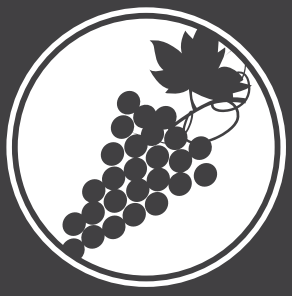

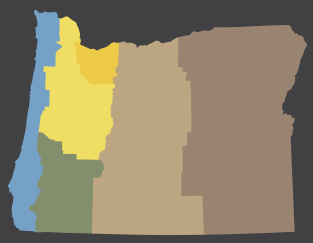

one Oregon

A Vision for Oregon's Transportation System

Transportation Vision Panel
Report to Governor Kate Brown

A 30-year vision and near-term recommendations for the future of transportation in the State of Oregon

Vision Panel members

Gregg Kantor, Co-Chair, NW Natural Gas, President & CEO
Tammy Baney, Co-Chair, Deschutes County Commissioner
Rep. Cliff Bentz, Oregon State Representative
Sen. Lee Beyer, Oregon State Senator
Martin Callery, Former COO, Port of Coos Bay
*Larry Campbell, Former Oregon House Speaker**
Gary Cardwell, NW Container Services
Theresa Carr, CH2M Hill
Jill Eiland, Intel
Aron Faegre, Faegre & Associates
Stuart Foster, Foster Denman, LLP
Mark Frohnmayer, Arcimoto, Inc.
Mark Gardiner, State Aviation Board
David Hauser, Eugene Chamber
Brad Hicks, Medford/Jackson Chamber
Sen. Betsy Johnson, Oregon State Senator
John Lattimer, Marion County
Roger Lee, EDCO
Rep. Caddy McKeown, Oregon State Representative
*Tim McLain, Former OSP Superintendent**
John Mohlis, Oregon Building and Construction Trades Council
Michael Montero, Montero & Associates, LLC
Susan Morgan, Douglas County Commissioner
Dennis Mulvihill, Dennis Mulvihill Consulting
Jerry Norquist, Cycle Oregon
*Sean O'Hollaren, Nike**
Susie Papé, The Papé Group
*Steve Phillips, Phillips Candies**
Dan Pippenger, Port of Portland
Tom Potiowsky, PSU, Northwest Economic Research Center
Annette Price, Pacific Power
Craig Reeder, Hale Companies
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Joanne Verger, Former Oregon State Senator
Bruce Warner, TriMet
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Rollie Wisbrock, Oregon State Treasury, Retired

**Former Vision Panel members*

Special thanks to:

AAA Oregon/Idaho
AASHTO
Association of Oregon Counties
Bicycle Transportation Alliance
Business Oregon
Cascades West ACT
Central Lane MPO
Central Oregon ACT
Cherriots
Drive Oregon
JLA Public Involvement
Lane County ACT
Lane Transit District
League of Oregon Cities
Lower John Day ACT
May Trucking
Metro & JPACT
Mid-Willamette Valley ACT
North Carolina Department of Transportation
North East ACT
Northwest Oregon ACT
Oregon Department of Aviation
Oregon Department of Transportation
Oregon Economic Development Districts
Oregon Environmental Council
Oregon Regional Solutions
Oregon Transit Association
Oregon Transportation Commission
Oregon Transportation Forum
Oregon Trucking Association
Pivotal Resources
Port of Portland
Portland Business Alliance
Region 1 ACT
Rogue Valley ACT
Safe Routes to School National Partnership
South Central Oregon ACT
South East ACT
South West ACT
Transportation for America
Transportation for Oregon's Future
Travel Oregon
TriMet
Willamette Falls Locks Working Group

Purpose

The purpose of this report is to give policymakers at all levels an overarching view of the transportation needs in Oregon, as articulated by the Transportation Vision Panel, a group of civic and business leaders, stakeholders, and community members from across the state. It focuses on needs in all regions and across all modes.

This report is not an operational plan or a specific funding package, nor is it prescriptive. Instead, it outlines the challenges and opportunities facing Oregon's transportation system, identifies key priorities for action, and provides a menu of short-term needs and long-term goals on transportation investments for consideration by policymakers at all levels.

Section overview

The *first section* of this document is a high-level overview of issues the panel foresees will impact transportation needs.

The *second section* details the panel's vision and key findings along with priorities from all regions of Oregon.

Finally, the *third section* of this document details considerations made by the panel for financing our transportation system.

Supporting material, including report references, background information, appendices, statistics, and analysis used to help develop the report, is available at visionpanel.wordpress.com.

Contents

Introduction

Oregon is a state blessed with incomparable natural beauty and a strong economy prized for its agriculture commodities, forest products, and its technology goods and services. Its people are also renowned for their civic engagement and innovation in public policy. This is a place where people from all parts of the country want to live, and where Oregonians want to stay. We are here to raise families, do business, enjoy our golden years, and take part in our shared high quality of life.

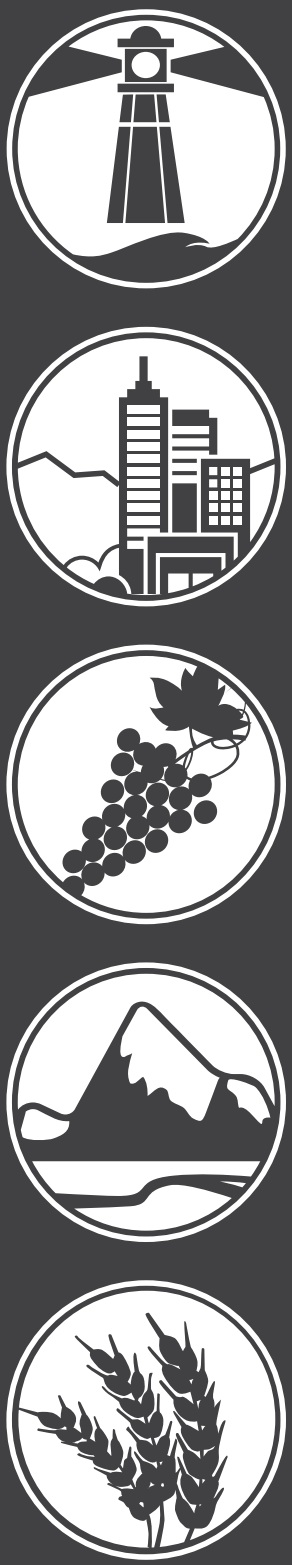
We are also fortunate to have a robust multimodal transportation system. It has served us well and has been a comparative advantage for our heavily trade-dependent economy. Significant investments by past Legislatures and Congresses in both preservation and strategic multimodal capacity expansion have left Oregon with a transportation system that better moves people and goods across all modes.

But Oregon's population is straining our heavily subscribed and ever-aging transportation system. Rapid growth could challenge our ability to remain economically competitive, hinder our ability to meet long-range greenhouse gas emission reduction goals, and make it harder to simply get to work.

Oregon is also facing a vulnerability not shared by other parts of the country. The expected Cascadia Subduction Zone earthquake and tsunami will cause long-lasting damage to this state if we are unable to make key upgrades to vulnerable parts of our transportation infrastructure.

But knowing all of these challenges makes our task clearer. Oregonians from all corners of the state were asked to share their priorities for improving our state's transportation system and to shore up growing vulnerabilities. This report provides a distillation of that input and prioritized findings from the panel itself.

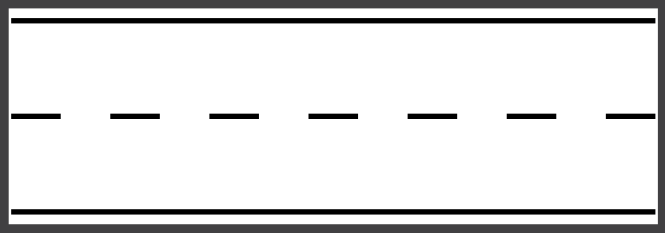
Oregon benefits greatly from residents who care deeply about this special place and who are willing to participate and make this state even better. While the landscapes, and even the time zones, differ in our vast state, this report finds we have much in common in relation to our transportation system — we share in our desire to make this great state better, and we understand the importance of being one Oregon.



by the numbers

23 marine **ports**

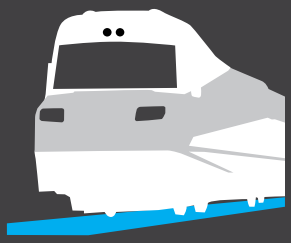
71,671
miles of highways, streets and roads



$300 billion
of commodities move annually into, out of, and through Oregon

7 **commercial** airports and **90** **public use** airports

2,369 **miles** of rail track



11,000+
public transit stops

Trucks carry **74%** of all **international trade goods** (by value) into and out of Oregon

7,669 **bridges** statewide

1884
First regularly scheduled passenger rail service begins in Portland

1889
The Rivers and Harbors Act leads to development of Columbia River ports

1909
Port of Coos Bay established, becomes the state's largest coastal deep-draft port

1913
Oregon creates the State Highway Commission to "Get Oregon Out of the Mud"

1919
Oregon establishes the nation's first gas tax, at 1¢ per gallon

1932
The Oregon Coast Highway is completed

1951
PDX becomes an "International" airport after expansion of its runway

1966
I-5 is completed from Portland to the California border

1971
The "Bicycle Bill" is passed by the Oregon State Legislature

1975
I-84 is completed from Portland to the Idaho border

1986
Tri-Met opens its first MAX Light-Rail line in East Portland

2001
OTIA marks the first major investment in the state's highway system in over a decade

2007
Lane Transit District begins service on the state's first Bus Rapid Transit system

1850 Population: 12,093

1890 Population: 317,704

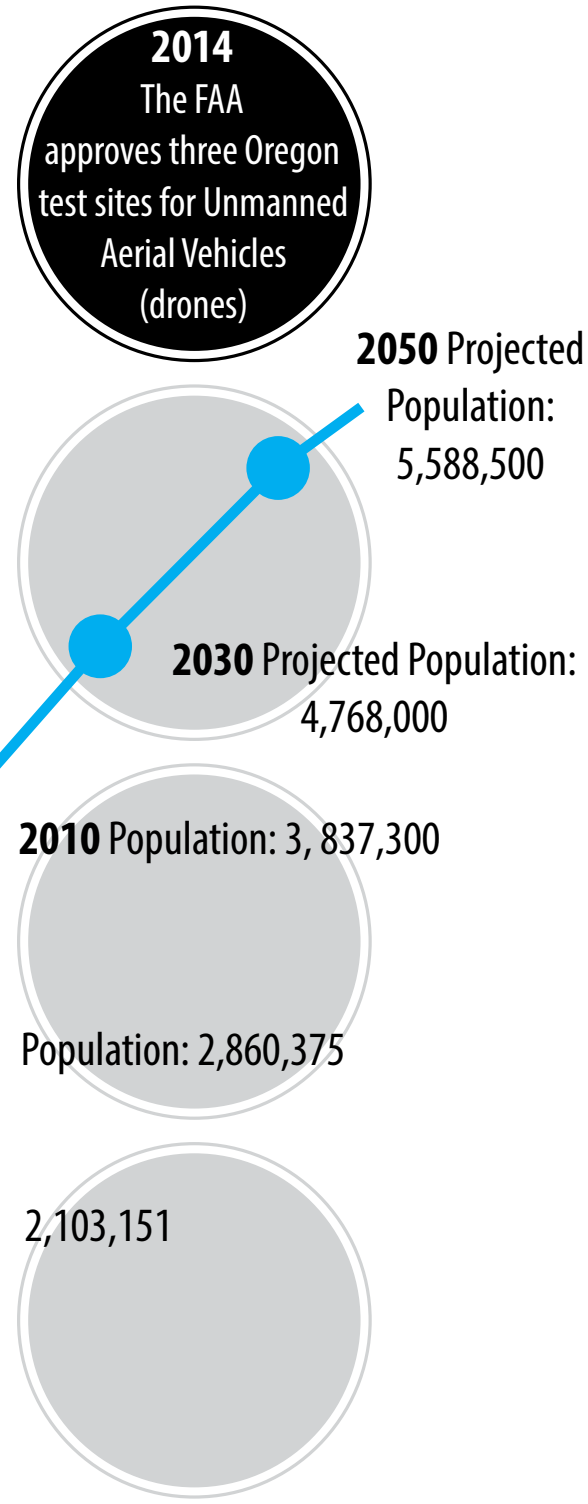
1910 Population: 672,765

1930 Population: 953,786

1950 Population: 1,521,341

1970 Population:

1990



Oregon's Transportation: A History

Oregon's transportation history is more than a recitation on concrete, steel, and iron. It is central to its people and what makes Oregon a special place. From anthropologist Luther Cressman's 1938 unearthing of seventy pairs of 10,000 year-old sandals, to Bill Bowerman's relentless pursuit of the perfect running shoe which led to an athletic empire, the movement of people and products has been key to our state's legacy.

