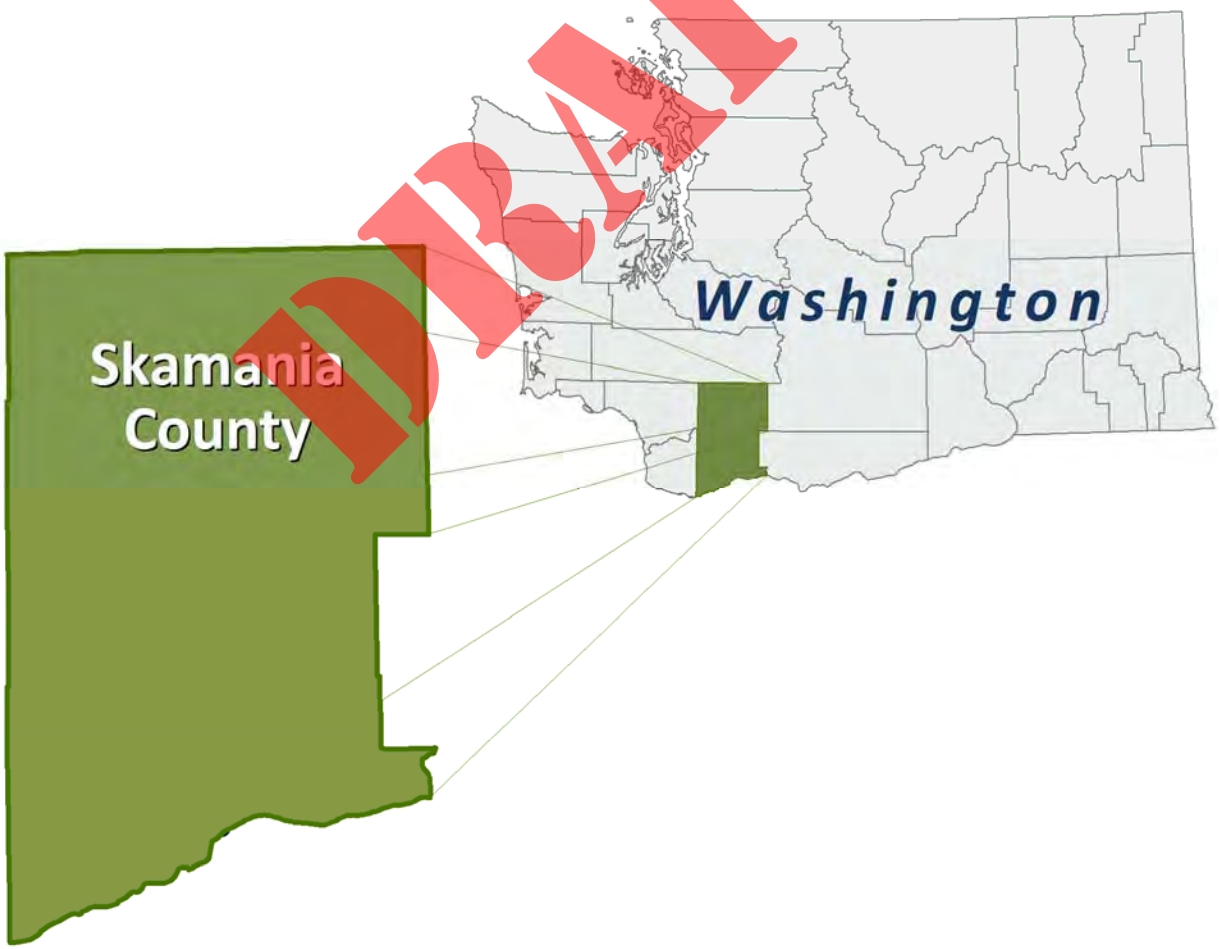
# Regional Transportation Plan for Skamania County, Washington

**May 2014**

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Southwest Washington Regional Transportation Council

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# Regional Transportation Plan for Skamania County, Washington

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RTC

**Skamania County, Washington**

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# Skamania County Transportation Policy Committee

## Policy/Mission Statement

The Committee supports the improvement of safety and efficiency of the regional transportation system in Skamania County.

The Committee supports transportation planning and project development that addresses the improvement of public safety along the regional transportation system.

The Committee supports the identification of "corridor segments" throughout the Skamania County region, which should be the focus of transportation improvement, enhancement, multimodal, and mobility funding.

The Committee supports the coordination between agencies in identifying and addressing, when practical, the needs of a multimodal transportation system.

### *Skamania County Member Jurisdictions*

| |
|---|
| **Skamania County** |
| **City of North Bonneville** |
| **City of Stevenson** |
| **Port of Skamania County** |
| **Washington State Department of Transportation** |

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| | |
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# Chapter 1: Introduction: RTP Vision, Purpose and Goals

The Regional Transportation Plan (RTP) for Skamania County is the region's principal transportation planning document. It represents a regional transportation plan for Skamania County area developed through a coordinated process between local jurisdictions in order to develop regional solutions to transportation needs. The first RTP for Skamania County was adopted in April 1995. This update to the Skamania County RTP will use 2035 as the horizon year and incorporate the latest available data. The RTP is intended to be a plan to meet the transportation needs over the next 20 years by implementing a regional transportation planning process. This introductory chapter presents the vision, purpose, goals, scope, statutory requirements, and decision-making process involved in development of the RTP for Skamania County.

## Vision

The RTP is a collective effort to address the development of a safe regional transportation system that will support planned economic growth and maintain the region's rural quality of life.

## Purpose

The RTP identifies future regional transportation system needs and outlines transportation plans and improvements necessary to maintain adequate mobility and safety within and throughout the Skamania County region. The region must plan for a future regional transportation system that adequately serves the population, employment, and visitor growth projected for Skamania County. The

RTP's goals, objectives, and policies will guide the various jurisdictions and agencies involved in planning and programming of transportation projects throughout Skamania County.

## Goals

The following goals were used to guide the development of the Skamania County Regional Transportation Plan:

- **Preservation**: Maintain and preserve the existing regional transportation system.
- **Safety and Security**: Provide a safe and secure transportation system.
- **Economy**: Provide a transportation system that fosters economic development.
- **Finance**: Provide for the development of a transportation system that efficiently uses financial resources.
- **Accessibility and Mobility**: Provide an integrated and coordinated transportation system that includes a variety of mobility options.
- **Environment**: Provide a transportation system that is sensitive to the quality of the environment and natural resources.
- **Vision and Values**: Provide for viable and livable local communities.
- **Management and Operations:** Maximize efficient management and operation of the transportation system.

There is consistency between the general RTP goals and the policies established by local jurisdictions and agencies as part of their local comprehensive planning process. The Regional Transportation Plan (RTP) for Skamania County, where applicable, will consider the goals established in the *Management Plan for the Columbia River Gorge National Scenic Area, SR-14 Corridor Management Plan*, and consider other long range plans.

### Management Plan for the Columbia River National Scenic Area

- Provide transportation facilities that meet the needs of the traveling public and implement this plan's recreation goals and objectives while protecting scenic, natural, cultural, and recreation resources.
- Promote alternative modes of transportation to improve safety and enjoyment of the traveling public and to help alleviate future traffic demand.

### SR-14 Corridor Management Plan

- Improve safety along SR-14 with respect for the protection and enhancement of resources.
- Enhance the economy of communities along the highway.
- Design Highway 14 as a national attraction by protecting and enhancing scenic, natural, cultural, and recreation resources within the highway corridor, with respect to local residences, and business.
- Manage the SR-14 Corridor in the most efficient and effective manner possible.

## Transportation Strategy

The Regional Transportation Plan for Skamania County is the region's transportation strategy.

## Guidelines and Principles

In 1994, the State Legislature passed legislation that required RTPO's to establish Guidelines and Principles that provide direction for the development of the transportation elements of comprehensive plans. The following represent these guidelines and principles:

- Identify adequate areas for future commercial, retail, and industrial economic growth. Coordinate identified economic growth areas with an efficient transportation system.
- Identify adequate land for residential development and density within urban areas that is coordinated with the transportation system.
- Provide a transportation system that supports the economic vitality of the region, and provides for long-term freight mobility needs and port access.
- Provide a range of non-motorized opportunities within the regional transportation system.
- Work toward the development of a core system of all-weather roads for freight travel.
- Encourage reducing the reliance on the single occupant vehicle by providing other modes of transportation.
- Encourage present and future railroad right of way to be utilized for transportation purposes.
- Enhance intermodal freight connections.

## Scope

The RTP for Skamania County takes the year 2035 as its horizon year. Travel demand for the region is forecasted for this future year and improvements to the transportation system are recommended based on the projected demand.

The area covered by the RTP is the whole of Skamania County. Skamania County is located in the southern part of the state of Washington along the north banks of the Columbia River. Stevenson, the county seat, lies approximately 45 miles east of Portland, Oregon and Vancouver, Washington (Figure 1-1).

*Figure 1-1: Map of Skamania County Location*

People and freight move throughout a regional transportation system without consideration for city, county, or state boundaries. Since transportation problems extend beyond jurisdictional boundaries, the RTP must analyze the future transportation needs for the entire region while creating a cooperative framework for coordinating the individual actions of various jurisdictions.

## Transportation Issues Addressed in RTP

- Transportation system maintenance, preservation, and safety.
- Development of corridors to improve economic development potential.
- Accessibility across the Columbia River in terms of capacity, economic development, corridor location, and connecting roadways.
- Federal, state, local, and private sources of revenue for transportation projects.
- Access to ports, airports, intermodal transportation facilities, major freight distribution routes, and recreation areas.
- The need to relieve and prevent congestion from occurring where it does not yet occur.

- The need to improve corridors with safety problems, including freight corridors.
- The need to provide a multimodal transportation system; including pedestrian, bicycle, bus, truck, rail, marine, and auto.
- The need to provide enhancements (signs, viewpoints, kiosk, etc.), to assist visitors.

# Statutory Requirements

## State

Within Washington State, Metropolitan Transportation Plans are expected to be consistent with the policy framework and objectives described in the transportation plan for Washington State. The most recent Washington Transportation Plan WTP 2030 was developed by the Washington Transportation Commission and adopted in December 2010.

The WTP is based on the following five transportation policy goals established by the Legislature:

- **Economic Vitality**: To promote and develop transportation systems that stimulate, support, and enhance the movement of people and goods to ensure a prosperous economy.
- **Preservation**: To maintain, preserve, and extend the life and utility of prior investments in transportation systems and services;
- **Safety**: To provide for and improve the safety and security of transportation customers and the transportation system;
- **Mobility**: To improve the predictable movement of goods and people throughout Washington State;
- **Environment**: To enhance Washington's quality of life through transportation investments that promote energy conservation, enhance healthy communities, and protect the environment; and

- **Stewardship**: To continuously improve the quality, effectiveness, and efficiency of the transportation system.

The Washington State Highway System Plan (HSP) is the element of Washington's Transportation Plan (WTP) that addresses current and forecast state highway needs. The HSP includes a comprehensive assessment of existing and projected 20-year deficiencies on the state's highway system. It also lists potential solutions that address these deficiencies. The HSP is updated periodically with each version building on the last. The document covers all issues related to the state's highway system. The 2007-2026 version of the HSP takes the WTP's investment guidelines, and identifies the highway system needs, strategies and performance measurements associated with the guidelines.

**HSP Preservation:** Pavement maintenance, preservation of 3,596 statewide structures including bridges, and preservation of other highway assets that include unstable slopes, rest areas, weigh stations and drainage and electrical rehabilitation.

**HSP Safety**: The objective of the safety program focuses on projects reducing and preventing fatalities, decreasing the frequency and severity of disabling injuries and minimizing the societal costs of accidents. The prevention of crossover accidents and run off the road accidents is a priority.

**HSP Economic Vitality**: Identification of highly-productive freight investments.

**HSP Mobility**: Bottlenecks, traffic incidents, bad weather, work zones, poor signal timing and special events are the most significant causes of congestion. HSP mobility solutions include strategies to address congestion at bottleneck and chokepoint locations, timely response to and clearance of incidents, as well as projects to improve system efficiency where traffic in congested corridors travels at speeds below 70% of the posted speed during the peak hour.

