separate joint powers authority, independent of county government.[132] In 1980, CPO changed its name to the San Diego Association of Governments.[133] The San Diego region has faced substantial growth over several decades, and in 1993, SANDAG developed its first growth management strategy.

In 1999, California State Senator Steve Peace (D – San Diego) introduced legislation to create a Regional Infrastructure Transportation Agency, which would have combined SANDAG, the water board, and all the transportation providers into a single agency. This legislation also called for the new agency to be governed by a directly elected board.[134]

The proposed legislation led the SANDAG Executive Committee to appoint officials from the San Diego region to evaluate regional and local land use decision-making in 2000. The Joint Agency Negotiation Team on Consolidation (JANTOC) developed a report offering several alternative governance structures. An important highlight of their work was to ensure that "land use and transportation decisions are made by the same set of decision makers."[135]

In 2001, the California State Legislature created the Regional Government Efficiency Commission (RGEC) to evaluate the San Diego region's governance system and to report recommendations on consolidating regional agencies. The Commission proposed a "15-member 'regional authority,' with 12 full-time directly elected members."[136]

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[132] SANDAG, "About SANDAG: History." http://www.sandag.org/index.asp?fuseaction=about.history (accessed January – February 2010).

[133] Hill, Elizabeth. *SANDAG: An Assessment of Its role in the San Diego Region*. Legislative Analyst's Office. http://www.lao.ca.gov/2006/sandag/sandag_033006.pdf March 2006, 1.

[134] Barbour, Elisa and Michael Teitz. *Blueprint Planning in California: Forging Consensus on Metropolitan Growth and Development.* Public Policy Institute of California. June 2006, 19.

[135] Hill, Elizabeth. *SANDAG: An Assessment of Its role in the San Diego Region*. Legislative Analyst's Office. http://www.lao.ca.gov/2006/sandag/sandag_033006.pdf March 2006. 1.

[136] Ibid.

In response to these proposals the California Senate passed Bill 1703 in 2002, which strengthened SANDAG's authority over the region. The agency took over the regional transit planning and capital project development functions of the region's Metropolitan Transit System and the North County Transit District. The State Legislature also required SANDAG to develop a Regional Comprehensive Plan. Barbour and Teitz noted that SANDAG's effectiveness as the region's growth management agency had been under speculation for over a decade, which had spurred the agency to prove that it could produce an effective growth management plan.[137]

In 2006, the California Legislative Analyst's Office (LAO) was asked to evaluate the San Diego Region's new governance structure.[138] The report concluded:

> "Over the years, the San Diego region's governance structure has been criticized for its limitations regarding regional agency accountability and its ability to implement solutions to regional problems. The conclusions of this report generally concur with the earlier findings regarding the San Diego region governance system. That is, we find that the area's regional agencies have limited public accountability and that their narrow scope of authority and responsibility reduces their effectiveness.[139]

However, the report also stated:

> Identifying weakness in a governance system and possible corrections, however, is a simpler task than enacting measures to address them. Enacting changes requires addressing sensitive policy trade-offs, including issues relating to local versus regional control, elected versus appointed representatives, and governance structure change versus stability. What should the Legislature, Governor, and residents of San Diego do? There really is no single answer. Any decision—whether to maintain the existing governance structure, implement incremental changes, or engage in major restructuring—entails sensitive policy trade-offs and taking actions where the outcomes cannot be fully predicted.[140]

The report did not make a recommendation regarding whether an alternative governance structure should be pursued.

REGION COVERED BY MPO

SANDAG's boundaries coincide with the boundaries of San Diego County and include 18 cities (see Figure 1). The San Diego region is over 4,000 square miles and the total population estimated for 2009 is close to 3.2 million.[141] The City of San Diego contains over half of the region's population while about 11% of the population lives in the five coastal cities north of the City (Carlsbad, Del Mar, Encinitas,

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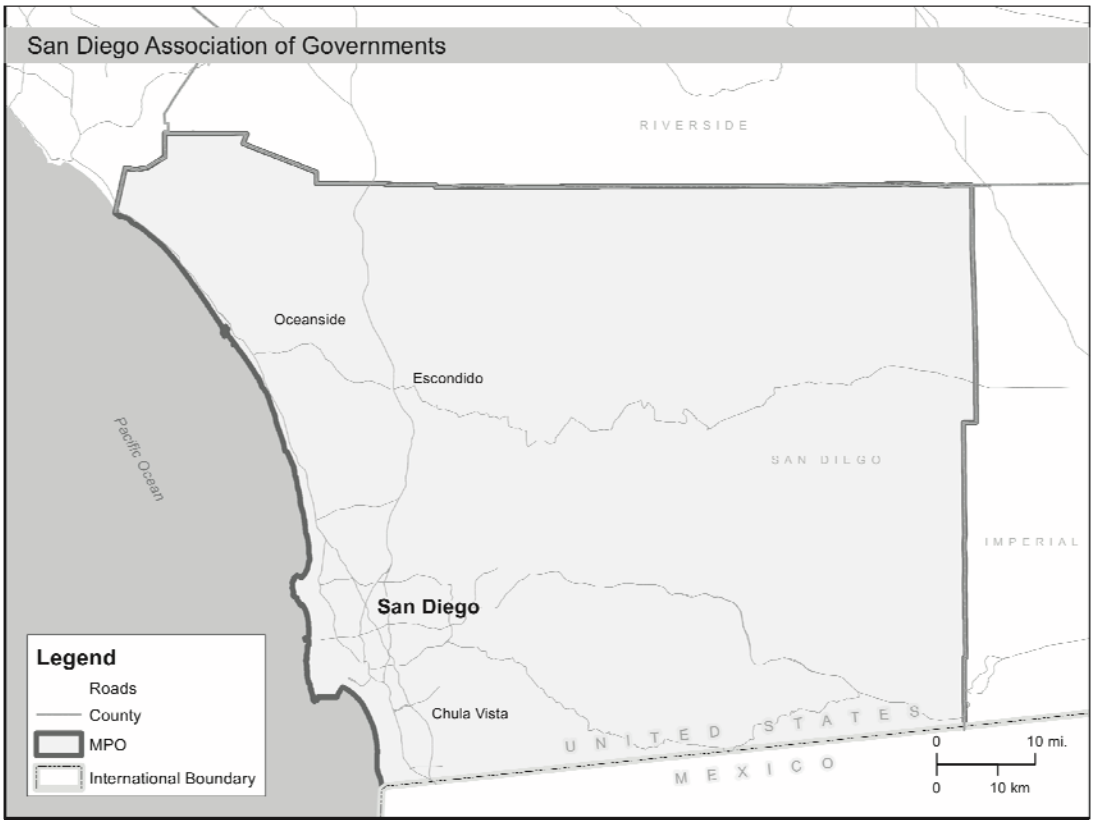
[137] Barbour, Elisa and Michael Teitz. *Blueprint Planning in California: Forging Consensus on Metropolitan Growth and Development.* Public Policy Institute of California. June 2006. 20.
[138] Hill, Elizabeth. *SANDAG: An Assessment of Its role in the San Diego Region*. Legislative Analyst's Office. http://www.lao.ca.gov/2006/sandag/sandag_033006.pdf March 2006, 2.
[139] Ibid, p. 71.
[140] Ibid, p. 71.
[141] SANDAG, "Demographics and Other Data: Fast Facts." http://www.sandag.org/resources/demographics_and_other_data/demographics/fastfacts/regi.htm (accessed January – February 2010).

Oceanside, and Solana Beach). The geography of the eastern portion of San Diego County makes it sparsely populated due to high mountain terrain, a lack of ground water, and public lands.[142]

Figure 1. SANDAG Region



Source: InfoGraphics Lab, Department of Geography, University of Oregon

Population growth in the San Diego region has averaged about 50,000 persons per year since the mid 1990s. According to SANDAG's 2030 Regional Growth Forecast, the region will add an additional 1 million people by 2030. The following table shows that the region's growth rates have declined since the 1980s. The Regional Growth Forecast projects that by the mid 2020s, the growth rate will fall below 1 percent.[143]

[142] Hill, Elizabeth. *SANDAG: An Assessment of Its role in the San Diego Region*. Legislative Analyst's Office. http://www.lao.ca.gov/2006/sandag/sandag_033006.pdf March 2006. 3.
[143] SANDAG. "Fast Facts. San Diego Region." http://www.sandag.org/resources/demographics_and_other_data/demographics/fastfacts/regi.htm

Table 1. Population Trends of San Diego Region (1980 – 2009)

	1980	1990	2000	2009
Total Population	1,861,846	2,498,016	2,813,833	3,173,407
Growth from Prior Period		34%	13%	13%

Source: SANDAG. "Fast Facts. San Diego Region."
http://www.sandag.org/resources/demographics_and_other_data/demographics/fastfacts/regi.htm

The RCP projections of demographic characteristics to 2030 suggest that the San Diego region, as a whole, will become more ethnically diverse and older. Natural increase and net migration (comprised of both foreign immigration and domestic migration) are the two sources of population growth in the region.[144] Future projections also show that largest percent increase in population will be in the age categories of: 55-59, 60-64 and 80 and older.

As of 2005, the San Diego region had a median household income by jurisdiction of over $50,000. According to SANDAG's RCP, about 61% of the region's housing stock is single family units, and about 35% is multifamily (the rest are mostly mobile homes).[145] The trend of housing characteristics is expected to change over the next 20 years. Due to the lack of vacant, useable single family land, the RCP suggests that nearly half of the housing units built in the region by 2030 will be multifamily housing projects. This trend shift also relates to the increased congestion on highways and local roads.[146]

REGIONAL TRANSPORTATION ISSUES

This section of the report provides an overview of transportation performance in the San Diego region and outlines SANDAG's strategies in addressing specific issues in the region. SANDAG's governance structure and authority are also described.

OVERVIEW OF TRANSPORTATION PERFORMANCE

As shown in Figure 2, about 75% of the region's residents commute alone to work by automobile.[147] According to the 2030 regional transportation plan (Pathways for the Future), in the 1980s vehicle miles traveled (VMT) grew twice as fast as the population, and in the 1990s VMT growth was 50% higher than population growth. The plan also reported that between 1990 and 2000 the percentage of residents who drove alone to work increased, while commuting by all other modes decreased or stayed the same.[148]

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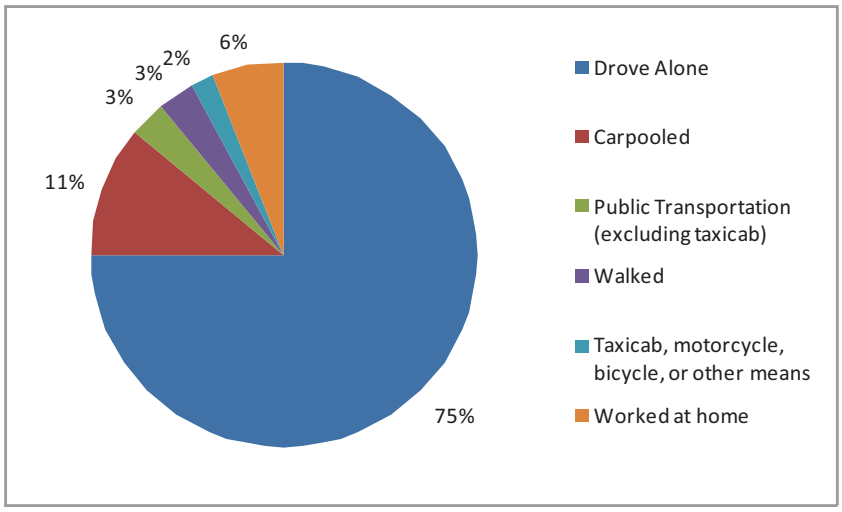
[144] SANDAG. *Regional Comprehensive Plan for the San Diego Region*. July, 2004. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=12&fuseaction=home.classhome (accessed January – February 2010), 46.
[145] SANDAG. *Regional Comprehensive Plan for the San Diego Region*. July, 2004. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=12&fuseaction=home.classhome (accessed January – February 2010), 43.
[146] Ibid., 44.
[147] Equinox Center. *Transportation to Work (2007) San Diego Region.* 2009. Document available on Equinox Center Web site: http://www.equinoxcenter.org/research-topics/transportation/overview.html (accessed January – February 2010).
[148] SANDAG 2007. 2030 San Diego Regional Transportation Plan: Pathways for the Future. San Diego: San Diego Association of Governments (SANDAG), pp. 3-4.

The two factors responsible for this travel growth were the increase in two-worker households and longer commute distances. The region's growth in travel is expected to continue to outpace population growth and employment in the next 20 years.[149]

Figure 2. Transportation to Work in San Diego Region (2007)



Source: Equinox Center. *Transportation to Work (2007) San Diego Region.* 2009. Document available on Equinox Center Web site: http://www.equinoxcenter.org/research-topics/transportation/overview html (accessed January – February 2010).