For generations, Oregonians have traveled by foot, canoe, and horse to fish, farm, and explore these great lands. The sternwheeler, steamship, and locomotive followed, transforming not only our landscape but the relative sense of distance between far-away families and communities. More recently, paved roads, cars, and freight trucks brought us even closer together and products from afar closer to home.

Today, we are on the precipice of technological changes in transportation that will likely radically alter our daily lives. Yet at the same time, we are rediscovering the value of older technologies — either on two wheels or steel wheels – and how they can better serve the needs of our modern day lives.

Oregonians have a longstanding passion for quality transportation. A "good roads" movement at the turn of the 20th Century helped to "Get Oregon out of the Mud" led by the Legislature and the State Highway Commission. Oregon has also welcomed innovators, like Samuel Lancaster, to design and build the region's first paved highway through the Gorge. And Conde McCullough designed many of Oregon's iconic bridges built with economy in mind and to "harmonize" with the state's natural beauty.

The legacy of past investments and drive toward innovation has helped build a transportation system that has served as an inspiration across the country. It has given Oregonians much to be proud of, and is the foundation for future achievement. However, this foundation is deteriorating from age, heavy use, and lack of investment in maintenance, enhancement, and transportation options.

In order to create the system that will best serve our future needs, one that allows for the efficient movement of people and products in an environmentally responsible way, we must be cognizant of current challenges in today's transportation system and we must be willing to act.

Challenges & Opportunities

A growing population

25% INCREASE

in Oregon's population by 2035

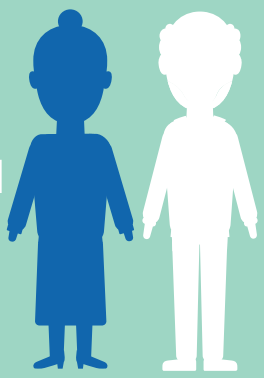
Increasing freight traffic

60% increase in freight volume in Oregon by 2035

Needs of an aging population

Today about 14.7 % of Oregonians are over the age of 65; nearly

20% of Oregon's population will be by 2035



Greenhouse gas emissions

39%

of Oregon's greenhouse gas emissions come from the **transportation sector**

A generational shift in community and transportation preferences

37% of sidewalks are incomplete along state roads where a need is identified

More **young people** are choosing to live in compact and mixed use developments that provide **walking, biking and transit options**

Aging transportation infrastructure

439

structurally deficient bridges in Oregon

CO_2

22.2 MILLION METRIC TONS

$15.1 MILLION

in increased trucking costs due to

the loss of Terminal 6 service

Shifts in technology

carsharing

more unmanned aerial vehicles

connected and automated vehicles

Seismic vulnerability

Cascadia Subduction ZONE

Oregon faces a grave risk of an earthquake and tsunami **in the next** 50 *years*

718

bridges on the state highway system need to be replaced, retrofitted, or rehabilitated for seismic resilience

The panel believes that the findings outlined in this report will have a lasting and positive impact on the fabric of Oregon's economy and security, as well as the vibrancy of our communities. We are also greatly encouraged that, from across Oregon, there is strong support for our shared transportation system and clear focus on the need to maintain the system we have today, address congestion, meet seismic needs, and make appropriate investments in transit.

We also appreciate that Oregon policymakers are deeply devoted to addressing the challenging issues facing our state today. It is our hope this report's findings, along with the priorities identified within the regions, offer a path for immediate, mid-term, and long-term investments in our shared transportation system.

One Oregon 2045: A vision

In 2045, Oregon will have a transportation system that is in a state of good repair, largely resilient to major natural disasters, financially stable, and meets the needs of its people and its economy.

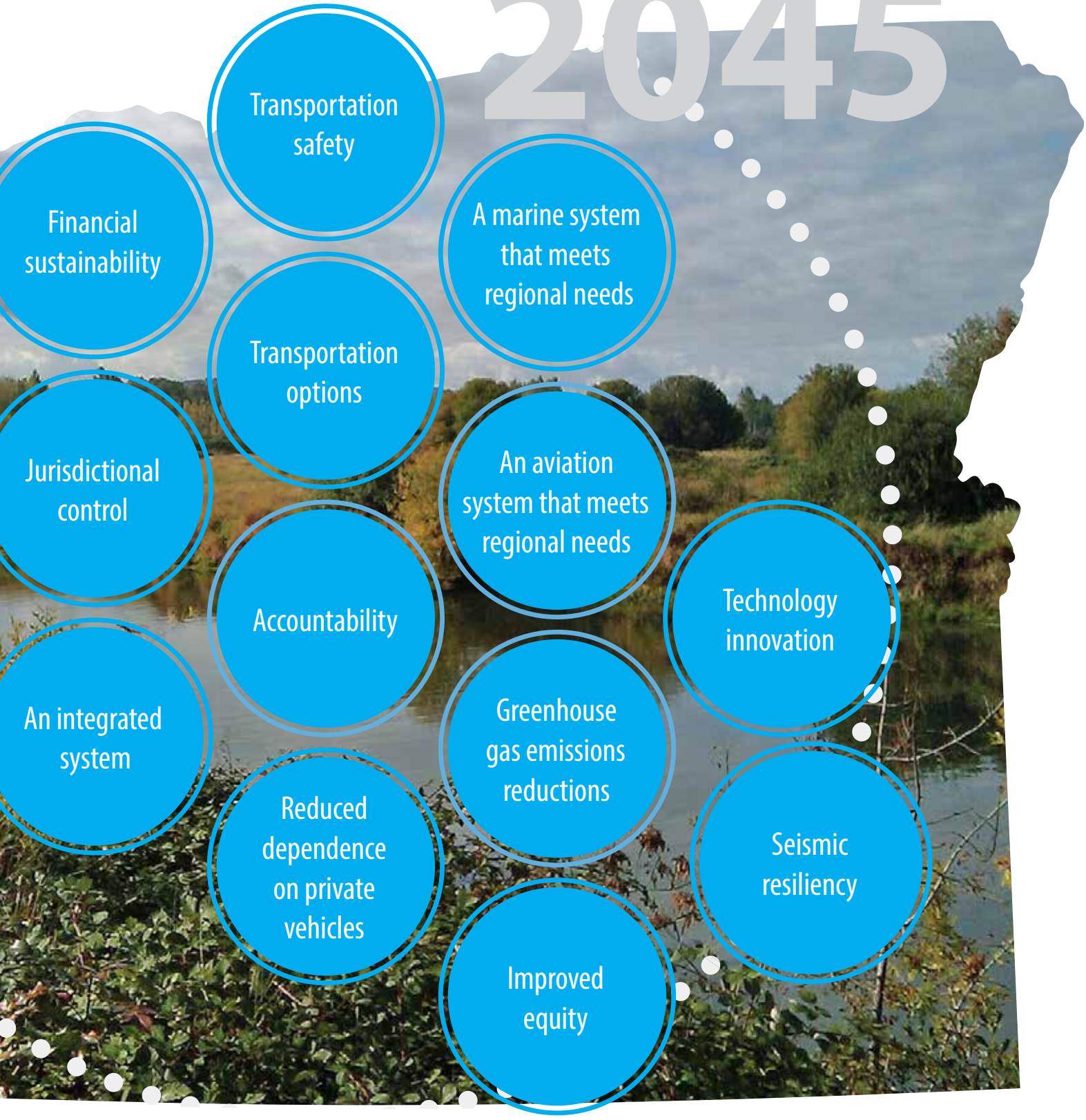
This system will support healthy and livable Oregon communities with improved access to safe and reliable transportation options, reducing reliance on a single mode. This multimodal transportation system will enhance mobility, whether Oregonians choose to travel by car, train, bus, boat, airplane, bicycle, or by foot.

Oregon will have a safe, reliable, and efficient multimodal freight network that supports Oregon's businesses and enhances Oregonians' quality of life. This freight network will include a marine, aviation, rail, and roadway system that meets distinct regional needs, supports urban and rural economies, and allows Oregon's businesses to efficiently access regional, national, and international markets.

Oregon's transportation system will have met its greenhouse gas reduction targets through strategic investments in lower carbon transportation options, such as alternative fuel vehicles and other technology innovations that also enhance safety and efficiency.

The state's transportation assets will be under appropriate jurisdictional control, and jurisdictions responsible for these assets will be accountable and garner a high level of public trust.

one Oregon 2045



Panel Findings

TRANSPORTATION MAINTENANCE

Oregon faces an annual $324 million shortfall in its ability to adequately maintain a state of good repair on bridges and pavement.

Oregonians have invested billions of dollars in the transportation system we enjoy today. But we no longer raise enough revenue to maintain this system, let alone enhance capacity. Transportation maintenance challenges are particularly acute for cities and counties across Oregon. These assets are too important to the state's economic vitality to let them deteriorate due to underinvestment. The panel recommends:

Transportation system maintenance: Oregon's top transportation investment priority must be to preserve and maintain existing transportation assets across all modes.

ROADWAY BOTTLENECKS

By 2040, Portland-metro households will spend an average of 69 hours each year stuck in congestion without new investments in transportation.

Congestion on Portland metro highways is impacting economic competitiveness for the entire state. At the same time, other state highways were not designed or built to adequately move today's volumes of freight traffic. To help the movement of people and freight, structural improvements are needed on roadway pinch points. The panel recommends:

Invest in bottleneck elimination: Improve capacity and throughput of existing roadway bottlenecks on the highest priority corridors of statewide significance (I-5, I-205, etc.).

Invest in freight network alternatives: Invest in improved capacity and efficiency of rural highway corridors (Highway 97, etc.) that create freight network alternatives.

Transportation demand management strategies: Invest in transportation options and demand management strategies such as transit, rideshare, biking and walking, and employer incentives. Additionally, invest in freight enhancements (such as truck rest areas and port drop sites) that reduce roadway trucking demand during peak hours of congestion.

TRANSIT

For many Oregonians — particularly students, seniors, and people with disabilities — transit is critical to meet their daily needs. For others, transit has become increasingly important just to get around in congested communities. The 2013 Values & Beliefs Survey found that a majority of Oregonians support investment in public transportation. While transit is becoming more popular in urban and rural communities alike, strategies to deploy transit will likely look different across the state. The panel recommends:

Reduce gaps in transit service: Transit investments don't always align with existing needs within communities or between communities. Future investments must aim to close both state and local gaps in service and enhance intercity transit connections to meet workforce and equity needs and help achieve greenhouse gas reduction goals.

Maximize transit funds: Transit districts often leave federal funds "on the table" because they do not have adequate resources to provide a "local match." New state and local investments in transit should maximize the potential for federal matching funds, as well as enhance the reliability and efficiency of transit services.

Increase flexibility of K-12 student transportation services: Redefine student transportation to ensure that communities are meeting the changing needs of students across the state. Increase flexibility and improve efficiency in how school districts are able to spend transportation revenue, such as transit district partnerships.