**HSP Environmental Quality and Health**: Projects to remove culverts to restore fish passage, reduce highway noise, treat storm water, reduce flooding, provide pedestrian crossings and bicycle connections.

Recent WSDOT plans are documented on WSDOT's Planning section website.

## Washington State's Regional Transportation Planning Program

Washington State's Growth Management Act, enacted in 1990, approved the Regional Transportation Planning Program which created a formal mechanism for local governments and the state to coordinate transportation planning for regional transportation facilities. The Growth Management Act (GMA) authorized the creation of Regional Transportation Planning Organizations (RTPOs) by units of local government. Southwest Washington Regional Transportation Council (RTC) is the designated RTPO for the three-county area of Clark, Skamania and Klickitat. In 1994 further state legislation clarified the duties of the RTPO outlined in the GMA and further defined RTPO planning standards.

The duties of the RTPO, as outlined in the GMA and SHB 1928, include:

- Designation of the regional transportation system.
- Development of a six year regional **Transportation Improvement Program** (TIP), including regionally significant projects. The TIP must include a financial plan.
- Development of a **Regional Transportation Plan (RTP)**, to include a regional transportation strategy, identification of existing and planned facilities and programs, Level of Service standards, a financial plan, assessment of regional development patterns and capital investment using a regional transportation approach. The concept of least cost planning is to be used in development of the RTP. The RTP must be reviewed at least every two years to ensure that it is current.
- Establish guidelines and principles for development and evaluation of the transportation elements of local comprehensive plans.
- Develop a regional Level of Service (LOS) standard for the regional system as required by the LOS Bill.

The Regional Transportation Planning Program is designed to be integrated with, and augment, the federally required Metropolitan Planning Organization (MPO) program. The Regional Transportation Planning Program extends transportation planning by the RTPO's to rural areas not covered by the federal program. The Regional Transportation Planning Program is also intended to tie in and be consistent with local comprehensive planning.

The regional transportation planning process should:

- Guide the improvement of the regional transportation system.

- Use regionally consistent technical methods and data.
- Consider environmental impacts.
- Ensure early and continuous public involvement.
- Be consistent with the local comprehensive planning process.
- Be an ongoing process.
- Incorporate multimodal planning activities.
- Address major capacity expansion and operational improvements to the regional transportation system.
- Be a partnership, including federal, state, and local governments, special districts, private sector, general public, and others during conception, technical analysis, policy development, and decision-making.

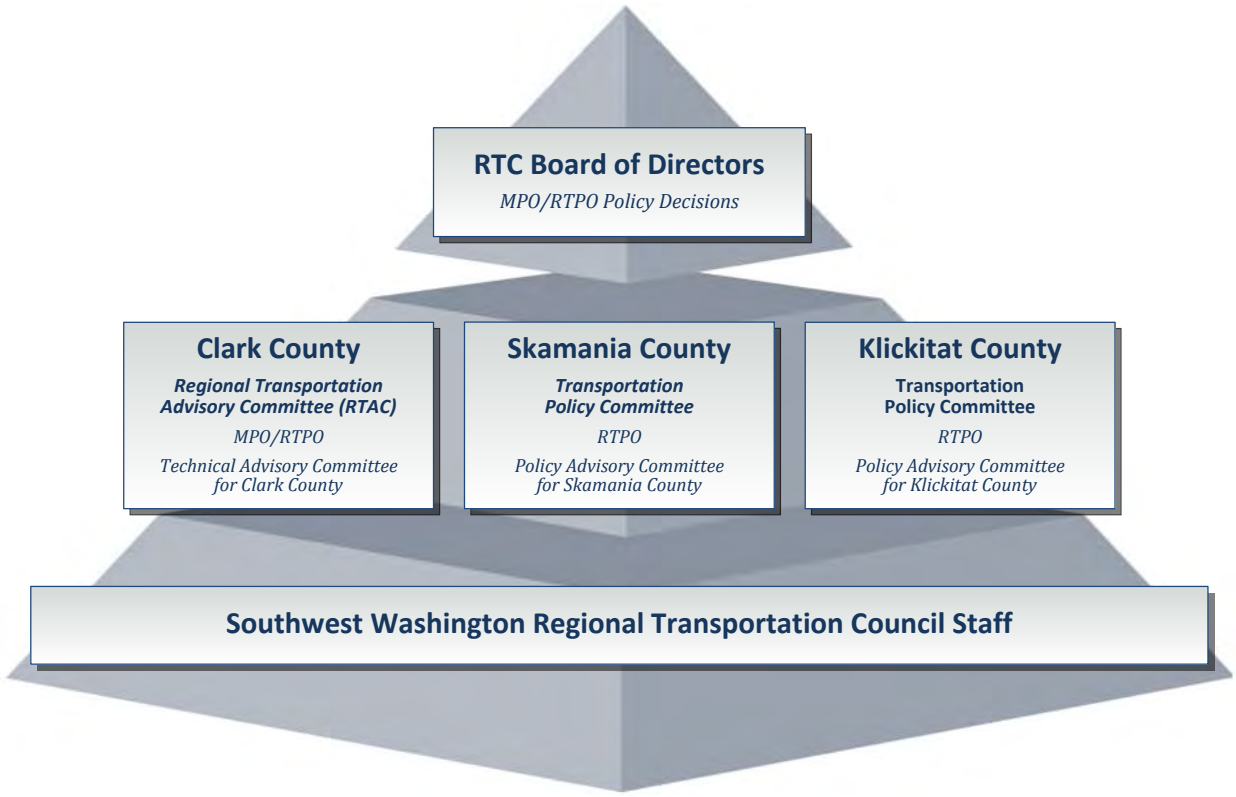
To comply with State standards the RTP shall include the following components:

- Description of the designated regional transportation system.
- Regional transportation goals, policies, and strategy.
- Regional land use strategy. Existing and proposed land uses defined on local and regional comprehensive land use plans determine the regional development strategy.
- Identification of regional transportation needs. An inventory of existing regional transportation facilities and services, identification of current deficiencies, and forecast of future travel demand will be carried out.
- Development of LOS standards consistent with the Level of Service Bill.
- Development of financial plan for necessary transportation system improvements.
- Regional transportation system improvement and strategy plan. Specific facility or service improvements will be identified and priorities determined.
- Establishment of a performance monitoring program. The performance of the transportation system will be monitored over time. The monitoring methodology, data collection, and analysis techniques to be used will be outlined.
- Plans for implementation of the RTP.

# Intergovernmental Coordination

In order to make the RTP not only a Plan to provide carefully thought-out solutions to transportation issues and problems but also a Plan that all jurisdictions can implement, a regional transportation planning committee structure has been established. Consistent with the 1990 GMA legislation, a three-county RTC Board of Directors has been established to serve the RTPO region. Individual County Committees and Boards also play a part in the regional transportation decision-making. The Skamania County Transportation Policy Committee continues to guide Skamania County regional transportation policy. The role of, and representation on, the RTC Board of Directors and individual County Policy Committees is described in the Bylaws of Southwest Washington Regional Transportation Council (last amended November 2010) and Interlocal Agreement for Establishment of the Southwest Washington Regional Transportation Council. The regional transportation committee structure is outlined in Figure 1-2.

***Figure 1-2: Agency Structure***




## Skamania County Transportation Policy Committee

The Skamania County Transportation Policy Committee was established to provide a focus for Skamania County regional transportation issues and policies. It is composed of representatives of Washington State Department of Transportation

(WSDOT), Skamania County, the City of Stevenson, the City of North Bonneville, and the Port of Skamania County.

The Skamania County Transportation Policy Committee carries out regional transportation planning activities within Skamania County. Other agencies and organizations are welcome to participate as non-voting members of the committee. Specifically, the Columbia River Gorge Commission, U.S. Forest Service, and Oregon partner agencies are invited to participate on the Skamania County Transportation Policy Committee.

### Bi-State Coordination

Skamania County is located on the Washington side of the Columbia River Gorge Region and bi-state travel is significant within this region. Oregon and Washington jurisdictions in the region have a history of coordinating their transportation and land use plans. These planning efforts ensure that regionally significant aspects of the transportation system are considered within a bi-state context.

RTC representatives participate in bi-state transportation opportunities with Oregon representatives. This includes the Gorge TransLink group, bi-state studies, and other bi-state opportunities. In addition, RTC welcomes participation of Oregon representatives in the Skamania County transportation planning process. Coordination between Washington and Oregon on bi-state transportation needs will continue through the regional transportation planning process.

## Skamania County Regional Transportation Plan: Work Plan

As a first step in preparation of the Skamania County RTP, a work plan was developed. (See Figure 1-3). The work plan outlines major tasks to be covered in the development of the RTP. The RTP is designed as a benchmark plan to meet RTPO elements required by the 1990 GMA legislation and SHB 1928 legislation of 1994.

## Outline of RTP Chapters

Chapter 1: **Introduction: RTP Vision, Purpose, and Goals**. The RTP is introduced and its general goals, policies, statutory authority, and purpose are described. The RTP process is outlined as well as regional transportation committee structure and intergovernmental cooperation and coordination of the RTP.

Chapter 2: **Regional Land Use and Growth**. Skamania County's demographic data, development trends, and regional development strategy are discussed. Existing and future land uses and development patterns are identified.

Chapter 3: **Identification of Regional Transportation Needs**. The regional transportation system is designated and defined. The characteristics and patterns of today's and future regional travel demand, today's transportation problem locations, and future regional needs are described. Needs criteria such as accessibility, levels of service, and safety are outlined.

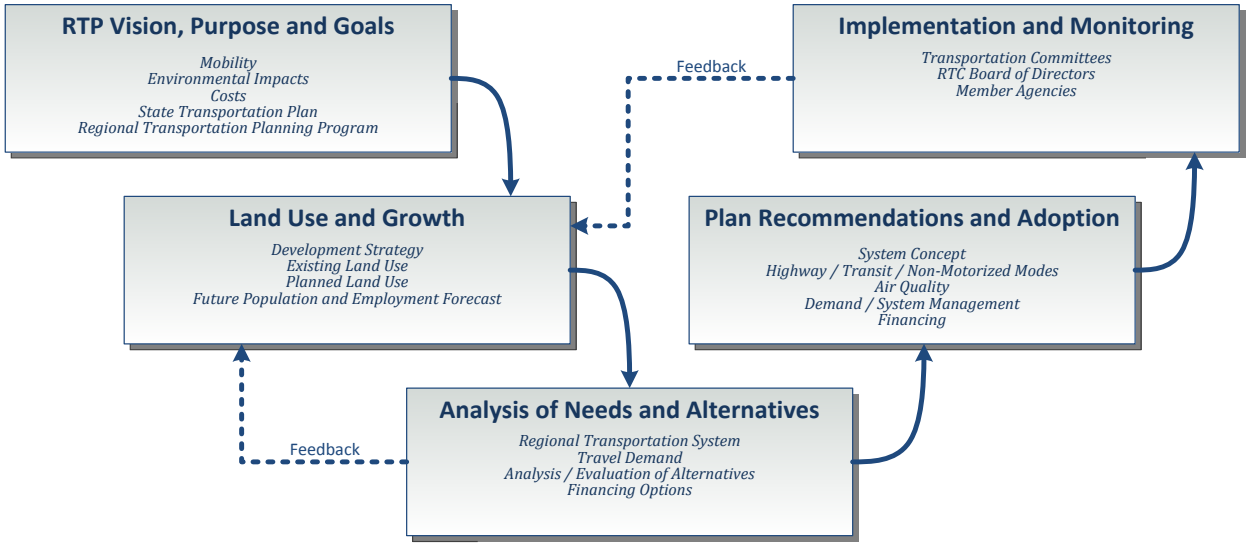
Chapter 4: **Financial Plan**. Revenue sources are identified and described, and a plan for financing transportation system improvements is presented.

Chapter 5: **System Improvement and Strategy Plan**. Recommendations for development of the regional transportation system are made. Regional transportation goals and policies are reviewed.

Chapter 6: **Performance Monitoring**. Performance monitoring measures are described. Monitoring the RTP's consistency with the state transportation plan, local transportation plans, land use regulations, and regional demographic projections are outlined.

Chapter 7: **Plan Development and Implementation**. Provisions for the implementation of the public in development of the RTP are described. Provisions for the implementation of regional transportation goals, policies, and actions established by the RTP are described. The RTP review and amendment process is outlined should changing policies, financial conditions, or growth patterns warrant amendment of the Plan. The required biennial update of the RTP is described.