In the San Diego region, nearly 30% of all highway travel is for work trips. The average work trip is about 10 miles. These trips usually take place during the morning and afternoon hours, which are considered the peak hours of travel demand. The peak hours of travel demand are what challenges the capacity of highways and creates traffic congestion. However, MOBILITY 2030 indicates that average commute time in the region increased by only three minutes from 1990 to 2000.[150] With the growth in travel, many of the region's road systems are operating near or beyond capacity.

SANDAG is also developing a Sustainable Communities Strategy in compliance with California Senate Bill 375, which sets regional greenhouse gas emissions targets through the California Air Resources Board. This new element of the 2050 RTP will identify development patterns, transportation policies, and investment strategies to comply with the law.[151]

MPO Structure

SANDAG's governance structure follows a "council of governments" format in which each local agency appoints one or more elected representatives from its governing board to serve on the governing board of

[149] SANDAG. *MOBILITY 2030: The Transportation Plan for the San Diego Region.* April, 2003. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010), 32.
[150] SANDAG. *MOBILITY 2030: The Transportation Plan for the San Diego Region.* April, 2003. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010), 32-33.
[151] SANDAG, "Land Use and Regional Growth: Comprehensive Land Use & Regional Growth Projects." http://www.sandag.org/index.asp?projectid=360&fuseaction=projects.detail (accessed January – February 2010).

the regional agency. SANDAG hires its own professional staff. Its governing board names an executive director who leads the professional staff. Currently, SANDAG has about 172 professional, support, and executive staff.[152]

DECISION-MAKING AND APPROVAL PROCESSES

The SANDAG Board of Directors is composed of mayors, council members, and a county supervisor from each of the region's 19 local governments. By state law, the board also has two representatives for both the City of San Diego and the County of San Diego. There are also nonvoting representatives from Imperial County, the U.S. Department of Defense, Caltrans, San Diego Unified Port District, Metropolitan Transit System, North County Transit District, San Diego County Water Authority, and Mexico. [153]

The Board of Directors uses a tally and weighted voting process, where all actions must be approved by a majority of the tally and weighted votes. Each city and the county gets one tally vote with the exception of the City of San Diego and County of San Diego, each of which receives two tally votes. A measure must receive 11 out of a total of 21 tally votes to be approved. The population in each jurisdiction with respect to the entire County is reflected by the weighted vote.[154]

Five standing committees report to the Board of Directors. The committees voting membership are comprised of six locally elected officials: one representative from the San Diego City Council and one from the San Diego County Board of Supervisors, as well as a representative chosen from cities in each of four geographic sections of the county. The roles of the committees are as follows:

- The Executive Committee sets the agenda for monthly Board meetings and reviews the overall work program and budget.
- The Transportation Committee advises the Board on transportation policy, oversees the preparation of the Regional Transportation Plan, and oversees transportation projects.
- The Regional Planning Committee oversees the preparation and implementation of the Regional Comprehensive Plan (RCP).
- The Public Safety Committee advises the Board on all matters related to public safety.
- The Borders Committee is responsible for planning activities that cross regional county and international borders, and prepares the Bi-national, Interregional and Tribal Liaison planning programs.[155] This committee oversees an Interagency Working Group on Tribal Transportation Issues.[156]

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[152] Hill, Elizabeth. *SANDAG: An Assessment of Its role in the San Diego Region*. Legislative Analyst's Office. http://www.lao.ca.gov/2006/sandag/sandag_033006.pdf March 2006, 12.
[153] SANDAG, "About SANDAG: Board of Directors." http://www.sandag.org/index.asp?fuseaction=about.board (accessed January – February 2010).
[154] Hill, Elizabeth. *SANDAG: An Assessment of Its role in the San Diego Region*. Legislative Analyst's Office. http://www.lao.ca.gov/2006/sandag/sandag_033006.pdf March 2006, 20.
[155] Hill, Elizabeth. *SANDAG: An Assessment of Its role in the San Diego Region*. Legislative Analyst's Office. http://www.lao.ca.gov/2006/sandag/sandag_033006.pdf March 2006, 12.
[156] SANDAG, "About SANDAG: Committees." http://www.sandag.org/index.asp?committeeid=54&fuseaction=committees.detail (accessed January – February 2010).

SANDAG'S AUTHORITY IN THE SAN DIEGO REGION

SANDAG is the federally designated MPO, giving it legal responsibility to develop long-range transportation plans (RTPs) and Regional Transportation Improvement Plans (RTIPs) for the San Diego region.

The State of California has designated SANDAG as the Regional Transportation Planning Agency (RTPA) and the Regional Transportation Commission. These state designations give the agency the power to create Regional Short Range Transit Plans (RSRTPs), and administer TransNet funds.[157]

Under state law, SANDAG is responsible for coordinating the regional housing needs assessment (RHNA) and distributing expected household growth to each jurisdiction within the region. The allocation includes housing units for various categories, including low-income households. Jurisdictions are then required to ensure that the housing elements of their general plans provide sufficient land zoned to accommodate the designated amount of growth in housing.[158]

OTHER GOVERNING ORGANIZATIONS IN THE SAN DIEGO REGION

The California Department of Transportation (Caltrans) is responsible for mobility across the state. It manages the state highway system and is involved with public transportation systems throughout California. Caltrans is made up of 12 districts throughout the state. The agency's District 11 has jurisdiction over San Diego and Imperial Counties. Caltrans has an advisory membership on several standing committees and working groups including the SANDAG Board of Directors.[159]

The County of San Diego coincides with the boundaries of SANDAG. San Diego County is responsible for land use planning and regulation for all unincorporated areas. They also provide law enforcement and operate jails. The County of San Diego is run by a five-member Board of Supervisors, who are elected by district.[160]

City jurisdictions provide municipal services to their residents in areas such as land use and local transportation planning, public safety, trash collection, waste water services, parks and recreation services, and infrastructure maintenance. All of the cities in the SANDAG area are governed by a city council form of government, but the mayoral powers and appointment processes vary.[161]

The 17 tribal governments in the San Diego region are subject to Federal regulations, but not state and local regulations. Tribal governments have the authority to provide services, enforce regulations, and collect taxes.[162]

OTHER GOVERNANCE ARRANGEMENTS

SANDAG's major initiatives include collaboration with the San Diego Regional Airport Authority on airport planning, the early delivery of transportation projects using TransNet funds (a transportation sales

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[157] Ibid., 35.
[158] Ibid., 44.
[159] SANDAG, "About SANDAG: Committees." http://www.sandag.org/index.asp?committeeid=54&fuseaction=committees.detail (accessed January – February 2010).
[160] Ibid., 8.
[161] Ibid.
[162] Ibid.

tax), and addressing the impacts of transportation and land use on greenhouse gas emissions. The agency also continues to work on ways to implement smart growth strategies outlined in its Regional Comprehensive Plan as well as Transportation Demand Management Programs to mitigate traffic congestion. These strategies are discussed in the Regional Land Use Planning section of this report.

The agency is currently working on several new projects. The SANDAG Transportation Committee is developing the 2050 Regional Transportation Plan, which is planned for adoption in 2011. A couple of new components addressed in the upcoming RTP are the Public Participation Plan and the establishment of a Sustainable Communities Strategy.[163]

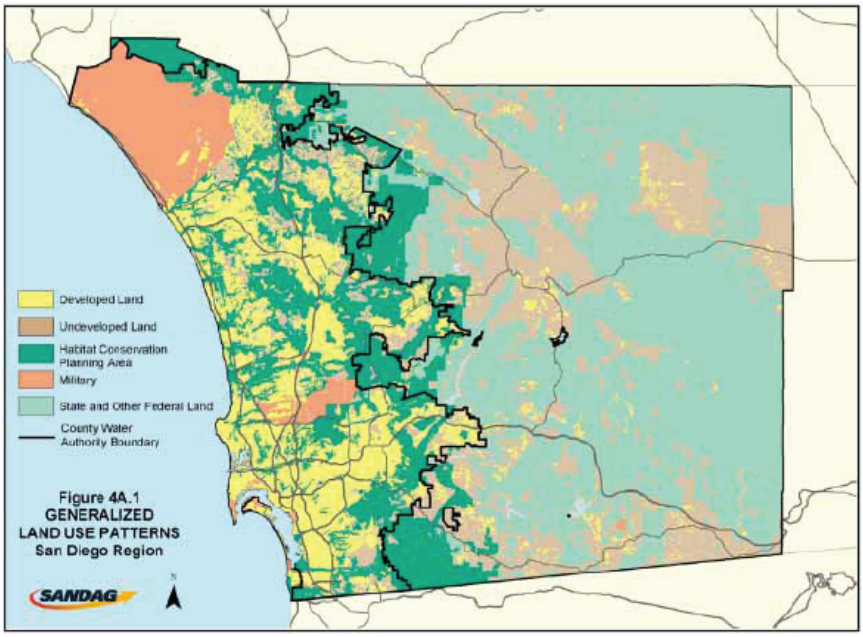
The Public Participation Plan (PPP) establishes a step-by-step process for gaining public input for agency programs such as highway projects, transit fare changes, the Regional Transit Plan, the Regional Comprehensive Plan, and smart growth efforts. The final PPP was approved by the SANDAG Board of Directors in December 2009.[164]

REGIONAL LAND USE PLANNING

SANDAG is responsible for preparing a Regional Comprehensive Plan (RCP), but it has no direct land use planning authority. This section reviews the regional plan and its role in coordinating land use and transportation.

[163] SANDAG, "Transportation: Comprehensive Transportation Projects." http://www.sandag.org/index.asp?projectid=349&fuseaction=projects.detail (accessed January – February 2010).
[164] SANDAG, "Public Participation Plan." http://www.sandag.org/?subclassid=115&fuseaction=home.subclasshome (accessed January – February 2010).

Figure 3. General Land Use Patterns for the San Diego Region



Source: SANDAG. *Regional Comprehensive Plan for the San Diego Region*. July, 2004. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=12&fuseaction=home.classhome (accessed January – February 2010), 59.

REGIONAL COMPREHENSIVE PLAN

The Regional Comprehensive Plan (RCP) is the long-term planning framework for the San Diego Region. It "lays out how the region should grow in terms of housing, transportation, environment, energy and water." The primary intention of the RCP is to link land use and transportation planning more effectively through collaboration and incentives.[165]

The Board of Directors began to develop the RCP in 2002, with assistance from the Regional Planning Committee, the Regional Planning Technical Working Group, and a Stakeholders Working Group. SANDAG's Regional Planning Committee collected input from working groups and reported the plan's progress to the Board of Directors.[166]

Following a two-year public planning process, the plan was adopted in July 2004.[167] Plan development cost approximately $2.5 million, half of which was funded through a Caltrans grant.[168] The RCP establishes a planning framework (see Figure 4) that brings together the general plans of each jurisdiction with the intent of integrating local land use with regional transportation decisions. It also provides a

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[165] Christensen, Kevin. *Sandag's comprehensive plan outlines county's future needs.* The Daily Transcript. August 13, 2004. http://www.sddt.com/reports/article.cfm?RID=241&SourceCode=20040811ro

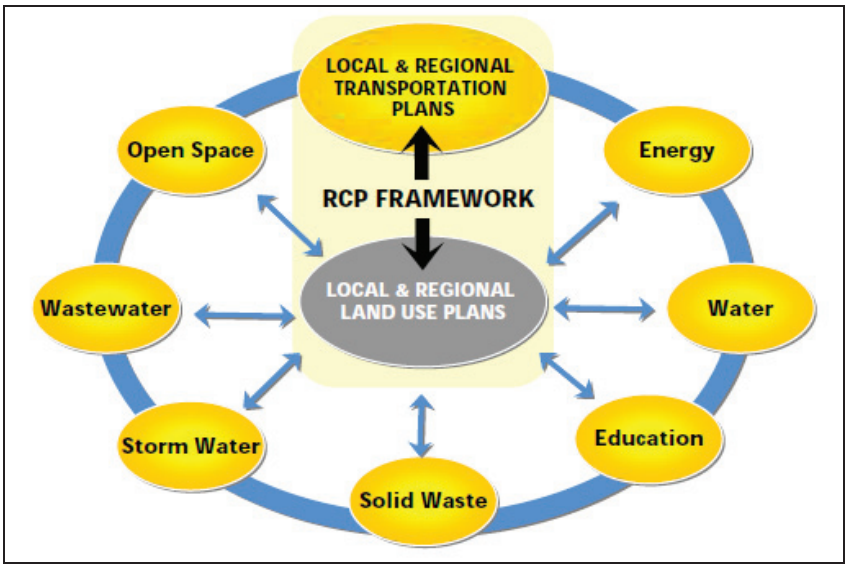
[166] Barbour, Elisa and Michael Teitz. *Blueprint Planning in California: Forging Consensus on Metropolitan Growth and Development.* Public Policy Institute of California. June 2006, 20.