The Oregon Statewide Transportation Strategy identified expanded public transportation investments as an effective strategy for reducing GHG emissions.

"Oregonians want to take care of the roads they have while recognizing that public transportation investments could be a better choice than roads for the future."

- 2013 Oregon Values and Beliefs Survey

BIKE AND PEDESTRIAN INVESTMENTS

Metro's Climate Smart Strategy shows expansion of the active transportation system in the Portland Metro region would reduce emissions, improve public health and decrease health care costs for residents.

Walking and biking is increasingly important for Oregonians living in rural and urban communities. In the last decade alone, walking increased by 25 percent and biking doubled. But surveys have shown that more Oregonians interested in biking and walking won't take the trip because they feel the existing infrastructure in their communities is unsafe. Oregon is also an increasingly popular destination for bicycle tourists interested in experiencing our state's beauty. Bicycle tourism has become an important economic driver for communities from the Oregon Coast to Hells Canyon. The panel recommends:

Reduce fatalities and injuries: Oregon must continue to prioritize and invest in bold efforts to dramatically reduce crashes that disproportionately cause fatalities and injuries for people walking and biking. Programs such as Safe Routes to School and investments in sidewalks and separated facilities are essential tools to reduce roadway conflicts and protect vulnerable users. New bicycle and pedestrian investments should also aim to maximize the potential for federal matching funds.

16% of Oregon roadway fatalities in 2014 were people on foot.

Support economic opportunities for tourism/tours: In order to support recreational tourism, connections on bikeways, shoulders, and sidewalks should be completed to improve safety and close gaps. Consideration is also needed to educate visitors on how to best share narrow rural roadways, especially during harvest season.

INTERMODAL FREIGHT INFRASTRUCTURE

Oregon is fortunate to be a heavily trade-dependent state. But many producers cannot avoid moving goods through already congested corridors, which creates delays and adds expense, and they do not have adequate alternatives on the non-roadway system. Investments in alternative freight hubs and transload facilities in less congested areas could help keep Oregon moving. The panel recommends:

Intermodal freight facilities: Identify and invest in intermodal facilities and freight connectors (e.g., transload facilities, port drop sites, inland ports, etc.) that reduce highway demand for freight.

Create a permanent *Connect*Oregon fund: A permanent *Connect*Oregon fund for non-highway transportation assets would help the state coordinate and support strategic investments.

Develop a statewide marine plan: Integrate and better link Oregon's ports and marine transportation system through a system plan and investment strategy. This plan could better tie the marine system with the Freight Plan and other transportation modal plans; help determine statewide funding priorities that impact the marine system (e.g., road, rail, and waterway system improvements); address marine land use issues; and help organize shipper alternatives (e.g., barging of containers along the Columbia River).

SEISMIC RESILIENCY

In recent years, geologists have developed a greater understanding of the risks posed to the Pacific Northwest from a Cascadia Subduction Zone event. They see a significant risk Oregon will experience a 9.0 earthquake in the next 50 years. To be prepared, Oregon must have a resilient transportation network to increase survivability, provide critical evacuation lifelines, and support long-term economic recovery. The panel recommends:

Invest in seismic resiliency: Additional resources must be secured to adequately shore up seismic resiliency. This includes consideration in future state transportation investments and ongoing advocacy at the federal level for designations and funds to support this effort.

Increase coordination with West Coast states: Strengthen coordination of planning efforts with California and Washington, and identify immediate investment needs for high priority transportation assets including I-5 and Highway 97 corridor improvements.

Non-highway inventory assessments: Seismic planning for non-highway modes (e.g., aviation, marine, rail) to date has been piecemeal and inadequate. Tools should be provided for these transportation entities to perform thorough inventories and assess seismic vulnerabilities.

Local seismic needs assessments: Many of Oregon's local jurisdictions have not conducted assessments of transportation vulnerabilities and priorities because they do not have the necessary resources. Adequate resources should be dedicated to perform these assessments; and local transportation agencies should have the tools necessary to respond to a disaster.

> "The opportunities outweigh the challenges on the Columbia River system [...] and I'm optimistic, if we can make the right investments."
>
> - Bill Robbins
> TransDevelopment
> Portland, OR

A $92 billion economic loss can be avoided through a $1.8 billion investment in seismic resiliency.

JURISDICTIONAL TRANSFER

As the population of Oregon has grown and cities have expanded, many of what were once rural highways now function more like city streets. At the same time, many local roads now operate as de facto highways. Transferring roadways between appropriate jurisdictions has been prohibitive mostly due to cost. However, getting the right jurisdiction to own and manage these roadways is important to better serve the traveling public and achieve development goals within communities. The panel recommends:

Enact a jurisdictional transfer program: Implement a pilot program that includes up to five priority transfers where there is broad state and community support and dedicate revenue to achieve these transfers.

Establish jurisdictional transfer working group: Create a working group that refines criteria for future transfers and streamlines the process.

TRANSPORTATION INNOVATION

The Oregon Global Warming Commission Roadmap to 2020 report projects that the state will need 10% of the fleet to be electric by 2020 to meet the state's goals.

We live in a time of rapid technological change that is impacting the way we get around and experience the world in real-time. Connected and automated vehicles, as well as car sharing and other new vehicle technologies, are altering the way we think about cars and car ownership. At the same time, unmanned aerial and terrestrial systems may change the way goods move from the storefront to home. Where this transformation is going isn't entirely clear. It should not be the role of government to pick technology winners or losers. Instead, government should support an environment that fosters innovation while safeguarding the public interest. The panel recommends:

Expand innovation partnerships: Establish partnerships with companies and other states with the objective of making Oregon a key testbed for the development and deployment of innovative transportation technologies (e.g., connected and automated vehicles, electric vehicles, drones).

Appoint a transportation innovation officer: Appoint a transportation innovation officer within the Governor's Office to drive interagency coordination in support of transportation innovation.

EMISSIONS MEASURES

Reducing greenhouse gas emissions from the transportation system continues to be a priority for Oregonians. In addition, federal agencies are now beginning to consider establishing new performance measures for emissions on the transportation system. Implementing other panel findings, such as investments in transit, bicycle, and pedestrian infrastructure, and embracing alternative fuel vehicles, will lead to lower greenhouse gas emissions from our transportation system. The panel recommends:

22.2 million metric tons of greenhouse gas are emitted annually by Oregon's transportation sector.

Track carbon reduction impacts: To ensure policy efforts are making a difference in reducing emissions, and to prepare for potential new federal requirements, the state should consider creating an office that draws upon independent and private sector expertise to begin tracking and reporting on Oregon's carbon reduction progress. The office should regularly report to the Governor's Office and Legislature on progress made to meet the state's carbon emission reduction goals.

LAND USE AND TRANSPORTATION

Oregon's roads, bridges, paths, and rail lines are all part of an integrated transportation and land use system. New investments in our transportation system must be reinforced by effective statewide land use and housing policies that do not exacerbate the congestion and mobility challenges we face as a state. The panel recommends:

Land use and transportation policy assessment: A joint effort should be made by the Oregon Transportation Commission and the Land Conservation and Development Commission to ensure that our land use and transportation policies are well aligned and meet the needs of Oregon's growing population.

Oregon Regions

Between January and March of 2016, the Transportation Vision Panel held a series of eleven Regional Forums across the state. These forums provided an opportunity to hear from community members about what is important for their region's transportation connections to the rest of the state, and how the transportation system impacts local economies. The forums also helped assess the strengths and weaknesses of each region's transportation system.

While each region has its own distinct characteristics and priorities, what surprised the panel were the number of common threads shared across Oregon's regions. From the Oregon Coast to Hells Canyon, and from large cities to small towns, **three key themes** *were heard consistently as major concerns affecting Oregon's transportation system:*

Seismic preparedness

Concern for the survivability from a major Cascadia Subduction Zone event is not limited to Oregon's coastal communities. It is a powerful and real-time worry for people living east of the Cascades who are keenly aware they will be the staging ground for the recovery efforts to assist coastal and valley communities. Today, Oregonians are asking important questions: Do we have adequate infrastructure to survive and respond to this event? Can Central and Eastern Oregon support large populations of evacuees? What are the steps we need to take today in order to be best prepared?

Congestion

Congestion in the Portland metro area is having a major impact on the economic vitality of all regions. It not only creates challenges for commuters and businesses in the metro area, it is also making it difficult for producers across the state to move their goods into and through Portland in a predictable, reliable, and timely fashion.

Coastal Oregon

Oregon Valley & Metro

Southern Oregon

Central Oregon

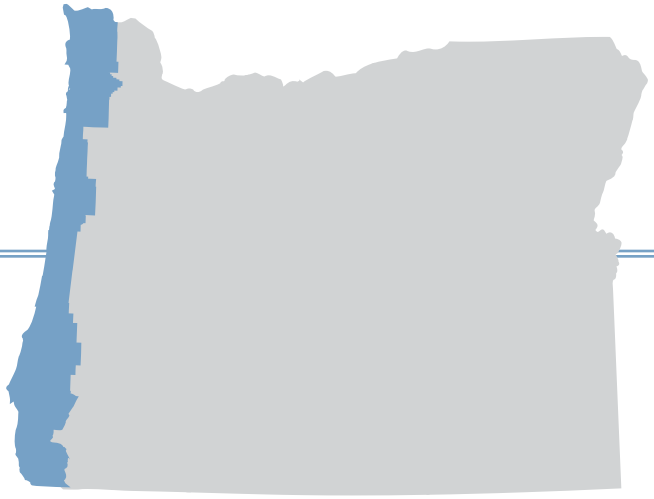
Eastern Oregon

Transit

In all eleven forum meetings, transit was identified as a top priority to get people around locally and to connect to communities across the region. Transit is seen as an essential tool to help workers, students, seniors, and people with disabilities move around. Forum participants also said transit is important to support tourist economies, attract a diverse and talented workforce and reduce carbon emissions.

22

Coastal Oregon



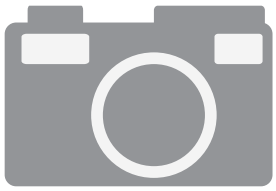
Oregon's coastline stretches 363 miles from the mouth of the Columbia River to the border of California. Its rugged landscape and picturesque scenery of sand dunes, sea cliffs, public beaches, and bucolic towns make it an ideal home for residents. Its wealth of natural resources and moist, mild climate makes it a great place for dairy farms, forestry, and fishing.

The coast is Oregon's top travel destination. Over 10.3 million visitors travel to the Oregon coast each year to bike, boat, fish, shellfish, scuba dive, surf, kite fly, hunt, and take in the sites. The coastal tourism economy generates over $1.7 billion each year and employs over 20,000 people.

Commercial fishing is another key economic mainstay. Oregon's Department of Fish and Wildlife reports that the value of commercial fish and shellfish landings totaled over $114 million in 2015. Recreational fishing and related trips also generated another $68.9 million in personal income for local coastal communities.

Forestry remains an important industry, although not as significant as it was prior to the 1990s. And many coastal communities benefit from higher-than-average transfer payments due to a higher number of retirees than in other parts of Oregon.

Dairy and cheese production remains king in Tillamook County on the north coast and is thriving once again on the south coast, around Bandon.



$1.7 billion
tourism industry

The coastal tourism economy employs over 20,000 people

$114 million
commercial fishing industry

Coastal Oregon

Of the 135 bridges on the Oregon Coast Highway, 56 bridges are expected to collapse, and 42 bridges will be heavily damaged in a Cascadia Subduction Zone event.

In many coastal communities, seniors make up over 20% of the population. In Curry County, seniors are over 28% of the population.

Challenges

The combination of rugged terrain and cooler, wetter weather compared to the rest of the state creates unique transportation challenges for the coast. Oregon is also one of the only coastal states in the nation without an interstate that extends to its coastline. Depending on the time of year, moving freight from coastal ports to markets in the valley can be a major challenge.