*Figure 1-3: RTP Process*

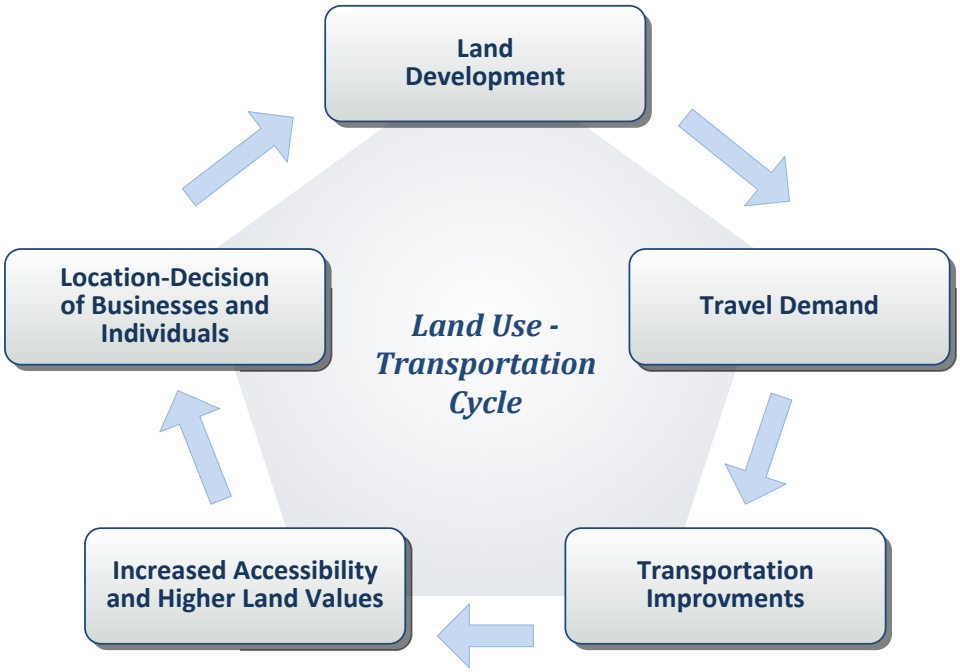


# Chapter 2: Land Use, Growth and Transportation

## Land Use and Transportation

Transportation planning is about meeting the travel demands of people and goods. The transportation system must connect people to jobs and services and connect freight and goods to markets and consumers. In developing a regional transportation plan, the fundamental relationship between transportation and land use must be recognized, and the effect that land use and growth have on transportation must be taken into consideration. The Land Use/Transportation cycle is illustrated in Figure 2-1.

*Figure 2-1: Land Use/Transportation Cycle*




The linkage between land use and transportation is a complex issue, but on a simple level the linkage can be thought of as working in two ways:

1. The spatial distribution and type of land use activity influences both the demand for travel and travel characteristics. Different types of land use generate and attract differing traffic rates; for example, retail land uses will generate more trips than residential land uses.

2. Improving access by expanding the transportation system allows for the development of land that was formerly inaccessible.

Land use and transportation are inter-linked because land use activities largely determine travel demand and desire. When different land uses are segmented or segregated, length of trips tends to increase. For example, people have to travel between their homes and their workplaces. To meet mobility needs, these longer trips usually have to be served by the automobile, thus reducing the use of transportation alternatives, such as walking or transit.

## Management Plan for Columbia River Gorge National Scenic Area

Most of the southern, more populous portion of Skamania County is located in the Columbia River Gorge National Scenic Area (Scenic Area). Thus, local land use is affected by the guidelines of the Management Plan for the Columbia River Gorge National Scenic Area (Management Plan). In 1993, Skamania County adopted land use ordinances that are consistent with the Management Plan. These ordinances adopted by the County provide for local implementation of the Management Plan.

The Management Plan includes direction for future land use in the Scenic Area. This land use direction will influence the regional transportation system and travel patterns. New industrial development in the Scenic Area can only be located within the urban areas. There is provision for some new commercial and rural residential development outside of urban areas, mainly in existing rural communities like Skamania. Denser residential development and more intensive commercial uses are encouraged to occur within the existing urban areas.

The communities of Stevenson, North Bonneville, Carson, and Home Valley are designated urban areas that are exempt from the Management Plan guidelines. Land use planning in these communities is governed by local comprehensive plans.

# Growth and Development

Sustained economic development and growth within a region is desirable because of the economic benefits that increased employment and a larger tax base can bring. However, while growth can contribute to the health of a region's economy, it can also have negative impacts. Unmanaged, fast rates of growth can have a severe impact on the ability of a community to provide services and infrastructure.

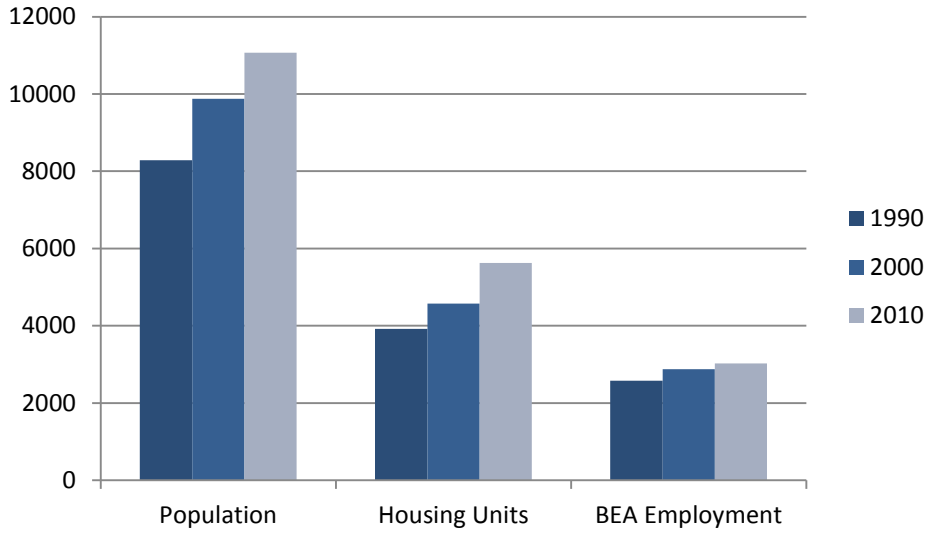
The need to maintain economic viability, and at the same time, quality of life is a challenge. Elements that contribute to a desirable quality of life include job opportunities, affordable housing, a healthy environment with clean air, and recreational opportunities. An efficient, safe transportation system contributes to the quality of life for residents of a region and can act as an attractor for economic development. Conversely, a transportation system dependent on deteriorating and outmoded facilities can be an inhibitor to the efficient, safe movement of people and goods.

## Growth in Skamania County

Skamania County has seen moderate growth in the last few decades. The U.S. Census Bureau, Washington State's Office of Financial Management (OFM), and Bureau of Economic Analysis (BEA) provided the following data. BEA employment includes all wage and salaried jobs as well as proprietors jobs that includes sole proprietor, self-employed, and farm employment.

Between 1990 and 2010 the population of the county increased by 34% from 8,289 to 11,066, while the number of housing units increased by 43% from 3,922 to 5,628. The increase in BEA employment was 17% from 2,582 in 1990 to 3024 in 2010. (See Figure 2-2) Much of the growth occurred between 1990 and 2007, while growth slowed between 2007 and 2010.

*Figure 2-2: Growth in Skamania County*




Skamania County has seen a large increase in recreation activity, due to the Columbia River Gorge National Scenic Area, Gifford Pinchot National Forest, Mt. St. Helens Volcanic Monument, Beacon Rock State Park, Skamania Lodge, Interpretive Center, and windsurfing. The growth of recreational activities seen in the county in the last two decades has increased seasonal demands on the regional transportation system.

Development of a transportation policy plan must consider how to plan for a transportation system that can support increases in travel demand caused by growth in population, employment, and recreational activity. At the same time, this system must be affordable and minimize environmental impacts to maintain the rural quality of life. A safe, efficient transportation system can work to enhance economic development within a region.

## General Land Uses in Skamania County

The population of Skamania County is concentrated in the southern quarter of the county near the Columbia River and in the Wind River Valley. The county has diverse environments, ranging from the gently sloping lands near the Columbia River to rugged and steep mountainous evergreen forest. The Cascade Mountains traverse Skamania County from north to south. Skamania County has a total area of 1,656 square miles, 90% of Skamania County is forested and 80% is a part of Gifford Pinchot National Forest. Much of the private land ownership is within the National Scenic Area.

Almost a third of the jobs in Skamania County were in the public sector, with local government accounting for the majority of the jobs, especially those in educational

services. Major private employment sectors include leisure and hospitality and manufacturing.

The provision of public facilities and services, including transportation, is a principal determinant of land use patterns. Although the growth in Skamania County has been moderate, much of growth and development has taken place near the transportation corridors of the Columbia River and State Route 14.

## Planned Land Use

Comprehensive plans are the means by which local jurisdictions can plan for their future growth and development; they can provide a process for anticipating and influencing the orderly and coordinated development of land. Within Washington State, planning authority is delegated by the state to local governments in RCW 36.70A, 35.63 and 35A.63. Comprehensive plans are required to have a land use element showing the general distribution and location of land for various uses, as well as a circulation element showing the street system and transportation routes. Skamania County, City of Stevenson, and City of North Bonneville all have currently adopted comprehensive plans.

The Scenic Area Act required that a Management Plan be developed, which includes land use designations outside of urban areas. In 1991, the Management Plan for Scenic Area was adopted. In 1993, Skamania County adopted land use ordinances that are consistent with the Management Plan. These ordinances adopted by the County provide for local implementation of the Management Plan.

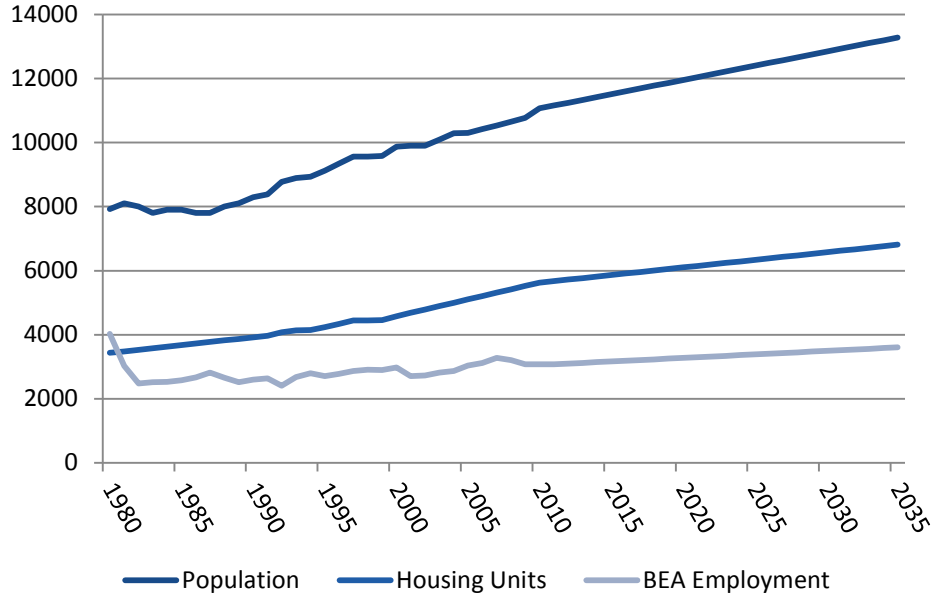
Local comprehensive plans and the Management Plan for the Columbia River Gorge National Scenic Area encourage the future development of residential, commercial, and industrial lands in the Urban Areas. There is provision for the development of some commercial and residential lands outside of the urban areas. In addition, the Skamania County Comprehensive Plan provides for other land uses such as agriculture and timber.

# Population and Employment Forecast

The Washington State Office of Financial Management (OFM) develops population forecast for all counties in the State of Washington. Their forecast contains a low, medium, and high estimate. The April 2012 forecast developed by OFM for 2035 population in Skamania County ranged from a low of 11,325 to a high of 14,991. For the purpose of the Regional Transportation Plan a medium-high forecast of 13,279 will be used. The 2035 forecast represents a 20% or 2,213 increase in population from 2010 to 2035.