[167] SANDAG, "About SANDAG: History." http://www.sandag.org/index.asp?fuseaction=about.history (accessed January – February 2010).

[168] Barbour, Elisa and Michael Teitz. *Blueprint Planning in California: Forging Consensus on Metropolitan Growth and Development.* Public Policy Institute of California. June 2006, 20.

policy approach that creates incentives for smart growth planning.[169] The RCP does not supersede local government land use authority, but looks at these individual decisions as a whole, assesses their collective impacts, and examines cumulative development trends on a 25-year horizon.

Figure 4. Framework of the Regional Comprehensive Plan



Source: SANDAG. *Regional Comprehensive Plan for the San Diego Region*. July, 2004. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=12&fuseaction=home.classhome (accessed January – February 2010), 5.

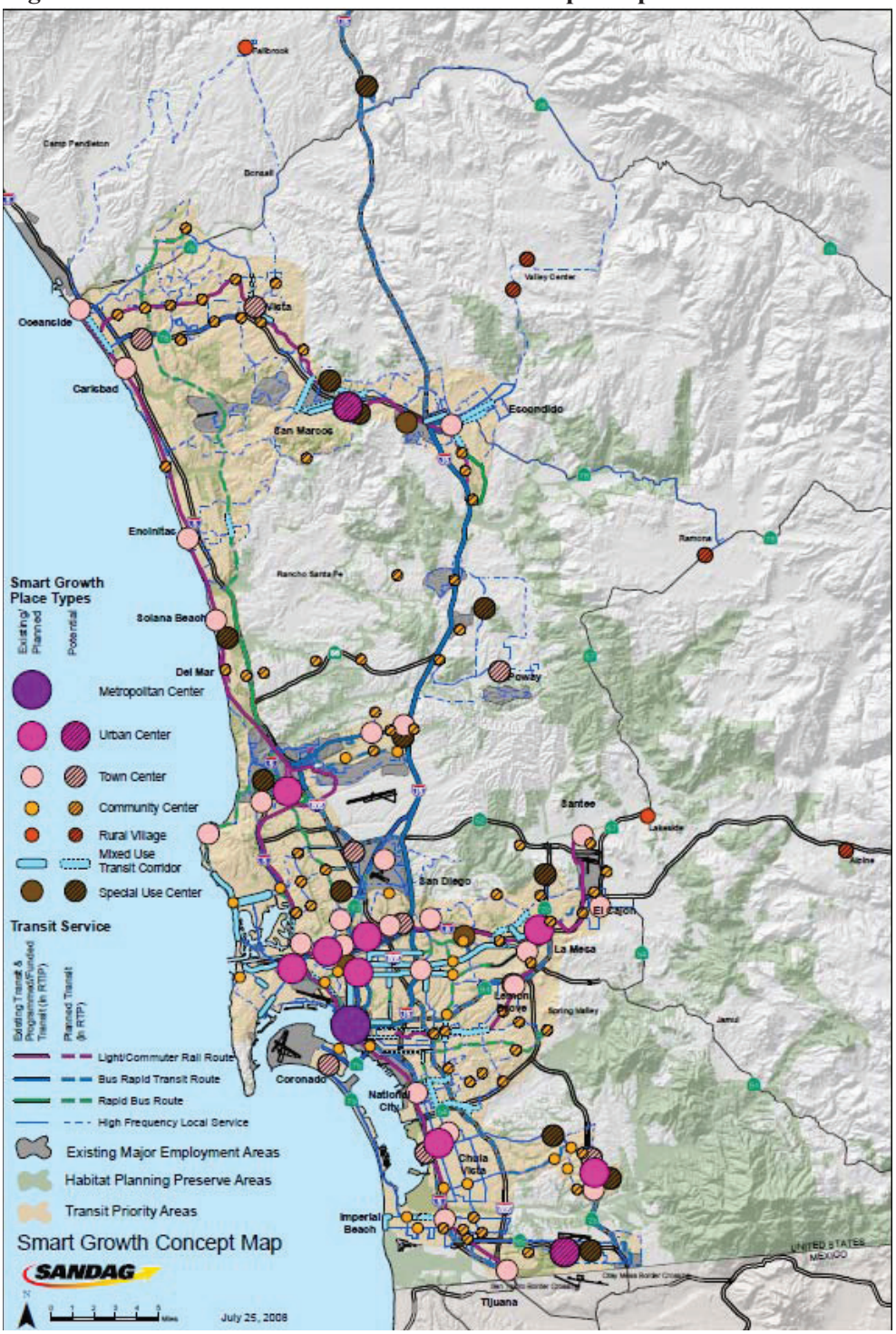
Specific Policies for Land Use and Transportation Integration

The RCP uses incentive-based programs to influence local jurisdictions to develop their plans in compliance with smart growth planning. The RCP recommended the development of a "Smart Growth Concept Map." This map, based on input from the 18 cities and county, was developed in 2006 (see Figure 5). It shows the existing, planned, and potential smart growth areas in the region. These are areas where compact, mixed use, pedestrian-oriented development either exists or is encouraged. The map indicates smart growth opportunities at seven different scales: Metropolitan Center, Urban Centers, Town Centers, Community Centers, Rural Villages, Mixed-Use Transit Corridors, and Special Use Centers.[170]

[169] SANDAG. *Regional Comprehensive Plan for the San Diego Region*. July, 2004. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=12&fuseaction=home.classhome (accessed January – February 2010), 4.

[170] SANDAG, "Land Use and Regional Growth: Comprehensive Land Use & Regional Growth Projects." http://www.sandag.org/index.asp?projectid=296&fuseaction=projects.detail (accessed January – February 2010).

Figure 5. SANDAG RCP Smart Growth Concept Map



SANDAG: Smart Growth in the San Diego Region. 2008, 2.

The *TransNet* Smart Growth Incentive Program (SGIP) offers grants to local communities for projects that incorporate smart growth land use and transportation principles. SANDAG funds this program with Federal transportation enhancement funds and *TransNet* funds. Local communities apply for funding and are awarded based on a set of evaluation criteria prioritized by constructability, condition of existing infrastructure, and availability of matching funds.[171]

For the year of 2009, two percent of *TransNet* annual funds, or about $5 million, was allocated for this program. Funds are intended to support "public infrastructure projects and planning activities that will support compact, mixed use development focused around public transit, and increase housing and transportation choices."[172] These are often bicycle-pedestrian projects, or streetscape improvements. The *TransNet* 40 Year Expenditure Plan allocates approximately $280 million for the Smart Growth Incentive Program.[173]

LOCAL GOVERNMENT INVOLVEMENT

The County of San Diego and the region's 18 cities each have an adopted general plan, made up of mandatory and optional elements, including land use and transportation. State law specifically provides local jurisdictions with the authority to make land use decisions in accordance with their general plans. The Regional Comprehensive Plan pulls together the various local and regional plans from throughout the region and establishes a coordinated regional planning document.[174]

SANDAG works with local jurisdictions to strengthen the connection between local plans and the RCP through subregional planning programs, private sector participation, and the development of compacts. Subregional plans are developed for geographic areas smaller than the San Diego Region but larger than a local jurisdiction. These plans are intended to encourage better cross-jurisdictional coordination especially in areas of transportation and land use. SANDAG has created financial incentives and public-private partnerships to encourage the private sector to align with the RCP's smart growth initiatives.[175] Most of the coordination between SANDAG and its member agencies is conducted through working groups, such as the Regional Planning Technical Working Group, which includes the planning directors of all local jurisdictions and other governmental entities.

PUBLIC INVOLVEMENT

Public involvement was considered to be the foundation for the development of the RCP. The San Diego region's residents, elected officials, and local stakeholders were given opportunities to provide extensive input in the development process.

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[171] SANDAG. Smart Growth Incentive Program Factsheet. May, 2005. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=12&fuseaction=home.classhome (accessed January – February 2010).
[172] SANDAG, "Land Use and Regional Growth: Comprehensive Land Use & Regional Growth Projects." http://www.sandag.org/index.asp?projectid=340&fuseaction=projects.detail (accessed January – February 2010).
[173] SANDAG. TransNet: TransNet Extension and Ordinance. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=30&fuseaction=home.classhome (accessed January – February 2010), 8.
[174] SANDAG. *Regional Comprehensive Plan for the San Diego Region*. July, 2004. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=12&fuseaction=home.classhome (accessed January – February 2010), 47.
[175] SANDAG. *Regional Comprehensive Plan for the San Diego Region*. July, 2004. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=12&fuseaction=home.classhome (accessed January – February 2010), 360.

SANDAG established a Regional Planning Committee that consisted of local elected officials regionwide "to spearhead the preparation of the RCP, provide policy direction on key planning issues, and make recommendations to the SANDAG Board of Directors."[176] A Stakeholders Working Group of representatives from business, community, and social service organizations was established. This group worked with the Technical Working Group, which was comprised of planning directors from throughout the region. The role of the Stakeholders Working Group was to provide recommendations to the Regional Planning Committee on RCP issues. Both the Stakeholders and Technical Working Groups helped to draft chapters of the RCP.[177]

Three rounds of public workshops were held throughout the region. Nearly 600 residents participated in the first round of workshops. A regional vision and set of core values for the San Diego region derived from the first round. The second round of public workshops focused on draft policies and actions for the RCP. The third round of workshops provided opportunity for public comment on the draft RCP and Environmental Impact Report. There also were advertisement and media relations conducted to inform stakeholders and interested residents through newsletters, workshop invitations, Web site updates, e-mail outreach, and presentations.[178]

To engage citizen groups that traditionally have not been involved in the regional planning process, the community outreach effort was expanded through the distribution of mini-grants to five community-based organizations. This effort focused on increasing participation from minorities, low-income residents, and the disabled. The mini-grants were funded through an Environmental Justice and Social Equity grant from Caltrans and ranged from five to seven thousand dollars.[179]

Although public involvement was important to the development of the RCP, a recent survey on collaborative regional planning in California by Juliann Allison and Jonathan Davison indicated that public knowledge and perception of these collaborative efforts was low. Less than 40% of San Diego residents who responded to the survey were familiar with the regional planning project in their region, and those who were familiar with the project remembered it less favorably.[180]

HABITAT CONSERVATION AS LAND USE POLICY

In 1991 the state enacted the Natural Community Conservation Planning Act (NCCP) to address the rapid urban development and diminishing open space taking place in Southern California at the time. This legislation allowed the preparation and adoption of two subregional plans in San Diego County.[181] In southern San Diego County, the Multiple Species Conservation Program targets more than 170,000 acres for conservation, where 85 sensitive plants and animals will be protected. In northern San Diego County, the seven incorporated cities, working through SANDAG, make up the Multiple Habitat Conservation

[176] Ibid., 417.
[177] Ibid.
[178] Ibid., 418.
[179] Ibid., 421.
[180] Allison, Juliann and Jonathan Davison. "Collaborative Regional Planning in California: Potential Models for Sustainable Governance." *Policy Matters*. Spring 2008.
[181] Leiter, Robert A. In press. "Planning and Policies for Sustainable Development in California and the San Diego Region." *Green Buildings and the Law*.

Program. More than 75 species are being evaluated for adequacy of conservation under the proposed 19,000-acre preserve system.[182]

Habitat conservation has also served as an important element of land use policy through the TransNet ballot measure, which allocated $850 million for environmental mitigation. This included $200 million to acquire sites need to complete the region's habitat conservation plan.[183] When fully implemented, the habitat conservation plans and other efforts will have set aside over 300,000 acres of land. This has effectively created a greenbelt encompassing a major portion of the urbanized region.

REGIONAL TRANSPORTATION PLANNING

SANDAG's Regional Transportation Plan is called "2030 San Diego Regional Transportation Plan: Pathways for the Future." It is a $57 billion plan which serves as a blueprint to address the challenges of mobility and access created by the region's growing population and employment. The document provides an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system in the San Diego region. The current RTP was approved by the Board of Directors in November of 2007.[184] It lists the region's highest priority transportation projects. Under Federal transportation law, the RTP uses a constrained budget, which means that the recommended projects are tied to actual funding expectations.[185]

TRANSPORTATION FUNDING

Public sector funding for transportation in the San Diego region is projected to total approximately $41 billion over the 25 years from 2006 through 2030. Public taxes, including Federal and state gas taxes and state and local sales taxes, are expected to comprise the majority of these funds.[186] Figure 6 shows the division of total projected transportation revenues.

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[182] SANDAG, "Natural Community Conservation Planning Program." http://www.sandag.org/index.asp?projectid=96&fuseaction=projects.detail (accessed October 2010).