Coastal communities are also particularly vulnerable to the impact of a Cascadia Subduction Zone event expected to occur within the next 50 years. Many communities are built in tsunami zones, and evacuation routes that connect the coast to other parts of the state are currently vulnerable to bridge damage and major landslides.

Tourism remains an important driver for local economies but narrow roads coupled with increased auto traffic in the summer months create significant safety hazards for drivers and visiting bicyclists.

Communities on the coast lack adequate transit service to meet the needs of students, seniors, and people with disabilities. Oftentimes, small communities do not have the tools necessary to provide reliable transit connections to cities in the Willamette Valley, and gaps in service exist in many places along the Highway 101 corridor.

Priorities

Ports
Coastal and lower-Columbia River ports are the backbone of Oregon's coastal economies. Underinvestment and underutilization of these port assets hinder the economic potential of the region.

Freight mobility
Coastal communities need adequate multimodal freight connections with the rest of the state to allow their local economies to flourish. Coastal economies are also impacted by freight congestion in the Portland area.

Seismic
A resilient transportation system is essential to Oregon Coast residents in the aftermath of a Cascadia Subduction Zone event. The seismic enhancement of roads that link to the coast and connect rural coastal communities is a high priority for coastal residents. Coastal communities also look to the potential of the marine system to support emergency response and recovery efforts.

Transit
Communities along the coast recognize the importance of effective and reliable transit that links small communities with metropolitan centers. A flexible and dependable transit system is particularly important for the coast's large senior and retired population who rely on this system to access health services. At the same time, student transportation services are important for coastal communities both large and small.

Bicycle and pedestrian infrastructure
Coastal communities are acutely aware of the value that bicycle and hiking tourism brings to the region, and at the same time recognize that bicycle and pedestrian facilities often are inadequate and create safety challenges. Better separation and connections are important to reduce roadway conflicts and enhance safety for all users.

Transloading
Potential transload facilities in the Willamette Valley are seen as economically beneficial to coastal communities.

Ports connect Oregon

Oregon's access to the Pacific Ocean and the Columbia-Snake-Willamette River system provides valuable links for waterborne freight movement and commerce.

There are 23 ports throughout Oregon, including five deep-draft marine ports and four shallow-draft marine ports.

Ports provide recreational, commercial, and economic services to Oregonians, and are a key component in sustaining Oregon's economy and quality of life.

Marine ports face a number of challenges. Of particular importance is maintaining appropriate water depths via dredging that will ensure sufficient vessel accessibility.

Coastal Oregon's needs include dredging and maintenance of the ports themselves and land-side investments that effectively integrate the ports with the communities and regions.

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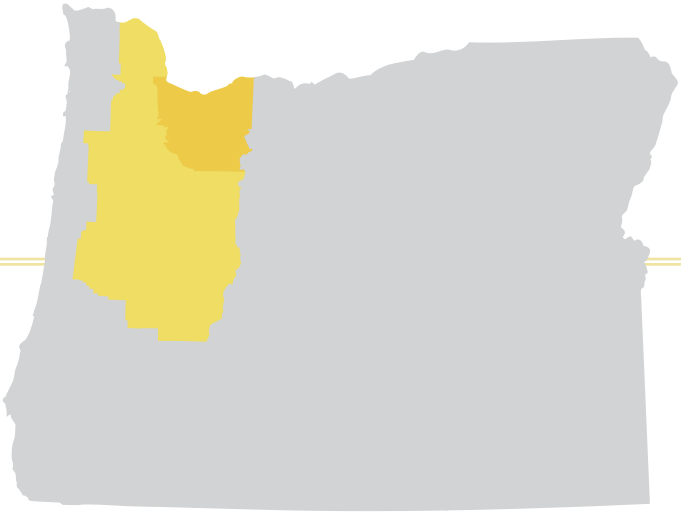
Oregon Valley & Metro



Oregon's 140-mile long Willamette Valley is home to the most diverse array of industries in the state along with two-thirds of its population. The Valley is bookended by the two largest metropolitan areas and at its heart contains some of the nation's most fertile farming lands, fed by the Willamette River. The region is home to thousands of small businesses that form the backbone of the state's overall economy.

The Willamette Valley is known worldwide for its agriculture production. More than 500 wineries produce wines from 19,000 acres of vineyards, generating more than 2 million cases each year. The Valley is the country's top grass seed producer, harvesting over 592 million pounds each year. It is also a major producer of berries, hazelnuts, hops, Christmas trees and nursery products.

The southern end of the Valley is home to the state's major research institutions. These universities are well known for their research in agriculture, silviculture, engineering, nanotechnology, and brain biology. They are also key economic drivers for their local communities and the state at large. The combined contribution of Oregon State University and the University of Oregon to the statewide economy totals over $4.3 billion. Additionally, Oregon Health Sciences University and Portland State University have robust research programs and are major drivers of the state and regional economy.

The north of the Valley is home to Oregon's "Silicon Forest" which is comprised of software companies, technology startups, and computer component manufacturers. It is also home to a cluster of world-leading athletic apparel makers also known for their related sports technologies. These sectors rely heavily on a talented workforce to develop and build their products and an efficient transportation system to get their goods to market.

The Portland region is the state's main hub for products made from all corners of the state to be exported to domestic and international markets. It supports the state's largest airport and marine port and hosts critical linkages including major interstate connections and freight railroad linkages.

592 million

pounds of grass seed produced annually

500 wineries produce over 2 million cases of wine each year

$4.3 billion

contributed to our economy by Oregon State University and the University of Oregon

Oregon Valley & Metro

45%

of ***rush-hour commuters*** *going into downtown Portland*

take transit

84 of Linn County's 556 **bridges** are **structurally deficient**

Challenges

The confluence of marine, road, rail, and aviation systems has given this region a distinct set of advantages over the years. But a growing population and a congested freight network have presented a number of challenges for the state and regional economy. On average, metro area commuters spend 52 hours per year stuck in traffic, a 13 percent increase compared to five years ago. At the same time, shippers from across the state struggle to provide on-time delivery of their products through an increasingly congested transportation network.

Desired investments in transit, bicycle, and pedestrian infrastructure have not always kept up with growing public demand. In the Valley's cities, these investments serve basic mobility needs by providing transportation options and congestion relief. In rural areas, shortages of transit service isolate communities from major population and employment centers, and insufficient bicycle and pedestrian infrastructure hinders safety and creates conflicts with other users.

The region's numerous rivers and waterways are traversed by an extensive and aging bridge system. As these bridges deteriorate, they put the connectivity of the region at risk. At the same time heavy demand on the system accelerates the deterioration of the region's roads and highways. This aging roadway and bridge system is also particularly vulnerable to a Cascadia Subduction Zone event.

Valley Priorities

Transit
Adequate and reliable transit service is a priority for communities across the Valley. In small communities, transit is needed to access major population and employment centers. In larger communities, robust transit systems are struggling to meet the demand of a growing population while providing adequate links between communities.

Bicycle and pedestrian facilities
Local bicycle and pedestrian connections can increase safety while reducing roadway demand. Separated bicycle and pedestrian facilities and links between communities can reduce roadway conflicts, enhance safety, and promote sustainability.

Bottlenecks and congestion
Reducing roadway bottlenecks and improving freight access to ports and international markets is critical to the region's diverse economy.

Transportation demand
To address an over-burdened transportation system and to manage transportation demand, adequate transportation options should be supported though land use and housing policies. Integration of transportation systems through multimodal hubs is also critical to meeting public needs.

Student needs
Transportation services must reflect the changing needs of students from Kindergarten through University. Today's students expect flexible and reliable transportation services that can often be provided through partnerships with local transit districts and investments in Safe Routes to School programs.

Seismic
Seismic resiliency is a priority across the region. The Valley's aging roadway and bridge system makes the region particularly vulnerable to the impacts of a Cascadia Subduction Zone event.

Transloading
Transloading facilities within the Willamette Valley can support regional businesses while reducing congestion on the I-5 and I-205 corridors.

Passenger rail
Preserving and maintaining passenger rail service is important to many Valley residents, particularly in the southern part of the region.

Unique metro area priorities

Transit
Investment in light rail and buses is an important tool to address peak hour road congestion and to meet diverse needs of the metro area's workforce, student, and senior populations.

Bottlenecks and congestion
The metro area faces several bottlenecks that are priorities for the region. Addressing these bottlenecks is a regional priority that involves a multi-pronged approach including targeted enhancements in congested areas, freight network alternatives, and investments in multimodal transportation options.

Transportation demand
Managing growing transportation demand is an important priority for the Portland metro area. Multimodal investments in transit, light rail, and bicycle networks, as well as telecommuting options, can have the added benefit of enhancing livable communities and reducing congestion.

Modal conflicts
The confluence of modes that intersect in the metro area presents a number of challenges. At-grade crossings of road and rail systems contribute to congestion across modes.

Bicycles, pedestrians, and students
An improved and expanded Safe Routes to School program is a priority in the metro region. Completion of the city sidewalk network, particularly in East Multnomah County, is particularly important to community members.

Seismic
Several seismic retrofits are a particular priority for the metro region. The region's large population and geography necessitate system redundancy and resiliency, particularly on major river crossings.

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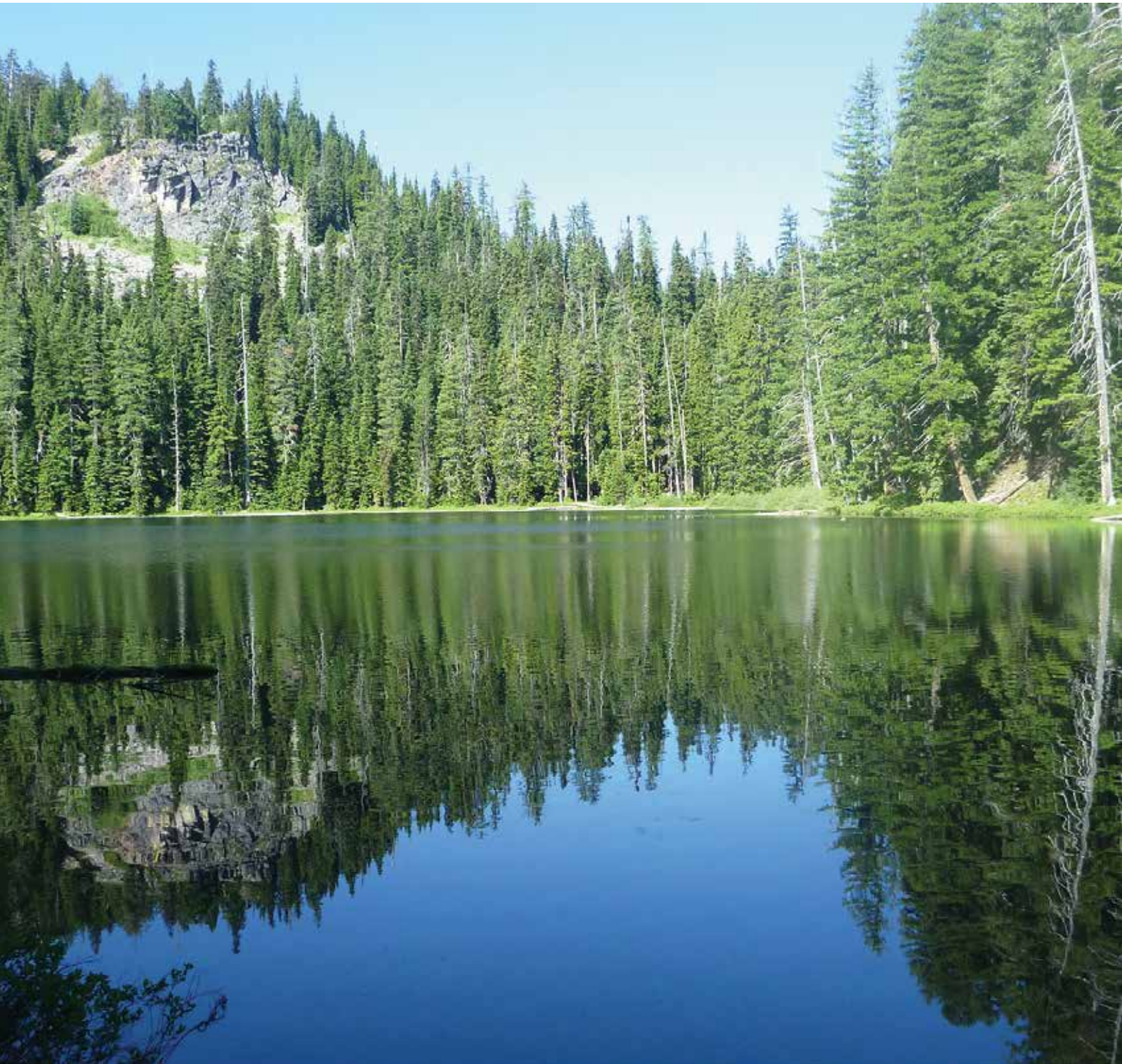
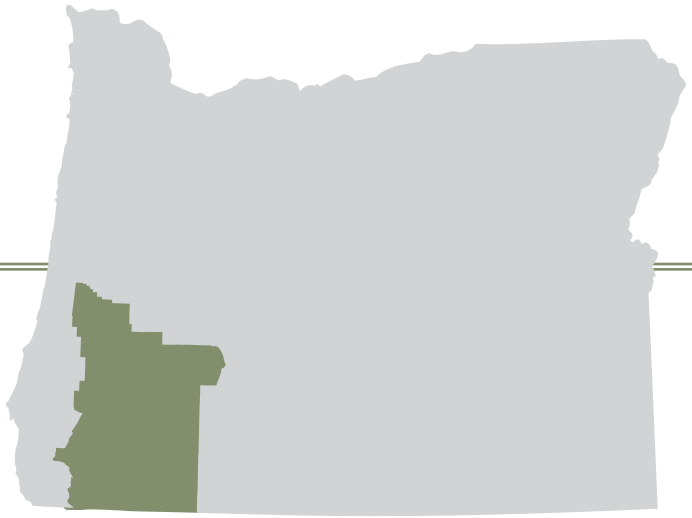
Southern Oregon