Housing and employment forecast for Skamania County were developed by RTC based on population forecast and historical trends. Estimated 2035 housing is 6,772 units. The 2035 forecast represents a 20% or 1,144 increase in housing units from 2010 to 2035. Estimated 2035 BEA employment is 3,607. This 2035 forecast represents a 17% or 528 increase in employment from 2010 to 2035 (see Figure 2-3).

*Figure 2-3: Population, Housing & Employment, 1980 to Forecast 2030*




# Demographic and Travel Trends

Growth in population and employment, development and resulting land use patterns together with its distribution all affect travel demand. However, other demographic factors also influence travel demand. These factors include household size, workforce participation, employment patterns, and vehicle ownership.

Household size is one of the most significant demographic factors that influences land use and demand for transportation services. Between 1970 and 2010 there

was a trend toward smaller household size in Skamania County due to more single-person households and smaller family size. The average number of persons per housing unit was 2.69 in 1970, but had fallen to 1.97 by 2010. The 2035 forecast is 1.95 persons per housing unit.

Another demographic trend that effects travel demand is the increase in two or more auto households. Typically, the autos are used to get to work, for work purposes while at work, to run errands at lunch time, before or after work, and if they have a family to take their children to their activities. All result in people's increased reliance on the automobile that people consider their most convenient transportation mode.

Employment patterns have also been changing, with a relative decline seen in the traditional industrial or timber jobs and an increase in service sector employment. With modern technology, there has also been a rapid growth in workers who are able to work at home. In addition, as the traditional timber jobs are lost, there is a trend for Skamania County residents to be employed in other counties. The U.S. Census Bureau American Community Survey 2006-2010 shows that approximately 51.2% of the county residents worked outside of Skamania County. Table 2-1 shows data of those living and/or working in Skamania County.

***Table 2-1: Skamania Workflow by County***

| Place of Residence | Place of Work | 2000 | 2000 Percent | 2010 | 2010 Percent | 2000-2010 Change |
|---|---|---|---|---|---|---|
| **Skamania County** | Skamania County | 2,032 | 47.7% | 2,340 | 48.8% | 308 |
| | Clark County, WA | 896 | 21.0% | 1,060 | 22.1% | 164 |
| | Multnomah Co., OR | 535 | 12.6% | 510 | 10.6% | -25 |
| | Hood River Co., OR | 353 | 8.3% | 260 | 5.4% | -95 |
| | Klickitat Co., WA | 205 | 4.8% | 340 | 7.1% | 135 |
| | Other Washington | 63 | 1.5% | 59 | 1.2% | -4 |
| | Other Oregon | 148 | 3.5% | 179 | 3.7% | 31 |
| | Other | 27 | 0.6% | 43 | 0.9% | 16 |
| **Skamania Co. Employed Workforce** | | **4,261** | | **4,791** | | **530** |
| Skamania County | **Skamania County** | 2.032 | 79.4% | 2,340 | 72.2% | 308 |
| Clark Co., WA | | 124 | 4.8% | 260 | 8.0% | 136 |
| Multnomah Co., OR | | 61 | 2.4% | 35 | 1.1% | -26 |
| Hood River Co., OR | | 70 | 2.7% | 115 | 3.5% | 45 |
| Klickitat Co., WA | | 147 | 5.7% | 340 | 10.5% | 193 |
| Other Washington | | 24 | 0.9% | 43 | 1.3% | 19 |
| Other Oregon | | 76 | 3.0% | 109 | 3.4% | 33 |
| Other | | 24 | 0.9% | 0 | 0.0% | -24 |
| **Employment within Skamania County** | | **2,558** | | **3,242** | | **684** |

Travel demand has also grown as the number of registered vehicles and passenger cars in Skamania County has increased in the past several decades. In 2010, there were 5,500 registered passenger vehicles with approximately 74.6% of the Skamania County households having two or more vehicles available. The relationship between land use and transportation should be carefully considered when developing a vision for future growth and growth patterns.

Travel demand for freight trucks passing through the region on SR-14 appears to be increasing. Trucks account for approximately 20% of the vehicle traffic on SR-14. The addition of these trucks creates conflicts with other vehicles using the SR-14 corridor.

There are several trends that affect seasonal travel demand within Skamania County. First, is the trend of additional retired residents who live in Skamania County, but spend their winters in a warmer climate. These residents add to the local traffic from spring to fall. Second, is the increased popularity of the Columbia River Gorge area as a recreational attractor. Since its designation as a National Scenic Area, summer traffic volumes have rapidly increased.

Table 2-2 also provides information that compares 2000 and 2010 Census Journey to Work data. This data displays several trends impacting the commuter travel times. First, the data shows that commute times have remained about the same. Second, the use of carpools decreased. Third, there has been an increase in the number of people drive alone and working from home.

***Table 2-2: Work Travel Mode***

| Skamania County | 2000 | 2000 Percent | 2010 | 2010 Percent | 2000 to 2010 Growth | 2000 to 2010 Percent Change | 2010 WA State Percent |
|---|---|---|---|---|---|---|---|
| Drive Alone | 3,238 | 76.0% | 3,785 | 78.9% | 547 | 16.9% | 72.3% |
| Carpool | 631 | 14.8% | 425 | 8.9% | -206 | -32.6% | 11.6% |
| Transit | 21 | 0.5% | 15 | 0.3% | -6 | -28.6% | 5.6% |
| Bicycle or Walked | 104 | 2.4% | 100 | 2.1% | -4 | -3.8% | 4.3% |
| Motorcycle/Other | 26 | 0.6% | 45 | 0.9% | 19 | 73.1% | 1.2% |
| Worked at Home | 241 | 5.7% | 425 | 8.9% | 184 | 76.3% | 5.1% |
| **Totals** | **4,261** | **100.0%** | **4,795** | **100.0%** | **534** | **12.5%** | **100.0%** |
| Mean Travel Time to Work (minutes) | 29.2 | n/a | 30.0 | n/a | 0.8 | n/a | 25.4 |

# Chapter 3: Identification of Regional Transportation Needs

## Current Functional Classification of the Regional Roadway System

Functional classification is the grouping of highways, roads, and streets by the character of service they provide. Comprehensive transportation planning uses functional classification to determine how travel can be channelized within the network in a logical and efficient manner. A functional classification defines the major role that a road or street serves within the total existing and future roadway network. In simple terms, highways, streets, and roads function as arterials, collectors, or local access. Arterials provide the highest degree of mobility and limited access to local property. Collectors generally provide equal emphasis upon mobility and land access. Local roads and streets emphasize land access in lieu of mobility.

The Washington State Department of Transportation (WSDOT) has the primary responsibility for developing and updating the highway functional classification system. They work cooperatively with local and regional agencies in developing and updating the functional classification system. The Federal Functional Classification system for Skamania County roads has been completed and resulted in a countywide uniform classification system. Generally, facilities classified as Major Collector or above in rural areas are eligible for federal funding. Further information on the functional classification of roads can be found on WSDOT's website. A statewide map of the federal functional

classification is available, allowing the zooming in to Klickitat County and City detail.

ISTEA also required that roads be designated as National Highway System (NHS) facilities. Congress approved the NHS System with passage of the National Highway System Designation Act of 1995 (NHS Act). In Skamania County, SR-14 has been designated as an NHS facility. In 1999, the state legislature adopted Highways of Statewide Significance. In Skamania County, the only highway facility defined as "of Statewide Significance" is SR-14.

A description of the rural functional classification categories follows:

## Rural Principal Arterials

Rural principal arterials are sub-divided into two sets (1) interstate facilities and (2) other principal arterials. Rural principal arterials serve corridor movements having trip length and travel density characteristics of statewide or interstate travel. They consist of a connected rural network of continuous routes.

## Rural Minor Arterials

In conjunction with the principal arterials, the rural minor arterials form a rural network which link cities and larger towns together with other major traffic generators. The principal arterials and rural minor arterials are spaced at such intervals that all developed areas of the state are within a reasonable distance of an arterial highway. Minor arterials should be expected to provide for relatively high overall travel speeds with minimum interference to through movement.

## Rural Major Collector Roads

Rural major collectors provide service to larger towns not directly served by the higher systems and to other traffic generators of equivalent importance. Rural major collectors serve the more important travel corridors within the county.

## Rural Minor Collector Roads

Rural minor collectors are spaced at intervals, consistent with population density, to collect traffic from local roads and provide developed areas with reasonable distance to a collector road. Rural minor collectors provide service to the remaining smaller communities and link the locally important traffic generators with surrounding rural areas.

## Rural Local Roads

Local streets provide direct access to abutting land and access to the higher classification facilities. They offer the lowest level of mobility. They are not

intended to carry through traffic; however, they do make up a large percentage of the total street mileage.

## Designation of the RTP Regional Transportation System

Consistent with the state's Regional Transportation Planning Program Planning Standards the RTP regional transportation system has been designated to include:

1. All state transportation facilities and services (including state highways)
2. All local principal arterials (the definition of rural principal arterials can be the same as used for federal classification or be regionally determined).
3. All other transportation facilities and services, including airports, transit services and facilities, roadways, rail facilities, marine transportation facilities etc. that the RTPO considers necessary to complete the regional plan.
4. Any transportation facility or service that is regionally needed or impacts places in the plan, as determined by the RTPO.

A detailed description of the designated RTP Regional Transportation System follows:

1. All state transportation facilities and services

   In Skamania County this category includes State Route SR-14 and SR-504.

   SR-14 provides the main east-west access from south-west Clark/Skamania County line to south-east Klickitat/Skamania County line along the north bank of the Columbia River. The facility has two lanes in each direction and extends 41.71 miles through Skamania County between Clark County and Klickitat County lines.

   SR-504 provides the main access from I-5 (Cowlitz County) east to the Mount St. Helens National Volcanic Monument. Skamania County has identified the need to connect SR-504 east to U.S. Forest Service highways.

2. All local principal arterials: SR-14 and SR-504 are the only local rural principle arterials.
3. All other transportation facilities and services considered necessary to complete the regional transportation plan. These include transit services and facilities, roadways, rail facilities, airports, marine transportation facilities, etc.

## Rural Major Collectors

All local rural major collectors are designated as part of the regional transportation system. Major collectors include such facilities as First Street, Rock Creek, Foster Creek, Gropper, Vancouver, Russell, Cascade, and Columbia in the City of Stevenson; Evergreen, Hot Springs, and East Cascade in the City of North Bonneville; Wind River Road, Cook-Underwood Road, Washougal River Road, Salmon Falls Road, Canyon Creek Road, Ryan-Allen, Loop, Kanaka Creek, and Curly Creek in the County.

## Forest Service Road System

With much of Skamania County located within the Gifford Pinchot National Forest, the Forest Highway System plays an important part in the economy of Skamania County. Forest Highways to be included in the regional transportation system are Forest Roads 23, 25, 30, 88, and 90.

## Port Facilities

Skamania County has one Port District; the Port of Skamania County, which covers much of the southern portion of Skamania County. The Port of Skamania County is a municipal corporation of the State of Washington. The Port currently maintains an asset base of commercial, industrial, recreational lands, buildings, and other facilities.

The Port's primary mission is economic development and job creation in industrial and commercial-related businesses. The Port owns 162 acres in Stevenson, Carson, and North Bonneville including approximately 30,000 square feet of commercial space and 120,000 square feet of industrial use space. Public access to recreational opportunities is an important priority for the Port. The Port owns and maintains approximately 6 acres of parkland with 1.5 miles of waterfront in Stevenson, and has developed 1.1 miles of walking paths with interpretive signs and amenities. The Stevenson Landing dock, parks, beaches, and boat launch ramp facilities draw a variety of water-sport enthusiasts and tourists helping to invigorate the local economy. The Port's Stevenson Waterfront area includes a Level II Electric Vehicle charging station.

## Airport Facilities

There are no public airfields currently operating in Skamania County. However, there are a few private airfields. Portland International Airport (PDX) is located in Portland, Oregon approximately 45 miles west of Stevenson, south-west of the I-205 Glenn Jackson Bridge. This is a regional airport with domestic and international passenger and freight service.

