

Monitoring the Performance of the Washington State Transportation Policy Plan

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16. ABSTRACT <p>The purpose of this study is to develop a performance monitoring system for tracking the implementation of the Washington State Transportation Policy Plan. Performance monitoring is the periodic measurement of progress towards goals and objectives. A performance monitoring system uses information and action to provide a dynamic view of a program's progress. Background on the use of performance monitoring was obtained from a literature review and a survey of other state agencies. The development of indicators to track progress towards the goals in the plan was based upon interviews with key individuals involved in the creation of the goal statements. The report identifies data sources for which existing data are available and makes recommendations for filling gaps. Major findings:</p> <ul style="list-style-type: none"> • Performance monitoring can be useful for tracking progress towards goals. • Other states have little experience monitoring transportation policy. • Where possible, conventional indicators are recommended to track progress towards goals. In other cases less conventional indicators are required to accurately track progress towards goals. • Existing data can be utilized, thus avoiding the need for primary data collection. This was possible for about half of the indicators. For the remaining indicators, gaps in data can be filled with local government data and the primary collection of data. 			
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Transportation Policy Plan Performance

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WASHINGTON STATE TRANSPORTATION
POLICY PLAN**

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CHAPTER 1

INTRODUCTION AND APPROACH

Much criticism has been directed at public agencies for the insufficient implementation of carefully developed plans. Implementation can easily be left out when management and the general public are not aware of discrepancies between an effort's planned and actual status. Performance monitoring is a means of tracking the implementation of a plan to avoid this common planning disaster. Performance monitoring is "the periodic measurement of progress toward explicit short and long run objectives and the reporting of the results to decision makers in an attempt to improve program performance." (1)

Performance monitoring, in the context of the Washington State Transportation Policy Plan, can show whether the state is moving toward the 19 goals laid out in the plan. For example, one of the goals is to conserve scarce resources (the reduction of total gallons of fossil fuel consumed in the state per year). Performance monitoring would track changes in the indicators that measured whether fuel consumption was increasing or diminishing. An example of an outcome indicator is the total consumption of fuel in the state per year for transportation purposes. On the other hand, **Program monitoring** can assess whether programs designed to accomplish the goals are being implemented. For example, one program activity in the plan is to seek support for additional federal funding for freight, rail, preservation, and safety. Program monitoring would determine whether this objective was being accomplished. Indicators might measure the level of additional federal funding received by the state for this purpose.

This project emphasizes performance monitoring, as opposed to program monitoring, although some discussion of program monitoring is involved in this report.

The purpose of this project is to develop a performance monitoring system to track the implementation of the goals and policies of the Washington State Transportation Policy Plan.

This paper reports on the development of indicators useful for measuring progress toward the plan's goals.

The purpose of monitoring is to provide a feedback loop within the policy cycle. This idea is presented graphically in Figure 1.1. This diagram conveys a simplified model of the theory behind monitoring policy. Unfortunately, the process of monitoring is not so simple. External forces can counter the efforts of programs. The model of monitoring in Figure 1.2 presents a more detailed picture of the forces at work in the determination of outcomes. This framework demonstrates the dynamic nature of the world in which decisions are made and the effect of countervailing forces. This framework can be applied to the process involved in the development of outcome indicators for each of the goals discussed later in this chapter.

Figure 1.3 breaks down the project's tasks. The literature review and review of other state transportation planning agencies constitute the second and third chapters in this report. The Washington State Transportation Policy Plan and the indicator development process are discussed in the fourth chapter. The fifth chapter is devoted to the identification of data resources and their level of availability. Chapters 6 and 7 discuss the refinement and demonstration of performance monitoring indicators. Chapter 8 explores program monitoring indicators, and Chapter 9 gives conclusions and recommendations.

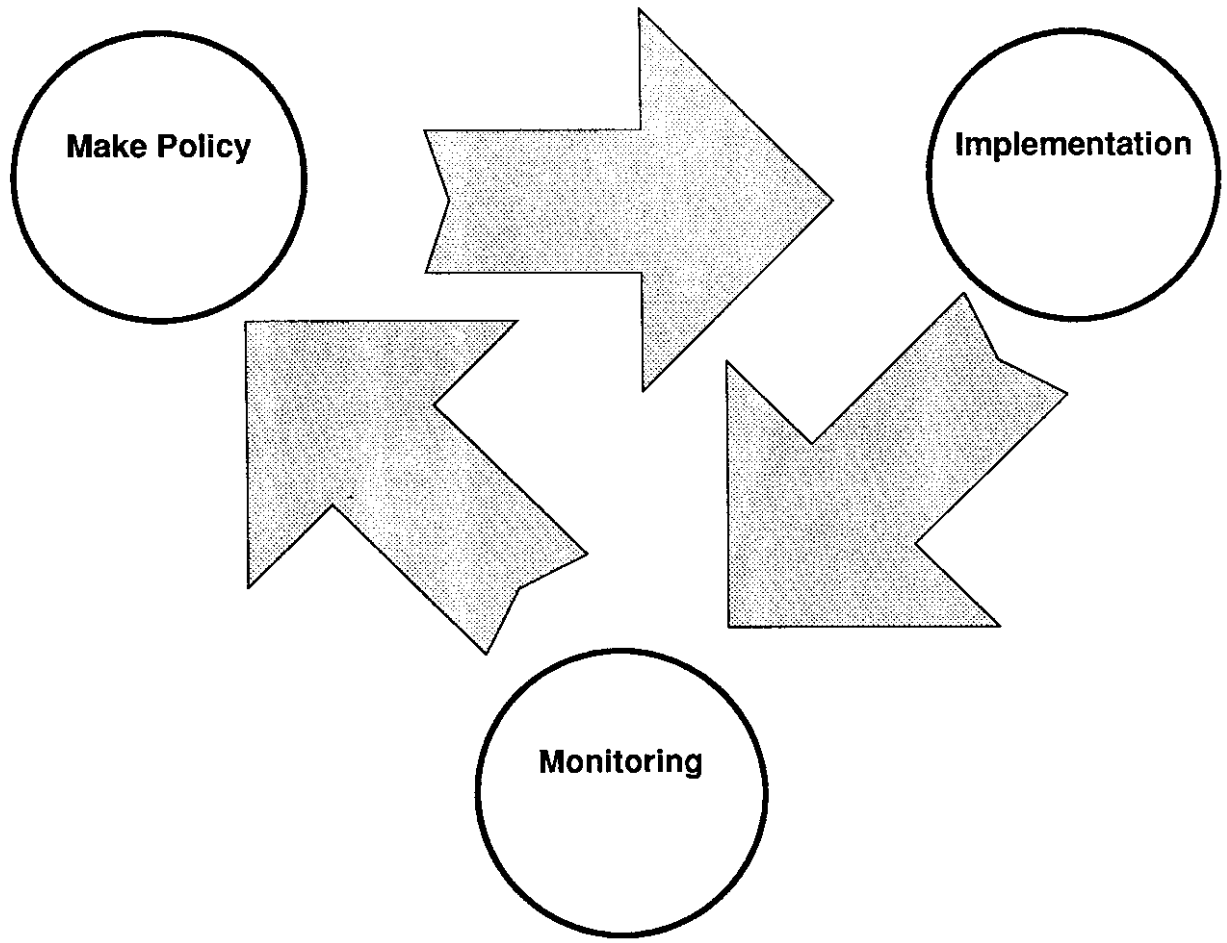


Figure 1.1. The Policy Cycle

A Model of Monitoring

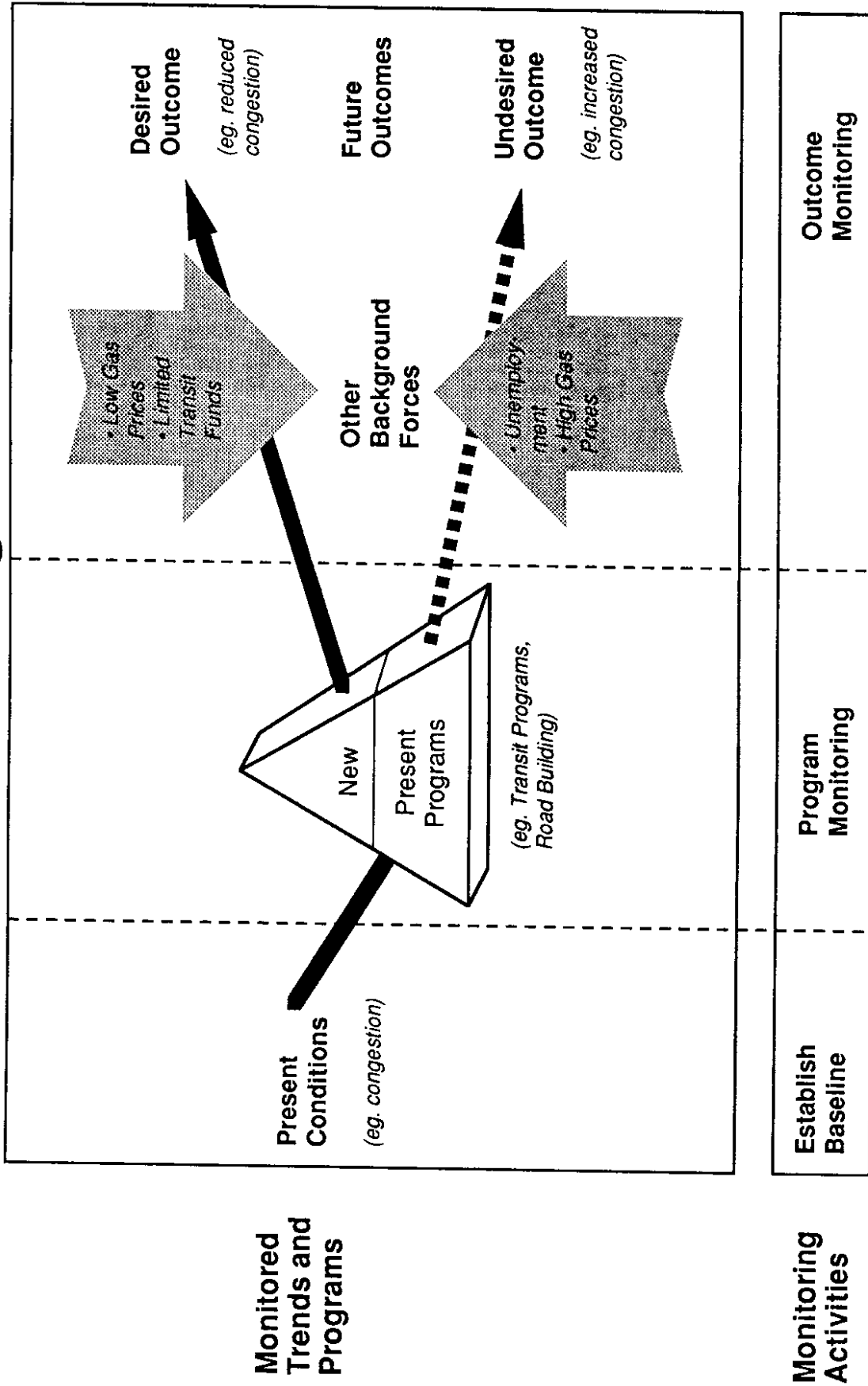


Figure 1.2 A Model of Monitoring

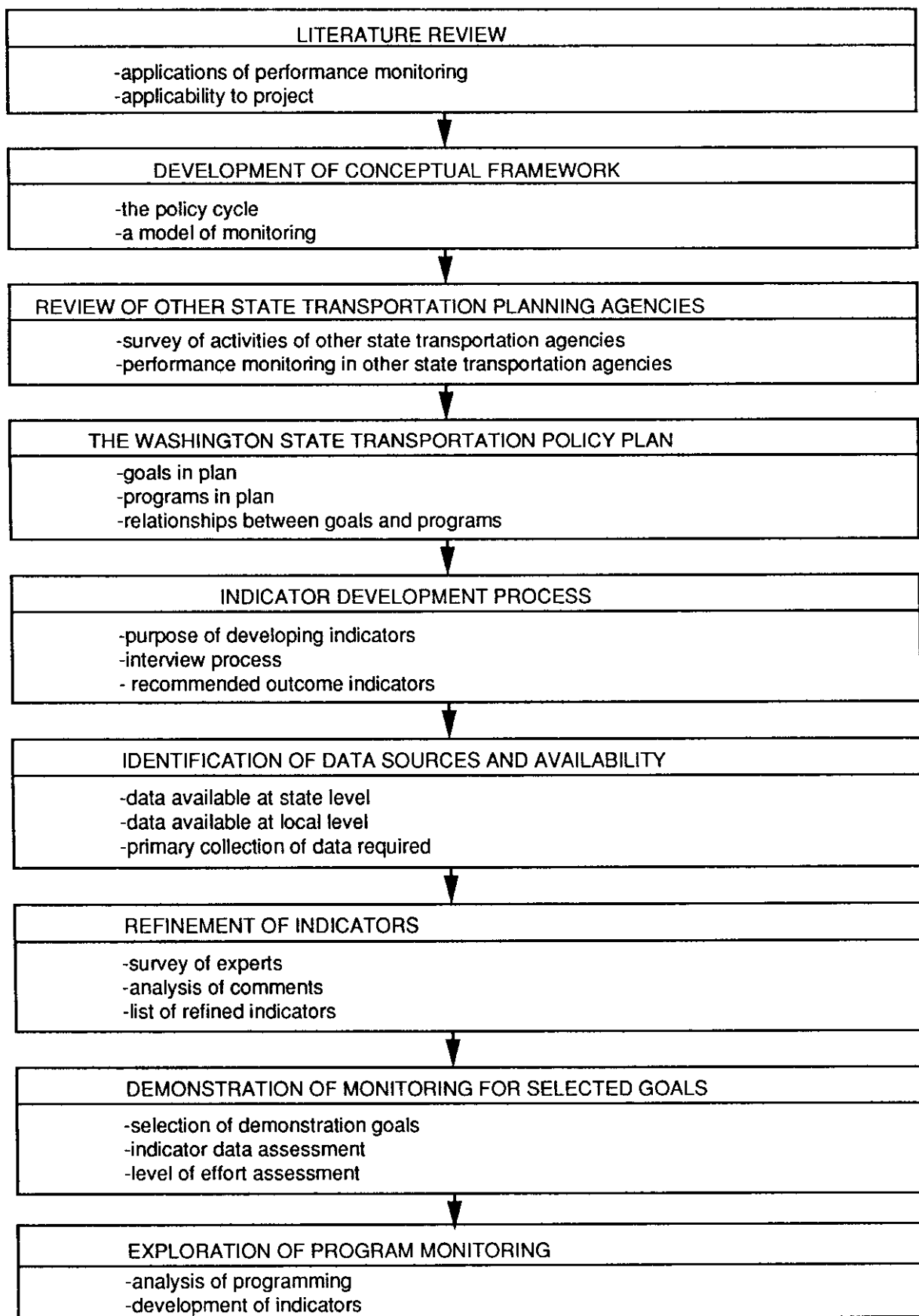


Figure 1.3 Performance Monitoring Research Tasks

CHAPTER 2

LITERATURE REVIEW

DEFINITION

Performance monitoring is a subset of program evaluation. It is the most feasible and useful evaluation option. Simply put, performance monitoring is the periodic measurement of progress toward short- and long-run program goals. More specifically, it is the

"periodic observation of effectiveness and efficiency indicators in order to track the progress a program or system of programs is making in light of specific objectives. Focus is on the aggregate impact and the net effect. The mechanism is to track key indicators over time, in order to make assessments of how well programs are performing in general." (4)

"The purpose of performance monitoring is to provide relevant information to decision-makers to enable them to take appropriate action to improve program performance." (4)

Relevant information can be divided into summative information, which provides information on the effectiveness of existing programs, and formative information about new programs to be developed. (5)

In contrast to performance or outcome monitoring, program monitoring focuses on program implementation and measures the direct results being produced and not whether the results are making progress toward the ultimate goals. For example, program monitoring might measure the level of service provided by a bus system, but not whether the system was ultimately achieving less dependency on the automobile. In contrast, performance monitoring focuses on the ultimate outcome rather than programmatic outputs.