Southern Oregon is nestled between the Coastal, Siskiyou, and Cascade Mountain range and is a region rich with natural abundance, history, and culture. From its green valleys that produce award-winning wines and fruits to its legendary scenic byways that carry visitors toward the headwaters of the Rogue and Umpqua rivers, Southern Oregon is a treasured part of Oregon's physical and cultural landscape.

Access to the interstate and freight rail network has long been essential in moving this region's manufacturing, agricultural, and viticultural products. Companies such as Amy's Kitchen and Medford Fabrication rely heavily on a robust transportation network to distribute their manufactured products throughout Oregon and across the country.

The region also boasts over 620,000 acres of farmland and 60,000 acres of irrigated lands. Its top agricultural commodities include cattle, hay, winter pears, forest products, and wine grapes. Companies such as Harry and David and its 2,000 employees in Jackson County are major contributors to the region's agricultural and manufacturing economies.

Southern Oregon's tourist economy continues to grow, a credit to its world class performing arts, natural resources and unparalleled scenery. It also attracts young people and retirees drawn to the quality of life the region provides. For example, in Jackson County alone, tourism brings in over $390 million annually and employs more than 5,000 local residents.

Healthcare and medical service is the fastest growing sector of the Rogue Valley economy. To support this expanding sector, access and community integration is required, including a multimodal transportation system of roads, airports, and transit services. Among the region's largest employers are Asante Health Systems, Rogue Valley Medical Center, and Providence Health System, which together employ over 7,000 area residents in Jackson County alone.

Food manufacturer, Amy's Kitchen, employs over 710 people in Jackson County

Tourism brings in $390 million annually in Jackson County

Healthcare is the fastest growing sector of the Rogue Valley economy

Southern Oregon

If transit funding for the region remains stagnant, the Medford region will experience a **40% increase in travel delay** by 2038.

- Finding by the Rogue Valley MPO Strategic Assessment

Challenges

Southern Oregon's manufacturing, agricultural, and timber industries rely heavily on a freight transportation system to move products to market reliably. But increased congestion both within and outside of the region is making it difficult for producers to get their goods to market.

Southern Oregon faces a number of seismic challenges. Due to the mountainous geography that surrounds Rogue Valley, the region risks being isolated in a Cascadia Subduction Zone event due to collapsed bridges and landslides.

Owing to its pleasant climate and vibrant communities, the region is becoming an increasingly popular place for people to retire. As the region grows in population, it also risks a rapid spike in congestion. To address this, local and intercity transit is becoming increasingly important. Without increased transit funding, the Medford region will experience a 40 percent increase in travel delay by 2038.

The Rogue Valley region also enjoys a number of off-road bicycling and walking paths such as the Bear Creek Greenway that support health and active lifestyles. However, many of these paths lack adequate connections and linkages to schools and employment centers.

Priorities

Transit
A flexible and reliable transit system is important to residents of the region to provide access to schools and employment centers. There is a strong regional desire for improved and increased intercity transit connections that link towns to urban centers and the region to other part of the state.

Seismic
Residents recognize there is a need to address bridges and river crossings along major routes, including the entire I-5 corridor, that are vulnerable to a Cascadia Subduction Zone event. The region's topography and its close connections with California make it important to integrate resiliency investments across state lines and ensure that airports have the tools they need to assist in recovery efforts.

Bicycle and pedestrian connections
Southern Oregon enjoys a number of regional paths that support active lifestyles. A challenge for the region is in developing a connected and integrated system that links community members safely and effectively with schools and employment centers.

Freight mobility
Climbing lane enhancements on I-5 mountain passes and highway connections to coastal communities are regional priorities for freight mobility and safety. At the same time, congestion in the Portland metro area is a key challenge that impacts Southern Oregon businesses moving freight.

Electric vehicles
Expansion of electric vehicle infrastructure, such as the I-5 West Coast Electric Highway, is seen as important for the region's future and a potential driver of tourism.

"Congestion along I-205 in Portland during peak hours is brutal for our company. To make timely deliveries, you simply can't travel through Portland near peak hours. You are basically forced to add a day to your delivery."

-Mike Card
Combined Transport
Central Point, OR

"Investments in our walking and biking system will improve our individual and community health and economy and help our region thrive."

- Jenna Stanke Marmon
Jackson County

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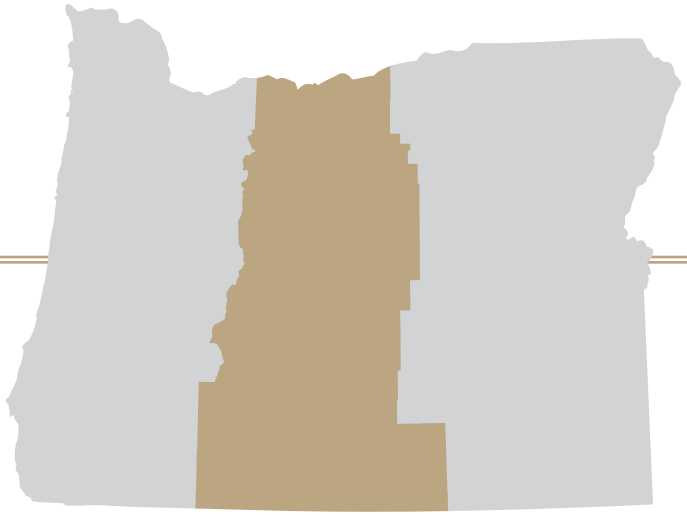
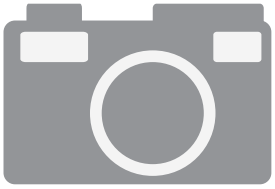
Central Oregon



Oregon's central region extends from the arid side of the Columbia River Gorge to the Klamath Basin along the California border. Here in the rain shadow of the Cascade Mountains, landscapes are vast and the sun shines over 300 days a year. The open and varied landscape makes the region a great area for ranching, outdoor recreation, forestry, and a growing tech industry.

Central Oregon and the Columbia River Gorge are two of Oregon's biggest tourist destinations. Each year, tourism in the greater Bend area brings in over $700 million and supports over 8,000 local jobs. The region as a whole is experiencing the state's fastest growth in tourism, with a 17.5% increase in overnight lodging in the Columbia Gorge region and a 10% increase in the greater Bend area over the past year. Visitors come to enjoy the region's abundance of skiing, biking, hiking, hunting, fishing, windsurfing, and natural history. They also come to visit its nationally renowned breweries. As of 2015, Central Oregon boasted over 31 breweries, and this number is expected to grow.



17.5% INCREASE
in overnight lodging in the Columbia Gorge region

Along with booming tourism and service industries, the central region enjoys strong high-technology business clusters, with large companies such as Google and Facebook opening and expanding data centers in the region, and small companies taking advantage of the region's educated and entrepreneurial workforce.

Over 31 breweries, and this number continues to grow year after year

From the Columbia River to the border of California, healthcare and medical services are a growing part of the area economy. Healthcare employs over 10,000 people in the central part of the region, and St. Charles Medical Center is the largest private employer in the Bend area. Hospitals such as Mid-Columbia Medical Center in The Dalles and Sky Lakes Medical Center in Klamath Falls are also major employers in their communities and serve as regional medical hubs.

Manufacturing, lumber, and agriculture continue to be important industries for the region. In Klamath County, JELD-WEN Windows and Doors employs over 1,000 county residents and over 2,000 Oregonians statewide. In the central part of the region, Les Schwab Tire Center employs over 880 people. To the north of the region, Wasco County is a leader in agriculture and is the second biggest producer of cherries in the nation.

Over 10,000 healthcare jobs in the Bend area

Central Oregon

Each year, **tourism** in the greater Bend area brings in over **$700 million** and supports over **8,000 local jobs**

42% of state roads in Central Oregon have **pavement** that is in **fair or poor condition**

Challenges

A major challenge for the region is the ability of Highway 97 to serve central Oregon communities and growing freight demand. In 2014, the highway saw a 25 percent increase in freight traffic coming from California. This increase in freight traffic is coupled with a booming population in the Bend area that is straining the corridor's capacity and creating safety and maintenance challenges.

Central Oregon and its transportation infrastructure will be important for the state's seismic resiliency. The region will be the staging ground for the state's emergency response and economic recovery efforts in the wake of a Cascadia Subduction Zone event. Highway 97 will likely serve as the primary corridor to move commodities as Oregon's economy gets back on its feet. At the same time, the Redmond Airport will be the staging ground for emergency response and supplies flown into the Willamette Valley and the Oregon Coast. However, the region's current infrastructure is not stout enough to support this level of response.

The road system is also stressed by the region's harsh weather and growing population, both of which accelerate wear and tear on roads and bridges.

Much of Central Oregon is growing rapidly without the resources needed to meet demand for transit. Transit providers such as Cascades East Transit serve a growing senior population across a large geographic area with a lower population density. In order for the central region to continue to attract a talented labor pool, support livable communities, and promote its thriving tourism economy, a reliable and integrated transit, bicycle, and pedestrian network is necessary.

Priorities

Highway 97
Central Oregon communities from Klamath Falls to Biggs Junction recognize the need for a safe, reliable, and resilient Highway 97 that is adequate to move freight and support recovery efforts in the wake of a Cascadia Subduction Zone event.

Rural airports
Rural airport enhancements are vital to Central Oregon's economies. These airports are critical to respond to forest fires and to support industries such as OHSU's rural campus in Klamath Falls. Additionally, investment in Redmond Airport is an essential part of Oregon's seismic preparedness efforts.

Bicycle and pedestrian facilities
From the Historic Columbia River Highway State Trail in the Columbia Gorge to the OE & C Woods Line State Trail in Klamath Falls, Central Oregon community members recognize the value that bicycle and hiking tourism brings to the region. Investments should aim to improve safety and reduce roadway conflicts through better separation. They should also support walkable urban centers like Bend's central business district.