## Bridges

All public bridges including Columbia River bridges are designated as part of the regional transportation system. There are over 30 public bridges located in Skamania County. The Bridge of the Gods and the Hood River Bridge are the only bridges crossing the Columbia River from Oregon to Washington in the Skamania County region. Both of these bridges are toll Bridges which are owned and operated by Oregon Port Districts. All bridges are important to the movement of people and goods within the region. However, those along the regional transportation system are essential to the region.

In addition, the Washington State Legislature designated an SR-35 corridor in the 1997 legislative session. SR-35 will provide a future link across the Columbia River to Oregon in the Bingen/White Salmon area. A Draft Environmental Impact Statement for a future river crossing in the SR-35 corridor was completed in 2004, a Type Size and Location Study was completed in 2011, and a Final Environmental Impact Statement will be the next step in the project development process.

## Columbia River

Historically, the Columbia River has always been an important transportation corridor to Skamania County. The Columbia River, as a transportation corridor, is used to move goods and people. Tour boats visit the Columbia River and dock in Stevenson.

## Public Transportation

Skamania County Senior Services provides general public Dial-A-Ride service in Skamania County, a deviated fixed route service along SR-14 into Clark County, and operates a volunteer driver program. In addition, Skamania County Senior Services participates in a coordinated effort linking transit agencies in the Mid-Columbia River Gorge area. The system has a number of vehicle types from accessible minivans to a 26-passenger bus. In addition to Senior Services, there are private firms that provide transit/taxi service to Portland International Airport.

Although, the dial-a-ride service provides preference to seniors and persons with disabilities, all County residents are eligible. The majority of system trips are for medical, social service, and shopping purposes. This service does provide transportation service as far west as Vancouver/Portland and east to The Dalles. Out-of-county medical trips are given priority over shopping or personal trips, although trip purposes are grouped when possible.

The SR-14 deviated fixed route service connects to C-TRAN's Fisher Landing Transit Center in Vancouver, making three round trips per day (morning, midday, evening). The service began in January 2004 and has been very successful. This service provides access to jobs, schooling, and other trip purposes within the greater Portland/Vancouver region.

The Gorge TransLink is an alliance of transportation providers offering public transportation services throughout the Mid-Columbia River Gorge area as well as to destinations, such as Portland and Vancouver. The goal of this coordination effort is to improve interconnectivity between the various transit providers in the Mid-Columbia River Region in both Oregon and Washington.

## Rail Facilities

There is one main rail line in use in Skamania County which provides freight and passenger service. Burlington Northern Santa Fe (BNSF) owns this main line. The BNSF Vancouver/Eastern Washington line has two tracks in good condition with up to 60 trains operating on the line daily. Amtrak also has an agreement with BNSF to operate passenger service on the freight carrier's rail lines, providing service from Vancouver traveling east through Skamania County toward Spokane. Seven days a week, the AMTRAK Empire Builder travels through Skamania County both east and west between Portland, Oregon and Chicago, Illinois. Although there are no Amtrak stations in Skamania County, most Skamania County residents are within an hour drive of stations in Bingen or Vancouver.

Along the main rail line, there are seven public and numerous private railroad crossings in Skamania County. The public railroad crossings are listed in Table 3-1.

*Table 3-1: Skamania County Public Railroad Crossings*

| Road | Warning System |
|---|---|
| Cape Horn Road | Stop Signs |
| SR 14 (St. Cloud) | Warning Lights |
| SR 14 (Skamania Landing) | Warning Lights |
| SR 14 (Skamania Landing) | Warning Lights |
| Russell/SR 14 (Stevenson) | Warning Lights and Drawbars |
| SR 14 (Cemetery) | Stop Sign, Tracks Warning |
| SR 14 (Home Valley Park) | Overhead/Side Lights, Drawbars |

## Enhancements

Transportation enhancements are designated as part of the regional transportation system. Enhancements include facilities for bicycles and pedestrians, scenic vistas, thematic signage, rest stops, and roadside beautification along the regional road network. Existing enhancements would include facilities such as the Pacific Crest Trail, Cape Horn Vista, the SR-14 bicycle route, Franz Lake viewpoint, and other enhancements within the County. The region has identified the need to develop a safe east-west bicycle facility through the county.

# Growth in Traffic Volumes

As a result of socio-economic and demographic changes described in Chapter 2, Skamania County has seen an increase in traffic volumes over the years. Washington State Department of Transportation compiles traffic count data along State Routes. Traffic volumes along SR-14 in the Columbia River Gorge National Scenic Area vary by season, with summer traffic volumes significantly higher than winter traffic volumes. Examples of growth in traffic volumes at selected locations along SR 14 in Skamania County are listed in Table 3-2.

*Table 3-2: Traffic Volumes-All Day (ADT)*

| Location | Leg | 2002 Volumes | 2012 Volumes | % Increase | Annual % Increase |
|---|---|---|---|---|---|
| Bridge of The Gods | S | 2,500 | 2,800 | 12% | 1.2% |
| SR-14 at Clark Co. Line | E | 4,000 | 4,300 | 8% | 0.8% |
| SR-14 at Bridge of The Gods | E | 5,900 | 6,800 | 15% | 1.5% |
| SR-14 at Russell Ave. | W | 6,800 | 7,600 | 12% | 1.2% |
| SR-14 at Wind River Rd. | W | 6,100 | 6,700 | 10% | 1.0% |
| SR-14 at Wind River Rd. | E | 2,400 | 2,800 | 17% | 1.7% |
| SR-14 at Klickitat Co. Line | W | 5,200 | 8,900 | 71% | 7.1% |

# Future Travel Demand

Future travel demand was forecasted for the Skamania region based on historic trends, net changes in land use and activity levels, applying appropriate traffic generation rates, and then using trip distribution information to determine the direction of travel.

The RTP network is considered to be the same transportation network as exists today. It is used only as a base case scenario for forecasting future travel demand and potential traffic volumes on road segments and does not constitute a recommended network. Traffic volumes could differ significantly from those that result from the future trip assignment onto the RTP network if significant changes to the population, land use, or transportation system occur.

Burlington Northern Santa Fe operates the east-west railroad route along the Washington side of the Columbia River Gorge and through Skamania County. This route is currently experiencing capacity constraints and will continue in the future without some kind of expansion. The Columbia River system is an important transportation corridor for the movement of goods. In order to meet the travel demand associated with this corridor, it will be essential to preserve appropriate channel depths and widths for shipping, and to maintain current lock handling capacity. Walking and bicycling are integral parts of the transportation system. People walk and bike for various trips. Walking and bicycling trips are usually short and demand is greater in urban areas. However, there is a demand for bicycling facilities along SR-14 for touring bicyclist. Public transit is an important aspect of the transportation system, especially for those with limited income, elderly, and disabled. With an aging population and per capita income lower than the state average, the demand for public transit will increase in Skamania County.

# Levels of Service

Levels of service standards represent the minimum performance level desired for transportation facilities and services within the region. They are used as a gauge for evaluating the quality of service on the transportation system and can be described by travel times, travel speed, freedom to maneuver, traffic interruptions, comfort, convenience, and safety. These levels of service are designated A through F, from best to worst. Level of service E describes conditions approaching and at capacity. For uninterrupted flow conditions, the following definitions[1] apply:

- Level of Service A describes free flow conditions, with low volumes and high speeds. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian is excellent.

[1] From *Highway Capacity Manual*, Transportation Research Board, 1985

- Level of Service B is in the range of stable flow but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver with the traffic stream from Level of Service A.
- Level of Service C is still in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. The general level of comfort and convenience declines noticeably at this level.
- Level of Service D represents high-density, but stable flow. Speed and freedom to maneuver are severely restricted, and the driver or pedestrian experiences a generally poor level of comfort and convenience.
- Level of Service E represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Comfort and convenience levels are extremely poor and driver or pedestrian frustration is generally high.
- Level of Service F describes forced or breakdown flow. These conditions usually result from queues of vehicles backing up from a restriction downstream. Operations within the queue are characterized by stop-and-go waves, and they are extremely unstable.

## Level of Service Standards

In 1998 the Washington State Legislature passed House Bill 1487, otherwise known as the Level of Service (LOS) Bill. The Bill set new requirements relating to transportation and growth management planning. The intent of the legislation was to enhance the coordination of planning efforts and plan consistency at the local, regional, and state level. The key applicable elements include:

Highways of Statewide Significance: The State must give higher priority to correcting identified deficiencies on transportation facilities of statewide significance. Designation of Highways of Statewide Significance (HSS) was completed in 1999. In the Skamania County region, the HSS system includes SR-14. WSDOT has established an LOS 'C' for rural HSS facilities like SR-14.

Non-Highways of Statewide Significance: Non-HSS state highways, otherwise known as Highways of Regional Significance, in Skamania County include SR-504. The RTPO has established an LOS 'C' for rural non-HSS.

# Capacity Analysis

The Highway Capacity Software was used to analyze level of service within the Skamania County Region based on P.M. peak hour traffic. In addition, there are several locations with capacity deficiencies associated with substandard curves and steep grades, which create a particular problem in the Columbia River Gorge area due to the mix of trucks, recreational vehicles, and autos. Deficient segments associated with capacity are listed in Table 3-3.

*Table 3-3: Deficient Capacity Segment*

| Road | Mile Post | Deficient Capacity Segment | LOS |
|---|---|---|---|
| SR-14 | 21.77 - 24.92 | Clark Co. line to Half Bridge | C |
| SR-14 | 24.92 - 27.87 | Half Bridge to Prindle Rd. Vicinity | C |
| SR-14 | 27.87 - 37.04 | Prindle Rd. to North Bonneville. | C |
| SR-14 | 43.90 - 47.44 | Rock Creek Br. to Wind River Rd. | C |

# Safety Analysis

Improving safety for all modes of transportation is critical to improving quality of life and improving access for all the citizens of the region. Washington State's Strategic Highway Safety Plan, Target Zero, establishes a statewide policy of zero fatalities and zero disabling injury collisions by 2030. Target Zero, helps to assess the safety needs statewide, encouraging and promoting good safety practices in the design and operation of the transportation system, as well as promoting safety by system users. Target Zero sets state-wide priorities, provides a resource for potential strategies, and monitors outcome at a statewide level.

At the regional level traffic safety priorities are set based upon the most frequently cited contributing factors. More than one factor is commonly involved in most collisions. This results in each fatality and serious injury collision being represented under multiple factors. The factors in fatal and serious traffic collisions are prioritized based on the percentage of traffic fatalities and serious injuries associated with each factor. Table 3-4 shows the Skamania County Fatality and Serious Injury Factors by Priority Levels, based on the 2010-2012 collision data.

Target Zero includes specific objectives and strategies to help reduce traffic fatalities and serious injuries for each of the primary factors. Within Skamania County, the focus should be on implementing strategies that address the highest prioritized factors.

*Table 3-4: Deficient Safety Segments, 2010-2012*

| | Fatalities | | Serious Injuries | |
|---|---|---|---|---|
| | # of People | % of Total | # of People | % of Total |
| **Priority Level One** | | | | |
| Motorcyclist | 2 | 28.6% | 29 | 59.2% |
| Speeding Involved | 4 | 57.1% | 15 | 30.6% |
| Impaired Driver Involved | 4 | 57.1% | 2 | 4.1% |
| Run Off the Road | 2 | 28.6% | 24 | 49.0% |
| Distracted Driver Involved | 3 | 42.9% | 8 | 16.3% |
| **Priority Level Two** | | | | |
| Opposite Direction | 2 | 28.6% | 7 | 14.3% |
| Young Driver 16-25 Involved | 1 | 14.3% | 11 | 22.4% |
| **Priority Level Three** | | | | |
| Unrestrained Vehicle Occupants | 1 | 14.3% | 7 | 14.3% |
| Drowsy Driver Involved | 1 | 14.3% | 4 | 8.2% |
| Wildlife | 1 | 14.3% | 3 | 6.1% |
| Older Driver 75+ Involved | 1 | 14.3% | 1 | 2.0% |
| Heavy Truck Involved | 0 | 0.0% | 3 | 6.1% |
| Intersection Related | 0 | 0.0% | 2 | 4.1% |
| Work Zone | 0 | 0.0% | 0 | 0.0% |
| Unlicensed Driver Involved | 0 | 0.0% | 0 | 0.0% |
| Pedestrian | 0 | 0.0% | 0 | 0.0% |
| School Bus Involved | 0 | 0.0% | 0 | 0.0% |
| Bicyclist | 0 | 0.0% | 0 | 0.0% |
| Vehicle-Train | 0 | 0.0% | 0 | 0.0% |
| **Total** | **7** | | **49** | |

## Unstable Slopes

Washington State Department of Transportation (WSDOT) began their Unstable Slope Management System in 1993. This management system incorporated a numerical slope hazard rating system. The rating system utilizes a matrix evaluating eleven categories. In 2004 an environmental assessment of SR-14 unstable slopes was completed. Of the sites investigated, 26 priority projects were identified in Skamania County. Priority projects had an Unstable Slope Management System rating greater than 200. Those with ratings above 300 total points represent a relatively high hazard slope. A Benefit to Cost (B/C) Ratio is then used to determine project priority. Table 3-4 lists the 17 remaining priority projects along SR-14 in Skamania County.