Table 2.1 contrasts the different purposes of performance and program monitoring. As a reminder to the reader, the work documented in this report emphasizes performance monitoring as opposed to program monitoring. (6, 7, 8, 9)

Table 2.1. Performance Versus Program Monitoring

Performance Monitoring	Program Monitoring
<ul style="list-style-type: none"> • documents whether progress toward goals occurred, not why • focuses on outcomes and goals • provides feedback to policy makers about the effectiveness of plans and policies 	<ul style="list-style-type: none"> • documents progress toward program objectives • focuses on program products not ultimate goals • provides information to aid in the allocation of scarce funds among competitive programs

THEORY AND PURPOSE

The premise underlying performance monitoring is that better information systems and control mechanisms make government more effective and better able to accomplish its goals. "A performance monitoring system is a system of information and action. It provides a dynamic view of the organization through static snapshots and is a tool to detect breakdowns. Its purpose is to provide the organization with beacon lights for steering the organization's course." (10)

Feedback from performance monitoring may lead to program modification, objective modification, more intensive evaluation, or changes in indicators. In addition, an enhanced ability to describe the current situation with facts creates more support for the plan, legal defensibility, and better development decisions. (11)

The practice of performance monitoring embodies the ideal that policy making is rational. It assumes there is a logical link between policy making and research/evaluation and that research can deliver objective facts for monitoring change.

However, the link between research and policy is not perfectly rational. Each step in the decision process is not necessarily based on an objective piece of evidence. More than a given set of goals govern policy. (10) Evaluation is a rational enterprise that takes place in a

political context. How well a program is doing may be less important than the political position of its supporters. Nevertheless, performance monitoring can clarify the trade-offs involved. (12)

COMPONENTS OF PERFORMANCE MONITORING SYSTEMS

The three basic components of a performance monitoring system are as follows (4):

- A data component, which provides a framework for collecting and measuring information. Data can be useless if collection is isolated from the activities and user of the information. The performance monitoring system must include continual interaction with management. The collection of data requires an agreement with management about what information is needed and agreement with personnel on what will be monitored and if it is collectible. (7)
- An analytical component, which involves comparisons of actual versus planned performance. (13)
- An action component to provide the framework for acting on information. This usually involves a determination by decision makers of whether program or policy changes are needed in light of monitoring results.

CHAPTER 3

REVIEW OF OTHER STATES

PROCEDURE

A survey of state transportation planning agencies was conducted for the American Association of State and Highway Transportation Officials/Transportation Research Board (AASHTO/TRB) conference on statewide planning held in the spring of 1989 in Boston, Massachusetts. Of the states represented, 44 responded to the survey, which provided information on the level of planning the agencies were performing. This information served as a starting point for the selection of states with the highest likelihood of having something similar to performance outcome monitoring or program monitoring under way. The presence or absence of strategic planning and the description of each state's process was the most germane piece of information provided by the survey.

TELEPHONE INTERVIEWS

Telephone interviews were conducted with the state transportation agencies that were judged from the survey to be most likely to have some type of performance monitoring activities. These interviews determined whether they were conducting monitoring activities. More detailed information on the type of monitoring being conducted was obtained from those state agencies with monitoring programs. The states selected for the telephone interviews were as follows:

- California
- Connecticut
- Florida
- Hawaii
- Illinois
- Kentucky
- Maryland
- Michigan
- New York
- Pennsylvania
- Wisconsin

FINDINGS

Although several state agencies use program monitoring in their capital planning process, very little performance monitoring is conducted. Florida is by far the most ambitious in monitoring the performance of its transportation policy. This is consistent with Florida's commitment to growth management. Some ongoing data gathering may reveal additional states that have related performance monitoring activities. Table 3.1 summarizes the results of the telephone interviews with the 11 states selected from the AASHTO/TRB survey. The following four states are presented because they illustrate a variety of monitoring activities.

1. **California**. Currently, the state department of transportation in California is developing an "Executive Information System." The purpose of this system will be to monitor the implementation of projects. This will include some evaluation of the efficiency of capital outlays.
2. **Florida**. The Florida State Department of Transportation is in the preliminary stages of developing a performance monitoring system similar to the concept being discussed here.

The Florida Department of Transportation is currently performing several monitoring activities with the hope of developing a strategic management process. Under this strategic management process, performance monitoring would be conducted. Florida is a state with very strong state level growth management legislation. Current legislation requires all agencies to develop an agency functional plan that is consistent with requirements of the state comprehensive plan. The Florida Department of Transportation (FDOT) intends to use the Florida Transportation Plan as its agency functional plan.

The Florida Transportation Plan requires the development of a performance monitoring program, which is now in the conceptual stages.

Table 3.1 Summary of Transportation Monitoring Activities in Selected States

States Working Towards Performance Monitoring	States With Program Monitoring
Florida	California Illinois Hawaii New York Pennsylvania Maryland Michigan Wisconsin

3. **Maryland**. Maryland has a program similar to the one being developed in California. There is a quantitative component as part of an annual process to develop goals and policies for state transportation project expenditures. Total dollars available are set first, then distributed among projects.
4. **Pennsylvania**. Much of the literature developed on performance monitoring stems from the experience of Pennsylvania Department of Transportation. The development of a system to monitor the conditions of highways in Pennsylvania was the result of this work. This program is similar to the pavement management system in Washington state.

GENERAL CONCLUSIONS

- Florida is the only other state that is conducting policy performance monitoring, and Washington state is further along.
- Pennsylvania, Washington, and other states are conducting pavement performance monitoring.
- Program and project monitoring, in the context of capital planning, is more common than performance monitoring.

CHAPTER 4

THE DEVELOPMENT OF INDICATORS FOR THE WASHINGTON STATE TRANSPORTATION POLICY PLAN

This chapter is divided into two sections: identification of goals and programs that are part of the Washington State Transportation Policy Plan, and the indicator development process. The purpose of this portion of the study was to generate a list of outcome indicators useful for tracking progress toward the goals in the Washington State Transportation Policy Plan.

GOALS AND PROGRAMS IN THE PLAN

The Washington State Transportation Policy Plan contains goals in four areas: personal mobility, economic vitality, natural environment, and institutional framework. There are 19 goals distributed among the four goal areas. The goal statements represent desired future conditions, for example, revitalized economically isolated areas. Table 4.1 lists the goals in the plan. The plan also contains related programs in four categories: working together, protecting our investments, personal mobility, and economic opportunity. The programs are activities designed to achieve the goals. Approximately 30 programs are referred to in the plan, distributed among the four program areas.

RELATIONSHIPS BETWEEN GOALS AND PROGRAMS

To aid understanding of the scope of the plan, matrices have been prepared to illustrate the relationships between the goals and programs within the plan (see Appendix A). The matrices are useful to

- provide a "map" of the plan for reference,
- indicate which goals are well supported with program activities and which goals suffer from little or no program support,

Table 4.1 Summary of Goals in the Washington State Transportation Policy Plan

1. provide safe, reliable, and convenient access to employment, educational, recreational, cultural, and social opportunities for all citizens in urban and rural environments;
2. provide cost effective accessibility for goods;
3. provide cost effective accessibility for people;
4. link land-use planning to transportation planning;
5. link land-use development directly to transportation development;
6. support international trade;
7. revitalize blighted urban areas;
8. revitalize economically isolated areas;
9. conserve scarce resources;
10. reduce pollutants and other waste by-products from the transportation system;
11. avoid the disruption and degradation of historically and environmentally significant locations;
12. include effective urban design in transportation facilities;
13. ensure the collection of the appropriate revenue to support the transportation system;
14. encourage the opportunity for public participation;
15. promote greater sharing and coordination of technical expertise between state and local governments;
16. promote sensitivity to public participation;
17. facilitate interjurisdictional and regional coordination;
18. assure the preservation of the needed system;
19. sponsor innovative research and development in cooperation with academia, the private sector, and others, in order to identify new cost-effective methods and address current and future transportation needs.

- indicate which programs are supportive of several goals and which programs are completely unrelated to the goals within the plan,
- provide an overall gauge of how well the programs and the goals are coordinated, and
- indicate the level of implementation for each of the programs.

A glance at the matrices (Appendix A) shows the goals that have significant program support within the plan and those with little to no support. It is important to note that other programs not discussed in the plan also support the goals; however, these were not reviewed for this report. The level of program support for each goal is summarized in Table 4.2. Support is measured by the number of programs in progress that help to fulfill the goal. The table shows how the majority of goals have moderate or extensive program support, although three goals have no program support in the plan.

INDICATOR DEVELOPMENT

The Interview Process

To establish a set of indicators that can measure progress toward the goals it is important to understand what the goals in the Washington State Transportation Policy Plan mean and the concerns that underlie them. This allows the selection of indicators that are relevant to policy discussions.

Interviews were conducted with key individuals involved in the development of the plan's goals. The Washington State Transportation Policy Plan is directed by a steering committee composed of professionals who represent several agencies, in addition to the Washington State Department of Transportation. The goals of the plan were developed by the Desired Futures Conditions Subcommittee. To develop indications for tracking progress toward the goals in the plan, members of the Desired Future Conditions Subcommittee, in addition to other members of the steering committee, were interviewed.

Table 4.2. Level of Support from Programs in Progress Referred to in the Washington State Transportation Policy Plan

Extensive Support (6 or more programs in progress)	Moderate Support (1 to 5 programs in progress)	No Support (No programs in progress)
safe, reliable, convenient access	link land use & transportation development	degradation of sensitive areas
cost effective access-goods	support international trade	effective urban design
cost effective access-people	revitalize blighted urban areas	sensitivity to public participation
conserve scarce resources	revital distressed areas	
facilitate regional coordination	reduce pollutants from transportation	
connect land use & transportation planning	collection of appropriate revenue	
preserve needed system	sponsor innovative research	

The interviews consisted of questions intended to document the process by which the goal was established, gain information on potential measures to monitor progress, and gain references to data sources to monitor recommended indicators.

Indicators for Performance Monitoring

After these discussions, the researchers identified the major legislative concerns associated with each goal and developed related performance measures. The idea was to identify a limited number of indicators that were simple to understand by the general public and based as much as possible on existing data sources. More complex indicators could provide useful information for policy discussions. However, simple indicators would ease the introduction of performance monitoring for transportation policy. A set of 42 indicators was developed for the plan's 19 goal statements. The list of indicators is located in Table 4.3. In this table, the indicators are associated with the goals they are intended to monitor. (See Appendix B for more detailed information about the indicator development process.) Information more qualitative in nature obtained in the interviews is presented in the issues and concerns section of Appendix B.

An example of the process used in the development of the indicators can be illustrated with the goal of linking land use development directly with transportation development. The issues and concerns underpinning this goal concern quality of life and efficiency of movement within the urban environment. On the basis of these concerns, the researchers identified four indicators that could measure progress towards the transportation and land use development goal:

- percentage of modal split,
- average travel time between specified locations,
- average trip length, and
- number of dwelling units and employees per acre.

Table 4.3. Indicator(s) for Each Goal Statement

Goal Statement	Indicator(s)
1) provide safe, reliable, and convenient access to employment, educational, and recreational opportunities in order to reinforce a sense of community statewide	<ul style="list-style-type: none"> - safety = # of incidents per pm pk hr in system - reliability = variation in travel time at specified locations - convenience = travel time at specified locations
2) provide cost effective accessibility for goods	<ul style="list-style-type: none"> - total cost of moving goods/ total value of trade
3) provide cost effective accessibility for people	<ul style="list-style-type: none"> - vehicle occupancy rates at specified locations
4) link land-use planning directly with transportation planning	<ul style="list-style-type: none"> - # of jurisdictions complying w/concurrency provisions in Growth Management Act - # of Regional Transportation Planning Organizations (RTPOs) formed
5) link land-use development directly with transportation system development	<ul style="list-style-type: none"> - # of dwelling units per acre - % modal split over time - average trip length - average travel time between specified points in trans. system
6) support international trade	<ul style="list-style-type: none"> - total value of freight in state per year
7) revitalize blighted urban areas	<ul style="list-style-type: none"> - average household income in distressed areas - # of jobs per unit of area in distressed areas
8) revitalize economically isolated areas	<ul style="list-style-type: none"> - unemployment rates measured in distressed areas
9) conserve scarce resources	<ul style="list-style-type: none"> - average fuel consumption per mile (both passenger and freight) - total consumption of fuel in state for transportation purposes
10) reduce pollutants and other wastes from transportation system	<ul style="list-style-type: none"> - AIR: amount of pollutants attributable to trans. - WATER: % of highway miles with runoff treatment system - WATER: particulate mix of runoff as compared to standards developed by Puget Sound Water Quality Authority (PSWQA) and other agencies - NOISE: # of people exposed to extreme levels from transportation system
11) avoid the disruption and degradation of historically and environmentally significant locations	<ul style="list-style-type: none"> - # of acres of environmentally sensitive land lost due to transportation infrastructure deployment - # of historically significant locations adversely affected by transportation system development

Table 4.3. Indicator(s) for Each Goal Statement (Continued)

Goal Statement	Indicator(s)
12) include effective urban design in transportation facilities	<ul style="list-style-type: none"> - presence or absence of pedestrian amenities at transit nodes - presence or absence of pedestrian linkages to transit nodes - % of highway system with landscape treatment and buffering
13) ensure the collection of appropriate revenues to support the transportation system	<ul style="list-style-type: none"> - amount of revenue available to support the transportation system/amount of revenue required to support the transportation system
14) encourage opportunities for public/private partnerships	<ul style="list-style-type: none"> - presence or absence of policy that discourages joint development - presence or absence of policy that encourages joint development - # of jointly developed transportation projects
15) promote greater sharing and coordination of technical expertise between state and local government	<ul style="list-style-type: none"> - # of transportation projects with shared personnel - # of technical-applied manuals produced in state
16) promote sensitivity to public participation	<ul style="list-style-type: none"> - % of citizens who feel they have opportunities for participation - # of programs that promote public participation
17) facilitate interjurisdictional and regional coordination	<ul style="list-style-type: none"> - # of Regional Transportation Planning Organizations (RTPOs) formed - # of projects successfully built by Transportation Improvement Bureau with regional cooperation - # of interlocal agreements
18) assure the preservation of the needed system	<ul style="list-style-type: none"> - % of existing highway system at an acceptable standard of repair - % of existing railroad system at an acceptable level of repair - dollar value of deferred maintenance of transit facilities
19) sponsor innovative research and development in cooperation with academia, private sector and others in order to identify new cost effective methods and address current and future transportation needs	<ul style="list-style-type: none"> - % of annual transportation budget devoted to research - \$ devoted to innovative research and development

These four indicators are fairly well known by the professional community and can be understood by the general public.

A similar process was followed for each of the 19 goals in the Washington State Transportation Policy Plan. For nine of the goals, reasonably conventional indicators were found. However, for ten of the goals, there were fewer conventions on which to base the indicators, and it will be more difficult to obtain agreement on the best indicators to use. Table 4.4 lists the goals according to whether the indicators that are available to track them are more or less conventional.

Once appropriate indicators have been selected, additional work will be needed to refine them. For each indicator the following additional details will need to be resolved:

- The appropriate geographic unit of measurement. For example, should the results be reported statewide, by county, or on a city by city basis?
- The definition of terms. For example, which modes are included in the modal split analysis?
- The frequency of measurement. Should information be collected every one, two, five, or ten years?
- The best units of measurement. For example, should density be measured in terms of persons or dwellings per square mile?

Table 4.4. How Conventional are the Recommended Indicators for Each Goal?

Goals With More Conventional Indicators	Goals With Less Conventional Indicators
<p>provide safe, reliable access to all opportunities</p> <p>revitalize blighted areas</p> <p>revitalize isolated areas</p> <p>reduce pollutants</p> <p>avoid disruption and degradation of significant locations</p> <p>assure the preservation of the system</p> <p>sponsor innovative research</p> <p>conserve scarce resources</p> <p>link land use development with transportation development</p>	<p>provide cost effective access for goods</p> <p>provide cost effective access for people</p> <p>link land use planning with transportation planning</p> <p>ensure the collection of revenue</p> <p>support international trade</p> <p>include effective urban design</p> <p>encourage public/private partnerships</p> <p>promote sharing of technical expertise</p> <p>promote public participation</p> <p>facilitate regional coordination</p>

CHAPTER 5

THE IDENTIFICATION OF DATA SOURCES

Once recommended indicators have been identified, the researchers investigated whether the information they would require is available. The assessment focused on data sources presently or soon to be available at the state level. The information was primarily collected through staff members in state agencies, with some help from local agency staff.