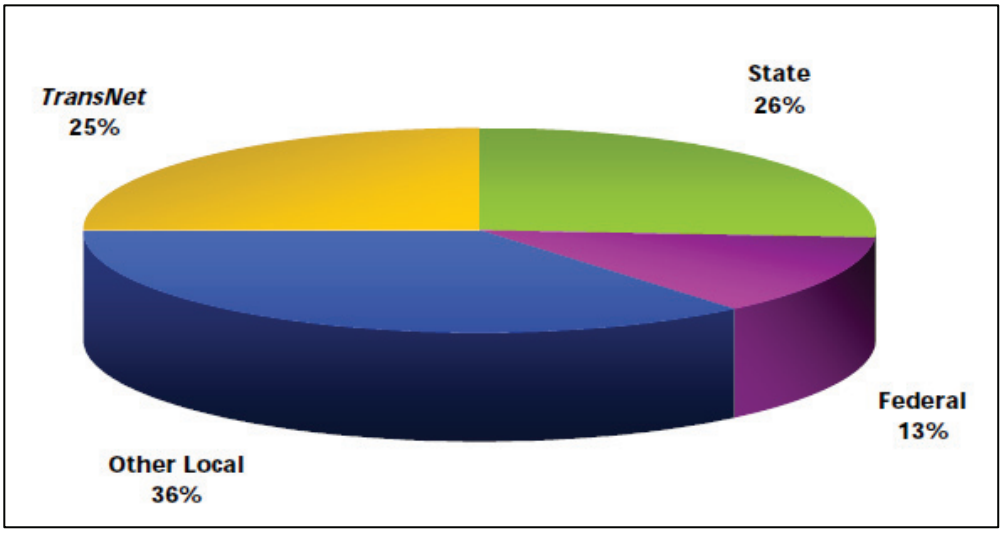
[183] Barbour, Elise and Michael Teitz. 2006. "Blueprint Planning in California: Forging Consensus on Metropolitan Growth and Development." Public Policy Institute of California, Occasional Paper. June 21, 2006.

[184] SANDAG, "Transportation: Comprehensive Transportation Projects." http://www.sandag.org/index.asp?projectid=292&fuseaction=projects.detail (accessed January – February 2010).

[185] Hill, Elizabeth. *SANDAG: An Assessment of Its role in the San Diego Region*. Legislative Analyst's Office. http://www.lao.ca.gov/2006/sandag/sandag_033006.pdf . March 2006, 35.

[186] SANDAG. *Alphabet Soup: A Primer on Transportation in the San Diego Region*. Document PDF available on SANDAG Web site: http://www.sandag.org/uploads/publicationid/publicationid_1236_5646.pdf (accessed January – February 2010), 8.

FIGURE 6. PROJECTED TRANSPORTATION REVENUES ($41 BILLION) SAN DIEGO REGION: 2006 – 2030



Source: SANDAG. *Alphabet Soup: A Primer on Transportation in the San Diego Region*. Document PDF available on SANDAG Web site: http://www.sandag.org/uploads/publicationid/publicationid_1236_5646.pdf

In terms of expenditures, transit capital projects and operating costs account for approximately 32% of the $41 billion total. Highway projects, including major capital, Managed Lanes/High-Occupancy Vehicle (HOV) facilities, and operations and maintenance, account for approximately 38% of the total. Local street and road projects are estimated to be 27%, and the final category of land use, systems management and demand management strategies, totals approximately three percent of the nearly $41 billion program.[187]

The passing of statewide Propositions 1A and 1B have also helped increase transportation funding in the San Diego Region. Proposition 1A "protects the region's share of the state gasoline tax" which generates revenue for transportation programs and projects.[188] According to SANDAG, the passage of Proposition 1B "will provide nearly $20 billion statewide to fund transportation projects — $484 million of which will be injected into [the] region."[189] SANDAG views these two propositions as integral revenue sources for highway projects, county roads, and local street repair.[190]

TransNet is the half-cent sales tax for local transportation projects that was first approved by voters in 1988 when it was labeled Proposition A. This tax was designed to provide the revenue base to implement

[187] SANDAG. *Alphabet Soup: A Primer on Transportation in the San Diego Region*. Document PDF available on SANDAG Web site: http://www.sandag.org/uploads/publicationid/publicationid_1236_5646.pdf (accessed January – February 2010), 8.
[188] SANDAG, "News: Propositions bring funding for regional improvements." http://www.sandag.org/index.asp?newsid=438&fuseaction=news.detail (accessed January – February 2010).
[189] Ibid.
[190] Ibid.

the San Diego region's highest priority transportation projects.[191] *TransNet* raised $3.3 billion over its original 20 year time frame, added to and upgraded the region's highway network, extended trolley and commuter rail miles, expanded transit service, improved and maintained more than 800 local road projects, funded regional bicycle projects, and created walkable communities.

In 2004, TransNet was extended for another 40 years, from 2008 to 2048. The program is expected to raise about $14 billion to help fund major highway expansion projects as well as state routes and numerous local road projects. As mentioned in the Specific Policies for Land Use and Transportation Integration section of this paper, the TransNet extension funds the innovative Smart Growth Incentive Program. TransNet is also funding light rail transit and bus rapid transit projects in the region, as well as major improvements to the area's bicycle network.[192]

SANDAG has initiated an Early Action Program for TransNet infrastructure projects that are intended to provide congestion relief through construction on the region's top priority projects. This program was established at the time the extension was approved by voters. To accelerate the implementation of regionally significant projects, SANDAG developed the Plan of Finance (POF), which is the debt financing mechanism through which SANDAG plans to complete the EAP projects."[193]

TRANSPORTATION IMPROVEMENT PROGRAM

SANDAG is required by state and Federal laws to develop and adopt a Regional Transportation Improvement Program (RTIP) no later than every four years. The RTIP is a multiyear program of proposed major highway, arterial, transit, and bikeway projects including the *TransNet* Program of Projects in the San Diego region. The 2010 RTIP covers Fiscal Years 2010-11 through 2014-15. The 2010 RTIP incrementally develops the 2030 Regional Transportation Plan (RTP). The current RTIP was approved by the Board of Directors in September 2010 and anticipates Federal approval in December 2010. The RTIP includes an Air Quality Conformity Analysis and the Air Quality redetermination to the 2030 Revenue Constrained RTP.[194] As the MPO of the San Diego Region, SANDAG is federally required to conform to the air quality requirements determined in the current State Implementation Plan, meaning that "transportation activities will not create new air quality violations, worsen existing violations, or delay the attainment of the National Ambient Air Quality Standards (NAAQS)."[195]

The process for developing the 2010 RTIP included several steps to involve the public, including participation on various SANDAG working groups, tribal governments, public comments at board and

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[191] SANDAG. *Proposition A: A San Diego Transportation Improvement Program.* July 1987. Document PDF available on SANDAG Web site: http://www.sandag.org/uploads/publicationid/publicationid_1237_5667.pdf (accessed January – February 2010).

[192] SANDAG. *TransNet Fact Sheet.* Document PDF available on SANDAG Web site: http://www.sandag.org/uploads/publicationid/publicationid_615_3566.pdf (accessed January – February 2010), 1.

[193] SANDAG. *Final 2006 Regional Transportation Improvement Program.* July, 2006. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010), 107.

[194] SANDAG, "SANDAG, "Transportation: Comprehensive Transportation Projects." http://www.sandag.org/index.asp?projectid=321&fuseaction=projects.detail (accessed January – February 2010).

[195] SANDAG. *Final 2008 Regional Transportation Improvement Program.* July, 2008. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010). 174.

committee meetings, and public notices. Continuing the SANDAG outreach efforts, the public participation process includes:

- The Independent Taxpayers Oversight Committee (ITOC) tasked with oversight for projects funded through the *TransNet* program.
- The hosting of a Tribal Forum to solicit participation from the 17 tribal governments and the Reservation Transportation Authority in San Diego County to increase involvement in the RTIP programming process.[196]
- Expansion of electronic notifications to citizen-involved working groups as well as the use of other media such as Facebook and Twitter to ensure maximum outreach.

PROJECT SELECTION PROCESS

The 2010 RTIP has specific evaluation criteria and rankings for prioritizing highway, high occupancy vehicle (HOV) connectors, freeway connectors, and transit projects included in the 2030 RTP. These criteria were part of the 2008 RTIP.

As the implementing document for transportation projects outlined in the 2030 RTP, the 2010 RTIP uses the project selection criteria identified in the RTP. TPEC revised the criteria to specifically address the goals of the 2030 RTP and the vision of the Regional Comprehensive Plan (RCP). The criteria across the four modal categories were simplified and standardized into a 100-point scoring system.[197] TPEC's updated criteria were divided into three major categories: serves travel needs, develops network integration, and cost-effectiveness. Each category is allocated one third of the points and the specific criteria for each category are shown in Table 4.

Table 4. Major Categories of 2030 RTP

Major Criteria Category	Individual Criteria Focus
Serves travel needs	projects that serve peak-period trips, goods movement, congested corridors
Develops network integration	projects that provide land use/transportation connectivity, serve smart growth areas, environmental impact mitigation
Cost-effectiveness	costs of project in relation to number of people moved or person hours saved

Source: SANDAG. *Final 2008 Regional Transportation Improvement Program*. July, 2008. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010), 230.

[196] SANDAG. *Final 2006 Regional Transportation Improvement Program.* July, 2006. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010). 6.
[197] Ibid.

Evaluation of the Four Modal Categories

SANDAG's 2008 RTIP evaluates transportation projects in the four modal categories: highway corridors, high occupancy vehicle connectors (HOVs), freeway connectors, and transit services. This evaluation focuses on the criteria related to the integration of land use and transportation.

Highway Corridors

The highway corridor evaluation is based on criteria that "quantify project traffic usage, travel time savings, cost, critical linkages, safety, goods movement, employment, smart growth, carpool lane integration, transit integration, habitat preservation, and residential impacts."[198] Highway projects are prioritized in order to emphasize the development of networks that integrate well with transit and arterial projects. Up to five points are awarded to projects that serve metropolitan centers, urban centers, or special use centers. Criteria that focus on the 2030 regional transportation goals of livability and accessibility comprise 15% of the total score; criteria related to developing network integration comprise 25% of the total; and criteria related to serving travel needs comprise 45% of weighting overall.[199]

High Occupancy Vehicle Connectors

The high occupancy vehicle (HOV) connectors criteria are based on five individual criteria that evaluate the traffic levels of the connector, transit integration, habitat and residential impacts, and cost-effectiveness of each project.[200] According to the 2008 RTIP, these "HOV connectors will facilitate direct HOV to HOV access and allow for continuous movement on the HOV network from freeway to freeway."[201]

Among the five criteria used to evaluate HOV connectors, a maximum score of 20 points (out of 100) can be awarded to a project that serves regional or corridor transit routes.

Freeway Connectors

The evaluation of freeway-to-freeway connectors uses seven criteria: accident rates, goods movement, mobility, congestion relief, transit integration, habitat and residential impact mitigation, and cost-effectiveness.[202] Serving travel needs and cost-effectiveness through improving safety and minimizing

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[198] SANDAG. *Final 2008 Regional Transportation Improvement Program*. July, 2008. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010). 231.

[199] SANDAG. *Final 2008 Regional Transportation Improvement Program*. July, 2008. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010). 236.

[200] SANDAG. *Final 2008 Regional Transportation Improvement Program*. July, 2008. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010), 240.

[201] Ibid.

[202] SANDAG. *Final 2008 Regional Transportation Improvement Program*. July, 2008. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010), 244.

congestion is given 70% of the criteria weighting. Fifteen percent of the criteria are allocated to projects that serve regional or corridor transit routes.[203]

Transit Services

The transit services evaluation criteria are made up of eight criteria that meet the goals of the three major criteria categories. Thirty-five percent of the total score serves travel needs, 35% develops network integration, and 30% addresses cost-effectiveness.[204]

Summary

Table 5 summarizes the percentage of points allotted for smart growth criteria across the four modal categories of the RTIP. Although smart growth is an important component, the RTIP gives more weight to projects that enhance mobility through congestion relief, meet high demands at peak periods, and are cost effective. In summary, the 2008 RTIP includes a range of criteria to support the integration of land use and transportation.

[203] SANDAG. *Final 2008 Regional Transportation Improvement Program*. July, 2008. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010), 248.

[204] Ibid., 249.

Table 5: Summary of Smart Growth Related Criteria

% of Point Allocation	Modal Category	Criteria
25	Highway Corridors	Serves existing/planned and/or potential RCP Smart Growth Areas, Facilitates carpool and transit mobility, minimizes habitat and residential impacts
30	High Occupancy Vehicle Connectors	Serves regional and/or corridor transit routes, Minimizes habitat and residential impacts
5	Freeway Connectors	Serves regional and/or corridor transit routes, Minimizes habitat and residential impacts
35	Transit Services	Links high-frequency transit services, Serves RCP Smart Growth Areas

Source: SANDAG. *Final 2008 Regional Transportation Improvement Program.* July, 2008. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010), 236-253.