*Table 3-5: Rockfall Hazard Locations*

| Road | Mile Post | Rating | B/C Ratio | Improvement |
|---|---|---|---|---|
| SR-14 | 24.91-25.00 | 315 | 1.70 | Reslope |
| SR-14 | 25.00-25.20 | 369 | 0.34 | Realign: Move Bridge |
| SR-14 | 30.20-30.34 | 279 | 2.27 | Reslope |
| SR-14 | 30.37-30.46 | 345 | 1.22 | Retaining/Buttress Wall |
| SR-14 | 30.90-31.10 | 219 | 1.12 | Reslope/Realign/Bolts |
| SR-14 | 46.46-46.55 | 309 | 7.52 | Reslope/Scaling/Bolts/Trim |
| SR-14 | 46.61-46.68 | 309 | 1.80 | Realignment/Scaling/Bolts |
| SR-14 | 53.33-53.44 | 267 | 5.93 | Scaling/Shotcrete/Bolts |
| SR-14 | 53.56-53.62 | 267 | 3.56 | Euromesh/Scaling/Bolts/Mesh |
| SR-14 | 54.80-54.97 | 249 | 2.54 | Reslope/Erosion Fabric |
| SR-14 | 55.05-55.35 | 327 | 1.59 | Reslope/Erosion Fabric |
| SR-14 | 55.60-55.66 | 285 | 1.06 | Scaling/Euromesh |
| SR-14 | 55.88-55.96 | 375 | 1.75 | Reslope/Scaling |
| SR-14 | 58.84-58.93 | 315 | 1.03 | Reslope/Scaling/Bolts |
| SR-14 | 59.07-59.14 | 261 | 8.06 | Reslope |
| SR-14 | 62.50-63.00 | 501 | 1.31 | Scaling/Euromesh |
| SR-14 | 63.05-63.20 | 429 | 3.14 | Realign |

## Tunnels

There are five tunnels along SR-14 in Skamania County between mile post 58.08 and 60.27. These tunnels have a 24 foot pavement width, no lighting, and a bicycle warning system. The tunnels are arched with a center clearance several feet higher than the 12.9 foot clearance at the outer edge of the pavement. Several of the tunnels are located on curves.

### Trucks

Interstate 84 (I-84) and State Route 14 (SR-14) are parallel east/west highways traveling through the Columbia River Gorge. I-84 is a 4-lane Interstate facility located in Oregon and SR-14 is a rural 2-lane State Highway located in Washington. Both routes are part of the National Highway System (NHS). Both routes are public routes that are open to all legal trucks. As a rural highway, SR-14 is less conducive to through truck traffic because of sharp curves, steep grades, and height restriction. I-84 as an Interstate Highway is the highest road classification and provides the highest level of mobility, at the highest speed, for a long uninterrupted distance. As such, through truck traffic should be encouraged to use I-84.

## Preservation and Maintenance Need

Of overwhelming importance in the planning for the regional transportation system is the need to maintain and preserve the existing system in order to protect the heavy investments already made in the system. The RTP supports projects programmed in the Transportation Improvement Program to maintain and preserve the regional transportation system.

A Pavement Management System has been developed for pavement condition on all state road facilities. This system is intended to assist with the prioritization of pavement preservation and to respond to recently observed conditions and predict probable future conditions. WSDOT and local jurisdictions visually inspect pavement conditions of facilities to determine needed maintenance and preservation. Projects that have reached a condition that warrants rehabilitation are programmed into the State and local Six-Year Transportation Improvement Programs.

Washington State has developed a Bridge Management System, a procedure to visually survey bridge conditions. This system is intended to assist with the prioritization of bridge replacement and maintenance. Projects with immediate needs are programmed into the State or local Six-Year Transportation Improvement Program. There are several bridges in deteriorating condition, or of substandard width, and cannot accommodate bicyclist and pedestrian traffic. These bridges will need to be replaced within the next 20 years. Both the Hood River Bridge (Port of Hood River) and the Bridge of the Gods (Port of Cascade Locks) are regularly inspected by the Oregon Department of Transportation. Maintenance and repairs are made by the Ports that own each bridge.

Burlington Northern Santa Fe Railroad maintains the BNSF main rail line through Skamania County. Port of Cascade Locks maintains the Bridge of the Gods. The Port of Hood River maintains the Hood River Bridge. The U.S. Forest Service maintains the Forest Service roads. Under the direction of the U.S. Army Corps of Engineers the Columbia River is maintained. Local jurisdiction and WSDOT maintain bicycle and pedestrian facilities.

The Regional Transportation Plan supports additional transportation dollars for the preservation and maintenance of the regional transportation system. Priority should be given to maintain the heavy investment already made in the regional transportation system.

## Enhancement Need

There is a need to develop and improve facilities for bicycles, pedestrians, scenic vistas, rest areas, thematic signage, roadside beautification, and other enhancements within the Skamania County region. The Regional Transportation Plan supports cost effective enhancements to the transportation system.

## Economic Development Need

The prosperity of a region is dependent on the provision of transportation infrastructure to support economic development. The movement of goods by highway, rail, water, and air are essential to the economy of Skamania County.

The RTP supports improvements to the transportation system that will give prime consideration to economic development and the safe, efficient movement of people and freight. Specifically, freight produced by or material necessary for the operation of businesses and industries in the Skamania County region.

The RTP supports the replacement of the Hood River Bridge. The Hood River Bridge provides the principle access for eastern Skamania County to employment, services, and goods. This facility is essential to the regions diversification by providing access and employment opportunities. This facility is important for the movement of local goods to market. The existing facility is narrow and inadequate to handle the demands of the region. The facility is aging and will likely need to be replaced with the next 20 years. The local economy depends heavily on the Hood River Bridge, ensuring an adequate replacement facility is a high priority for the region.

The RTP supports improvements to the transportation system that will give prime consideration to economic development and the safe, efficient movement of people and freight. Specifically, freight produced by or materials necessary for the operation of businesses and industries within Skamania County.

# Chapter 4: Financial Plan

## Overview

Potential transportation improvement projects proposed in this Plan are intended to meet the RTP goals and policy objective as outlined in Chapter One. These goals and policies include making the most efficient use of and enhancing the existing transportation system.

The availability of federal, state, and local moneys will have a significant impact on the ability to fund proposed projects. This chapter describes revenue sources and discusses changes to revenue sources as a result of federal and state legislation. The projection of funding ability is based on historical funding levels. The ability of the projected funding to meet RTP costs is determined.

Transportation has traditionally been funded by "user fees". Today, the major tax sources to fund transportation are the gas tax, vehicle licenses, permits, and fees. Gas tax is imposed at the federal level ($0.184 per gallon) and at the state level ($0.375 per gallon) and is devoted to roadway purposes.

## Challenges and Accomplishments

The RTP faces considerable challenges for funding the transportation system into the future. Over the last decade fewer dollars have been spent on the transportation system as transportation revenues have declined. As the transportation system ages, the cost of preserving and maintaining the existing transportation system has increased. There is a need to have a public discussion on how transportation cost will be paid for in the future.

The RTP was last adopted in 2012; since that time, a number of improvements have been completed on the regional system within Skamania County. Completed improvements include the Curly Creek Road, SR-14 Cape Horn Improvements, and maintenance and preservation projects.

Planned future transportation improvements, will continue to maintain and enhance the existing transportation system. Without additional revenue there will be limited opportunities to improve the Skamania County regional transportation system.

# Revenue Sources

## Federal Funding

The federal gas tax and other transportation fees and taxes are the major federal revenue sources for federal transportation funding. On July 6, 2012, the President signed into law the Moving Ahead for Progress in the 21st Century Act (MAP-21). MAP-21 provides funding for fiscal years 2013 and 2014. MAP-21 restructures core transportation programs with programs created, eliminated, or restructured under other programs. This document includes a brief description of MAP-21 programs.

National Highway Performance Program (NHPP): This program provides support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in the State's asset management plan for the NHS. Under MAP-21 the National Highway System is expanded to include all principal arterials.

Surface Transportation Program (STP): This program provides flexible funding that may be used for projects to preserve and improve the conditions and performance of any Federal-aid highway, bridge, and tunnel on any public road. This includes improvements to roads, pedestrian and bicycle infrastructure, and transit capital projects. STP funds are divided between the follow programs:

- STP-Rural (STP-R): Formula allocation for projects outside the Urban Area boundary. RTC (MPO) selects projects for funding.
- STP-State (STP-S): Formula allocation to the Washington State Department of Transportation, for use on State highway projects. The State selects projects.

### Highway Safety Improvement Program (HSIP)

This program is intended to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. The HSIP requires a data-driven, strategic approach to improving highway safety.

### Transportation Alternatives Program (TAP)

MAP-21 established a new program to provide for a variety of alternative transportation projects, including many that were previously eligible activities under separately funded programs. The TAP replaces the funding from Recreational Trails, Safe Routes to Schools, and several other discretionary programs, wrapping them into a single funding source.

### Community Development Block Grant (CDBG)

CDBG funds are administered by the Department of Housing and Urban Development (HUD). Funds can be used for public facilities, economic development, housing, and comprehensive projects which benefit low and moderate income households. Projects are selected by the county.

### Federal Lands Highways

The Federal Lands Highways Program provides funds for projects that improve access within federal lands.

## State Funding

The State Gas Tax is the primary State source of highway maintenance and arterial construction funds:

### Washington State Department of Transportation (WSDOT)

The Washington State Department of Transportation administers state and federal funded state highway projects. State transportation revenues are divided into separate programs. The budget for these programs is determined by the state legislature. WSDOT then prioritizes projects and determines which projects can be constructed within the budget of each program.

### Transportation Improvement Board (TIB) Programs

The Washington State Legislature created the Transportation Improvement Board (TIB) to foster state investment in quality local

transportation projects. The TIB distributes grant funding, which comes from the revenue generated by three cents of the statewide gas tax, to cities and counties for funding transportation projects. The TIB identifies and funds the highest-ranking transportation projects based on criteria established by the Board for each program.

- Small City Program (SCP): Funds projects that preserve and improve the roadway system in a manner that is consistent with local needs (Incorporated cities under 5,000 population). A local match of 5% or greater is required.
- Pedestrian Safety & Mobility Program (PSMP): Funds projects that enhance and promote pedestrian safety and mobility by providing access and addressing pedestrian system continuity and connectivity. A local match of 5% or greater is required.
- Federal Match: Provides the local match for federally funded projects meeting routine small city program eligibility.
- Pavement Preservation Program: Provides funding for rehabilitation and maintenance of the small city roadway system, in some cases in partnership with WSDOT or county paving projects.

### County Road Administration Board (CRAB)

The County Road Administration Board was created by the Legislature in 1965 to provide statutory oversight of Washington's thirty-nine county road departments. The agency and the two grant programs they administer are funded from a portion of the counties' share of the State fuel tax.

- Rural Arterial Program (RAP): This program provides funding for reconstruction of rural arterial roads. Proposed projects for this program are rated by a specific set of criteria including (1) structural ability to carry loads, (2) capacity to move traffic at reasonable speeds, (3) adequacy of alignment and related geometrics, (4) accident rates, and (5) fatal accident rates. This program generates approximately $19 million a year for county road improvements.
- County Arterial Preservation Program (CAPP): This program provides funding to assist counties in preserving their existing paved arterial road networks. Funding is provided to counties as direct allocation based on paved arterial lane miles. This program generates approximately $14 million a year for county road improvements.