During the process of investigating available data sources, some adjustments were made to the list of indicators. While not allowing indicators to diverge too far from their original objective, the researchers sought to make the best use of existing data.

For each goal, the availability of data to track the related indicators was determined. For example, the indicator developed to monitor the safety component of the goal to provide safe, reliable, convenient access is the number of accidents per million miles travelled. The Traffic Safety Commission's annual report is statewide and provides the data required. The results for all the goals are summarized in Table 5.1. Appendix C lists the actual data sources found for each indicator.

Three levels of data availability were found:

- (1) (All) – goals for which most or all of the needed data are available at the state level.
- (2) (Some) – goals for which some of the needed data are available at the state level.
- (3) (None) – goals for which little or none of the needed data are available at the state level.

For the 42 indicators, the researchers found all data for 20, some data for 5, and no data for 17.

Data are available to track at least some or all the indicators for most of the goals. However, for four goals, little or no data are available.

Table 5.1. Availability of State Level Data for Monitoring the Goals in the Washington State Transportation Policy Plan

Data Available	Some data available but collection needed	Data does not exist and collection required
provide access for goods	provide safe, reliable access to all opportunities	link land use and transportation development
support international trade	link land use and transportation planning	provide access for people
avoid disrupting significant locations	promote sharing technical expertise	include effective urban design
revitalize urban areas	facilitate regional coordination	promote public participation
revitalize isolated areas	reduce pollutants	
conserve resources	encourage private/public development	
ensure the collection of revenues		
assure the preservation of system		
sponsor innovative research		

The shortage of data raises doubts about the current ability to fully monitor progress toward all the goals in the Washington State Transportation Policy Plan. However, the data are sufficient to begin monitoring most of the goals in the plan.

STRATEGIES FOR FILLING THE DATA GAPS

Strategies for filling the data gaps identified in the previous section are presented in Appendix C. The strategies fall into two categories: gathering data that are already held by local governments or that could be easily collected as part of their routine operations and wholly new data collection efforts. The recommended strategies for filling the gaps are summarized in

Table 5.2, which lists the goals according to whether one or the other or both of these strategies are needed to provide the data necessary for their indicators.¹

Overall, current data gaps can be filled. In several instances this will require primary data collection efforts. However, in other areas, data gaps can be more easily filled by surveys of local governments to gather the information they already have or could easily obtain as part of their routine activities.

Table 5.2. Suggested Strategies for Collecting Additional Data Needed to Monitor the Progress Toward the Goals in the Washington State Transportation Policy Plan

Goals Whose Indicator Data Can Be Collected From Local Government Sources	Goals Whose Indicators Require New Data Collection Efforts
<p>encourage public/private partnerships</p> <p>promote sharing of technical expertise</p> <p>facilitate regional coordination</p> <p>link transp. and land use development</p> <p>assure the preservation of the system</p>	<p>provide safe, reliable access to all opportunities</p> <p>encourage public/private partnerships</p> <p>provide cost effective access for people</p> <p>reduce pollutants</p> <p>promote public participation</p> <p>link transp. and land use planning</p> <p>include effective urban design</p> <p>link transp. and land use development</p>

¹Local governments were not surveyed for this report and assumptions were made about their capabilities. The comments made here about local government data sources should be read with this caution in mind.

CHAPTER 6

COMMENTS ON INDICATORS AND FURTHER REFINEMENT

This portion of the study obtained feedback from key individuals involved in the development of the initial indicators (see Table 4.3) and refined the indicators based on their comments. The indicators in Phase I were developed after interviews with key individuals responsible for the creation of the goals in the plan (see Table 4.1). The majority of those interviewed were members of the Desired Future Conditions Subcommittee of the Washington State Transportation Policy Plan Steering Committee. This subcommittee was charged with the development of goals for the Washington State Transportation Policy Plan.

The respondents were asked whether the indicators listed in Table 4.3 were accurate measures of progress toward the goals. If they felt they were inaccurate, an alternative indicator was requested. They also were asked which goals should be selected to further demonstrate the feasibility of performance monitoring. Responses were received from five individuals. They are presented in Appendix E. In general, the following comments were made on the accuracy and quality of the recommended indicators:

1. Make the indicators simple where possible.
2. Keep them directly linked to transportation.
3. More thought will be needed to develop meaningful indicators in some of the newer areas such as urban design.
4. It is essential that indicators be quantifiable where possible.

In response to these comments, new indicators were generated. The initial list of indicators (from Table 4.3) and a refined list are presented in Table 6.1.

Table 6.1. Refined Indicators after Comments

Pre Comment	After Comment
<ul style="list-style-type: none"> - safety = number of incidents per pm pk hr in system - reliability = variation in travel time at specified locations - convenience = travel time at specified locations - none 	<ul style="list-style-type: none"> - number of accidents per million VMT - variability in travel time between locations - average trip duration between locations - percentage of transit vehicles and stops that are handicapped accessible
<ul style="list-style-type: none"> - total cost of moving goods/ total value of trade 	<ul style="list-style-type: none"> - total cost of moving goods per ton mile
<ul style="list-style-type: none"> - vehicle occupancy rates at specified locations 	<ul style="list-style-type: none"> - total cost per person mile of travel
<ul style="list-style-type: none"> - number of jurisdictions complying w/concurrency provisions in Growth Management Act - number of Regional Transportation Planning Organizations (RTPOs) formed 	<ul style="list-style-type: none"> - consistency between land use and transportation plans - deleted
<ul style="list-style-type: none"> - number of dwelling units per acre - percent modal split over time - average trip length - average travel time between specified points in trans. system 	<ul style="list-style-type: none"> - population density in cities - percent of population living/working within 1/4 mile of transit service - employment density in cities - jobs/housing balance in cities
<ul style="list-style-type: none"> - total value of freight in state per year 	<ul style="list-style-type: none"> - annual public investments in port facilities and services
<ul style="list-style-type: none"> - average household income in distressed areas - number of jobs per unit of area in distressed areas - unemployment rates measured in distressed areas 	<ul style="list-style-type: none"> - dollar value of transportation investments in distressed areas ** - (ditto) - dollar value of transportation investments in distressed areas ** - (ditto) - dollar value of transportation investments in distressed areas
<ul style="list-style-type: none"> - average fuel consumption per mile (both passenger and freight) - total consumption of fuel in state for transportation purposes - none 	<ul style="list-style-type: none"> - same - same - acres of resource lands designated under the Growth Management Act lost by transportation development.
<ul style="list-style-type: none"> - AIR: amount of pollutants attributable to trans. - WATER: particulate mix of runoff as compared to standards developed by Puget Sound Water Quality Authority (PSWQA) and other agencies - WATER: percentage of highway miles with runoff treatment system - NOISE: number of people exposed to extreme levels from transportation system 	<ul style="list-style-type: none"> - amount of air pollutants attributable to vehicles - deleted - pollutant mix in water runoff from highways - number of people exposed to greater than 70 CNEL due to the transportation system
<ul style="list-style-type: none"> - number of acres of environmentally sensitive land lost due to transportation infrastructure deployment 	<ul style="list-style-type: none"> - acres of critical areas designated under the Growth Management Act lost by transportation development

* Pre comment and after comment are the same

** After comment combined with indicator immediately above

Table 6.1. Refined Indicators after Comments (Continued)

Pre Comment	After Comment
<ul style="list-style-type: none"> - # of historically significant locations adversely affected by transportation system development - presence or absence of pedestrian amenities at transit nodes - presence or absence of pedestrian linkages to transit nodes - % of highway system with landscape treatment and buffering 	<ul style="list-style-type: none"> - deleted - percent of intermodal linkages with all weather designs - deleted - visual quality index rating along state highways
<ul style="list-style-type: none"> - amount of revenue available to support the transportation system/amount of revenue required to support the transportation system 	<ul style="list-style-type: none"> - amount of revenue generated to support a mode/amount of revenue required
<ul style="list-style-type: none"> - presence or absence of policy that discourages joint development - presence or absence of policy that encourages joint development - # of jointly developed transportation projects 	<ul style="list-style-type: none"> * - (same) - presence or absence of policy that discourages joint development * - (same) - presence or absence of policy that encourages joint development * - (same) - # of jointly developed transportation projects
<ul style="list-style-type: none"> - # of transportation projects with shared personnel - # of technical-applied manuals produced in state 	<ul style="list-style-type: none"> * - (same) - # of transportation projects with shared personnel - dollar value of technical assistance to local government
<ul style="list-style-type: none"> - % of citizens who feel they have opportunities for participation - # of programs that promote public participation 	<ul style="list-style-type: none"> - percent of district budgets devoted to public information/participation activities - delete
<ul style="list-style-type: none"> - # of Regional Transportation Planning Organizations (RTPOs) formed - # of projects successfully built by Transportation Improvement Bureau with regional cooperation - # of interlocal agreements 	<ul style="list-style-type: none"> * - (same) - # of Regional Transportation Planning Organizations (RTPOs) formed * - (same) - # of projects successfully built by Transportation Improvement Bureau with regional cooperation - number of regionally significant projects completed v. programmed
<ul style="list-style-type: none"> - % of existing highway system at an acceptable standard of repair - % of existing railroad system at an acceptable level of repair - dollar value of deferred maintenance of transit facilities - none - none 	<ul style="list-style-type: none"> - pavement condition index - number of rail miles abandoned each year - yearly transit passengers per capita - operational hours of transit per capita - operational hours of ferry service per capita
<ul style="list-style-type: none"> - % of annual transportation budget devoted to research - \$ devoted to innovative research and development 	<ul style="list-style-type: none"> * - (same) - % of annual transportation budget devoted to research * - (same) - \$ devoted to innovative research and development

* Pre comment and after comment are the same

CHAPTER 7

FURTHER DEMONSTRATION OF SELECTED GOALS

Five goals were selected for further testing to more rigorously demonstrate the feasibility of performance monitoring. The objective was to thoroughly assess the data requirements for the indicators of the selected goals and to present historical baseline data for the indicators in graphic form where possible to illustrate how an actual monitoring report might look.

Five goals were selected that were representative of the range of issues involved in the implementation of performance monitoring. This enabled the analysis to be generalized to the other goals that were not selected for detailed study. Four criteria were used to make the selection, including the recommendations of the survey respondents (see Chapter 6), the availability of existing data for the indicators, the quantifiability of the indicators, and the geographic scale at which progress would be monitored. Survey response scores and ratings for the other criteria are displayed in Table 7.1. Five goals were selected that together covered the range of scores given for the criteria and were of high priority to the survey respondents. The goals that were selected are indicated in Table 7.1.

Indicator Data Assessment Forms were used to compile information on the quality of data available. Information on the data was based on extensive investigations into data sources and interviews with state and regional agency staff. The indicator assessment forms are located in Appendix E.

Each proposed indicator was assigned an ordinal, level of effort score based on the nature of work that would be required to make the indicator fully operational. The criteria for each level of effort are given in Table 7.2. The selected goals, proposed indicators, and associated level of effort are graphically displayed in Table 7.3.

The level of effort measures can be grouped into three categories:

- data available at the state level,
- data available at the local level, and
- primary collection of data required.

The distribution of indicators among these three categories is displayed in Table 7.4. Of the 19 indicators recommended for the five goals, sufficient data were available to construct historical baseline trends for 15 percent (3) of the indicators, which are presented in Figures 7.1 to 7.3. However, with limited effort in reformatting and calculating, 42 percent (8) of the indicators could be made fully operational with data that are already collected at the state level. Primary data collection would be required for approximately 37 percent (7) of the indicators by methods that are already known or need to be developed. This would require a significant commitment of resources. The remaining 21 percent (4) of the indicators could be made operational with data that are collected at the local or regional level. This suggests that progress toward many aspects of the policy plan's goals can be monitored at this time. However, many other aspects of the goals cannot be monitored without additional data analysis or collection. Unless these efforts are made, planners and policy makers will be unable to fully monitor or guide progress toward the goals of the policy plan.

WASHINGTON STATE TRANSPORTATION POLICY PLAN

Table 7.1. Goal Selection Process by Selected Criteria Items

Goal in Plan	Survey Response Score *	Existing Data Available **	Measurability ***	Local/Regional/State Reporting ****
✓ Safe, reliable, convenient access	7	moderate	high	all
Cost effective access – goods	4	moderate	high	state
Cost effective access – people	0	low	moderate	regional
✓ Link land-use plng. with trans.	3	low	low	regional
Link land-use devel. with trans.	6	low	moderate	regional
Support international trade	0	moderate	moderate	state
Blighted urban areas	0	high	moderate	local
Economically distressed areas	0	high	moderate	regional
Conservation of scarce resources	0	high	high	state
✓ Reduce pollutants	5	moderate	high	regional
Degradation of significant locations	0	moderate	high	state
✓ Effect. urb. design	4	low	moderate	regional
Collect appropriate revenue	5	high	high	state
Public/private development	0	moderate	high	local
Share & coordinate tech. expertise	0	low	low	regional
Sensitive to public participation	0	low	low	local
Facilitate interjurisdictional and regional coordination	0	low	low	regional
✓ Preserve existing systems	11	high	high	state
Sponsor innovative research	0	moderate	moderate	state

* From survey results; summation of responses with a numeric value of 5 assigned to most important goal for demonstration purposes to 1 assigned to least important goal

** Assesses the availability of existing data to support indicators

*** Assesses the quantifiability of the indicators

**** Assesses the appropriate geographic scale(s) for data collection and analysis

✓ Selected for further study

WASHINGTON STATE TRANSPORTATION POLICY PLAN

Table 7.2. Criteria for Each Level of Effort

Level	Criteria
1	Data collected regularly at the state level Data made available to project staff Data is in a form which is readily usable
2	Data collected regularly at the state level Data not easily accessible now to project staff Data is in a form which is readily usable
3	Data is collected regularly at state level Data is not in a form which is readily usable
4	Data is available at local or regional level Data is collected on a regular basis
5	Data is available at local or regional level Data is not currently collected on a regular basis
6	The collection of primary data is required A well developed methodology exists for data collection
7	The collection of primary data is required A methodology for data collection needs to be developed