STIP Funding Process

The State Transportation Improvement Program (STIP) is the State's spending plan for state and Federal funding. It is comprised of the Regional Improvement Program (RIP) and the Interregional Improvement Program (IIP). The STIP Fund Estimate, which includes the RIP "County Share" and IIP fund allocations, is developed by the California Transportation Commission (CTC). The fund estimate covers a five-year period and is updated every two years. By state requirement, projects funded by STIP are listed in the RTIP. The STIP consists of funds from the State Highway Account (SHA), which includes a mix of state and Federal transportation funds.[205]

The following is a breakdown of the state transportation funding process as described by the 2006 Regional Transportation Improvement Program:

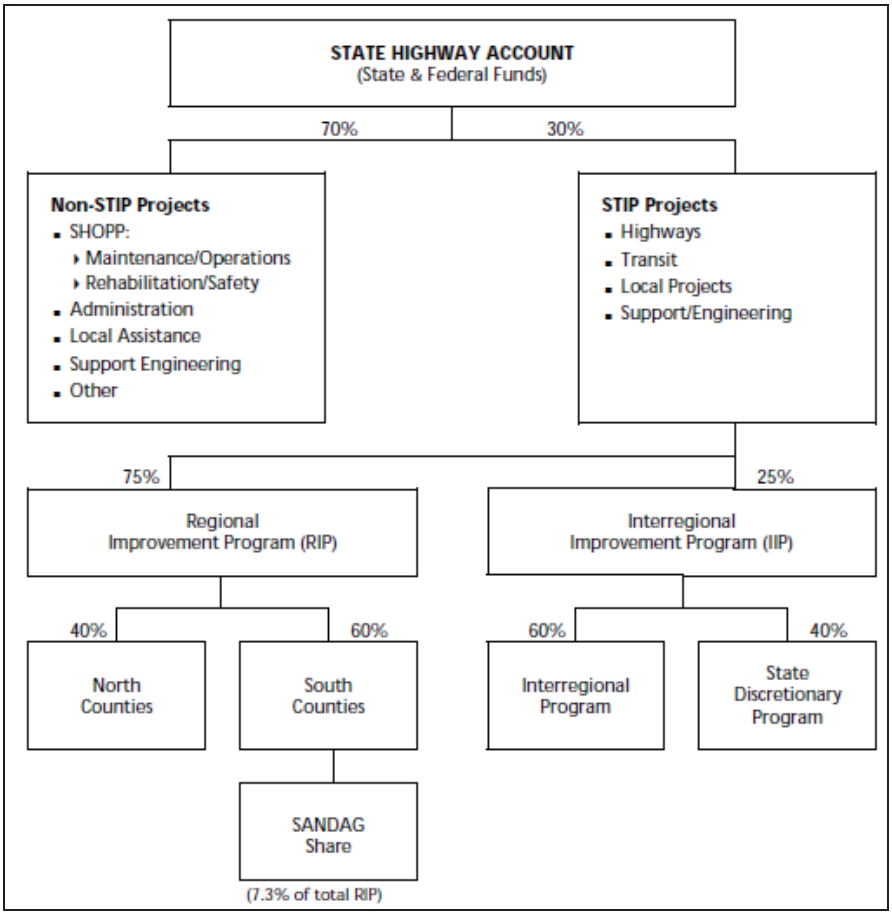
[205]SANDAG. *Final 2006 Regional Transportation Improvement Program.* July, 2006. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010), 13.

- Approximately 70% of the State Highway Account is channeled to Non-STIP related projects. This includes the Caltrans State Highway Operation and Protection Program (SHOPP), which funds the preservation of bridges, roadways, and roadsides.
- The remaining funds are then divided between regional and statewide needs.
    - Nearly 75% of the STIP funds flow to the regions by formula, by which the regional planning agencies are charged with developing an expenditure plan for the funds. The overall 40% of the STIP funds must be allocated to the northern half of the state and 60 percent to the southern half. Project types include improvements to state highways, local roads, public transit, intercity rail, pedestrian and bicycle facilities, grade separations, transportation system management, transportation demand management, intermodal facilities, and safety.[206]
    - The remaining 25% of the funds flows through the IIP, which is a statewide competitive program. Sixty percent of these funds are directed to projects that improve interregional transportation. Forty percent of these funds are at the discretion of the CTC, subject to a north/south split. Eligible project types include intercity passenger rail, mass transit guideways, grade separations, and state highways.[207]

SANDAG determines which projects receive the RIP funding from the STIP. The projects are constrained to the funding amount specified in the STIP Fund Estimate and must meet approval from the CTC. Caltrans determines which projects receive funding from the IIP funding through STIP.[208]

[206] Ibid., 14.
[207] Ibid., 13.
[208] SANDAG. *Final 2006 Regional Transportation Improvement Program.* July, 2006. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010), 13.

Figure 8. The State Transportation Funding Allocation Process



Source: SANDAG. *Final 2006 Regional Transportation Improvement Program.* July, 2006. Document PDF available on SANDAG Web site: http://www.sandag.org/index.asp?classid=13&fuseaction=home.classhome (accessed January – February 2010).

CONCLUSION

As SANDAG's authority increases in the San Diego region, it must address several issues and trends. The agency projects that the region's population will age and shift in its ethnic composition. Housing, which has been overwhelmingly single-family for decades, is expected to shift to multifamily in response to traffic congestion and the dearth of developable land. Transportation is dominated by car travel. SANDAG is developing long-range plans with the expectation that the region's travel growth is expected to continue to outpace population growth and employment in the next 20 years.

SANDAG is currently developing its new long-range 2050 Regional Transportation Plan, and aims to introduce new projects to address transportation issues in the region. A plan to encourage more participation in the development of the Regional Transportation Plan and Regional Comprehensive Plan has recently been completed. Also, the Sustainable Communities Strategy is being developed to comply with a recent California law that implements regional greenhouse gas emissions targets.

The agency's development of the Regional Comprehensive Plan is SANDAG's attempt to address land use and transportation integration. The plan's framework calls for collaboration with local governments

who have authority over land use and attempts to achieve this integration with incentive programs. The plan has developed a “centers” strategy to promote smart growth in specific areas of the region. SANDAG has annual funding available for local jurisdictions that have projects that meet smart growth criteria.

The Regional Transportation Plan (RTP), the cornerstone of the agency’s function as a Metropolitan Planning Organization, maps out specific responses to the region’s concerns. This plan is able to map out projects over the next 20 years with confidence that they will be funded. Facing diminishing Federal investment for transportation funding, the San Diego region has secured revenue by leveraging a local sales tax and retaining the region’s portion of the state gas tax.

The Regional Transportation Improvement Program (RTIP), the agency’s mechanism for selecting projects listed in the RTP, has criteria that are moderately weighted towards the land use and transportation goals of the region. This strategy was brought to the forefront with the Regional Comprehensive Plan and is gaining momentum as SANDAG develops its 2050 Regional Transportation Plan.

DETAILED CASE STUDY: DRCOG

The Denver Regional Council of Governments (DRCOG) is a non-profit regional council and the metropolitan planning organization for the greater Denver region. This summary describes DRCOG's history, governance structure, and transportation and land use responsibilities.

MPO HISTORY AND CONTEXT

The Denver Regional Council of Governments (DRCOG) was formed in 1955. A group of 39 elected officials, identifying themselves as the Inter-County Regional Planning Commission (ICRPC), met at the Denver Athletic Club, and in 1968 the group adopted the present day name of Denver Regional Council of Governments (DRCOG). DRCOG was one of the nation's first regional planning organizations.

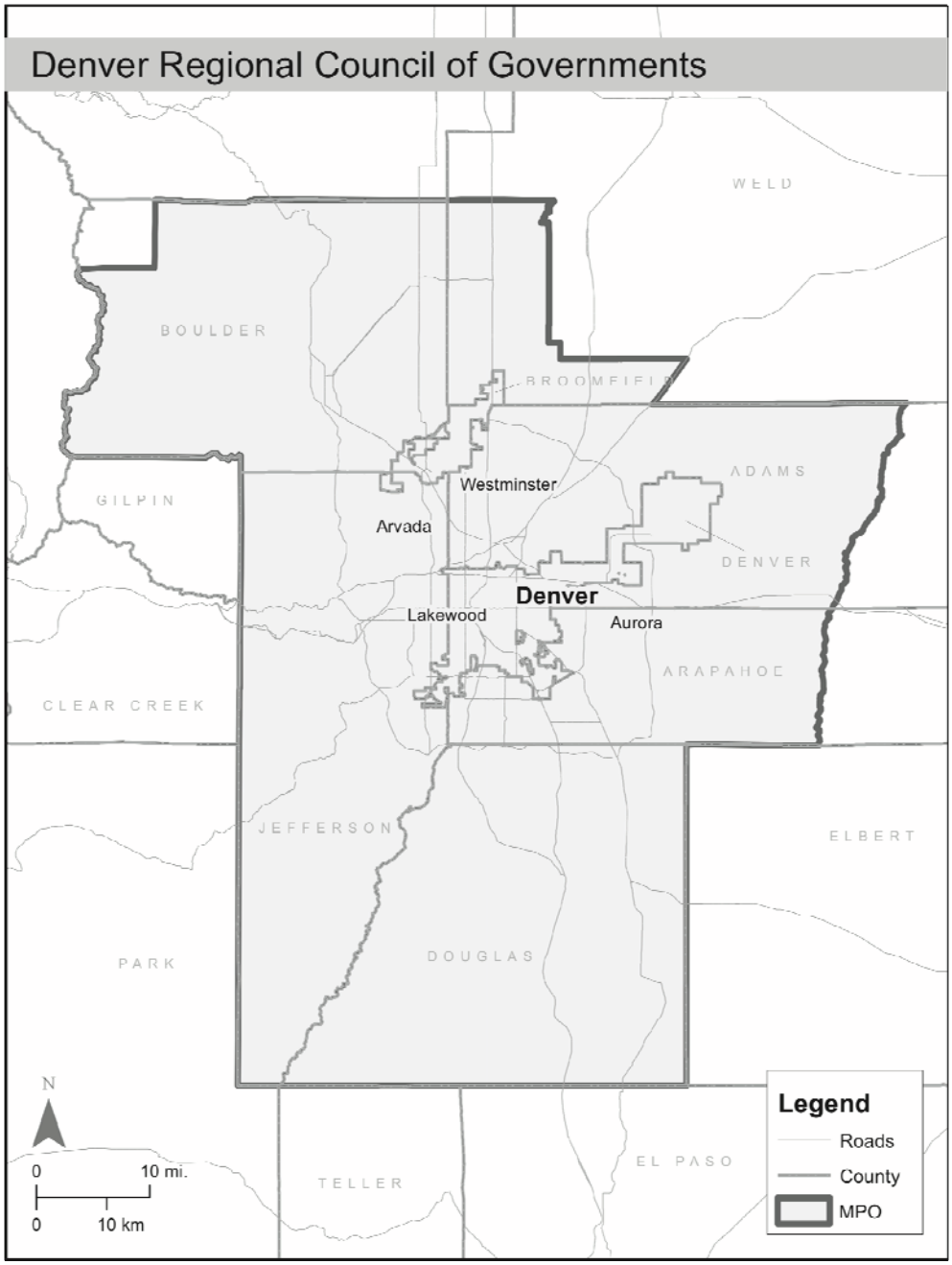
One of DRCOG's first accomplishments was to successfully route Interstate-70 through the Denver region. In 1963, DRCOG signed of a Memorandum of Agreement (MOA) with the Colorado Department of Highways (CDOH) to better manage transportation in the Denver metropolitan region and to meet the new Federal criteria.[209] With DRCOG's support, a Regional Transportation District (RTD) was formed in 1969, tasked with managing the region's transit system. DRCOG signed its first agreement with CDOH and RTD in 1971 to manage transportation throughout the region.

MPO REGION AND STRUCTURE

DRCOG's planning area (Figure 1) encompasses 2.7 million people in seven counties. Another 1.5 million people are expected to live in the region by 2035. DRCOG represents a population nearly five times that of the City of Denver.

[209] *Shaping the Region with One Voice,* DRCOG, 2005, http://www.drcog.org/documents/50th%20DRCOG%20history%20.pdf

Figure 1. DRCOG Region

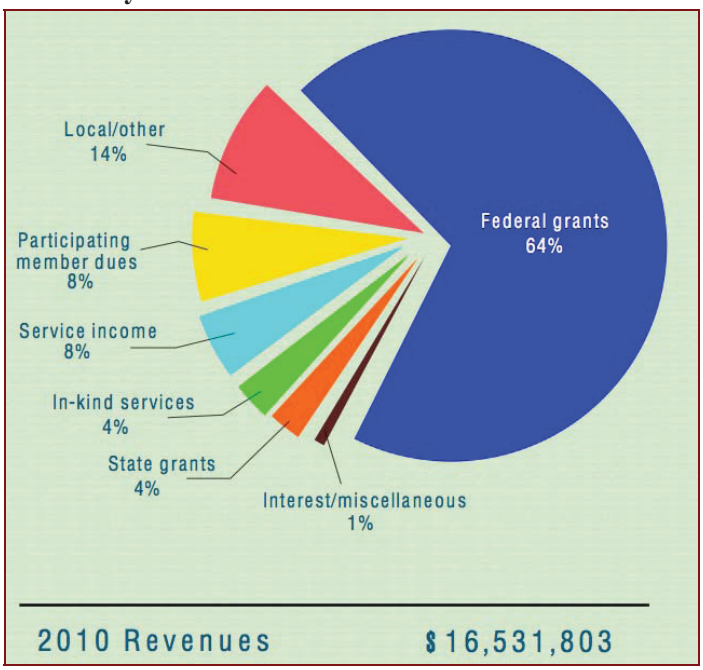


Source: InfoGraphics Lab, Department of Geography, University of Oregon

MPO Funding

DRCOG is a 501(c)(3) nonprofit corporation. The majority of DRCOG's funding (64%) is sourced from the Federal government (Figure 2).