### Washington State Public Works Board

The Public Works Board was created by the 1985 legislature. The mission of this board is "to assist Washington's local governments and private water systems in meeting their public works needs to sustain livable communities." They loan money for public facilities, including roads and bridges.

### Public Works Trust Fund (PWTF)

The Public Works Trust Fund has a pre-construction and a construction loan program. These loan programs provide funds for design work, engineering, permit acquisition, environmental review, right-of-way acquisition, and construction. These loans have a 5-year term for pre-construction and a 20-year term for construction with an interest rate of only one-half percent.

### Community Economic Revitalization Board (CERB)

This fund was established by the legislature to make loans and/or grants for public facilities, including roads, which will stimulate investment and job opportunities, reduce unemployment, and foster economic development. The Department of Community Trade and Economic Development administer this program.

### WSDOT Grant Programs

WSDOT administers many transportation related grants that are available to agencies. However, many of these programs are dependent on the legislature allocating funding. These programs often vary from year to year.

## Local Funding

Local revenue comes from a variety of sources such as gas tax, property tax, sales tax, permits, fees, and private development.

### Local Gas Tax Revenue

This is the distribution of the state gasoline tax to the cities and counties based on each jurisdiction's population.

### Road Improvement District (RID)

RID's can be formed and funded by properties benefiting from an improvement. They are usually formed at the request of property owners. Local government will build the project using revenue bonds from the road improvement district.

### Frontage Improvement Agreements

Developments are often required to construct frontage improvements as a condition of their development. In cases where the development abuts a proposed road improvement project, it may be beneficial for the developer to pay local government for their share of the frontage improvement and for local government to construct the improvement as part of the overall capital project.

## Transit Revenues

Revenue sources that have been described previously are generally intended for roadway improvements. The transit system, including senior transportation, is generally funded by fare box proceeds, consolidated state and federal grants, Medicaid, and other local funds. These funds are used to pay for both operating and capital costs.

### Farebox

Patrons of the Skamania deviated fix route service pay a fare to use the service between Skamania County and Vancouver. The fare revenues pay for a portion of the operating cost.

### Consolidated State and Federal Grants

The Washington State Department of Transportation is responsible for distributing a variety of state and federal grants for public transportation programs. These programs include Federal Sections 5310, 5311, 5311(f), 3037 and State Rural Mobility, Paratransit/Special Needs, and Transit Formula Revenue Equity. WSDOT created a consolidated application process that is used for both state and federal public transportation grants. By creating a consolidated application process, applicants only need to submit their proposals for all funding once every two years.

### Medicaid

Eligible medical trips are funded by Medicaid transportation funds.

### Local Funds

Senior Transportation is funded in part by the Southwest Agency on Aging and Skamania County. In addition, donations from local agencies and passengers assist with operating cost.

# Revenue Assumptions

SHB 1928 requires the RTP be 'fiscally constrained' or "include a financial plan demonstrating how the regional transportation plan can be implemented, indicating

resources from public and private sources that are reasonably expected to be made available to carry out the plan, and recommending any innovative financing techniques to finance needed facilities, services, and programs." There must be a balance between forecast revenues and costs of identified transportation system improvements. With limited revenues available for funding transportation improvements, the most cost-effective transportation solutions must be identified and selected. The following outlines the assumptions and methodology used for the RTP revenue forecast.

WSDOT provided historical data for transportation revenues for years 2004-2012 (9-year period).

Total transportation revenue was estimated for a 21-year period through 2035, using the following approach:

1. Calculated annual Skamania County transportation revenue for years 2004-2012;
2. Increased annual revenue by 10% to reflect the recovery of the economy;
3. Multiplied transportation revenue by 80% to reflect the revenue available for the regional transportation system;
4. Multiplied regional transportation revenue by 21 years to estimate total regional revenue generated by Skamania County through 2035.

The regional revenue estimate accounts for the trend that Skamania County receives a $1.28 return for every dollar contributed by Skamania County residents.

Assumed the equivalent of a new statewide transportation funding package of 11.5 cents per gallon. With Skamania County receiving approximately $5 million dollars allocated to a single project, with additional distribution to local governments for maintenance and preservation.

Assumed the continuation of the federal transportation revenue at current levels.

The RTP Assumes revenue and costs in 2012 dollars.

Table 4-1 contains projected transportation revenue for the regional transportation system. Based on this estimate, the Skamania County region would have approximately $91.7 million in transportation revenue available over the next 21 years.

***Table 4-1: Projected Revenue***

| Revenues | Annual Average | 21 Years |
|---|---:|---:|
| Transportation Revenue | $4,300,000 | $90,300,000 |
| State Revenue Package | $240,000 | $5,040,000 |
| **Totals** | **$4,540,000** | **$95,340,000** |

# Cost Assumptions

The following outlines the assumptions and methodology used to estimate costs:

- Future maintenance and preservation cost were based on trends from years 2004-2009. The full maintenance and preservation need is significantly higher than the available cost.
- Cost for transportation improvements are based on planning level cost estimates.
- Cost for other modes such as rail, air, and river are assumed to be met outside of the RTP.

Table 4-2 contains projected transportation cost for the regional transportation system. Based on this estimate, the Skamania County region would have $69.3 Million in maintenance and preservation cost, $26 Million in improvement costs, and $79.0 Million in illustrative needs

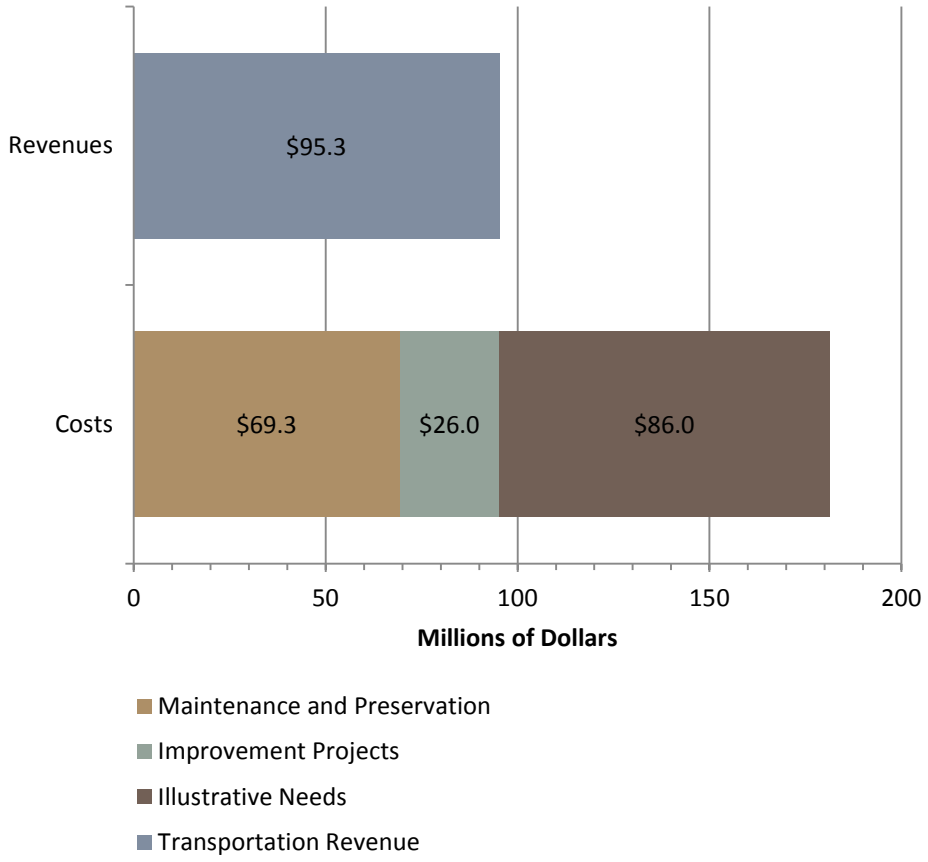
***Table 4-2: Projected Costs***

| Cost Type | 21 Year Forecast |
|---|---|
| Maintenance & Preservation | $69,300,000 |
| Improvement Projects | $26,040,000 |
| Illustrative Needs | $79,000,000 |

# Balancing Revenue and Cost

The "fiscally constrained" test focuses on assuring that there is a reasonable expectation that revenues will be available to provide for the transportation Improvements identified in the RTP. Based on the revenue assumptions described in this chapter, there are insufficient resources within the region to meet the maintenance, preservation, and improvement needs of the regional transportation system. If additional resources are not obtained, there will be inadequate funds for all of the transportation improvement needs. The funding and cost difference is illustrated in Figure 4-1. To meet the financial constraints of the RTP, some improvement needs have been moved to an illustrative list.

*Figure 4-1: Transportation Revenue and Cost, 2014-2035*



# Chapter 5: System Improvement and Strategy Plan

## Overview

This chapter summarizes the solutions and strategies needed to provide an adequate level of regional mobility over the next 20 years. A wide range of solutions and strategies are needed to meet the regional travel demand. There are strategies to address the travel demand side as well as transportation system supply side, and strategies to increase the efficiency of the existing regional transportation system as well as strategies to provide for a safer transportation system. The solutions and strategies outlined in this chapter will provide Skamania County residents with a well-maintained, structurally sound, safe regional transportation system. In developing a balanced regional transportation system, it is not only capacity and safety deficiencies that must be addressed but also preservation and maintenance of the existing regional transportation system. This chapter concludes with a prioritized list of transportation system improvements.

The solutions and strategies for the Skamania County regional transportation system have been divided into subheadings. Maintenance is the daily operations that keep the transportation system safe, clean, and efficient. Preservation is an investment that prolongs the life of the transportation system. Improvements are modifications that increase the safety, mobility, and effectiveness of the transportation system. Miscellaneous includes specific improvements which may be included under one of the other subheadings or is tied to a specific funding source, thus no cost estimate is provided for these strategies. Illustrative includes additional transportation projects that have been identified and currently lack sources of funding.

## Maintenance

Of prime importance in the planning for the regional transportation system is the need to maintain the existing system.

Maintenance will address the day-to-day activities needed to keep the transportation system in good working order; daily operations that keep the system

safe, clean, reliable and efficient. Such activities include filling potholes, repairing bridges, repairing drainage ditches, repairing guardrails, replacing damaged signs, plowing snow, removing rocks, and efficiently operating traffic signals. Preservation can prolong the life of the existing transportation system through such projects as repaving roads, rehabilitating bridges, and rock fall protection.

The Washington State Department of Transportation (WSDOT) and local jurisdictions monitor the condition and operation of the existing system and program projects to maintain and preserve the system. The RTP supports the routine, regularly-scheduled, and necessary maintenance and preservation work identified by local jurisdictions. The RTP supports maintenance and preservation being given high priority in the programming of transportation funds. The estimated 21 year public maintenance and preservation cost for the regional transportation system is $69.3 million. This does not reflect the full maintenance and preservation need.

## Improvements

In addition, the Regional Transportation Plan recommends transportation improvements needed to provide an adequate level of safety and regional mobility for the anticipated growth in travel demand. Improvements should be related to an identified deficiency, as identified in Chapter 3 (safety, capacity, economic development, non-motorized mode, and bridge). Improvements would include adding lanes, removing a dangerous curve, adding rest areas, adding scenic vistas, improving sight distance, adding a climbing lane, realignment of a roadway, and adding alternative modes of transportation. The estimated 21 year improvement cost is $26.0 million.

## Illustrative

Projects that address an identified deficiency, but do not have identified revenue, are contained in the Illustrative Project List. These projects are considered "financially unconstrained," because estimated resources would not cover project costs.

The Illustrative Projects have "conceptual improvements" indicated and estimated costs identified. These conceptual improvements will not become committed projects until further study is completed, including moving through the regional transportation planning process and potential revenue has been identified. In many cases, the Illustrative projects will require further study of feasible alternatives. The estimated 21 year improvement cost is $74.5 million.

# Miscellaneous Strategies and Solutions

The RTP supports strategies for bridges, safety, economic development, non-motorized modes, and transit which will support the mobility of people and goods within Skamania County.

## Bridge Deficiencies

Maintenance, preservation, and replacement projects required on bridges are identified through the Bridge Management System (BMS) administered by WSDOT.

The region has identified the long-term need to replace the functionally obsolete Hood River Bridge. The region must continue to work collaboratively on this long-term transportation need.