WASHINGTON STATE TRANSPORTATION POLICY PLAN

Table 7.3. List of Goals and Indicators Selected for Demonstration Purposes

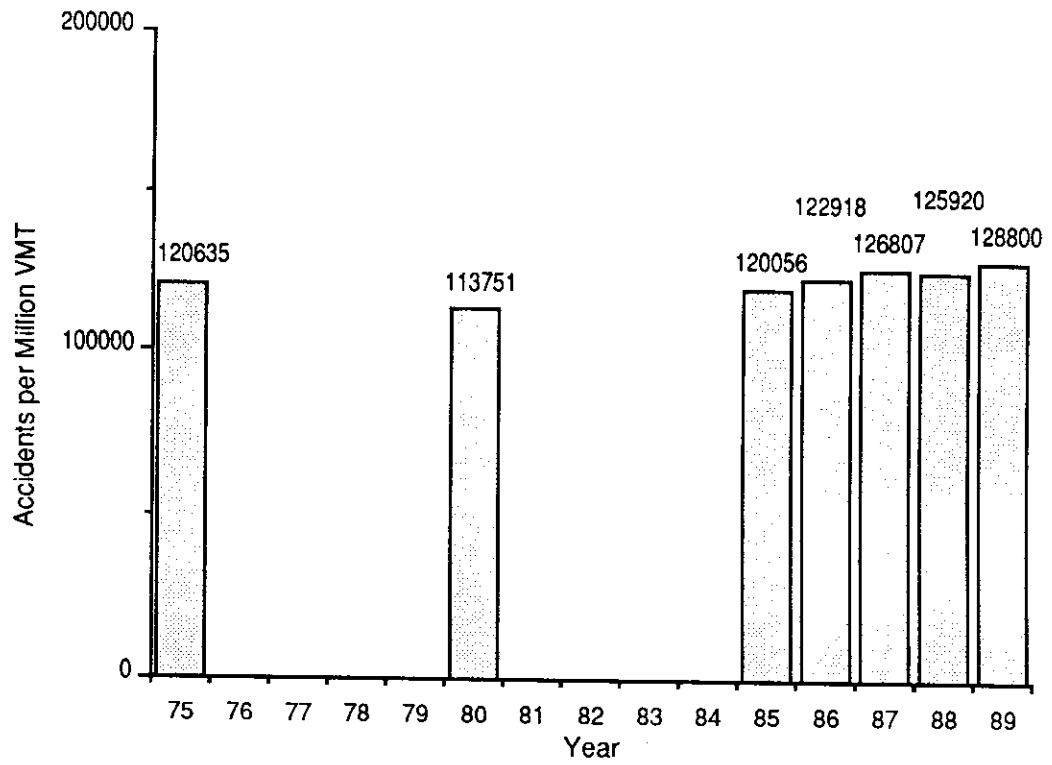
Goal	Proposed Indicators	Level of Effort
1. Provide safe, reliable and convenient access	Number of accidents per million vehicle miles travelled Variability in travel time between locations Average trip duration between locations Percent of transit vehicles and stops that are handicapped accessible	1 6 6 5
2. Link land use development with transportation development	Percent of population living and working within 1/4 mile of public transit service Employment density in cities Population density in cities Jobs/housing balance in cities	3-4 3 1 3
3. Reduce pollutants from the transportation system	Total air pollutants attributable to vehicles Pollutant mix in water runoff from highways Number of people exposed to greater than 70 CNEL due to transportation systems	3 6 6
4. Include effective urban design in transportation facilities	Percent of intermodal linkages with all weather designs The presence or absence of pedestrian linkages to transit facilities Visual quality index rating along highways	7 7 6
5. Preserve existing system	Pavement condition index Number of miles of rail abandoned each year Transit passengers per capita Operational hours of transit service per population Operational hours of ferry service per capita	2 1 4 4 3

WASHINGTON STATE TRANSPORTATION POLICY PLAN

Table 7.4 . Data Availability for Grouped Levels of Effort by Geographic Availability of Data

Data Available at State Level	Data Available @ Local Level	Primary Data Collection Required
Level of Effort 1 - 3	Level of Effort 4 - 5	Level of Effort 6 & 7
Number of Indicators	Number of Indicators	Number of Indicators
8 indicators	4 indicators	7 indicators

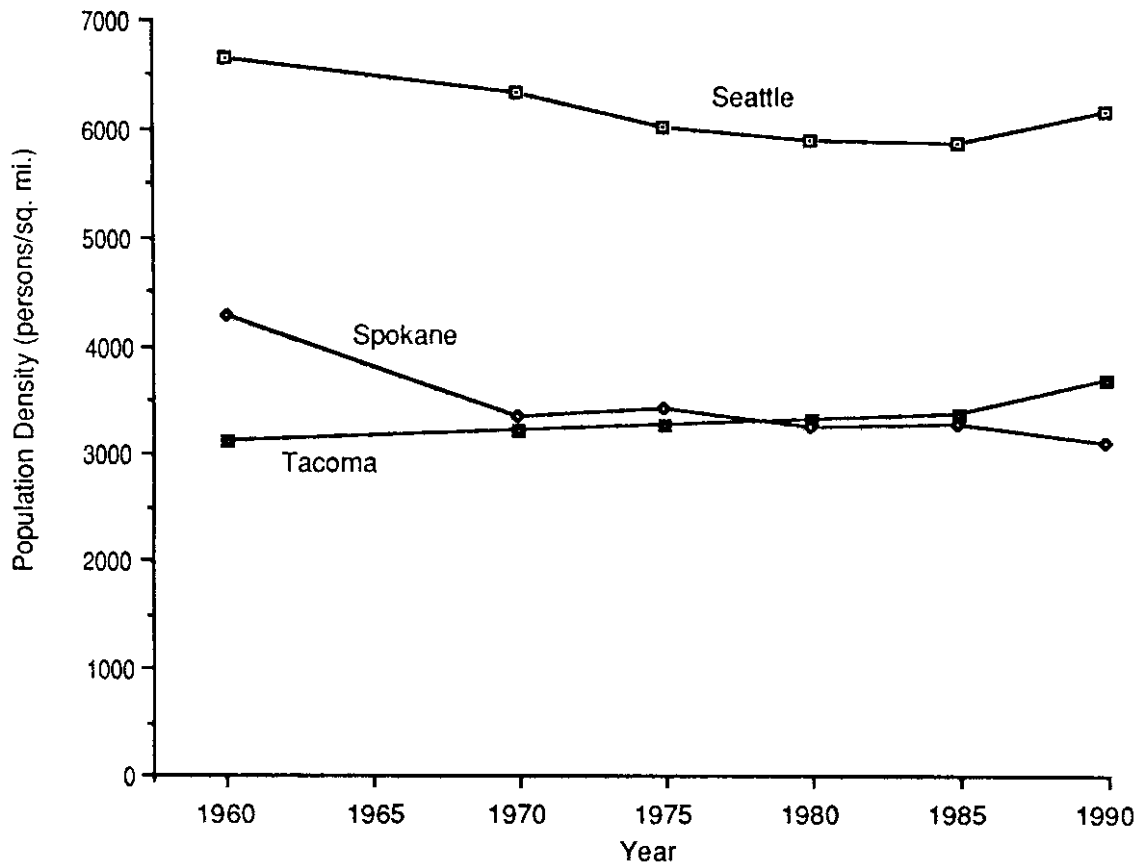
WASHINGTON STATE TRANSPORTATION POLICY PLAN



Indicator: Accidents per million VMT
Goal: To provide safe, reliable and convenient access
Source: WSDOT Accident Data Branch

Figure 7.1. Trend in Accident Rate

WASHINGTON STATE TRANSPORTATION POLICY PLAN



Indicator: Population density in cities
Goal: Linking land use with transportation development
Source: OFM, Authors

Figure 7.2a. Population Density for Selected Central Cities

WASHINGTON STATE TRANSPORTATION POLICY PLAN

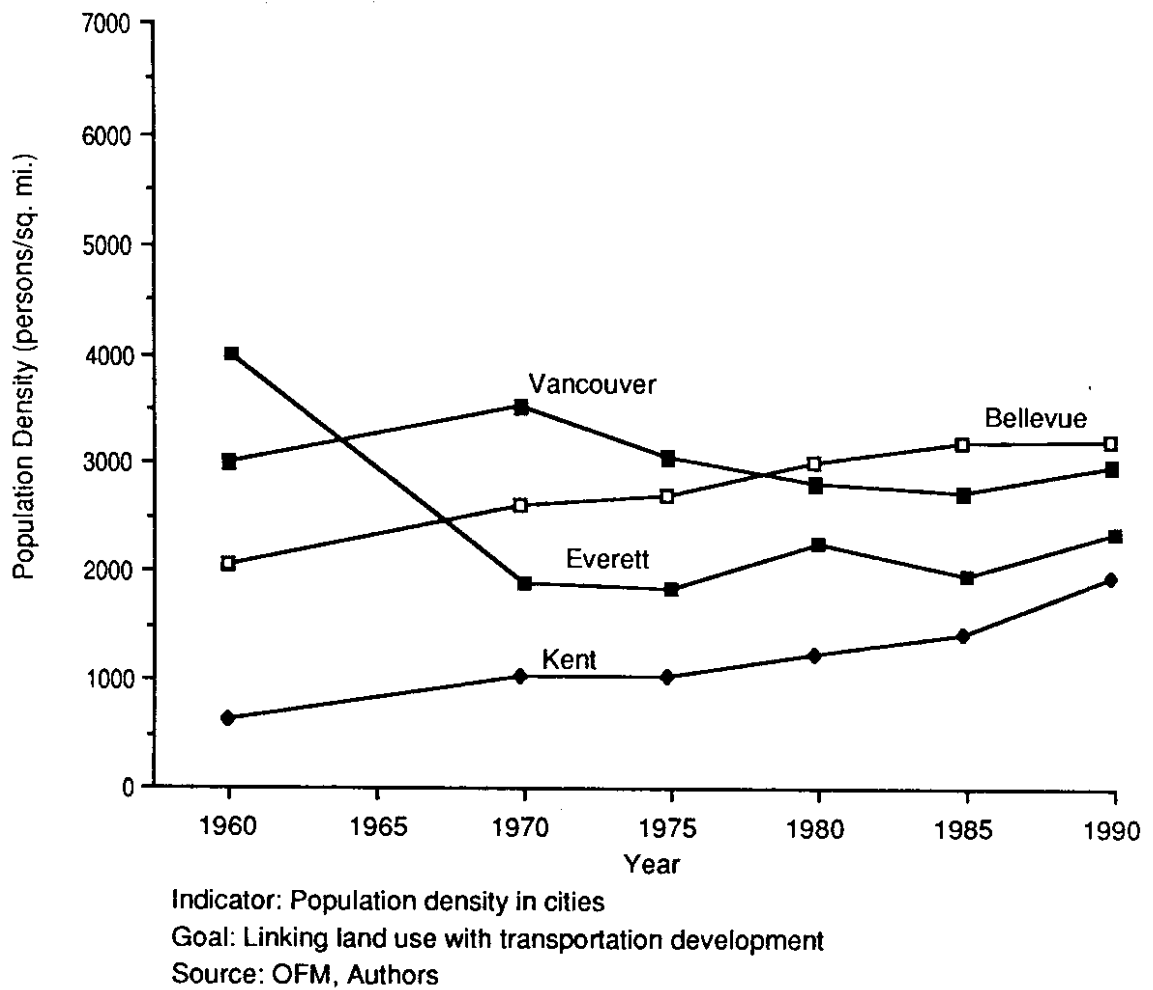
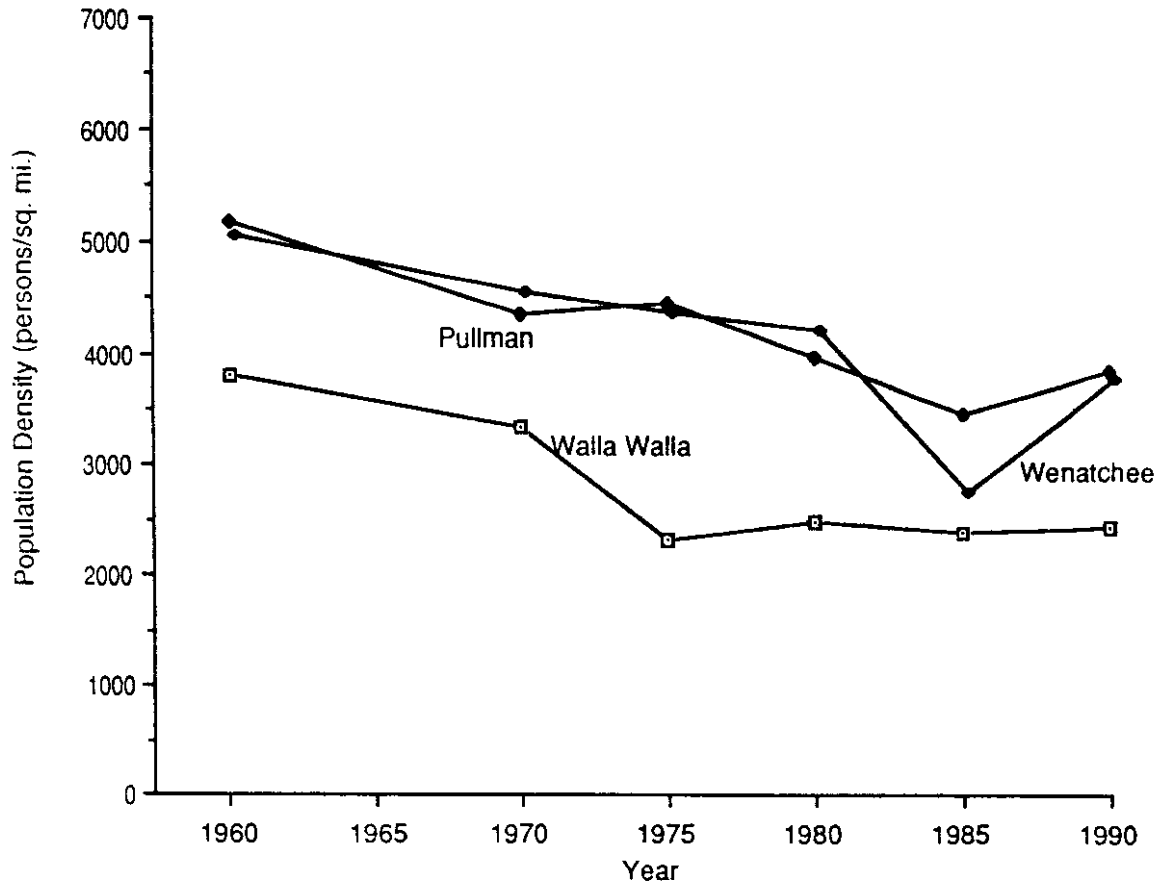


Figure 7.2b. Population Density for Suburbs

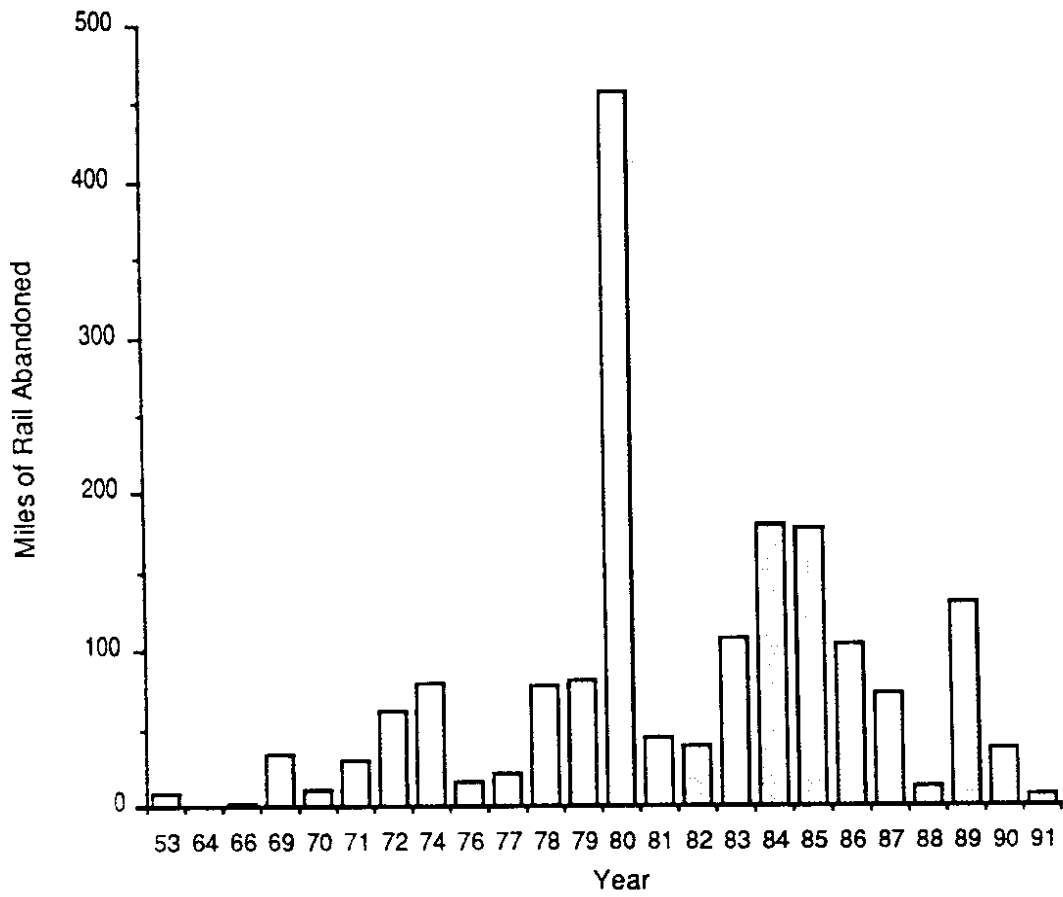
WASHINGTON STATE TRANSPORTATION POLICY PLAN



Indicator: Population density in cities
Goal: Linking land use with transportation development
Source: OFM, Authors

Figure 7.2c. Population Density for Selected Eastern Cities

WASHINGTON STATE TRANSPORTATION POLICY PLAN



Indicator: Miles of Freight Rail Abandoned
Goal: Preservation of existing transportation system
Source: WSDOT Planning Office

Figure 7.3. Abandoned Freight Rail

CHAPTER 8

TOWARD PROGRAM MONITORING

The purpose of this chapter is to explore the issues associated with program monitoring and the feasibility of program monitoring for the Washington State Transportation Policy Plan. Most of this report has focused on performance monitoring, or measuring progress toward the 19 stated goals in the Washington State Transportation Policy Plan. However, as noted in Chapter 1, a variety of public agency programs are the primary vehicles used to achieve planning goals. In fact, if programs designed to reach planning goals are not effectively implemented, those goals probably will not be achieved. Therefore, in addition to performance monitoring, program monitoring is an important source of quantitative and qualitative information on the implementation of adopted plans. According to one author, "programs should be monitored to ascertain their compliance with (or deviation from) stated goals, responsible expenditures of allocated funds, and detection of problems before they mushroom into crisis."⁽¹⁴⁾

As noted in Table 2.1 above, program monitoring activities focus on program objectives and program products rather than ultimate goals. This distinction is important. While programs should contribute toward ultimate goals, they are seldom the only factors involved in attaining them. For example, a program to expand transit service clearly contributes to the goal of increased transit accessibility. However, accessibility itself is affected by much more than just the level of transit service. By definition, program monitoring would aim to measure the specific level of transit service provided by a transit program, while performance monitoring would focus on several measures of accessibility (and other goals) furthered by the transit program.