Figure 2. DRCOG Revenues by Source



Source: Board Resource Manual Section 1, DRCOG, 2009, p. 37, http://www.drcog.org/documents/Mission%20and%20Vision,%20Procedures%20%20Operations.pdf

GOVERNANCE STRUCTURE

Steering DRCOG is its Board of Directors, which consists of 57 participating local governments. The Governor also appoints three nonvoting representatives to the Board of Directors. Two types of committees exist within DRCOG: standing and ad hoc. The political authority and criteria for membership of standing committees "come from the DRCOG Articles of Association, memoranda of agreement, intergovernmental agreements, Federal or state statutes, or Board authorization." Ad hoc committees, on the other hand, are created to review specific issues within a specified timeframe.

Figure 3 shows the committee structure within DRCOG as well as all of the current standing committees within the organization. Two significant standing committees are the Regional Transportation Committee and the Metro Vision Issues Committee. Underneath the Regional Transportation Committee is another standing committee of particular interest: the Transportation Advisory Committee. These two committees address many of the transportation planning issues in the Denver region. The Metro Vision Issues Committee is also of particular interest, since the regional plan has wide-ranging implications on the coordination of land use and transportation planning in the Denver region.

Figure 3. DRCOG Committee Structure

Source: Board Resource Manual Section 1, p. 51

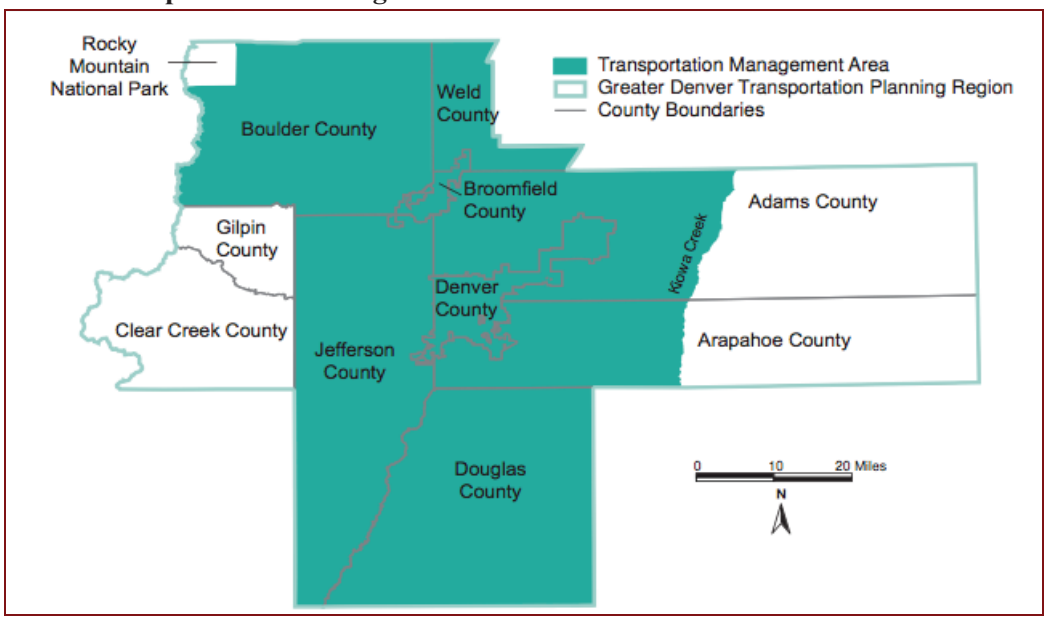
TRANSPORTATION

While DRCOG's existence is rooted in regional land use planning, as an MPO one of DRCOG's charges is to "plan, program, and coordinate Federal transportation funds." DRCOG's main tool for implementing its transportation goals is the 2035 Metro Vision Regional Transportation Plan (RTP), which is directly connected to the greater 2035 Metro Vision plan. Additional transportation-related planning includes bicycle and pedestrian planning. Current transportation programs include the Congestion Mitigation Program (CMP), Intelligent Transportation Systems (ITS), Transportation Improvement Program (TIP), Travel Demand Management (TDM), RideArrangers (a ground-level TDM program), and a Traffic Signal Systems Program.[210] Transportation planning within the Transportation Management Area (TMA) in the Denver region is guided by the Federal metropolitan planning rules.

Figure 4 shows the TMA that is covered by DRCOG. Hence, DRCOG has separate COG (planning area) and designated MPO boundaries. The most recent expansion of DRCOG's MPO boundary was the incorporation of the southwest portion of Weld County in 2008.[211] Figure 5 depicts DRCOG's transportation planning committee structure.

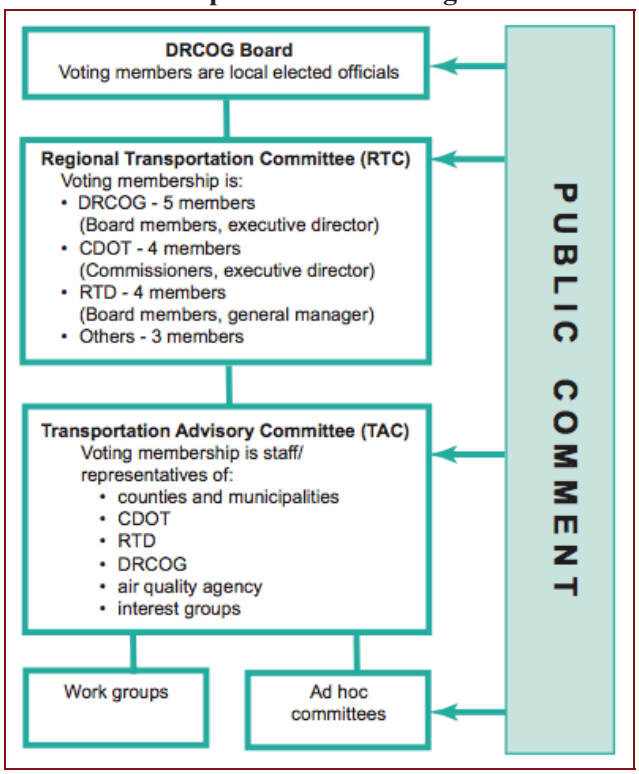
[210] *Transportation*, DRCOG, 2010, http://www.drcog.org/index.cfm?page=Transportation
[211] *Incorporation of Southwest Weld into Metro Vision 2035*, DRCOG, 2009, p. 1, http://www.drcog.org/documents/MV2035_SWWeld_Report_FinalAdopted_08.19.09.pdf

Figure 4. DRCOG Transportation Management Area



Source: Incorporation of Southwest Weld into Metro Vision 2035, DRCOG, 2009, p. 1, http://www.drcog.org/documents/MV2035_SWWeld_Report_FinalAdopted_08.19.09.pdf

Figure 5. DRCOG Transportation Planning Committee Structure



Source: Metro Vision 2035, DRCOG, 2007, p. 11, http://www.drcog.org/documents/MetroVision2035FinalPlanIntro-Ch%202.pdf

Land Use

DRCOG has authority only over transportation funding and has no real authority over land use other than its voluntary Urban Growth Boundary/Area (UGB/A) and the voluntary Mile High Compact group. The Metro Vision plan also lays out strategies to increase infill and density through urban centers, freestanding communities, transit corridors, and rural town centers. However, none of the specifications in the Metro Vision plans, UGB/A, and Mile High Compact polices are mandatory.

Metro Vision's goals and policies "aim to *influence* the direction, shape, size and other characteristics of the region's built environment."[212] Land use planning occurs almost entirely at the local level in the Denver region.

Regional Land Use Planning

The Metro Vision is "the Denver region's plan for future growth, development, transportation, environmental quality and water quality management." The DRCOG Board of Directors adopted the current Metro Vision plan, Metro Vision 2035, in 2007.

Specific Policies for Land Use and Transportation Integration

Metro Vision 2035 outlines the formation of urban centers, rural town centers, and freestanding communities for the purpose of decreasing urban sprawl and increasing infill. Various transportation corridors are also identified. Through its transportation programs DRCOG exercises its greater authority on land use since TIPs must flow through MPOs in federally defined Transportation Management Areas (TMAs).

DRCOG also works collaboratively with local governments in developing Transit Oriented Development (TOD). The development of TODs goes hand-in-hand with the implementation of FasTracks throughout the region, which is a taxpayer-funded RTD program to rapidly increase the amount of transit services (light and commuter rail and bus rapid transit, or BRT) in the region. In addition, DRCOG serves as a source of information for local governments on TODs.[213]

Local Government Plan Requirements

Colorado does not have any state-mandated municipal government planning requirements. The Mile High Compact is a voluntary agreement among regional cities and counties to manage growth by adhering to the Metro Vision. According to DRCOG, as of December 2010, 46 communities representing around 90% of the region's population have signed the agreement. The UGB/A, the Urban Growth Boundary/Areas, are also defined within the Metro Vision regional plan. As with many Urban Growth Areas, the UGB/A defines where future urban development should take place.

Process for Regional Plan Amendments and Updates

Figure 6 outlines the Metro Vision plan assessment process, which follows a predefined cycle. The assessment process starts with data collection. Next, local plan amendment proposals are offered. A definition and assessment then leads to policy direction. Finally, evaluation, modeling, and review are

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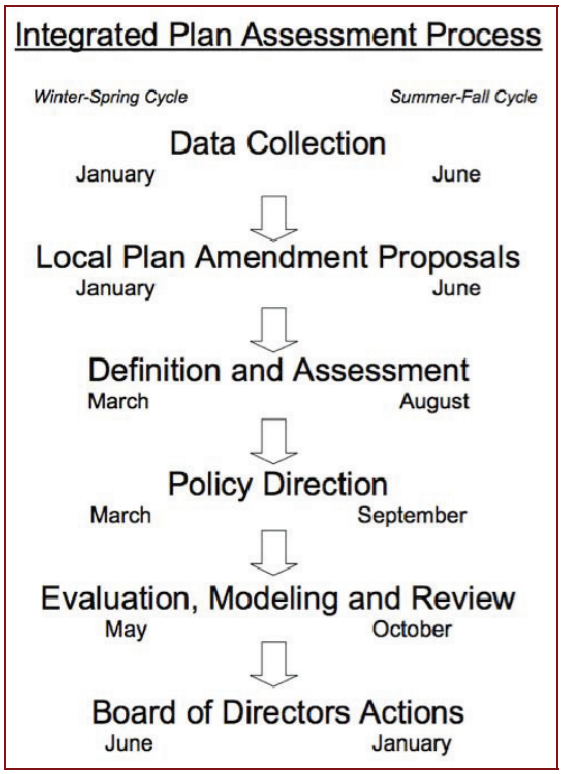
[212] *Metro Vision 2035*, DRCOG, 2007, p. 11, http://www.drcog.org/documents/MetroVision2035FinalPlanIntro-Ch%202.pdf

[213] See *With One Voice*, p. 6.

done before the DRCOG Board of Directors makes final decisions. DRCOG is currently in the process of updating Metro Vision 2035, with the update scheduled for adoption in February of 2011.

Figure 6. Metro Vision Plan Assessment Process



Source: Metro Vision Assessment Process, DRCOG, 2007, p. 2, http://www.drcog.org/documents/MVPA_updated.pdf

Regional Land Use Tools

Metro Vision 2035 specifies a number of land use tools and policies. These policies pertain to the following:[214]

Growth Boundary/Area – The UGB/A shows where urban development will take place in the region over the next 25 years.

Growth Allocation – Growth forecasts are allocated to each community by the DRCOG Board based on historical growth. Each community determines the location of specific allocations.

Flexibility – Communities have the flexibility to postpone committing their allocated urban growth area until specific development plans are in place. These communities are referred to as urban growth area (UGA) communities.

Compact Development – Metro Vision supports small lots sizes and multifamily housing to achieve a more compact development pattern, while still supporting traditional single-family detached homes.

[214] See Metro Vision 2035, pp. 12-14.

Infill and Redevelopment – Metro Vision encourages local governments to use overlooked vacant parcels and underdeveloped parcels for infill and redevelopment.