## Safety Deficiencies

Accidents and their number, location, and type are monitored by WSDOT and local jurisdictions. If there is deemed to be a safety deficiency, then remedial measures are considered and corrective action taken.

## Economic Development and Freight Transportation Deficiencies

The prosperity of a region is dependent on the provision of transportation infrastructure to support economic development. Economic development emerged as a prime evaluation criterion for prioritizing projects for the Regional Transportation Plan.

WSDOT has adopted a Statewide Freight and Goods Transportation System, which categorizes highways and local roads according to the tonnage of freight they carry. Washington State also created the Freight Mobility Strategic Investment Board (FMSIB) with a mission to create a comprehensive and coordinated state program to facilitate freight movement between and among local, national, and international markets which enhances trade opportunities.

The Washington State Legislature has defined the purpose of the state's freight rail program and planning activities and established a comprehensive freight rail policy. This policy directs WSDOT to maintain and improve the state freight rail system through better freight rail planning, better cooperation to preserve rail lines, and increased financial assistance from the state.

Washington and Oregon have identified the deepening of the lower Columbia River channel to 43 feet as essential for the movement of freight. This improvement will help keep the region economically competitive in the future.

## Non-Motorized Transportation Deficiencies

The development of non-motorized transportation modes is a strategy that will maximize the capacity of the existing transportation system in urban areas. Reduced reliance on automobiles is largely dependent on the development of adequate sidewalks and bikeways. Pedestrian and bicycle needs are most appropriately identified at the local level.

Transportation demand management (TDM) strategies to reduce vehicle trips on the regional transportation system can include use of transit, carpooling, vanpooling, working of flex-hours and/or compressed work week, and working from home with use of communications technology.

Transportation system management (TSM) is also a strategy to maximize the efficiency of the existing transportation system. TSM measures include a wide range of strategies, most of which are related to the use of intelligent transportation systems. These include incident response programs, programs to monitor travel conditions (weather/congestion), variable message signage to alert motorist of travel conditions, improved communication means, and Intelligent Vehicle/Highway Systems. Other TSM elements include minor capital upgrades such as channelization at traffic intersections.

## Transit Deficiencies

Transit is important in meeting the mobility needs of the transit dependent; those unable to drive automobiles because of age, infirmity, disability, or low income. Transit can also meet the mobility needs for commute trips to and from employment centers.

# Conclusion

The RTP provides for strategies and solutions to meet regional travel demand and to develop a balanced regional transportation system over the 20-year planning period. Projects are identified in the RTP and then programmed in the local Transportation Improvement Program. Table 5-1 provides a listing of needed improvements for the regional transportation system. This table includes a list of projects for which regional need has been identified and for which there is strong regional commitment. The list focuses on safety improvements since these are the projects that are most readily needed. The list also identifies a wide range of transportation system improvements that will contribute to the development of a balanced regional transportation system.

A prioritization process helps the region to make most effective use of limited transportation funding to meet transportation system improvement needs. The projects listed in Table 5-1 were prioritized based on the regional prioritization process. The following key issues were considered in the prioritization process:

1. Safety,
2. Economic Development,
3. Congestion,
4. Connectivity,
5. Support, and
6. Cost/Funding.

### *Table 5-1: Transportation Improvement Projects*

| Rank | Facility | Mile Post | Location | Existing Condition | Improvement | Cost* *(millions)* |
|---|---|---|---|---|---|---|
| Unranked | All | N/A | Skamania County | Existing transportation system | Preservation and Maintenance | Ongoing |
| Unranked | All | N/A | Skamania County | Existing transportation system | Safety Improvements | Ongoing |
| Unranked | All | N/A | Skamania County | Existing transportation system | Transportation Enhancements | Ongoing |
| Unranked | All | N/A | Skamania County | Existing transit system | Maintain and improve public transit | Ongoing |
| 1 | SR-14 | 22.7-26.4 | Marble Rd. to Salmon Falls Rd. | One lane each direction | Phase 3: Realign curves | $8.0 |
| 2 | SR-14 | 47.5/49.3 | Wind River Rd. Intersection | Skewed intersection | Improve Intersection | $5.0 |
| 3 | SR-14 | 41.5 | Bridge of the Gods | Intersection | Improve Intersection | $1.0 |
| 4 | SR-14 | 38.5 | Hot Spring Way / Dam | At-grade intersections | Add WB deceleration and acceleration lanes | $0.5 |
| 5 | SR-14 | 21.7-63.5 | Countywide Rockfall | Rockfall | Rockfall protection | $10.0 |
| 6 | SR-14 | 44.9-48.1 | E. of Stevenson to Carson | One lane each direction with sharp curves | Corridor Feasibility Study | $0.2 |
| 7 | SR-14 | 58.0-60.2 | Tunnels 1-5 | Height restricted tunnels | Feasibility Study: Lower grade by 6", ITS | $0.5 |
| 8 | SR-14 | 24.9-27.9 | Half Bridge to Prindle Rd. | One lane each direction | Study: Extend WB Climbing Lane | $0.2 |
| 9 | SR-14 | 21.7-63.5 | Countywide | Limited shoulders | Study: Widen shoulder to 4' | $0.2 |
| 10 | SR-14 | 30.1-30.7 | East of Smith-Cripe Rd. | One lane each direction, with sharp curves | Study: Realignment | $0.1 |
| 11 | SR-14 | 63.32 | Cook-Underwood Intersection | At-grade intersections | Study: Intersection improvement | $0.1 |
| 12 | Columbia River | N/A | Stevenson Landing | Dock | Study: Replace Public Dock | $0.1 |
| 13 | SR-14 | 42.9-43.3 | Stevenson Industrial Land | Driveways | Feasibility Study: Industrial Land Access | $0.1 |
| **Total** | | | | | | **$26.0** |

**These are planning level estimates and additional work will be needed to determine actual cost.*

Table 5-2 provides a listing of needed improvements along the regional transportation system that do not have an identified revenue source. These projects will be added to the committed list when adequate financial resources are identified.

### *Table 5-2: Illustrative Needs*

| Rank | Facility | Mile Post | Location | Existing Condition | Improvement | Cost* (millions) |
|---|---|---|---|---|---|---|
| 1 | SR-14 | 22.7-26.4 | Marble Rd. to Salmon Falls Rd. | One lane each direction | Phase 4: Realign curves | $7.0 |
| 2 | SR-14 | 21.7-63.5 | Countywide Rockfall | Rockfall | Rockfall protection | $10.0 |
| 3 | SR-14 | 44.9-48.1 | E. of Stevenson to Carson | One lane each direction with sharp curves | Realignment, widen shoulders, and rockfall | $20.0 |
| 4 | SR-14 | 58.0-60.2 | Tunnels 1-5 | Height restricted tunnels | Lower grade by 6", ITS | $5.0 |
| 5 | SR-14 | 24.9-27.9 | Half Bridge to Prindle Rd. | One lane each direction | Extend WB Climbing Lane | $16.0 |
| 6 | SR-14 | 21.7-63.5 | Countywide | Limitted shoulders | Widen shoulder to 4' | $20.0 |
| 7 | SR-14 | 30.1-30.7 | East of Smith-Cripe Rd. | One lane each direction, with sharp curves | Realignment | $5.0 |
| 8 | SR-14 | 63.32 | Cook-Underwood Intersection | At-grade intersections | Intersection improvements | $2.0 |
| 9 | Columbia River | N/A | Stevenson Landing | Dock | Replace Public Dock | $1.0 |
| **Total** | | | | | | **$86.0** |

**These are planning level estimates and additional work will be needed to determine actual cost.*

# Chapter 6: Performance Monitoring

## Overview

The transportation planning process requires that monitoring of system performance takes place. Monitoring of the regional transportation system's performance is an ongoing activity, which at a minimum, will occur as part of the review of the Regional Transportation Plan (RTP). The RTP must be reviewed at least every two years. Several elements of system monitoring activities are described below.

## Safety

Monitoring of accident rates and rockfall is an ongoing activity of the regional transportation system. Accident data will be collected and studied based on a three year accident rate as part of each RTP review. The accident rates will be used to identify the performance of the transportation system by identifying deficient road segments. High accident locations will be used as a tool for identifying improvement strategies to alleviate a safety problem.

In addition, WSDOT will monitor rockfall. Future updates of the RTP will contain the most recent rockfall information. Rockfall locations will be used as a tool for prioritizing rockfall improvements.

## Capacity Analysis

Traffic volumes will be used as a tool for monitoring traffic congestion and for identifying improvement strategies to alleviate the congestion. The Highway Capacity Software will be used to analyze the level of service along the regional transportation network. Deficient segments will be analyzed to identify improvement strategies to alleviate congestion.

## Preservation and Maintenance

Local, regional, and state tools are being used to monitor preservation and maintenance needs. Washington State has developed a Bridge Management System and Pavement Management System to identify deficient conditions along roadways and bridges. These tools along with other tools are ongoing activities which monitor preservation and maintenance needs of the regional transportation system.

## Special Studies

Local and state studies and plans are occasionally undertaken which monitor the performance of the transportation system. As these special studies or plans are completed, the associated information will be included in the next update of the Regional Transportation Plan.

# Chapter 7: Plan Development and Implementation

## Public Involvement in Regional Transportation Planning Process

Southwest Washington Regional Transportation Council (RTC) has an adopted public involvement process outlining the public involvement efforts in the development of regional transportation plans and programs. Copies of the public involvement process are available from RTC's Web site or office. All RTC Board meetings and the Skamania County Transportation Policy Committee meetings are open to the public. Public involvement efforts build from those carried out at the local level in development of local plans and programming of transportation projects.

A public meeting is held to adopt the Skamania County Regional Transportation Plan. Amendments to the RTP are presented to both the Skamania County Transportation Policy Committee and the RTC Board of Directors for their consideration and adoption. Transportation issues, studies, plans, and programs are outlined and reported on RTC's web site at http://www.rtc.wa.gov.

## RTP Implementation

Implementation of regional transportation goals, policies, and actions established by the Skamania County Regional Transportation Plan (RTP) are carried forward through a local and regional decision-making process. Through the local development of a Transportation Improvement Program (TIP), transportation needs identified in the RTP are programmed for receipt of funds.

## RTP Update Process

The RTP is to be reviewed at least every two years and has been updated or amended many times over the years. Should changing policies, financial conditions, or growth patterns warrant, an RTP update or amendment will occur.

Results and recommendations from transportation studies and improvements will be incorporated into future RTP updates. The next review/update to the RTP is anticipated in 2016.

# Glossary

| Abbreviation | Description |
|---|---|
| ADT | Average Daily Traffic |
| BEA | Bureau of Economic Analysis |
| BNSF | Burlington Northern Santa Fe Railroad |
| BMS | Bridge Management System |
| CAPP | County Arterial Preservation Program |
| CDBG | Community Development Block Grant |
| CERB | Community Economic Revitalization Board |
| CRAB | County Road Administration Board |
| FMSIB | Freight Mobility Strategic Investment Board |
| GMA | Growth Management Act |
| HSP | State Highway System Plan |
| HSIP | Highway Safety Improvement Program |
| HSS | Highways of Statewide Significance |
| ISTEA | Intermodal Surface Transportation Efficiency Act (1991) |
| LOS | Level of Service |
| MPO | Metropolitan Planning Organization |
| NHS | National Highway System |
| NHPP | National Highway Performance Program |
| OFM | Washington State's Office of Financial Management |
| Scenic Area | Columbia River Gorge National Scenic Area |
| NHS | National Highway System |
| PMS | Pavement Management System |
| PTBA | Public Transportation Benefit Area |
| RID | Road Improvement District |
| RTC | Southwest Washington Regional Transportation Council |
| RTP | Regional Transportation Plan |
| RCO | Washington State Recreation and Conservation Office |
| RTPO | Regional Transportation Planning Organization |
| SHB | Senate House Bill |
| SR- | State Route |
| STP | Surface Transportation Program |
| TAP | Transportation Alternatives Program |
| TDM | Transportation Demand Management |
| TIB | Transportation Improvement Board |
| TIP | Transportation Improvement Program |
| TSM | Transportation System Management |
| VMT | Vehicle Miles Travelled |
| WSDOT | Washington State Department of Transportation |
| WTP | Washington Transportation Plan |