PROGRAM MONITORING ISSUES

A significant issue with program monitoring is the institutional and organizational relationship between the planning entity that sets goals and objectives and the program managers that oversee their implementation. Most programs that help carry out plans are not under the direct authority of a single planning entity. The Washington State Department of Transportation (WSDOT), for example, is responsible for only a few of the many programs that assist the implementation of the state Policy Plan goals. The state Transportation Policy Plan, a process sponsored by the STC, does not have the statutory responsibility or resources to monitor other departmental and agency program implementation activities in any great detail, with the possible exception of the WSDOT.

Another important issue concerns the preferred criteria that will be used to monitor programs. Program managers tend to see the objectives and performance of their programs differently from the the eyes of an "external" evaluator. Resistance may be high to proposed measurements of their programs against output or productivity standards developed by others, e.g., the state Transportation Commission's state Policy Plan.

A third issue is critical: who does the monitoring? External monitors can be perceived as auditors and as threatening to the autonomy and funding security of a program. On the other hand, self-reporting of program performance often lends itself to inaccurate results. Overall, the business of program monitoring can be threatening to program managers and can generate or escalate interdepartmental and interagency conflicts.

Ultimately, the success of the Policy Plan will depend on the effective implementation of many diverse programs across different organizations to achieve its goals. Some form of performance evaluation structure is needed to enable the state Transportation Commission to know whether these programs are successfully achieving Policy Plan objectives over time.

PROGRAM MONITORING DATA

Project staff developed a data matrix to organize useful program monitoring information. The matrix is displayed in Appendix F. Programmatic Action Strategies are displayed across the top of the matrix. Information useful for program monitoring is provided for each action strategy.

Level of Program Implementation

Many of the action strategies in the Policy Plan require legislative action to be implemented. Therefore, one kind of information worth collecting is whether legislation exists to support the strategy, or legislative efforts are under way on pending legislation, or no legislative efforts are under way.

Institutions Involved in the Strategy

Information was obtained from the Policy Plan's "Preliminary Implementation Plan" (1990) on the agencies involved in the implementation of each programmatic action strategy. For example, the programmatic action strategy "Define and develop a system of heliports to serve state needs" has *WSDOT* listed as the only institution involved, while other strategies rely on the cooperation of several state and/or local agencies.

Program Inputs

An indicator was developed to measure the amount of resources that are or may be devoted to a program. The indicator is usually dollars. For example, the programmatic action strategy, "Define the state's role in transportation planning" has been assigned an input indicator: *\$ devoted to defining the state's role.*

Program Outputs

An indicator was developed to measure the products or results of each program. For example, the programmatic action strategy, "Pass enabling legislation to establish a regional transportation planning process" has been assigned an output indicator: *has legislation been passed.*

Program Quality

The quantity of outputs generated by a program may be the same in two instances, but the quality of the outputs may vary between instances. Therefore, an indicator was developed to measure the quality of a given program. This assessment usually requires the opinions of peers or a panel review. For example, the programmatic action strategy, "Update the 1985 ports and transportation system study" has been assigned the quality measurement: *comprehensiveness of update*. The comprehensiveness would need to be assessed by a designated peer group.

Institutions With Related Programs

Institutions with other programs that involve related activities are listed to encourage coordination. If efforts can be coordinated between programs with similar missions, then greater efficiency will result.

FUTURE WORK

Once program monitoring data have been collected, various analyses can be conducted to learn more about the programs and their effectiveness. For example, when inputs and outputs are compared over time, changes in the cost-effectiveness or efficiency of programs can be determined. In addition, studies can be conducted to compare program outputs to changes in performance measures of progress toward goals so that the contribution made by the program to progress toward the goal can be identified. This kind of program evaluation study would assist the Transportation Commission to determine which programs are most important for accomplishing Policy Plan goals.

CHAPTER 9

MAJOR FINDINGS AND FUTURE WORK

MAJOR FINDINGS

- Performance monitoring can be applied to transportation policy to track progress towards planning goals.
- Other states have little experience with performance monitoring in transportation policy, but the state of Florida is working to build a performance monitoring system.
- Conventional indicators can be used to track progress towards approximately half of the goals in the Washington State Transportation Policy Plan. Less conventional indicators will be required for the other goals.
- Data needed to track changes in about half the indicators are currently available. For the other indicators, data gaps can be filled through data collection from local governments and new data collection efforts.
- Environmental factors such as economics, politics, and technology influence the nature and extent of policy implementation.

FUTURE WORK

The following steps are recommended to help establish a permanent performance monitoring system for the state Transportation Policy Plan.

1. Amend the Policy Plan to make monitoring a formal program objective.
2. Have the Transportation Commission establish a protocol and information system within the WSDOT planning office to maintain data on the performance indicators. Assign staff responsibilities for monitoring.
3. Develop formal understandings with other state agencies that already maintain needed data. These include at a minimum the Department of Community Development, the Department of Ecology, the Office of Financial Management,

the Department of Trade and Economic Development, and the Department of Employment Security.

4. Collect data and where necessary calculate measurements for historic baseline conditions for those indicators that rely on existing data available at the state level. These may include the following indicators:

- Number of accidents per-million VMT
- Total cost of moving goods per ton-mile
- Total cost per person-mile of travel
- Population density in cities
- Employment density in cities
- Jobs/housing balance in cities
- Annual public investments (\$) in port facilities and services
- Dollar value (\$) of transportation investments in distressed areas
- Average fuel consumption per mile
- Amount of air pollutants attributable to vehicles
- Presence/absence of policy that discourages joint development
- Presence/absence of policy that encourages joint development
- Number of jointly development transportation projects
- Number of transportation projects with shared personnel
- Dollar value of technical assistance to local government
- Percentage of district budgets devoted to public information/participation activities
- Number of RTPOs formed
- Number of projects built by TIB with regions
- Number of regionally significant projects completed versus programmed
- Pavement condition index

- Number of rail miles abandoned per year
 - Operational hours of ferry service per capita
 - Percentage of transportation budget for research
 - Dollars devoted to innovative R & D
5. Develop and implement procedures and establish formal agreements for collecting data available at the regional or local level. These include at a minimum Regional Transportation Planning Organizations and local transit agencies. These agreements should address data for the following indicators:
- Variability in travel time between locations
 - Average trip duration between locations
 - Percentage of transit vehicles/stops that are handicapped accessible
 - Consistency between land use and transportation plans
 - Percentage of population living/working within 1/4 mile of transit service
 - Acres of resource lands designated under the Growth Management Act lost by transportation development
 - Acres of sensitive areas designated under the Growth Management Act lost by transportation development
 - Percentage of intermodal linkages with all weather designs
 - Amount of revenue generated to support a mode/amount of revenue required
 - Yearly transit passengers per capita
 - Operational hours of transit per capita
6. Conduct research toward the development of indicators in those areas where more fundamental work is needed. These include the areas of urban design, land use, consistency, and concurrency.

7. Develop and implement procedures for collecting primary data that are currently not collected statewide. This includes data for the following indicators:
 - Variability in travel time between locations
 - Trip duration between locations
 - Consistency between land use and transportation plans
 - Pollutant mix in water runoff from highways
 - Number of people exposed to greater than 70 CNEL due to the transportation system
 - Visual Quality Index rating along state highways
8. Develop long-term targets and 5-year benchmarks as a means of predicting and evaluating progress toward the goals in the plan. This should be based on a study of historical trends, desired future conditions, and the likely progress that can be made toward the desired future conditions.
9. Develop and implement a program monitoring system. For each program this process should include the following:
 - the establishment of a lead agency;
 - the establishment of the authority to monitor between agencies;
 - the establishment of a peer review system to assess program quality;
 - coordination of efforts among other institutions with similar programs;
 - the development of an appropriate schedule for data collection for each program's input and output indicators.
10. Evaluate the relationships between programs and progress toward goals through a comparison of performance indicator data from locations with different levels of program activity. For example, the goal "to revitalize economically distressed areas" would be supported by the following proposed program: "establish a

special account to fund transportation projects in economically distressed areas of the state."

The following indicators are proposed to monitor progress toward this goal:

- average household income in distressed areas;
- number of jobs per unit of area in distressed areas;
- unemployment rates measured in distressed areas.

The program's relationship to progress toward the goal can be tested by comparing data collected for these three indicators in similar locations that do and do not have support from this program.

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APPENDIX A
PROGRAM AREAS WITHIN POLICY PLAN

Reading the Matrices Located in Appendix A

1. The goals are on the vertical axis and the programs are on the horizontal axis.
2. Figures A.1, A.2, and A.3 correlate the first nine goals with all 30 programs, and Figures A.4, A.5, and A.6 correlate the remaining ten goals with the same 30 programs.

ABBREVIATIONS USED IN APPENDICES A-C

RTPO - Regional Transportation Planning Organization

EIS - Environmental Impact Statement

DTED - Department of Trade and Economic Development

WSDOT - Washington State Department of Transportation

DCD - Department of Community Development

HPMS - Highway Performance Modeling System

PSWQU - Puget Sound Water Quality Authority

DOE - Department of Ecology

TIB - Transportation Improvement Bureau

BN - Burlington Northern

TRAC - Washington State Transportation Center

Washington State Transportation Policy Plan

PROGRAM AREAS WITHIN POLICY PLAN

GP1 10-2-90

LEVEL OF PROGRAM IMPLEMENTATION	Working Together		Protecting Our Investments								Personal Mobility
	establish a statewide regional transportation planning process	require comprehensive plans to integrate transportation and land-use planning	provide sufficient funds to ensure preservation of existing road system	emphasize preservation as the priority in funding	provide permanent funding structure for state & county ferry systems	conduct a study to determine level and source of funding for transit	continue freight rail planning to identify rail lines to be preserved	provide state support to preserve airports of state significance	preserve portions of the transportation system for non-motorized use	establish a state policy on urban mobility	
in progress	I	I	L			L					L
legislation required	L										
no work to date	N										
program unrelated to goal											
to provide safe, reliable, and convenient access to employment, educational, recreational, opportunities in order to reinforce a sense of community statewide											
Personal Mobility											
providing cost effective accessibility for goods	I	I					I				
providing cost effective accessibility for people	I	I				L					L
linking land-use development directly with transportation system development	I	I									L
supporting international trade											
revitalizing blighted urban areas											
revitalizing economically isolated areas											
conserve scarce resources	I					L					L
reduce pollutants and other wastes from trans. system											
Natural Environment											

Note: Refer to list of abbreviations located at the front of the appendices

GOAL AREAS

Washington State Transportation Policy Plan

PROGRAM AREAS WITHIN POLICY PLAN

GP2 10-2-90

LEVEL OF PROGRAM IMPLEMENTATION	Personal Mobility									Economic Opportunity						
	study the need for regional authorities to coord. resource alloc. for urban trans. prog.	dev. mech. to coord. delivery and fund. of all rural and special needs pub. trans. prog.	dev. a program to estb. and operate intermodal connection terminals at the community level	estb. a state policy that encourages access and safe use of trans. sys. by cyclists & peds.	update the 1985 ports and transportation systems study	study future capacity requirements and locs. for statewide cargo and air pasgr. services	continue to develop the Washington State Airport Systems Plan underway	define and develop a system of heliports to serve state needs	conduct a highway commodity flow to define highway freight movement needs	incorporate freight concerns into highway systems plans						
in progress	I	I	I	L												
legislation required																
no work to date																
program unrelated to goal																
to provide safe, reliable, and convenient access to employment, educational, recreational, opportunities in order to reinforce a sense of community statewide																
providing cost effective accessibility for goods																
providing cost effective accessibility for people																
linking land-use development directly with transportation system development																
supporting international trade																
revitalizing blighted urban areas																
revitalizing economically isolated areas																
conserve scarce resources																
reduce pollutants and other wastes from trans. system																

GOAL AREAS

Note: Refer to list of abbreviations located at the front of the appendices

Washington State Transportation Policy Plan

PROGRAM AREAS WITHIN POLICY PLAN

GP3 10-2-90

GOAL AREAS	LEVEL OF PROGRAM IMPLEMENTATION		Economic Opportunity											
	I	L	N	establish priorities and alignments for routes that serve ports	identify and assess resources to improve a core system of roads to move eg. commodities	identify options to mitigate impacts of urban cong. on freight movement in state	coord. w/ other states to dev. uniform regs. and a strategy to adrs. overwt. imp. conts.	maximize the opportunities for safe, multiple uses of rights-of-way	implement rail branch line rehabilitation assistance and corridor preservation	implement rail r.o.w. res. program and state asst. to regional psgr. rail transit authorities	seek support for additional federal freight rail preservation and safety program	estb. a special acct. to fund trans. projects in economically distressed areas of state	determine aspects of the transportation system which should be targeted to enhance tourism	
Personal Mobility														
Economic Vitality	to provide safe, reliable, and convenient access to employment, educational, recreational, opportunities in order to reinforce a sense of community statewide													
	providing cost effective accessibility for goods													
	providing cost effective accessibility for people													
	linking land-use development directly with transportation system development													
Natural Environment	supporting international trade													
	revitalizing blighted urban areas													
	revitalizing economically isolated areas													
	conserve scarce resources													
	reduce pollutants and other wastes from transportation system													

Note: Refer to list of abbreviations located at the front of the appendices

Washington State Transportation Policy Plan

PROGRAM AREAS WITHIN POLICY PLAN

GP5 10-2-90

LEVEL OF PROGRAM IMPLEMENTATION	Personal Mobility			Economic Opportunity						
	study the need for regional authorities to coord. resource alloc. for urban trans. progs.	dev. mech. to coord. delivery and fund. of all rural and special needs pub. trans. progs.	dev. a program to estab. and operate intermodal connection terminals at the community level	estab. a state policy that encourages access and safe use of trans. sys. by cyclists & peds.	update the 1985 ports and transportation systems study	study future capacity requirements and locs. for statewide cargo and air pasgr. services	continue to develop the Washington State Airport Systems Plan underway	define and develop a system of heliports to serve state needs	conduct a highway commodity flow to define highway freight movement needs	incorporate freight concerns into highway systems plans
in progress										
legislation required										
no work to date										
program unrelated to goal										
avoiding the disruption and degradation of historically and environmentally significant locations										
including effective urban design in transportation facilities										
insure the collection of appropriate revenues to support the transportation system										
encourage opportunities for public/private partnerships										
promote greater sharing and coordination of technical expertise b/wrn. state local governments										
promote sensitivity to public participation										
facilitate interjurisdictional and regional coordination										
clearly connect land-use planning and transportation planning										
assure the preservation of the needed system										
sponsors innovative research and development in cooperation with academia, private ...										