Outlying Areas – growth will be strategically designated to conserve appropriate areas for urban development beyond 2035.

Infrastructure – Metro Vision seeks to direct future urban growth within the urban growth boundary/area into areas where infrastructure already exists. Regional transportation systems should be provided in a way that will most effectively encourage the desired future development.

Intergovernmental Coordination – Metro Vision encourages local governments to establish intergovernmental agreements to address planning and service delivery issues in areas of mutual interest.

Annexation – Metro Vision encourages the annexation of unincorporated areas within the UGB/A, consistent with local comprehensive plans and annexation procedures.

Regional Facilities – Facilities such as airports, solid waste disposal sites and major cultural facilities will be located to maximize their regional benefit and minimize their impact on existing and future development.

All of these policies and tools focus on managing growth at the regional level by using resources more efficiently, increasing urban density and promoting collaboration between local governments.

Metro Vision 2035 also identifies a number of land use focal points:[215]

Large-Lot Development – establishes policies to address low-density, large-lot development activity occurring outside the UGB/A.

Urban Centers – identifies guidelines for about 85 high-density, mixed-use, pedestrian- and transit-oriented activity nodes, including:

- Mixed-Use Centers
- Activity Centers
- Regional Corridors

Freestanding Communities – focuses on four satellite communities beyond the larger urban area that have the potential to become self-sufficient and thereby reduce travel within the region.

Rural Town Centers – examines the role of smaller, outlying communities in the region's rural areas.

[215] Ibid, p. 6.

Senior-Friendly Development – provides guidelines for meeting the housing, transportation, and service needs of the region's older population.

These focal points are designed to better integrate land use and transportation to serve a variety of environmental and quality of life needs.

REGIONAL TRANSPORTATION PLANNING

The Unified Planning Work Program (UPWP) outlines "all metropolitan transportation planning and transportation-related land use and air quality planning activities, regardless of funding source, on a two year cycle, addressing the planning priorities facing the DRCOG region." CDOT also provides input on the UPWP in order to seamlessly integrate efforts at the regional level when time and funding exist. The typical process for developing or updating the Metro Vision Regional Transportation Plan (RTP) begins with three months of establishing the planning basis. Next, quantitative background research is conducted over a period of six months. Once that is complete, DRCOG works to demonstrate air quality standard conformity of the plan while preparing the draft RTP over another six months. The final six months are spent adopting the RTP. The public is involved in the entire 18 month long process.

APPROVAL PROCESS FOR PLAN

Under SAFETEA-LU, "DRCOG and CDOT must certify to FHWA and FTA that the metropolitan transportation planning process is being conducted in accordance with all applicable Federal requirements each time a new TIP is submitted." The FHWA/FTA then conducts its own review of the process every four years. DRCOG puts forth a draft certification to be reviewed by the DRCOG Board of Directors through the transportation committee process. While the draft certification is at the Board of Directors, public comment is received. The FHWA and FTA then review responses and issue one of the following actions:[216]

- Certify the transportation planning process
- Certify the process subject to required corrective actions
- Certify the process as acceptable for a portion of the overall requirements
- Withhold certification

TRANSPORTATION IMPROVEMENT PROGRAM

The TIP is an important tool for DRCOG in facilitating transportation and land use coordination. As the region's MPO, DRCOG is required by the Federal government to identify and prioritize TIP projects for the region. DRCOG makes its selections based upon how well the proposed projects meet the goal's outlines within the Metro Vision 2035 regional plan and RTP.

DRCOG, RTD' and CDOT all have their own selection criteria for various projects for TIP funding. The three work together to synergize their project proposals to maximize the net social benefit. However, DRCOG maintains the authority of final selection of projects to receive TIP funding, as mandated by the Federal government.

[216] See *Transportation Planning in the Denver Region*, p. 36.

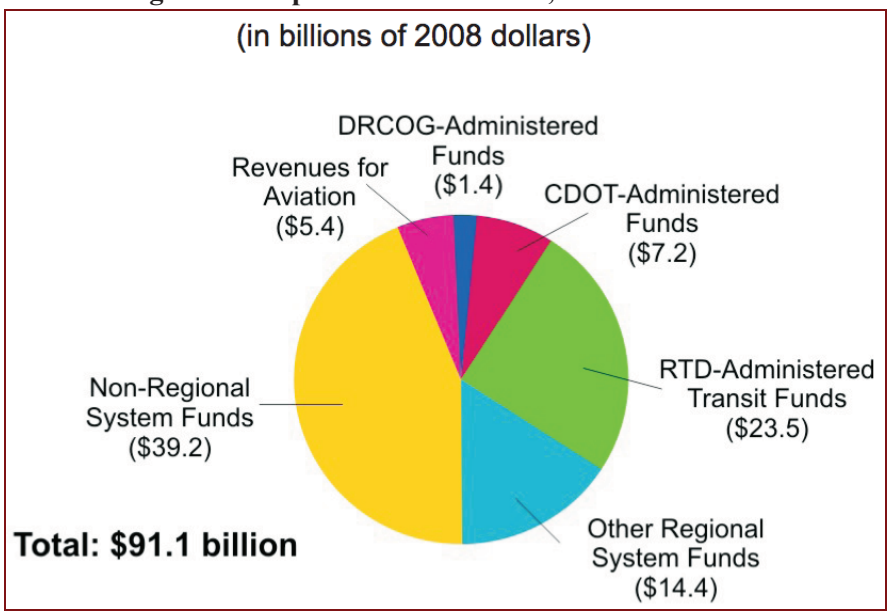
Regional Transportation Improvement Funding

Transportation improvement funding in the Denver region comes from a variety of sources and is channeled through a variety of organizations. TIP funding, on the other hand, is sourced through a few key Federal government channels, based on specific programs and legislation.

Overview of funding sources and allocation

As illustrated in Figure 7, DRCOG administers only a small part of the transportation funds available in the Denver region, at just over one percent of the total $91 billion in funds shown in the long-range plan.

Figure 7. Denver Region Transportation Revenues, 2008-2035



Source: 2035 Metro Vision RTP, DRCOG, 2009, p.102, http://www.drcog.org/documents/2035%20MVRTP_revisedMarch09.pdf

DRCOG's portion totals $1.4 billion for the 28-year period from 2008-2035 (roughly $50 million per year in current U.S. dollars). RTD transit funds and nonregional system funds make up the bulk of transportation funding in the region, with a combined total of roughly $63 billion dollars. DRCOG funds projects through three discretionary Federal funding sources: the Congestion Mitigation and Air Quality (CMAQ) Improvement Program,[217] the Surface Transportation Program (STP)–Metro, and the STP–Enhancement.[218] All three of these sources were either authorized or reauthorized under SAFETEA-LU. The combined total of these sources make up DRCOG's $1.4 billion in total revenues that it allocates to the Denver region through the TIP. STP-Metro and CMAQ were the largest administered revenue sources, respectively, and account for 55% of total administered revenues. The next largest administered revenue source stemmed from local matching funds for STP-Metro (29%).

[217] *Congestion Mitigation and Air Quality Improvement Program*, USDOT FHA, 2009, http://www.fhwa.dot.gov/environment/cmaqpgs/

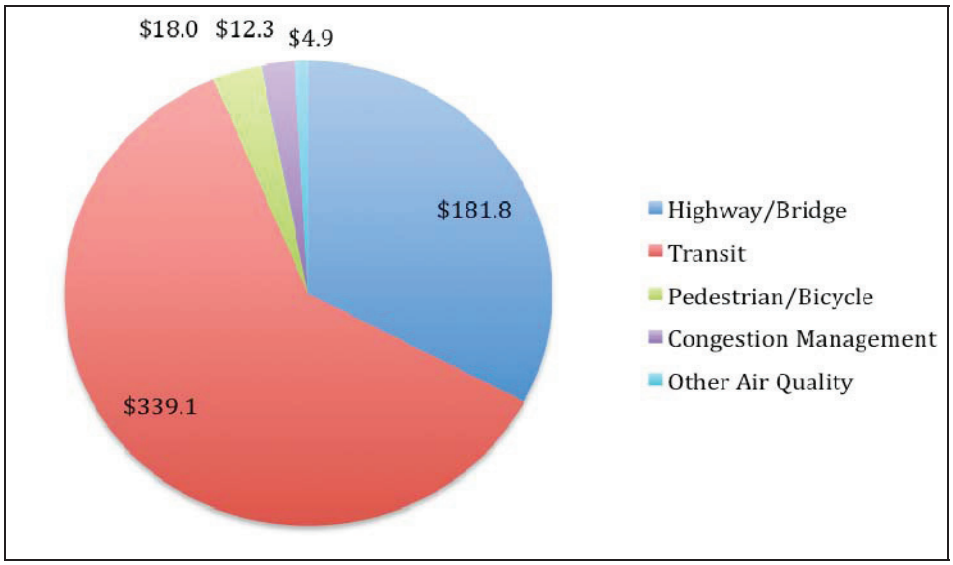
[218] *Overview: Flexible Funding for Highway and Transit*, USDOT FTA, 2010, http://www.fta.dot.gov/funding/grants/grants_financing_3786.html

Funds allocated for improvement purposes

DRCOG's TIP nominally covers a six-year period, but typically its projects are specifically identified only for the first four years. Each TIP includes projects that are rolled forward in addition to new projects.[219]

Figure 8 shows the FY2009 federally obligated projects for the Denver region. The largest project during this period was the construction of the West Corridor light rail line, which equaled over 20% of the total funds for the year at $114 million. Seventy-two percent of the total annual funds went towards only 12 of the 170 projects.

Figure 8. Denver Region Federally Obligated Project Summary, 2009



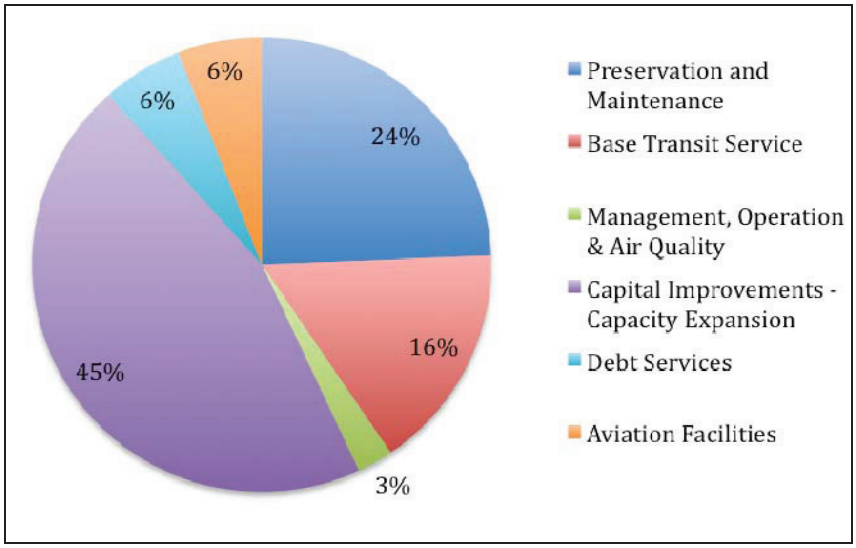
Source: Annual Listing of Federally Obligated Projects: FY2009, DRCOG, 2009, p.2
http://www.drcog.org/documents/ALOP%20Report%20FY2009.pdf

Figure 9 shows a breakdown of the fiscally constrained expenditures by system category from the *2035 Metro Vision RTP* for years 2008-2035. Capital Improvements – Capacity Expansion received the largest portion of funds, at 45% of the total. Preservation and Maintenance received the second largest portion of funds at 24%, followed by Base Transit Service at 16%.

The FasTracks program, which was originally scheduled to be completed by 2016, will receive a total of $6 billion out to 2035. While RTD is currently working on an updated plan for FasTracks, the $6 billion would still complete FasTracks in the 2020 time horizon. The system, however, requires additional funds beyond the $6 billion. If additional funds are not approved, the timeline for completion would be beyond 2040. New arterial, collector, and local roads will receive a substantial $48 billion over the same period of time.

[219] Ibid.

Figure 9. Metro Vision Fiscally Constrained Expenditures, 2008-2035



Source: DRCOG Metro Vision RTP, p. 106.