Rural transit
Central Oregon has a low population density but a significant need for transit across a large service area. As the region grows, workers, students, seniors, and people with disabilities increasingly rely on intercity transit service that connects bedroom communities to cities, medical facilities, colleges, and major employment centers.

Inland ports
The potential establishment of an inland port in Central Oregon is seen as economically beneficial for businesses that move freight.

Columbia Gorge river, road and rail corridor
The multimodal transportation corridor that connects the east end of the Columbia Gorge with major population centers in the Willamette Valley is a critical asset to the region. Investments must be made to ensure that this corridor's river, road, and rail transportation system is resilient to a seismic event.

Bicycle tourism

Transportation and tourism are natural partners. Many visitors travel through Oregon to enjoy its natural beauty. One of the best ways to experience Oregon's scenery and rural communities is by bike. Whether you're into road biking, mountain biking or in-town cruising, Central Oregon has the trails and bike paths to suit your cycling.

Oregon has the only Scenic Bikeways program in the nation. To date, 12 Oregon Scenic Bikeways have been designated, totaling over 860 miles. Central Oregon is home to five of these designated Oregon Scenic Bikeways, totaling over 286 miles.

"Bicycle recreation spending supports approximately 270 full and part-time jobs, with earnings of $5.7 million, and generating over $900,000 in state and local tax receipts."

- Columbia River Gorge Bicycle Recreation Economic Impact Forecast, 2014

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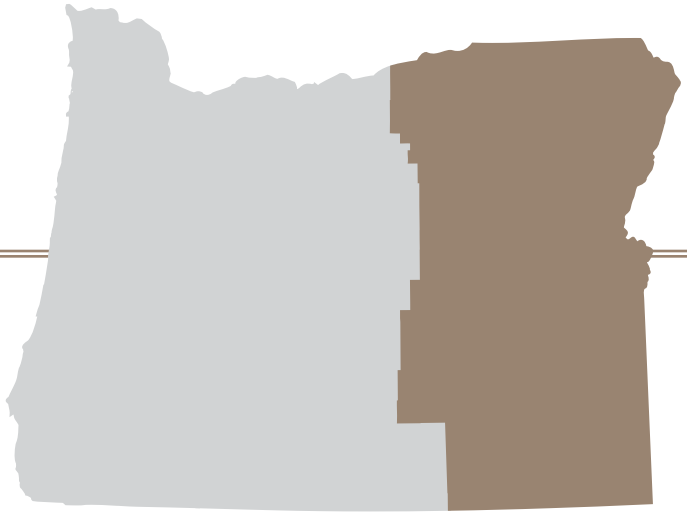
Eastern Oregon



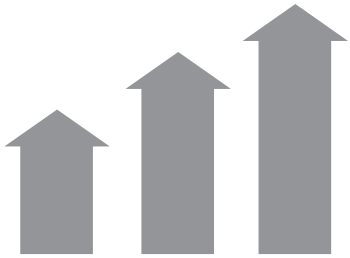
Oregon's eastern region is a land of contrast and wonder. Its greater seasonal variations, high deserts, and forests of pine and juniper make it Oregon's gateway to the western continental expanse of the United States. It boasts a diversity of geography: arid land formations, mountain ranges, extensive river systems, fertile valleys, deep canyons, open range lands, and fault-block formations that inspire both visitors and residents alike.

The Columbia Plateau is one of the most productive wheat-producing regions in the world. The rich loess soil in the region is a treasured legacy of ancient glaciers and ice-age floods. South of these plateau lands is home to livestock grazing and alfalfa production. The agriculture producers and cattle ranchers rely heavily on a transportation system of rail, road, and barge to bring products to regional and international markets.

Along the Columbia River, the Ports of Morrow and Umatilla serve as important economic engines for the region's agricultural production. The Port of Morrow's major exports include grains, root vegetables, and dairy products that are primarily grown in Oregon, Washington, and Idaho. As of 2011, the Port of Morrow directly and indirectly supported 13,247 jobs, and contributed $915 million to Oregon's GDP.

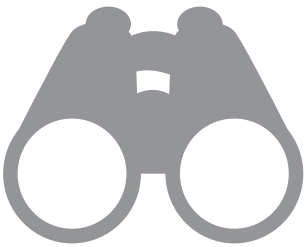
While timber and mining in Eastern Oregon have declined over the past several decades, they remain important economic drivers for the region. For example, EP Minerals, which operates the Celatom Plant in the town of Vale, remains one of Malheur County's largest employers.

Eastern Oregon also abounds with tourism that supports local economies. Each year, travel-generated expenditures from fishing, hunting, and wildlife viewing bring over $106 million into eastern Oregon's economy. In Wallowa County alone, travel and tourism directly and indirectly employs over 540 people. To support a growing tourism industry, safe and reliable roads and transit services are needed for visitors to access the region. At the same time, separated bicycle and pedestrian paths can reduce roadway conflicts and support rural tourism economies.



13,247 jobs
supported by the Port of Morrow

Largest producer of wheat in Oregon



$106 million
fishing, hunting & wildlife viewing industry

Eastern Oregon

In Wallowa County alone, **travel and tourism** directly and indirectly **employs** over **540 people**

Challenges

The extreme weather of Eastern Oregon, from its cold winters to its hot summers, has a harsh impact on the region's highways, roads, and bridges. Ice that forms in pavement cracks expands and contracts, leading to quicker deterioration of roadways. Many cities and counties with already limited resources due to low population struggle to simply keep their roads paved.

Agricultural commodities which form the backbone of the region's economy rely on Portland's road, rail, and marine systems to move their products to market. But increased congestion in the Portland area is creating challenges for ranchers and farmers to get their products to a global market.

While bicycle tourism is growing in the region and provides many opportunities for local economies, narrow rural roadways create safety challenges, particularly around harvest season.

As with other regions, Eastern Oregon has a growing senior population. As seniors age, transit is a critical need for many rural communities.

Priorities

Road maintenance
Investment in the maintenance and preservation of the region's state highways, county roads, and city streets is critically important. New investment should take into account the large volume of roads that Eastern Oregon communities are responsible for maintaining, and the limited resources due to the region's lower population.

Ports and barging
Addressing Portland bottlenecks is important for the movement of Eastern Oregon commodities. Improving freight mobility in the metro area and enhancing freight alternatives such as barging options on the Columbia River is vital to the region's agricultural economies.

Highway 97
Highway 97 is recognized in Eastern Oregon as a key asset that can provide freight network alternatives and make the state more resilient to a Cascadia Subduction Zone event.

Bicycle tourism and safety
Investments should support the region's growing bicycle tourism industry by creating separated facilities that reduce roadway conflicts, particularly during harvest season. An effort should also be made to provide education for visitors on how best to share narrow rural roadways.

Rural transit
Reliable and efficient public transit is needed to serve communities of the region. This transit should meet the needs of seniors, improve access to employment centers, and provide effective linkages between communities.

Rural airports
Investments in preserving and maintaining rural airports and rural air service are critical to communities in Eastern Oregon. Airports are essential to firefighting efforts throughout the region, and support business development.

The Morrow miracle

Located along the Columbia River and in the vicinity of two-thirds of America's potato production, the Port of Morrow has become an ideal location for value-added food processing companies. Despite a major national recession that impacted nearly every industry in Oregon, business in and around the Port of Morrow grew by 88 percent between 2008 and 2013. As of 2011, the Port of Morrow directly and indirectly supported 13,247 jobs, and contributed $915 million to Oregon's GDP. In 2014, the expansion of processing plants by Lamb Weston and Tillamook Cheese added an additional 140 jobs to the region.

The success of the Port of Morrow in the past decade (often referred to as "the Morrow miracle") is made possible, in part, by its transportation system. Close access to a highway system allows the Port to bring in agricultural products from across Oregon, Washington, and Idaho, and a rail and barge system allows food processors to ship their products to markets across the region and the world.

Investing in Transportation

For decades, investments in transportation were grounded by the principle of 'the user pays' and supported by robust trust funds that both built and maintained transportation assets. In recent years, the revenue raised to support trust funds is no longer sufficient. The reasons for the shortfall vary. Even so, the need for adequate resources to maintain and improve a multimodal transportation system remains.

The panel's approach took this into account and considered the state's short-term and long-term needs across modes, while remaining agnostic about solutions and valuing creativity alongside stability.

Key challenges

Oregon's transportation system is essential for the growth of Oregon's economy, and must also be a system that is safe, sustainable, and serves the needs of local communities. The panel has identified the following key challenges for funding Oregon's transportation system.

Deferred maintenance of the transportation system drastically increases costs: State and local transportation agencies are forced to defer routine maintenance of their roads and bridges due to revenue shortfalls. This deferral sharply increases costs as roadways fail and must undergo more costly reconstruction.

Oregon lacks many of the funding sources available to other states for transportation: Underfunding of the transportation system is not a challenge that is unique to Oregon. However, Oregon's lack of a sales tax and limitations in its property tax system create additional constraints on options available to make robust transportation investments in roadways and transit systems.

Local governments face major transportation costs and are limited in their capacity to raise local revenue: Just like at the state level, Oregon's cities and counties fall significantly short of the resources they need to maintain and improve local transportation systems. The lack of a sales tax and property tax restrictions have forced local governments to take creative approaches in raising transportation funding—or, as is the case in many communities, go without resources needed to meet basic needs.

Non-highway investments are limited due to constitutional restrictions on revenue and a lack of sustainable funding sources: Relatively few revenue sources are available to finance non-highway transportation needs such as rail, aviation, marine, transit, and bicycle and pedestrian infrastructure.

Existing transportation revenue sources are eroded by inflation: Revenue from the fuel tax and vehicle user fees that are the foundation of the Oregon State Highway Fund does not increase over time in the same way as property, income, or sales taxes. Episodic increases in fuel tax rates and vehicle user fees have been and will continue to be eroded by inflation.

Vehicle fuel efficiency and alternative fuels reduce revenue for trust funds: As vehicles become more fuel efficient, alternative fuel vehicles gain market share, and many Oregonians seek alternatives to driving, transportation revenue from fuel taxes will continue to shrink.

Oregon should not rely solely on federal revenue to enhance its transportation system: Today, nearly all of the state's new construction is funded through federal dollars. While the federal government recently passed a five-year transportation reauthorization bill (FAST-ACT, P.L. 114-94) stabilizing investments to states, it failed to address the future insolvency of the federal Highway Trust Fund. Federal funds will always be essential to Oregon. States across the country are increasingly coming up with their own plans for raising revenue to close the gap.

> "I don't want to have a bridge collapse to show that we need to invest in transportation."
>
> - Mike Card
> Combined Transport
> Central Point, OR

Oregon's annual average cost for taxes and fees per vehicle is just $157, about 85% lower than the national average of $1,058.

A call to action

State policymakers should take immediate action to increase the investment necessary to maintain and enhance Oregon's transportation system.

While there are a number of financing options available to fund transportation, the panel identified a set of principles that new investments should be built upon.

The panel felt that investment decisions should be made with efficiency, economy and effectiveness in mind.

Efficiency: *Does the funding mechanism achieve the most from available resources?*

Economy: *Does the funding mechanism maximize resources at minimal cost?*

Effectiveness: *Does the funding mechanism achieve the desired result?*

As policymakers consider options for funding transportation, it is critical that these options be effective in achieving the desired result. Investments should aim to provide adequate, sustainable, and long-term solutions, rather than temporary infusions of revenue.

Investment principles:

- Address immediate funding crisis
- Uphold a user-pays principle
- Provide predictable and stable revenue
- Make multimodal investments
- Make long-term investments in community and economy
- Address challenges of inflation
- Incentivize efficient use of the system
- Limit administrative costs and ensure capacity to deliver
- Be responsive to fuel efficiency and the need to reduce carbon emissions
- Improve equity

Financing transportation in Oregon: A menu of options

The panel explored a "menu of options" to finance Oregon's transportation system built upon the transportation investment principles. This menu incorporates near-term, mid-term, and long-term options for consideration by policymakers.