GOAL AREAS

Note: Refer to list of abbreviations located at the front of the appendices

APPENDIX B
GOAL INDICATOR DEVELOPMENT PROCESS

NOTE: The number assigned to each of the goals in Appendix B is used to reference the indicators in the identification of data sources tables located in Appendix D.

Washington State Transportation Policy Plan

GOAL INDICATOR DEVELOPMENT PROCESS

GLIND2 12-5-90

GOAL ITEM & REFERENCE #, TYP.	ISSUES & CONCERNS	INDICATOR
PERSONAL MOBILITY	<ul style="list-style-type: none"> 1) to provide safe, reliable, and convenient access to employment, educational, and recreational opportunities in order to reinforce a sense of community statewide 	<ul style="list-style-type: none"> - safety = # of incidents per pm pk hr in system - reliability = variation in travel time at specified locations - convenience = travel time at specified locations
ECONOMIC VITALITY	<ul style="list-style-type: none"> 2) providing cost effective accessibility for goods 	<ul style="list-style-type: none"> - total cost of moving goods/ total value of trade
	<ul style="list-style-type: none"> 3) providing cost effective accessibility for people 	<ul style="list-style-type: none"> - vehicle occupancy rates at specified locations
	<ul style="list-style-type: none"> 4) linking land-use planning directly with transportation planning 	<ul style="list-style-type: none"> - # of jurisdictions complying w/concurrency provisions in Growth Management Act - # of RTPOs formed
	<ul style="list-style-type: none"> 5) linking land-use development directly with transportation system development 	<ul style="list-style-type: none"> - # of dwelling units per acre - % modal split over time - average trip length - average travel time between specified points in trans. system
NATURAL ENVIRONMENT	<ul style="list-style-type: none"> 6) supporting international trade 	<ul style="list-style-type: none"> - total value of freight in state per year
	<ul style="list-style-type: none"> 7) revitalizing blighted urban areas 	<ul style="list-style-type: none"> - average household income in distressed areas - # of jobs per unit of area in distressed areas - unemployment rates measured in distressed areas
	<ul style="list-style-type: none"> 8) revitalizing economically isolated areas 	<ul style="list-style-type: none"> - average fuel consumption per mile (both passenger and freight) - total consumption of fuel in state for transportation purposes
	<ul style="list-style-type: none"> 9) conserve scarce resources 	<ul style="list-style-type: none"> - AIR: amount of pollutants attributable to trans. - WATER: % of highway miles with runoff treatment system - WATER: particulate mix of runoff as compared to standards developed by PSWQA and other agencies - NOISE: # of people exposed to extreme levels from transportation system

Note: Refer to list of abbreviations located at the front of the appendices

GOAL AREAS

Washington State Transportation Policy Plan

GOAL INDICATOR DEVELOPMENT PROCESS

GLIND2 12-5-90

GOAL ITEM	ISSUES & CONCERNS	INDICATOR
NATURAL ENVIRONMENT	11) avoid the disruption and degradation of historically and environmentally significant local.	<ul style="list-style-type: none"> - # of acres of environmentally sensitive land lost due to transportation infrastructure deployment - # of historically significant locations adversely affected by transportation system development
	12) include effective urban design in transportation facilities	<ul style="list-style-type: none"> - presence or absence of pedestrian amenities at transit nodes - presence or absence of pedestrian linkages to transit nodes - % of highway system with landscape treatment and buffering
INSTITUTIONAL FRAMEWORK	13) insure the collection of appropriate revenues to support the transportation system	<ul style="list-style-type: none"> - amount of revenue available to support the transportation system/amount of revenue required to support the transportation system
	14) encourage opportunities for public/private partnerships	<ul style="list-style-type: none"> - presence or absence of policy that discourages joint development - presence or absence of policy that encourages joint development - # of jointly developed transportation projects
	15) promote greater sharing and coordination of technical expertise between state and local government	<ul style="list-style-type: none"> - # of transportation projects with shared personnel - # of technical-applied manuals produced in state
	16) promote sensitivity to public participation	<ul style="list-style-type: none"> - % of citizens who feel they have opportunities for participation - # of programs that promote public participation
	17) facilitate interjurisdictional and regional coordination	<ul style="list-style-type: none"> - # of RTPOs formed - # of projects successfully built by TIB w/regional cooperation - # of interlocal agreements
	18) assure the preservation of the needed system	<ul style="list-style-type: none"> - % of existing highway system at an acceptable standard of repair - % of existing railroad system at an acceptable level of repair - dollar value of deferred maintenance of transit facilities
	19) sponsor innovative research and development in cooperation with academia, private sector and others in order to identify new cost effective methods and address current and future transportation needs	<ul style="list-style-type: none"> - % of annual transportation budget devoted to research - \$ devoted to innovative research and development

Note: Refer to list of abbreviations located at the front of the appendices

GOAL AREAS

APPENDIX C
IDENTIFICATION OF DATA SOURCES

NOTE: The numbers assigned to each of the goals in Appendix C are used to reference the indicators to the appropriate goals in Appendix B and Table 4.1.

Washington State Transportation Policy Plan

IDENTIFICATION OF DATA SOURCES

DAT1 12-5-90

GOAL #	INDICATOR	DATA IS AVAILABLE AT STATE LEVEL	DATA IS AVAILABLE AT LOCAL LEVEL	PRIMARY COLLECTION OF DATA REQUIRED
1	- safety = # of incidents per pm pk hr in system	Traffic Safety Commission Annual Report for State		
	- reliability = variation in travel time at specified locations			panel survey to indicate travel time between points
	- convenience = travel time at specified locations			
2	- total cost of moving goods/ total value of trade	DTED		
	- vehicle occupancy rates at specified locations			vehicle occupancy surveys throughout state
3	- # of jurisdictions complying w/concurrency provisions in Growth Management Act			WSDOT Planning Office
	- # of RTPOs formed			monitor compliance of 6 year road & street program
4	- # of dwelling units per acre			
	- % modal split over time	10 year census		needed for in intercensal yrs.
5	- average trip length			
	- average travel time between specified points in trans. system			panel and household travel survey
6	- total value of freight in state per year	DTED		
	- average household income in distressed areas	DTED & DCD identification of distressed areas		
7 & 8	- # of jobs per unit of area in distressed areas			
	- unemployment rates measured in distressed areas			
9	- average fuel consumption per mile (both passenger and freight)	WSDOT annual traffic report - HPMS		
	- total consumption of fuel in state for transportation purposes	Department of Ecology Data Services Group		
10	- AIR: amount of pollutants attributable to transportation system			County Public Works Depts. presence of absence of runoff treatmt.
	- WATER: % of highway miles with runoff treatment system			to sample runoff both treated and untreated
	- WATER: particulate mix of runoff as compared to standards developed by PSWQA and other agencies			WSDOT
	- NOISE: # of people exposed to extreme levels from trans. system			

Note: Refer to list of abbreviations located at the front of the appendices

GOAL AREAS

Washington State Transportation Policy Plan

IDENTIFICATION OF DATA SOURCES

DAT1 12-5-90

GOAL #	INDICATOR	DATA IS AVAILABLE AT STATE LEVEL	DATA IS AVAILABLE AT LOCAL LEVEL	PRIMARY COLLECTION OF DATA REQUIRED
11	<ul style="list-style-type: none"> - # of acres of environmentally sensitive land lost due to transportation infrastructure deployment - # of historically significant locations adversely affected by transportation system development 	DOE EIS data State historical registry		
12	<ul style="list-style-type: none"> - presence or absence of pedestrian amenities at transit nodes - presence or absence of pedestrian linkages to transit nodes - % of highway system with landscape treatment and buffering 			field surveys
13	<ul style="list-style-type: none"> - amount of revenue available to support the transportation system/amount of revenue required to support the transportation system 	WSDOT priority program model & Pavement Mgmt. Syst. & Roads Jurr. Study		
14	<ul style="list-style-type: none"> - presence or absence of policy that discourages joint development - presence or absence of policy that encourages joint development - # of jointly developed transportation projects 		jointly develop & survey multi-modal facilities	legal analysis required
15	<ul style="list-style-type: none"> - # of transportation projects with shared personnel - # of technical-applied manuals produced in state 		survey of local jurisdictions	
16	<ul style="list-style-type: none"> - % of citizens who feel they have opportunities for participation - # of programs that promote public participation 			survey citizens survey local & state governments
17	<ul style="list-style-type: none"> - # of RTPOs formed - # of projects successfully built by TIB w/regional cooperation - # of interlocal agreements 	WSDOT TIB	survey local gov'ts.	
18	<ul style="list-style-type: none"> - % of existing highway system at an acceptable standard of repair - % of existing railroad system at an acceptable level of repair - dollar value of deferred maintenance of transit facilities 	WSDOT Materials Lab PMS & bridge data WSDOT & BN		
19	<ul style="list-style-type: none"> - % of annual transportation budget devoted to research - \$ devoted to innovative research and development 	WSDOT Research Office & TRAC Innovations Unit	Local transit operators	

Note: Refer to list of abbreviations located at the front of the appendices

GOAL AREAS

APPENDIX D
SURVEY RESULTS FROM INDICATOR
REFINEMENT PROCESS

APPENDIX D

SURVEY RESULTS FROM INDICATOR REFINEMENT PROCESS

I. General Comments on Preliminary Indicators

RESPONDENT #1 (A Metropolitan Planning Organization (MPO)):

Recommends approaching the indicators in a more simplistic manner for statewide monitoring and applying more specific and complex measures to the metropolitan areas. The setting of performance objectives is also recommended prior to the development of indicators.

Rank Order of Goals — no rank order was indicated

RESPONDENT #2 (Washington State Department of Transportation):

Indicators need to be transportation related, as with the case of blighted/distressed urban areas. Questions how urban design goal indicators will be implemented; are they nominal, etc.

Rank Order of Goals

- #1 safe, reliable, convenient access
- #2 preservation of needed system
- #3 reduce pollutants
- #4 ensure collection of appropriate revenue
- #5 link land use development with transportation development

RESPONDENT #3 (University of Washington Professor):

The indicators developed to monitor the goal to link land use planning with transportation planning will serve as a "start," meaning that more thought is required to develop meaningful indicators. We need to link blighted/distressed urban area goal indicators with transportation investment. Collection of appropriate revenue indicators need to assess specific modes to be meaningful. In addition, the qualitative indicators such as those developed to measure citizen participation are not good measures.

Rank Order of Goals

- #1 link land use development with transportation development
- #2 include effective urban design in transportation facilities
- #3 ensure the collection of appropriate revenue
- #4 ensure the preservation of the needed system
- #5 reduce pollutants

RESPONDENT #4 (Washington State Department of Transportation):

Feedback pertaining to the goal to provide safe, reliable, convenient access was particularly useful. The location of monitoring stations to determine travel time

needs to take into account total trip time not just the link. This is somewhat confusing and may not be practical. Good ideas for indicators of the urban design goal were provided.

Rank Order of Goals

- #1 assure the preservation of the needed system
- #2 provide cost effective accessibility for goods
- #3 link land use planning with transportation planning
- #4 safe, reliable, convenient access
- #5 reduce pollutants

RESPONDENT #5 (Washington State Transportation Commission):

Particular areas of concern are that we be sensitive to issues that are statewide and pertinent to non-Puget sound residents. In addition, attempting to create quantifiable, measurable indicators is essential. Sensitivity to political issues and transportation relatedness were concerns as well.

Rank Order of Goals — none indicated

II. Indicators in Detail

Goal #1 — *Provide safe, reliable, convenient access*

- Comments:**
- safety; use number of accidents (as opposed to incidents) per million of vehicle miles travelled (MPO, WSDOT)
 - reliability; locations for monitoring must be for total trip not just link (WSDOT)
 - convenience; locations for monitoring must be for total trip not just link (WSDOT)

- Alternatives:**
- population of state/miles of primary and interstate route (MPO)
 - population of state/miles of intercity bus service (MPO)

Goal #2 — *Provide cost effective accessibility for goods*

- Comments:**
- total costs does not necessarily indicate cost effective; assess alternative costs/mode (University of Washington)
 - accurate if all modes are combined (WSDOT)

- Alternatives:**
- total cost per ton-mile (MPO)
 - alternative: investment/goods moved (WSDOT)

Goal #3 — *Provide cost effective accessibility for people*

- Comment:** • indicator needs to relate to goal; assess costs and transportation alternatives (University of Washington)
- Alternatives:** • investment/people moved system wide and site specific (WSDOT)
- cost per person-mile of travel (MPO)

Goal #4 — *Link land use planning directly with transportation planning*

- Comments:** • indicators provided are a superficial measurement. It does not mean that they are doing it. (WSDOT)
- number of RTPOs functioning (Transportation Commission)
- Alternative:** • number of RTPOs in compliance with regional development strategy requirement of state planning standards (MPO)

Goal #5 — *Link land use development directly with transportation development*

- Comment:** • differentiate between within Puget Sound and east versus west (Transportation Commission)
- Alternatives:** • percentage of population near transit (WSDOT)
- concurrency compliance (WSDOT)
- level of service on links (WSDOT)
- number of building permits approved meeting concurrency requirements divided by total building permits submitted (MPO)

Goal #6 — *Support international trade*

- Comments:** • indicator may miss exports from eastern Washington that go via Columbia River
- need to distinguish between value of goods and value of transportation services (University of Washington)
- Alternatives:** • dollar value of transportation related development (MPO)
- percentage of freight moved by mode (WSDOT)

Goal #7 — Revitalize blighted urban areas

- Comments:**
- the indicators developed are not sufficiently transportation related (Transportation Commission, WSDOT, University of Washington)
- Alternatives:**
- average housing price/average salary # of housing rehabs
 - dollar value of transportation related development (MPO)

Goal #8 — Revitalize economically isolated areas

- Comments:**
- indicator needs to be more transportation related (University of Washington)
 - maybe for ongoing monitoring of where the areas are — not useful beyond that (WSDOT)
- Alternative:**
- number of new jobs created a result of transportation improvements

Goal #9 — Conserve scarce resources

- Comments:**
- although already indicated; measures need to deal separately with passenger and freight (Transportation Commission)
 - compare to potential (University of Washington)
- Alternatives:**
- average fleet fuel efficiency in MPG (WSDOT)
 - ton-mile per unit moved for freight (Transportation Commission)
 - passenger-mile per passenger moved (McKibbon)

Goal #10 — Reduce pollutants

- Comments:**
- AIR:**
 - relate directly to fuel consumption (WSDOT)
 - when using number of days in violation of EPA standards as an indicator there are too many other variables affecting measure (WSDOT)
 - WATER:**
 - need to focus on effectiveness of treatment system (WSDOT)
 - expand measure to include a water quality analysis (WSDOT)
 - NOISE:**
 - use a given DHB level not "unhealthy" as opposed to using a level using unhealthy in indicator (WSDOT)
 - measure of unhealthy level should be that which is greater than 70dba (MPO)
- Alternative:**
- NOISE:**
 - number of miles of highways that are noise generators (expose people to excessive noise) (WSDOT)

Goal #11 — Avoid the disruption and degradation of historically and environmentally significant locations

- Comments:**
- with regard to environmentally sensitive habitat, indicator is irrelevant due to "No net loss legislation" (WSDOT)
 - need to specify classes as found in state wetlands act (Transportation Commission)
 - with regard to historically significant locations, it is possible to also monitor those locations positively affected by transportation system development (University of Washington)
 - "adversely affected" as used in the historical indicator is too subjective (WSDOT)

Goal #12 — *Include effective urban design in transportation facilities*

- Comments:**
- the indicators developed will all be useless unless they are carefully operationalized. For example, "Presence or absence of pedestrian amenities at transit nodes." How is this measured — standards must be developed for the collection of data. (WSDOT)
 - the indicator (percentage of highway system with landscape treatment and buffering) is foolish (WSDOT)
 - confusion over the indicators ask for a yes or no or to some degree (WSDOT)
 - the indicator: (percentage of highway system with landscape treatment and buffering) is not applicable in eastern Washington (Transportation Commission)