TIP Process and Funding

This section discusses the process of selecting projects for funding through DRCOG. From start to finish, the TIP process lasts for 15 months. The first three months are spent developing or adopting policy for TIP preparation, which takes six months to complete. At month three, four different processes begin: (1) RTD project selection, (2) CDOT project selection, (3) financial plan preparation, and (4) public involvement, all of which last for varying durations. Between months six and nine, the applications for TIP projects are submitted to DRCOG by potential sponsors. Between months nine and twelve, three new procedures occur: (1) DRCOG application evaluation with its Transportation Advisory Committee and Metro Vision Issues Committee, (2) preparation of the draft TIP, that includes the projects proposed by RTD and CDOT, and (3) demonstration of the plan's air quality standard conformity. Finally, during months twelve through fifteen, the TIP adoption process takes place, which includes formal public hearing, and the TIP is finalized.[220]

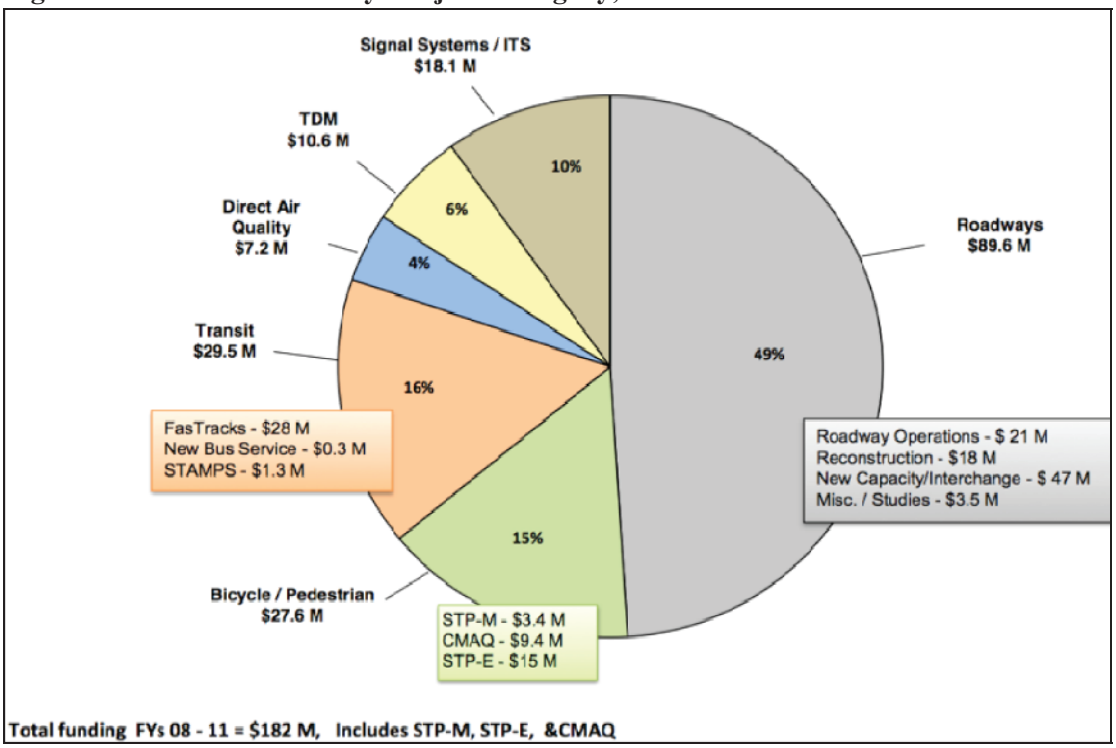
DRCOG's TIP covers a six-year window of time, slightly longer than the federally mandated four years. The first four years of the TIP contain committed projects. The following two years are limited to carryover projects from the previous four years. DRCOG states that "typically, the first years of funding will include: (1) the environmental process, (2) right-of-way (ROW) acquisition, and (3) design (including approval by CDOT, where required). The final year(s) typically fund construction."[221]

In FY2009, the TIP funds were obligated based upon a number of specific categories (see figure 10). Only the CMAQ, STP-Enhancement, STP-Metro, and TCSP funding types allow funding for improvements in land use and transportation coordination. The vast majority of funding is directed towards transit and highway/bridge projects.

[220] See *Transportation Planning in the Denver Region*, p. 30.
[221] Ibid, p. 2.

Figure 10 shows that funding to roadways ($90 million) from FY2008 through FY2011 accounted for 49% of the total allocation in the TIP. The next largest allocation went to transit, which was almost entirely dedicated to the FasTracks program to rapidly expand transit service in the region. The third largest allocation went toward bicycle and pedestrian transportation projects, with most funds coming from the STP-Enhancement. The remaining three categories, signal systems, TDM, and direct air quality, account for 20% of the total TIP funding allocation.

Figure 10. TIP Allocation by Project Category, 2008-2013



Source: 2035 Metro Vision RTP, p.106.

TIP Criteria

Each of the three major agencies utilizes its own process to select projects with the funds it controls within the TIP area. The four means by which the three agencies increase synergies in project selection include: (1) utilizing "strategic corridors" as the unifying theme, (2) participating in each other's meetings on project selection, (3) gaining concurrence of DRCOG project selections with RTD and CDOT, and (4) holding interagency reviews on draft TIP project lists.[222]

CDOT selects projects using a variety of revenue sources. These projects "include primary roadway and bridge construction, and operation and maintenance activities." The projects RTD selects are for "regional transit construction and operations and maintenance."

DRCOG selects projects to receive STP-Metro, STP-Enhancement, and CMAQ funding. The different types of entities eligible to apply for TIP funding in the Denver region are: municipalities, counties,

[222] *Policy on Transportation Improvement Program Preparation*, DRCOG, 2006, pp. 1-6. http://www.drcog.org/documents/20072012TIPPolicyAmendedFinal0106.pdf

regional agencies (such as RTD, the Regional Air Quality Council and DRCOG), and State agencies (such as CDOT, the Colorado Department of Public Health and the Environment, and others). Additionally, the TIP must carry out the State Implementation Plan (SIP) Transportation Control Measure (TCMs) to meet air quality requirements as per Metro Vision RTP findings.[223]

DRCOG-selected projects that involve state highways require CDOT concurrence; projects that involve transit require RTD concurrence. The number of new funding requests that can be put forth by municipalities and counties depends on the population or employment (P/E) size of the locality.

The first phase of project selection entails selecting new projects by way of ranked lists on point scales, to a maximum of 75% of the total not-yet-programmed (NYP) funds. DRCOG creates targets for the levels of funding, based on the needs of the *2035 Metro Vision RTP*. However, the projects must score a minimum of 50 points on the scale to be selected, even given the funding targets. These targets are outlined in Figure 11.

Figure 11. DRCOG TIP Phase One Project Selection Funding Targets

Funding targets for first phase selection by funding category (75% of not-yet-programmed funding)	
STP-Metro	
Roadway Capacity Projects, includes roadway widening, new roadways, new interchanges, interchange reconstruction, Bus/HOV/BRT lane (see text)	60%
Roadway Operational Improvements	20%
Roadway Reconstruction	20%
Studies, includes capacity project and operational improvement studies	0%
CMAQ	
Air Quality Improvement Projects	70%
Studies for station area planning activities	20%
New bus service	10%
Non-FasTracks Transit Passenger Facilities	0%
STP-Enhancement	
Bicycle/Pedestrian Projects	100%
Other Enhancement Projects	0%

Source: Policy on Transportation Improvement Program Preparation, DRCOG, 2006

The second phase of selection is more qualitative rather than quantitative in nature. This phase of selection covers the remaining 25% of NYP funds and is based upon the following criteria:[224]

- Financial equity of project awards at the county level (computed by DRCOG staff with population, VMT and auto-related sales tax contribution levels identified as surrogates for revenue)
- Potential cost savings from merging projects
- Projects in strategic corridors
- Project readiness for construction
- Projects in very small communities

[223] Ibid, pp. 6-7.
[224] Ibid, p. 19.

In particular, the one element here that pertains to land use and transportation coordination is the award of projects based upon the criteria of strategic corridors, which are shown in Figure 12. In order to make it to the second phase of selection, the project (except for those in very small communities) must score at least 50 points in the first phase criteria.[225]

DRCOG's *Policy on TIP Preparation* document identifies eight Metro Vision implementation factors by which sponsors can be awarded one point. These eight factors are as follows:[226]

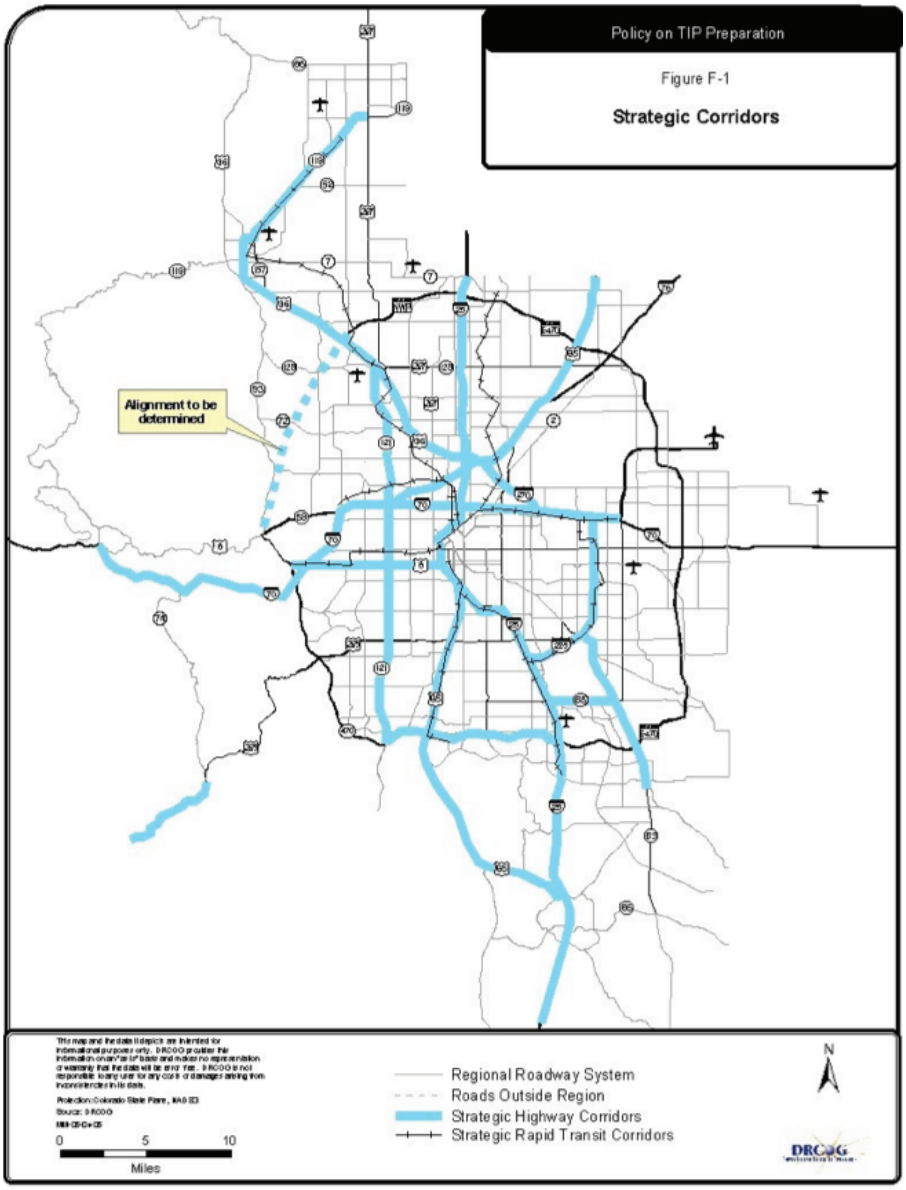
- Preserves open space
- Demonstrates progress in developing an urban center or freestanding community town center
- Increases population density
- Establishes an urban reserve planning area
- Adopts senior-friendly development policies
- Establishes a stormwater utility or equivalent level of commitment
- Implements alternative mode plans
- Signs the Mile High Compact

In addition, two factors worth up to four points each at the sponsor level include:

- PM10 conformity commitment for communities that were asked to make a conformity commitment (an air quality standard related to coarse particulate matter)
- Current practices for communities that were not asked to make a PM10 conformity commitment
- A maximum of 9 project-level Metro Vision Implementation points are available: a maximum of 6 for location in specific types of urban centers, and a maximum of 3 related to location within the urban growth boundary/area.

[225] Ibid.
[226] Ibid, p. 85.

Figure 12. DRCOG Strategic Corridors



Source: Policy on Transportation Improvement Program Preparation, DRCOG, 2006.

Research Study Documents

Main Report:

Margerum, Richard D., Susan Brody, Robert Parker, and Gail McEwen. 2011. Regional Transportation and Land Use Decision Making in Metropolitan Regions: Findings from Four Case Studies.

Appendix 1

Margerum, Richard D., Susan Brody, Robert Parker, and Gail McEwen. 2011. Regional Transportation and Land Use Decision Making. Appendix 1: Detailed Research Findings.

Appendix 2

Margerum, Richard D., Susan Brody, Robert Parker, and Gail McEwen. 2011. Regional Transportation and Land Use Decision Making. Appendix 2: Detailed Case Study Summaries.

Appendix 3

Margerum, Richard D., Susan Brody, Robert Parker, and Gail McEwen. 2011. Regional Transportation and Land Use Decision Making. Appendix 3: Forum Proceedings.

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