In the near term, Oregon can stem the immediate transportation funding crisis by passing a transportation funding package. A number of funding options are available, including the traditional suite of user taxes and fee increases, as well as creating new fees where appropriate to ensure equitable contributions by transportation system users. Local governments can also be given greater ability to raise money for their transportation needs. Providing additional funding for non-highway modes is also critical.

In the mid term and long term, new revenue options to supplement traditional user fees should be explored to stabilize state funds and provide funding for all modes of transportation. As Oregon looks to future funding options, it should explore modifications to the state constitutional dedication that limits Oregon's ability to invest in non-highway transportation modes.

The menu of options considered by the panel is articulated in greater detail in Appendix A.

The money raised by the state gas tax and other fees on the ownership, operation or use of motor vehicles is dedicated by Oregon's Constitution solely for construction, improvement, maintenance, operation and use on Oregon's highways, roads, streets, and rest areas.

This constitutional dedication (Article IX, section 3a) was adopted by Oregon voters May 20, 1980.

Revenue options matrix

This matrix evaluates funding options in comparison with a series of criteria. This chart is somewhat subjective and is not intended as endorsement or rejection of any particular funding option. Further evaluation and detail can be found in Appendix C.

		Adequacy of revenue	Responsiveness to inflation	Revenue stability and predictability	Appropriateness of dedication (user pays)	Administrative costs (relative to revenue)	Equity by income group
Roadway funding options:							
1) Existing user fees	a. Increase state gas taxes	Very Good	Poor	Fair	Good	Very Good	Poor
	b. Increase other user fees (license, registration, title fees)	Good	Poor	Very Good	Fair	Very Good	Poor
2) A temporary gas tax increase		Very Good	Poor	Poor	Good	Very Good	Poor
3) New vehicle user fees	a. Electric vehicle registration fees	Poor	Poor	Good	Good	Very Good	Fair
	b. First-time title fees on new vehicles	Good	Poor	Fair	Fair	Very Good	Good
	c. A new vehicle excise tax	Good	Good	Fair	Fair	Good	Very Good
4) State gas tax indexing		Good	Very Good	Fair	Good	Very Good	Poor
5) Local funding options	a. Local gas taxes	Fair	Poor	Fair	Good	Very Good	Poor
	b. Local registration fees	Fair	Poor	Very Good	Fair	Very Good	Poor
6) Studded tire tax		Poor	Poor	Poor	Good	Good	Fair
Non-roadway funding options:							
7) A permanent *Connect*Oregon multimodal fund	a. Lottery revenue dedication	Very Good	Poor	Fair	Poor	Good	Poor
	b. Statewide property tax	Good	Good	Good	Fair	Fair	Very Good
8) Transit and passenger rail funding	a. Employer payroll taxes	Good	Good	Fair	Fair	Good	Good
	b. Employee payroll taxes	Good	Good	Fair	Fair	Good	Fair
	c. Property tax dedication	Good	Good	Good	Fair	Good	Very Good
9) Bicycle and pedestrian funding	a. Bicycle excise taxes	Poor	Good	Fair	Good	Good	Good
	b. Increase state and federal dedication	Good	Poor	Fair	Fair	Very Good	Fair
10) Cigarette, alcohol, and cannabis taxes		Fair	Fair	Fair	Fair	Good	Poor
Mid-term and long-term funding options:							
11) Road and bridge tolling		Fair	Fair	Fair	Very Good	Poor	Poor
12) Per-mile road user charges		Very Good	Poor	Very Good	Very Good	Fair	Fair
13) A carbon tax		Good	Poor	Fair	Very Good	Very Good	Poor

Oregon's needs: A sense of scale

The following provides a snapshot and sense of scale of the revenue needed to address Oregon's major transportation challenges.

Units of Investment		
Existing taxes & fees	Fuel tax	Every 1-cent increase generates $28.3 million each year
	Registration fees	Every $10 increase generates $57.9 million each year
	Existing title fees	Every $10 increase generates $11.5 million each year
	Class C License fees	Every $10 increase generates $5.8 million each year
New tax & fee options	Supplemental title fee on new vehicles	Every $10 increment generates $3.6 million each year
	Vehicle excise tax	Every 1% tax rate increment generates $78.0 million each year
	Bicycle excise tax	Every 1% tax rate increment generates $0.4 million each year

Seismic resiliency

$257 million

invested each year could complete the Seismic PLUS plan within 20 years, addressing 718 vulnerable bridges and 1,185 potential landslide zones

Bottlenecks

$250 million

invested each year could address 10 of Oregon's biggest bottlenecks within 10 years

Transit

$108 million

invested annually could meet the basic mobility needs of seniors and people with disabilities, help close gaps in service, and better leverage federal funds

Maintenance & preservation

$324 million

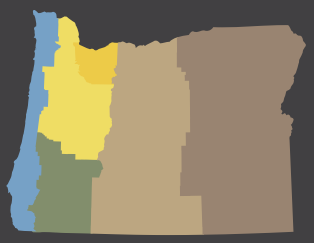
of new revenue invested each year could adequately maintain a state of good repair on bridges and pavement

Bicycle & pedestrian

$25 million

invested annually could complete 55 miles of new bikeways, shoulders and sidewalks each year, complete 50 street crossings, and provide traffic safety education for all graduating elementary students

one Oregon



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Report Appendices

Report References

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Page	Fact / topic	Source
7	*Number of lane miles, rail miles, bridges, ports, airports, and transit stops*	*State of the System Report, 2014*, Oregon Department of Transportation. https://www.oregon.gov/ODOT/TD/pages/stateofthesystem.asp
7	*Freight commodities, value and mode*	"Economic Impacts of Congestion, December 2014 Briefings," *Economic Development Research Group.* http://www.oregon.gov/ODOT/TD/TP/OFAC/2014/Dec10/EconomicImpacts_Presentation.pdf
8 - 9	*History graph*	*Oregon on the Move*. Salem, OR: ODOT History Committee, 2007. Web. https://www.oregon.gov/ODOT/CS/BSS/docs/oregononmove_final.pdf
8 - 9	*Oregon population graph*	"Oregon Demographic forecast." *State of Oregon: Department of Administrative Services*. https://www.oregon.gov/das/OEA/Pages/forecastdemographic.aspx
10 - 11	*Population increase*	"Forecasts of Oregon's County Populations and Components of Change, 2010 - 2050." *State of Oregon: Department of Administrative Services*. https://www.oregon.gov/das/OEA/Documents/County_forecast_March_2013.xls
10 - 11	*Freight traffic increase*	"Oregon Freight Movement Overview Presentation," *ODOT Freight Planning*, 2/6/2015 https://visionpanel.files.wordpress.com/2015/10/oregon-freight-movement-overview.pdf
10 - 11	*Aging population*	"Forecasts of Oregon's County Populations and Components of Change, 2010 - 2050." *State of Oregon: Department of Administrative Services*. https://www.oregon.gov/das/OEA/Documents/County_forecast_March_2013.xls
10 - 11	*GHG emissions*	"Oregon Greenhouse Gas In-Boundary Inventory Data," Oregon *Department of Environmental Quality.* http://www.oregon.gov/DEQ/AQ/Pages/Greenhouse-Gas-Inventory-Report.aspx#data
10 - 11	*Incomplete sidewalks*	*State of the System Report, 2014*. Oregon Department of Transportation. *Page 15.* https://www.oregon.gov/ODOT/TD/pages/stateofthesystem.asp
10 - 11	*Structurally deficient bridges*	*2015 Oregon Bridge Report*, Transportation for America. http://transportationforamerica.org/wp-content/uploads/2015/06/Oregon-2015-Bridge-Report.pdf
10 - 11	*Trucking, terminal 6*	*Oregon Trade Solutions Report, 2015*, Business Oregon. http://oregontradesolutions.com/report/

Page	Fact / topic	Source
10 - 11	*Seismic Vulnerability*	*Oregon Highways Seismic PLUS Report, 2014*, Oregon Department of Transportation. https://www.oregon.gov/ODOT/HWY/BRIDGE/docs/2014_Seismic_Plus_Report.pdf
14	*Maintenance needs shortfall*	*2016 estimates provided by the Oregon Department of Transportation. For further details see the* Rough Roads Ahead Report: *Rough Roads Ahead: The Cost of Poor Highway Conditions to Oregon's Economy*, 2014, Oregon Department of Transportation. https://www.oregon.gov/ODOT/COMM/Documents/RoughRoads2014.pdf
14	*2040 congestion estimates*	*Economic Impacts of Congestion Report, 2014*, Economic Development Research Group. http://valueofjobs.com/pdfs/2014-cost-of-congestion-FINAL.pdf
15	*Public transit, GHG emissions reductions*	*Oregon Statewide Transportation Strategy: A 2050 Vision for Greenhouse Gas Emissions Reduction*, 2013, Oregon Department of Transportation. https://www.oregon.gov/ODOT/TD/OSTI/docs/STS/Oregon_Statewide_Transportation_Strategy.pdf
15	*Public support for transit investment*	"Oregon Values and Beliefs Survey, 2013," Oregon Values and Beliefs Project. http://oregonvaluesproject.org/ovp-content/uploads/2013/10/OVB_Summary_Top-Findings.pdf
16	*Benefits of active transportation investment*	*Climate Smart Strategy for the Portland Metro Region*, 2014, Oregon Metro Regional Government. http://www.oregonmetro.gov/sites/default/files/ClimateSmartStrategy-FinalVersion-2014.PDF
16	*Pedestrian fatalities, 2014*	"2014 Oregon Motor Vehicles Traffic Crashes, Quick Facts," *Oregon Department of Transportation.* https://www.oregon.gov/ODOT/TD/TDATA/car/docs/2014_QuickFacts.pdf
17	*Seismic resiliency investment*	*Oregon Highways Seismic PLUS Report, 2014*, Oregon Department of Transportation. https://www.oregon.gov/ODOT/HWY/BRIDGE/docs/2014_Seismic_Plus_Report.pdf
18	*Vehicle electrification and GHG reduction goals*	Jeff Allen, Drive Oregon, Presentation to Panel Subcommittee, Nov 2015. https://visionpanel.files.wordpress.com/2015/10/gtvp-drive-oregon-presentation.pdf
19	*Transportation GHG emissions*	"Oregon Greenhouse Gas In-Boundary Inventory Data," Oregon *Department of Environmental Quality.* http://www.oregon.gov/DEQ/AQ/Pages/Greenhouse-Gas-Inventory-Report.aspx
20	*Regional Forums Summaries*	*For summaries of the transportation vision panel regional forums conducted between January and March 2016, see: https://visionpanel.wordpress.com/regional-forum-summaries/*