- Alternatives:**
- all weather intermodal linkages (WSDOT)
 - sidewalks/highways as a percentage of the total highway system (WSDOT)
 - roadmiles of urban corridors revitalized through urban design and access control (WSDOT)

Goal #13 — *Ensure the collection of appropriate revenues to support the transportation system*

- Comments:**
- indicator should be the amount of revenue required as opposed to the amount of revenue available to support the transportation system in the numerator (Transportation Commission)
 - concern over how predictable the indicator developed will be (Transportation Commission)
 - need to assess the modes within the transportation system — money available for one mode is not necessarily "trans" (University of Washington)

- Alternative:**
- needs/revenue ratio (WSDOT)

Goal #14 — *Encourage opportunities for public/private partnerships*

- Comments:**
- good indicators developed (Transportation Commission)
 - accurate measure checked by all respondents

Goal #15 — *Promote greater sharing and coordination of technical expertise*

Comment: • indicator calling for the number of technical applied manuals produced in and disseminated by the state is too bureaucratic (Transportation Commission)

Alternative: • dollar value of technical assistance to local governments

Goal #16 — *Promote sensitivity to public participation*

Comments: • regarding the indicator (percentage of citizens surveyed who feel they have opportunities for participation), if constituencies have a problem they will speak up. (WSDOT)

• regarding the indicator (number of programs that promote public participation), this information is hard to obtain on a statewide level. (WSDOT)

Alternative: • percentage of district budget devoted to public information activities (WSDOT)

Goal #17 — *Facilitate interjurisdictional and regional coordination*

Comment: • Is the indicator, "# of interlocal agreements" a bureaucracy measure? (WSDOT)

Alternative: • number of regionally significant transportation projects completed versus programmed (MPO)

Goal #18 — *Assure the preservation of the needed system*

Comments: • the indicators as separated by mode are a good idea but questions over whether they can be implemented are raised (WSDOT)

• dollar value of deferred maintenance is hard to obtain for transit facilities (WSDOT)

Alternatives: • percentage of miles of abandoned railroad lines (WSDOT)

• ferry system deferred maintenance (WSDOT)

Goal #19 — *Sponsor innovative research*

Comments: • none

APPENDIX E
INDICATOR DATA ASSESSMENT FORMS

APPENDIX E

INDICATOR DATA ASSESSMENT FORMS

The Indicator Data Assessment Forms are comprised of seven sections:

CATEGORY	DATA
<i>I. Proposed Indicator (as per data source)</i>	This is the indicator that was developed in response to the availability of existing data, further research and interviews with subject experts.
<i>II. Explanation of Proposed Indicator</i>	This statement describes how the indicator applies to the goal statement.
<i>III. Current Data Availability</i>	This section applies to those indicators for which there is existing data. The analysis includes the identification of sources, coverage, time frame available, frequency of collection, geographic unit of analysis, format in which the data is available, and the method by which it is obtained. Data was available for certain indicators to enable the project staff to produce historical or baseline trends.
<i>IV. Recommended Data Source(s)</i>	If there is insufficient data available to support the indicator then alternative sources are identified.
<i>V. Proposed Data Collection Process</i>	This section identifies how the data might be obtained if sufficient data does not exist. Two pieces of information are disclosed: <ul style="list-style-type: none">• research references which contain a method for data collection; and• a brief overview of how a data collection process might be conducted.
<i>VI. Level of Effort Assessment</i>	Seven levels of effort were developed to reflect the level of effort needed to obtain new data. The criteria used for assigning levels of effort are provided in Table 7.2.

Goal # 1

PROVIDE SAFE, RELIABLE, CONVENIENT ACCESS

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #1: PROVIDE SAFE, RELIABLE, CONVENIENT ACCESS

CATEGORY	DATA
<i>I. Proposed Indicator (as per data source)</i>	Number of accidents per million vehicle-miles travelled
<i>II. Explanation of Proposed Indicator</i>	Monitors the total number of accidents per total travel to estimate whether the roads are safer relative to increased usage.
<i>III. Current Data Availability</i>	<ul style="list-style-type: none"> • Sources <ul style="list-style-type: none"> • Agency — WSDOT • Unit — Accident Data Branch • Funding — state and federal • Coverage entire state highway system • Time Frame Available 1977 and on • Frequency compiled monthly • Geographic Unit of Analysis by highway milepost • Format of Data computer file • Method/Measurement Technique continuous survey
<i>IV. Recommended Data Source(s)</i>	Not applicable
<i>V. Proposed Data Collection Process</i>	Not applicable
<i>VI. Level of Effort Assessment — (1)</i>	Data are available, collected regularly, reported at the state level, and available to project staff.

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #1: PROVIDE SAFE, RELIABLE, AND CONVENIENT ACCESS

CATEGORY	DATA
I. Proposed Indicator (as per data source)	Variability in travel time between locations
II. Explanation of Proposed Indicator	The variability in travel time between specified locations estimates how well individuals are able to depend on the system to arrive at a projected time. Simply put, it measures how well they can rely on their arrival occurring when they expect.
III. Current Data Availability	Not available
IV. Recommended Data Source(s)	Travel panel surveys
V. Proposed Data Collection Process	<ul style="list-style-type: none"> • Research Documentation "Developing a Household Travel Panel Survey for the Puget Sound Region" (Murakami & Watterson, Puget Sound COG, 1990) • Methodology Overview <ol style="list-style-type: none"> 1. Establish panel surveys for each RTPO similar to that which is outlined in the paper cited above. 2. Compile data from travel logs on travel times for one month intervals three times a year. 3. Document daily variations.
VI. Level of Effort Assessment — (6)	Requires the primary collection of data that is labor intensive.

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #1: PROVIDE SAFE, RELIABLE, CONVENIENT ACCESS

CATEGORY	DATA
I. <i>Proposed Indicator (as per data source)</i>	Average trip duration between locations
II. <i>Explanation of Proposed Indicator</i>	The amount of time required to travel between fixed points is a measure of convenience. People generally use time-distance as a measure of accessibility.
III. <i>Current Data Availability</i>	<ul style="list-style-type: none"> • Sources <ul style="list-style-type: none"> • Agency — PSCOG • Unit — Technical Services Division • Funding — U.S. Department of Energy and WSDOT • Coverage Puget Sound Region • Time Frame Available 1989 and 1990 • Frequency not known • Geographic Unit of Analysis Puget Sound Region • Format of Data computer file • Method/Measurement Technique household travel panel survey
IV. <i>Recommended Data Source(s)</i>	<ul style="list-style-type: none"> • Travel panel surveys
V. <i>Proposed Data Collection Process</i>	<ul style="list-style-type: none"> • Research Documentation "Developing a Household Travel Panel Survey for the Puget Sound Region" (Murakami & Watterson, Puget Sound COG, 1990) • Methodology Overview <ol style="list-style-type: none"> 1. Establish panel surveys for each RTPO similar to that which is outlined in the paper cited above. 2. Have data collected three times a year.
VI. <i>Level of Effort Assessment — (6)</i>	Requires the primary collection of data and is labor intensive.

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #1: PROVIDE SAFE, RELIABLE, CONVENIENT ACCESS

CATEGORY	DATA
<i>I. Proposed Indicator (as per data source)</i>	Percentage of transit vehicles and stops that are handicapped accessible
<i>II. Explanation of Proposed Indicator</i>	Uses the proportion of the transit vehicles and stops that are handicapped accessible as an indicator of access available to handicapped patronage.
<i>III. Current Data Availability</i>	Not available
<i>IV. Recommended Data Source(s)</i>	Transit authorities
<i>V. Proposed Data Collection Process</i>	<ul style="list-style-type: none"> • Research Documentation None • Methodology Overview <ol style="list-style-type: none"> 1. Assess the number of vehicles and stops that are equipped for handicapped service using applicable guidelines. 2. Determine the percentage of total vehicles and stops that are handicapped accessible. 3. Conduct biannually.
<i>VI. Level of Effort Assessment — (5)</i>	Data are readily available to transit authorities to conduct internally.

Goal #2

LINK LAND USE WITH TRANSPORTATION DEVELOPMENT

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #2: LINK LAND USE WITH TRANSPORTATION DEVELOPMENT

CATEGORY	DATA
I. <i>Proposed Indicator (as per data source)</i>	Percentage of population living and working within 1/4 mile of public transit service
II. <i>Explanation of Proposed Indicator</i>	The percentage of the population within walking distance to public transit service measures how well land use and transit are coordinated.
III. <i>Current Data Availability</i>	Not available
IV. <i>Recommended Data Source(s)</i>	U.S. Census Block Data for population, DES or U.S. Journey to Work Census for jobs
V. <i>Proposed Data Collection Process</i>	<ul style="list-style-type: none"> • Research Documentation None • Methodology Overview <ol style="list-style-type: none"> 1. Geographically overlay transit network on population and job data. 2. Count population and jobs in blocks that are mostly within a 1/4 mile of transit lines. 3. Divide by total population in service area.
VI. <i>Level of Effort Assessment — (3-4)</i>	Population and job data available at state level but not in usable form. Transit system data available at local level.

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #2: LINK LAND USE WITH TRANSPORTATION DEVELOPMENT

CATEGORY	DATA
<i>I. Proposed Indicator (as per data source)</i>	Employment density in cities
<i>II. Explanation of Proposed Indicator</i>	Employment density is a good predictor of the feasibility of a multimodal transportation system and the demand for transportation facilities.
<i>III. Current Data Availability</i>	<ul style="list-style-type: none"> • Sources <ul style="list-style-type: none"> • Agency — Department of Employment Security for jobs and OFM for city area • Funding — State • Coverage statewide • Time Frame Available historical • Frequency annual • Geographic Unit of Analysis city • Format of Data tabular and computer file • Method/Measurement Technique Continuous survey
<i>IV. Recommended Data Source(s)</i>	Not applicable
<i>V. Proposed Data Collection Process</i>	<ul style="list-style-type: none"> • Research Documentation None • Methodology Overview <ol style="list-style-type: none"> 1. Divide city employment data by area of cities. 2. Dept. of Economic Security data are by county and not useful in original format. The number of jobs per smaller units of area are available on a fee basis upon request. 3. Conduct on a biannual basis.
<i>VI. Level of Effort Assessment — (3)</i>	Data collected regularly at the state level but not in a form that is readily available.

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #2: LINK LAND USE WITH TRANSPORTATION DEVELOPMENT

CATEGORY	DATA
I. Proposed Indicator (as per data source)	Population density in cities
II. Explanation of Proposed Indicator	Based upon the assumption that population densities are associated with the ability to provide multimodal transportation service and the demand for transportation facilities.
III. Current Data Availability	<ul style="list-style-type: none"> • Sources <ul style="list-style-type: none"> • Agency — Office of Financial Management • Unit — Forecasting division • Funding — State • Coverage statewide • Time Frame Available 1967 and on • Frequency annual • Geographic Unit of Analysis jurisdiction • Format of Data tabular prior to 1980, computer file after 1980 • Method/Measurement Technique continuous survey for both land areas, including annexations and population
IV. Recommended Data Source(s)	Office of Financial Management, "Population Trends for Washington State"
V. Proposed Data Collection Process	<ul style="list-style-type: none"> • Research Documentation None • Methodology Overview <ol style="list-style-type: none"> 1. Collect OFM land area and population data. 2. Divide population by land area (in square miles) to get total population per square mile.
VI. Level of Effort Assessment — (1)	Data collected regularly at state level, available and usable.

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #2: LINK LAND USE WITH TRANSPORTATION DEVELOPMENT

CATEGORY	DATA
<i>I. Proposed Indicator (as per data source)</i>	Jobs/housing balance in cities
<i>II. Explanation of Proposed Indicator</i>	Uses the ratio of jobs to households as an overall indicator of regional "balance." "Balance" is a measure of the degree to which it is possible to live and work within a specified area, which affects travel demand and vehicle miles travelled.
<i>III. Current Data Availability</i>	Not available
<i>IV. Recommended Data Source(s)</i>	<ul style="list-style-type: none"> • OFM for dwelling units • Department of Economic Security for jobs
<i>V. Proposed Data Collection Process</i>	<ul style="list-style-type: none"> • Research Documentation <ol style="list-style-type: none"> 1. Lincoln Institute for Public Policy: "Achieving Job/Housing Balance; Land Use Planning for Regional Growth" Resource Manual, 1991. 2. Methodology currently being developed by Puget Sound Council of Governments. • Methodology Overview <ol style="list-style-type: none"> 1. Obtain jobs data at city level 2. Obtain dwelling unit data at city level 3. Divide total number of jobs by total number of dwellings 4. Conduct biannually
<i>VI. Level of Effort Assessment — (3)</i>	Data collected regularly at the state level, but not in a form which is readily available.

Goal #3

**REDUCE POLLUTANTS FROM THE TRANSPORTATION
SYSTEM**

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #3: REDUCE POLLUTANTS FROM THE TRANSPORTATION SYSTEM

CATEGORY	DATA
I. Proposed Indicator (as per data source)	Amount of air pollutants attributable to the vehicles
II. Explanation of Proposed Indicator	Measures the amount of pollutants attributable to vehicles.
III. Current Data Availability	<ul style="list-style-type: none"> • Sources <ul style="list-style-type: none"> • Agency — Washington State Department of Ecology • Unit — Air Programs • Funding — state and federal • Coverage urban areas • Time Frame Available 1979 to date • Frequency annually • Geographic Unit of Analysis county • Format of Data computer files • Method/Measurement Technique annual survey
IV. Recommended Data Source(s)	Not applicable
V. Proposed Data Collection Process	<ul style="list-style-type: none"> • Methodology Overview <ol style="list-style-type: none"> 1. Obtain average pollutant rate by fleet type 2. Multiply average by number of vehicles in fleet
VI. Level of Effort Assessment — (3)	Although data are currently collected and reported at the state level, they are not in a form that is readily usable for the indicator described above. It would be necessary to refine the current EPA model to provide necessary output.

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #3: REDUCE POLLUTANTS FROM THE TRANSPORTATION SYSTEM

CATEGORY	DATA
I. Proposed Indicator (as per data source)	Pollutant mix in water runoff from highways
II. Explanation of Proposed Indicator	<p>Research conducted at the University of Washington for WSDOT from 1977 to 1982 has established that among a host of variables, highway runoff quality is most highly correlated with</p> <ul style="list-style-type: none"> • the number of vehicles passing by a given point, and • the purification potential of vegetation in the right of way downslope from the paved surface. <p>Therefore, average daily trips in conjunction with purification potential of vegetation can be used as a predictor of runoff quality. Purification potential is defined as the ability of the vegetative cover in the right-of-way to remove pollutants from highway runoff.</p>
III. Current Data Availability	<p>Permanent Traffic Recorder System (PTR) for traffic volumes only.</p> <ul style="list-style-type: none"> • Sources <ul style="list-style-type: none"> • Agency — WSDOT • Unit — Travel Data Branch • Funding — state and federal • Coverage state highway system • Time Frame Available 1965 and on • Frequency summarized monthly • Geographic Unit of Analysis state highway system • Format of Data computer file • Method/Measurement Technique continuous survey (see charts which follow)
IV. Recommended Data Source(s)	Field survey of highway right-of-way vegetation at sample stations
V. Proposed Data Collection Process	<ul style="list-style-type: none"> • Research Documentation <i>Highway Runoff Water Quality Report # 14: Guide for Water Quality Impact Assessment of Highway Operations and Maintenance, University of Washington, September 1982</i> • Methodology Overview <ol style="list-style-type: none"> 1. Utilize existing PRT data collection process for determining average annual daily traffic. 2. Collect vegetation data in field. 3. Use model to calculate runoff quality.
VI. Level of Effort Assessment — (6)	Data collection needed. Method exists.

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #3: REDUCE POLLUTANTS FROM THE TRANSPORTATION SYSTEM

CATEGORY	DATA
I. <i>Proposed Indicator (as per data source)</i>	Number of people exposed to greater than 70 CNEL because of the transportation system
II. <i>Explanation of Proposed Indicator</i>	The number of individuals exposed to unhealthy levels of noise indicates the overall magnitude of the noise pollution problem. Transportation related sources of noise pollution include highways, trains, and airplanes.
III. <i>Current Data Availability</i>	Not available
IV. <i>Recommended Data Source(s)</i>	Monitoring stations, U.S. Census Bureau
V. <i>Proposed Data Collection Process</i>	<ul style="list-style-type: none"> • Research Documentation "Monitoring Community Noise," Branch, Gilman, and Weber, AIP Journal, July 1974. • Methodology Overview <ol style="list-style-type: none"> 1. Follow process developed in "Monitoring Community Noise" to develop a noise monitoring system. This includes an investment in noise monitors, as well as a central data processing center. 2. Estimate the number of people living in excessive noise areas using block level census data.
VI. <i>Level of Effort Assessment — (6)</i>	The collection of primary data is required, and although a methodology has been developed, it would likely need refining.

Goal #4

**INCLUDE EFFECTIVE URBAN DESIGN IN
TRANSPORTATION FACILITIES**

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

**GOAL #4: INCLUDE EFFECTIVE URBAN DESIGN IN TRANSPORTATION
FACILITIES**

CATEGORY	DATA
<i>I. Proposed Indicator (as per data source)</i>	Percentage of intermodal linkages with all weather designs
<i>II. Explanation of Proposed Indicator</i>	Focusing on intermodal linkages will help to assess the effectiveness of programs designed to integrate several modes of transportation. Effective urban design at the linkages between modes, such as transit station areas, would increase the overall appeal and efficiency of the transportation system.
<i>III. Current Data Availability</i>	Not applicable
<i>IV. Recommended Data Source(s)</i>	Field surveys of transportation systems by jurisdiction.
<i>V. Proposed Data Collection Process</i>	<ul style="list-style-type: none"> • Research Documentation None • Methodology Overview Survey transit authorities and private carriers to identify the number of all weather intermodal linkages with their operating jurisdiction.
<i>VI. Level of Effort Assessment — (7)</i>	The primary collection of data is required, as well as the development of a cost-effective methodology for obtaining the data.

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

**GOAL #4: INCLUDE EFFECTIVE URBAN DESIGN IN TRANSPORTATION
FACILITIES**

CATEGORY	DATA
<i>I. Proposed Indicator (as per data source)</i>	Visual quality rating along state highways
<i>II. Explanation of Proposed Indicator</i>	The visual experience along a highway plays an important role in how people experience highway travel. Degradation of visual quality will be reflected in people's perceptions of the highway system.
<i>III. Current Data Availability</i>	None
<i>IV. Recommended Data Source(s)</i>	Field surveys
<i>V. Proposed Data Collection Process</i>	<ul style="list-style-type: none"> • Research Documentation "Environmental Thresholds Carrying Capacity Study Report," Tahoe Regional Planning Agency, 1982 • Methodology Overview <ol style="list-style-type: none"> 1. Conduct periodic surveys to classify highway segments according to a visual quality classification system. 2. Monitor percentage of segments in each visual class over time.
<i>VI. Level of Effort Assessment — (6)</i>	The primary collection of data is required. Method exists.

Goal #5

ASSURE THE PRESERVATION OF THE NEEDED SYSTEM

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #5: ASSURE THE PRESERVATION OF THE NEEDED SYSTEM

CATEGORY	DATA
I. <i>Proposed Indicator</i> <i>(as per data source)</i>	Pavement condition index
II. <i>Explanation of Proposed Indicator</i>	Makes use of the Pavement Management System currently in place, which monitors the surface condition of the state highway system on a regular basis.
III. <i>Current Data Availability</i>	<ul style="list-style-type: none"> • Sources <ul style="list-style-type: none"> • Agency — WSDOT • Unit — Operations Material Lab • Funding — state • Coverage entire state • Time Frame Available biannual 1969-1988; annual 1988-present • Frequency annual • Geographic Unit of Analysis 1/4 mile road sections • Format of Data report • Method/Measurement Technique continuous survey
IV. <i>Recommended Data Source(s)</i>	Not applicable
V. <i>Proposed Data Collection Process</i>	Not applicable
VI. <i>Level of Effort Assessment</i> — (2)	Data are collected and reported at the state level but are not currently available to the project staff.

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #5: ASSURE THE PRESERVATION OF THE NEEDED SYSTEM

CATEGORY	DATA
I. <i>Proposed Indicator (as per data source)</i>	Number of miles of rail abandoned each year
II. <i>Explanation of Proposed Indicator</i>	Data on the abandonment of existing rail lines can be used to indicate how well the existing rail system is being preserved.
III. <i>Current Data Availability</i>	<ul style="list-style-type: none"> • Sources <ul style="list-style-type: none"> • Agency — WSDOT • Unit — Transportation Planning Office • Funding — state and federal • Coverage state • Time Frame Available 1978 • Frequency every year • Geographic Unit of Analysis by operator jurisdiction • Format of Data system diagram map • Method/Measurement Technique Shipper questionnaires regarding "Light Density System," and public meetings to identify potential candidates for financial assistance to avoid abandonment and maintain as part of "Essential Rail System."
IV. <i>Recommended Data Source(s)</i>	Not applicable
V. <i>Proposed Data Collection Process</i>	Not applicable
VI. <i>Level of Effort Assessment — (1)</i>	Data are currently collected and reported at the state level on a regular basis and are made available to project staff.

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #5: ASSURE THE PRESERVATION OF THE NEEDED SYSTEM

CATEGORY	DATA
I. Proposed Indicator (as per data source)	Yearly transit passengers per capita
II. Explanation of Proposed Indicator	The ratio of passengers to population indicates the overall market capture rate of public transportation within a transit service jurisdiction. This measures the relative competitiveness of public transportation.
III. Current Data Availability	<ul style="list-style-type: none"> • Sources <ul style="list-style-type: none"> • Agency — UMTA — section 15 reports, WSDOT state annual report, and Six Year Capital and Finance Plans • Unit — varies by agency • Funding — local, state and federal • Coverage statewide • Time Frame Available varies by data source • Frequency annual for all three data sources • Geographic Unit of Analysis by transit operator jurisdiction • Format of Data tabular and computer file • Method/Measurement Technique continuous survey
IV. Recommended Data Source(s)	Not applicable
V. Proposed Data Collection Process	<ul style="list-style-type: none"> • Research Documentation As indicated • Methodology Overview <ol style="list-style-type: none"> 1. Identify number of passengers per total population. 2. Repeat process annually.
VI. Level of Effort Assessment — (4)	Data are available at the local level as required by federal and state mandate.

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #5: ASSURE THE PRESERVATION OF THE NEEDED SYSTEM

CATEGORY	DATA
<i>I. Proposed Indicator (as per data source)</i>	Operational hours of transit per capita
<i>II. Explanation of Proposed Indicator</i>	The ratio of route miles to total population indicates the overall level of service available to the general public. This measures how well the population as a whole is served by public transportation.
<i>III. Current Data Availability</i>	<p>For available revenue</p> <ul style="list-style-type: none"> • Sources <ul style="list-style-type: none"> • Agency — UMTA — section 15 reports, WSDOT state annual report, and Six Year Capital and Finance Plans. • Unit — varies by agency • Funding — local, state and federal • Coverage statewide • Time Frame Available varies by data source • Frequency annual for all three data sources • Geographic Unit of Analysis by transit operator jurisdiction • Format of Data tabular and computer file • Method/Measurement Technique continuous survey
<i>IV. Recommended Data Source(s)</i>	Not available
<i>V. Proposed Data Collection Process</i>	<ul style="list-style-type: none"> • Research Documentation As indicated • Methodology Overview <ol style="list-style-type: none"> 1. Identify number of route miles/total population 2. Report to WSDOT 3. Repeat process annually
<i>VI. Level of Effort Assessment — (4)</i>	Data are available at the local level as required by federal and state mandate.

**WASHINGTON STATE TRANSPORTATION POLICY PLAN
PERFORMANCE MONITORING DEMONSTRATION PROJECT**

INDICATOR DATA ASSESSMENT FORM

GOAL #5: ASSURE THE PRESERVATION OF THE NEEDED SYSTEM

CATEGORY	DATA
I. Proposed Indicator (as per data source)	Operational hours per capita of ferry service
II. Explanation of Proposed Indicator	Uses the ratio of operational hours to total population in a ferry service area as a predictor of how well the ferry system is maintaining its level of service.
III. Current Data Availability	<p>Ferry Systems Six-Year Operating Capital Plan</p> <ul style="list-style-type: none"> • Sources <ul style="list-style-type: none"> • Agency — WSDOT • Unit — Marine Division • Funding — state • Coverage state ferry system operating area • Time Frame Available 1987 and on • Frequency annually • Geographic Unit of Analysis by ferry route • Format of Data tabular and computer file • Method/Measurement Technique forecast
IV. Recommended Data Source(s)	U.S. Census Bureau (for population)
V. Proposed Data Collection Process	<ul style="list-style-type: none"> • Research Documentation None • Methodology Overview <ol style="list-style-type: none"> 1. Collect the number of service hours. 2. Identify ferry service area. 3. Collect population data in ferry service area. 4. Divide number of hours by population in service area.
VI. Level of Effort Assessment — (3)	Requires collecting two pieces of data that are currently available. Some calculation is involved to put the data into useful form.

APPENDIX F
MONITORING PROGRAMMATIC
ACTION STRATEGIES

WASHINGTON STATE TRANSPORTATION POLICY PLAN

List of Abbreviations for Appendix F

Abbreviation	Full Title
DCD	Department of Community Development
MPO	Metropolitan Planning Organization
MVET	Motor Vehicle Excise Tax
ID	Identify
DTED	Department of Trade & Economic Development
R-O-W	Right of Way
WSCASP	Washington State Continuous Airport System Plan

Programmatic Action Strategies			GP1A 8-10-91									
Program Implementation Monitoring	Working Together		Protecting Our Investments									
	require comprehensive plans to integrate trans. and land-use planning	define the state's role in transportation planning	pass enabling legislation to establish a regional transportation process									
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Institutions Involved In Strategy	-legislature -cities -counties -DCD	- WSDOT - Trans. Commission - Legislature	-legislature -state & local gov. agencies									
Program Inputs	-state \$ for local plan -local \$	\$ devoted to define state's role	\$ in multimodal funding package									
Program Outputs	% of jurisdictions with plans adopted	has role of state been defined	-miles of road preserved									
Program Quality	quality of plans	effectiveness of state	cost effectiveness of program									
Institutions With Related Programs	DCD-local government assist. prog.	N/A	local government spending									

Programmatic Action Strategies

Program Implementation Monitoring		Protecting Our Investments									
		conduct a study to determine level and source of funding for transit	continue freight rail planning to identify rail lines to be preserved	provide state support to preserve airports of state significance	preserve portions of the transportation system for non-motorized use						
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Institutions Involved In Strategy	<ul style="list-style-type: none"> - legislature - WSDOT - all transportation providers 	<ul style="list-style-type: none"> - WSDOT - industry - local governments 	- WSDOT local governments	- WSDOT local governments							
Program Inputs	- \$ devoted to study	\$ devoted to identifying essential rail system	\$ provided by WSCASP in the form of planning and project funding	- \$ allocated to shoulder widening on state hwy. -\$ for planning bike system							
Program Outputs	% complete	% complete	# of projects completed	-# of lane miles widened -# of miles of bike route built/designated							
Program Quality	study quality per peer review	plan quality per peer review	quality of projects as determined by peer review	quality of facilities as determined by design review							
Institutions with Related Programs	LTC Study	Rail Commission Study	port districts	local government spending							

Programmatic Action Strategies

		Personal Mobility									
Program Implementation Monitoring	Protecting Our Investments	provide permanent funding structure for state & county ferry systems	establish and fund a regional transportation planning process to coordinate transportation improvements among jurisdictions	study the need for regional authorities to coordinate resource allocation for urban transportation projects	develop a mechanism to coordinate the delivery and funding of all rural and special needs public transportation programs	develop a program to establish and operate intermodal connection terminals at the community level					
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Institutions Involved in Strategy	-legislature -WSDOT -counties	insufficient data	-all transportation providers	-WSDOT -transit agencies -local govern -dept. of social services	-WSDOT -local governments -transportation providers						
Program Inputs	\$ allocated from MVET to ferry system	\$ devoted to develop regional process	\$ devoted to study	\$ used to develop mechanism	\$ allocated to the planning, design, and development of facilities						
Program Outputs	permanence of funding	a fully implemented process	% complete	mechanism established or not	# of multimodal facilities planned and operating						
Program Quality	N/A	% of time process is applied	study quality as determined by peer review	quality of mechanism	quality of new facilities as determined by design review						
Institutions with Related Programs	county agencies port districts	local MPOs	Transportation Improvement Board (TIB)	none	none						

Programmatic Action Strategies GP2A2 8-24-91

Program Implementation Monitoring	Personal Mobility			Economic Opportunity					
	determine and provide the desirable levels of accessibility for elderly and handicapped	conduct a study to clarify the transportation needs of rural residents	establish a state policy that encourages access and safe use of transportation system by both bicyclists and pedestrians	update the 1985 ports and transportation systems study					
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Institutions Involved in Strategy	insufficient information	insufficient information	-legislature -WSDOT -Bicycle advisory committee	-legislature -WSDOT -public ports -industry					
Program Inputs	\$ devoted to determine and provide accessibility	\$ devoted to study	\$ devoted to develop policy	\$ devoted to updating study					
Program Outputs	establishment of desirable levels and amount of revenue generated	has study been completed	has policy been adopted	has study been updated					
Program Quality	peer review of program	# of recommendations adopted	strength of policy as determined by peer evaluation	comprehensiveness of update					
Institutions with Related Programs	local transit operators prevention center	NONE	Harbourview injury	NONE					

		Economic Opportunity										
Program Implementation Monitoring		establish priorities and determine needed alignments for routes that serve ports	identify and assess resources to improve a core system of all weather roads to move agricultural commodities	identify options to mitigate impacts of urban congestion on freight movement in state	coordinate with other states to develop uniform regulations and a strategy to address imported containers	maximize the opportunities for safe, multiple uses of rights-of-way						
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Institutions Involved in Strategy		-WSDOT -ports -industry	-WSDOT -Dept. of Agriculture -counties -industry	-WSDOT -MPOs -local governments	-WSDOT -State Patrol -industry	WSDOT						
Program Inputs		\$ allocated to cities and needed alignments	\$ allocated to ID and assess resources avail. to improve core all weather system	\$ to identify options	Hours devoted to inter-state coordination	hours devoted to identify opportunities to maximize safe multiple use						
Program Outputs		% of ports with access routes adequately determined	% complete	% of study complete	# of agreements established between states (uniform legislation)	% complete						
Program Quality		N/A	peer review of document regarding comprehensiveness of study	quality of proposals	# of adjacent states with uniform legislation	quality of study						
Institutions with Related Programs		NONE	local transportation planning efforts	none	other states transportation planning efforts	Transportation Improvement Board (TIB)						

Programmatic Action Strategies

		Economic Opportunity										
Program Implementation Monitoring		implement rail branch line rehabilitation and assistance and corridor preservation	implement rail right-of-way reservation program and state assistance to regional passenger rail transit authorities	seek support for additional federal freight rail preservation and safety program	establish a special account to fund transportation projects in economically distressed areas of state	determine aspects of the transportation system which should be targeted to enhance tourism						
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Institutions Involved in Strategy		-legislature -WSDOT -counties -ports	legislature	WSDOT	legislature	-WSDOT -DTED						
Program Inputs		\$ devoted to rail branch line rehabilitation	-\$ devoted to implement rail R-O-W program	hours devoted to seek additional support	efforts towards creating account	\$ devoted to determine which aspects of transp. system will enhance tourism						
Program Outputs		# of miles of rail branch line assisted	miles of rail R-O-W reserved	funds generated	account set up or not	determination completed						
Program Quality		program cost effectiveness	program cost effectiveness	funds generated relative to cost of seeking support	N/A	plan quality						
Institutions with Related Programs		rail companies	regional rail transit planning	local government efforts	DTED	none						