Page	Fact / topic	Source
23	*Oregon Coast travel data*	"Economic Impacts of Domestic and International Overnight Travel to Oregon - Oregon Tourism Commission." *Oregon Tourism Commission*, Travel Oregon. http://industry.traveloregon.com/research/archive/economic-impacts-domestic-international-overnight-travel-oregon/ "Oregon Travel Impacts 1991-2014," *Dean Runyan and Associates.* Prepared for Oregon Tourism Commission. Apr. 2015. http://www.deanrunyan.com/doc_library/ORImp.pdf
23	*Commercial fishing value*	"Pounds and Values of Commercially Caught Fish and Shellfish Landed in Oregon, Year 2006-2015," *Oregon Department of Fish and Wildlife*. 11 Feb. 2016. http://www.dfw.state.or.us/fish/commercial/landing_stats/2015/Commercial_food_fish_pounds_and_values_2006-2015.pdf
23	*Recreational fishing value*	"Economic Impact" *Oregon Department of Fish and Wildlife*. 11 Apr. 2016. http://www.dfw.state.or.us/agency/economic_impact.asp
24	*Vulnerable bridges, Oregon Coast Highway*	*The Oregon Resilience Plan*, Oregon Seismic Safety Policy Advisory Commission, Feb. 2013. http://www.oregon.gov/OMD/OEM/osspac/docs/Oregon_Resilience_Plan_Final.pdf
24	*Senior population, Oregon Coast*	*Natural Hazards Mitigation Plan*, State of Oregon Emergency Management Plan, Feb. 2012, Page 9. http://www.oregon.gov/LCD/HAZ/docs/2.A.ORNHMP12-Reg1Profile.pdf
25	*Port statistics*	*State of the System Report, 2014*, Oregon Department of Transportation. https://www.oregon.gov/ODOT/TD/pages/stateofthesystem.asp
27	*Willamette Valley wine production*	"Willamette Valley Facts & Figures - Willamette Valley Wineries," *Willamette Valley Wineries*. Willamette Valley Wineries Association, 2016. http://willamettewines.com/facts-figures/
27	*Willamette Valley grass seed production*	"Willamette Valley Field Crops," *Oregon State University* http://oregonstate.edu/valleyfieldcrops/grass-seed
27	*Oregon State University and University of Oregon, economic impact*	"Economic Impact." *University of Oregon*. http://uoregon.edu/impact "The Economic Impact of Oregon State University." *The Economic Impact of Oregon State University*. http://www.econw.com/case-studies/the-economic-impact-of-oregon-state-university
27	Top Portland region international exports	"Economic Impacts of Congestion, December 2014 Briefings," *Economic Development Research Group.* http://www.oregon.gov/ODOT/TD/TP/OFAC/2014/Dec10/EconomicImpacts_Presentation.pdf

Page	Fact / topic	Source
28	*Portland downtown transit commuter rates*	*TriMet at a Glance, 2016.* Tri-County Metropolitan Transportation District of Oregon. https://trimet.org/ataglance/TriMet-At-a-Glance-2016.pdf
28	*Structurally deficient bridges, Linn County*	*2015 Oregon Bridge Report,* Transportation for America. http://transportationforamerica.org/wp-content/uploads/2015/06/Oregon-2015-Bridge-Report.pdf
28	*Congestion hours increase*	"Annual Urban Mobility Scorecard, 2014," *Texas A&M Transportation Institute*. http://d2dtl5nnlpfror.cloudfront.net/tti.tamu.edu/documents/ums/congestion-data/portland.pdf
31	*Southern Oregon agricultural commodities*	*State of Oregon Agriculture, Industry Report from the State Board of Agriculture.* State Board of Agriculture, January 2015. http://www.oregon.gov/ODA/shared/Documents/Publications/Administration/BoardReport.pdf
31	*Jackson County major employers*	"Largest Employers," *Medford/Jackson County Chamber of Commerce*. http://www.medfordchamber.com/cwt/external/wcpages/business_services/largest_employers.aspx
31	*Jackson County tourism economic impact*	"Oregon Travel Impacts 1991-2014," *Dean Runyan and Associates.* Prepared for Oregon Tourism Commission. Apr. 2015. http://www.deanrunyan.com/doc_library/ORImp.pdf
31	*Rouge Valley health care and medical service employment growth*	"Employment and Wages by Industry (QCEW), Jackson County Annual 2015," *State of Oregon Employment Department.* https://www.qualityinfo.org/ed-ewind/?at=1&t1=0~4104000029~00~2~0000~00~00000~2015~00
32	*Transit funding and future congestion*	*Strategic Assessment of Transportation and Land Use Plan,* page 16. Rogue Valley Metropolitan Planning Organization Strategic Assessment. http://www.rvmpo.org/images/studies/2015-strategic-assessment/Strategic_Asessment_Final_Report.pdf
35	*Central Oregon tourism and lodging*	"Oregon Travel Impacts 1991-2014," *Dean Runyan and Associates.* Prepared for Oregon Tourism Commission. Apr. 2015. http://www.deanrunyan.com/doc_library/ORImp.pdf
35	*Central Oregon brewing industry*	"Facts – Oregon Craft Beer." *Oregon Craft Beer*. http://oregoncraftbeer.org/facts/
35	*Central Oregon high-tech business cluster*	"2015 Central Oregon Profile," *Economic Development for Central Oregon (EDCO).* https://www.edcoinfo.com/wp-content/uploads/2015/05/Central-Oregon-Profile-2015.pdf

Page	Fact / topic	Source
35	*Central Oregon healthcare sector*	"Central Oregon Labor Trends," *State of Oregon Employment Department.* https://www.qualityinfo.org/documents/10182/89830/Central+Oregon+Local+Labor+Trends?version=1.11 "2015 Central Oregon Profile," *Economic Development for Central Oregon (EDCO).* https://www.edcoinfo.com/wp-content/uploads/2015/05/Central-Oregon-Profile-2015.pdf
35	*Klamath County employment*	"Case Studies," *Choose Klamath,* Klamath County Economic Development Association. http://www.chooseklamath.com/case-studies/
35	*Les Schwab Tire Center employment*	"2015 Central Oregon Profile," *Economic Development for Central Oregon (EDCO).* https://www.edcoinfo.com/wp-content/uploads/2015/05/Central-Oregon-Profile-2015.pdf
35	*Wasco County agriculture*	"2012 Census of Agriculture" *US Department of Agriculture, National Agricultural Statistics Service.* http://www.agcensus.usda.gov/Publications/2012/Online_Resources/County_Profiles/Oregon/cp41065.pdf
36	*Highway 97 freight volume increase*	"Oregon Freight Movement Overview Presentation," *ODOT Freight Planning*, 2/6/2015. https://visionpanel.files.wordpress.com/2015/10/oregon-freight-movement-overview.pdf
36	*Central Oregon pavement conditions*	*ODOT Pavement Conditions Report, 2014*, Oregon Department of Transportation. https://www.oregon.gov/ODOT/HWY/CONSTRUCTION/docs/pavement/2014_condition_report_maps.pdf
37	*Bicycle recreation economic impact, Columbia River Gorge*	"Columbia River Gorge Bicycle Recreation Economic Impact Forecast, 2014," *Dean Runyan and Associates.* http://industry.traveloregon.com/wp-content/uploads/2014/09/Final-Final-Report.pdf
39	*Columbia Plateau wheat productivity*	Rost, Bob. "Blessed with Soil and Precious Little Water," *Oregon's Agricultural Progress Online*. Oregon State University, 18 June 2013. Web. 11 May 2016. http://oregonprogress.oregonstate.edu/summer-2005/blessed-soil-and-precious-little-water
39	*Port of Morrow, commodities and economic impacts*	"Economic Benefits of Oregon Public Ports, 2014," *Business Oregon*. http://oregonports.com/documents/memberresources/2014portreport.pdf
39	*Celatom Plant employment*	State Representative Cliff Bentz, House District 60. *Representative Cliff Bentz Helps Secure $2 Million for Juntura Cutoff Road Project*. State Representative. https://www.oregonlegislature.gov/bentz/Documents/Rep%20%20Bentz%20helps%20secure%20$2%20million%20for%20Juntura%20Cutoff%20Road%20Project.pdf

Page	Fact / topic	Source
39	*Eastern Oregon travel-generated expenditures*	"Fishing, Hunting, Wildlife Viewing and Shellfishing in Oregon, 2008," *Dean Runyan and Associates, 2009.* http://www.deanrunyan.com/ODFW/ODFWsurvey.html
39, 40	*Wallowa county tourism impacts*	"Oregon Travel Impacts 1991-2014," *Dean Runyan and Associates.* Prepared for Oregon Tourism Commission. Apr. 2015. http://www.deanrunyan.com/doc_library/ORImp.pdf
40	*Port of Morrow, growth 2008 - 2013*	Plaven, George. "Port of Morrow Charts Continued Growth in 2014," East Oregonian, 14 Jan. 2015. http://www.eastoregonian.com/eo/business/20150114/port-of-morrow-charts-continued-growth-in-2014
41	*Port of Morrow, economic impacts*	"Economic Benefits of Oregon Public Ports, 2014," *Business Oregon.* http://oregonports.com/documents/memberresources/2014portreport.pdf
41	*Port of Morrow, 2014 growth*	Plaven, George. "Port of Morrow Charts Continued Growth in 2014," East Oregonian, 14 Jan. 2015. http://www.eastoregonian.com/eo/business/20150114/port-of-morrow-charts-continued-growth-in-2014
43	*Oregon taxes and fees per vehicle (compared to national average)*	"Car-Ownership Costs Ranked By State | Bankrate.com," *Car-Ownership Costs Ranked By State | Bankrate.com.* http://www.bankrate.com/finance/auto/car-ownership-costs-by-state.aspx *Rough Roads Ahead: The Cost of Poor Highway Conditions to Oregon's Economy, 2014*, Oregon Department of Transportation. https://www.oregon.gov/ODOT/COMM/Documents/RoughRoads2014.pdf
45	*Transportation Vision Panel, Menu of Options*	Transportation Vision Panel, Menu of Options, *see Appendix A: https://visionpanel.wordpress.com*
45	*Constitutional Dedication of Highway Funds*	Oregon State Constitution, Article IX, section 3a. *see:* http://bluebook.state.or.us/state/constitution/constitution09.htm
46	*Transportation Vision Panel, Revenue Options Matrix*	Transportation Vision Panel, Revenue Options Matrix, *see Appendix C: https://visionpanel.wordpress.com*
47	*Units of Investment:* *Fuel tax* *Registration fees* *Existing title fees* *License fees* *Supplemental title fee on new vehicles*	State Transportation Revenue Forecast, December 2015, ODOT *Estimates are FY16-FY21 average values and include the constitutionally required proportional heavy vehicle increase.*
47	*Units of Investment:* *Vehicle Excise Tax*	Estimate based on March 2016 Kelley Blue Book average transaction price for a new light vehicle and December 2015 State Transportation Revenue Forecast volume for light vehicle sales.

Page	Fact / topic	Source
47	*Units of Investment: Bicycle Excise Tax*	Estimate based on national bicycle sales data from the National Bicycle Dealers Association for 2014, extrapolated to Oregon based on population.
47	*Maintenance and preservation needs estimate*	*2016 estimates provided by the Oregon Department of Transportation. For further details see the* Rough Roads Ahead Report: *Rough Roads Ahead: The Cost of Poor Highway Conditions to Oregon's Economy, 2014,* Oregon Department of Transportation. https://www.oregon.gov/ODOT/COMM/Documents/RoughRoads2014.pdf *See also, Appendix E: https://visionpanel.wordpress.com*
47	*Seismic resiliency needs estimate*	*Oregon Highways Seismic PLUS Report, 2014,* Oregon Department of Transportation. https://www.oregon.gov/ODOT/HWY/BRIDGE/docs/2014_Seismic_Plus_Report.pdf *See also, Appendix E: https://visionpanel.wordpress.com*
47	*Bottlenecks needs estimate*	Estimates provided by ODOT Highway Division *See also, Appendix E: https://visionpanel.wordpress.com*
47	*Transit needs estimate*	Estimates provided by ODOT Public Transit Division: https://visionpanel.files.wordpress.com/2015/10/gtvp-public-transportation-considerations-outline.pdf *See also, Appendix E:* https://visionpanel.wordpress.com
47	*Bicycle and pedestrian needs estimate*	Estimates provided by ODOT Active Transportation Division: https://visionpanel.files.wordpress.com/2015/10/bptpr_draft_report_outline_dec2015.pdf *See also, Appendix E: https://visionpanel.wordpress.com*

Appendix A: Financing transportation in Oregon: A menu of options

Built upon the transportation investment principles, the Vision Panel identified a "menu of options" to finance Oregon's transportation system. This menu incorporates near-term, mid-term, and long-term options for consideration by policymakers.

Near-term options

- Increase state gas taxes
- Temporary gas taxes
- Increase diver and vehicle fees
- Electric vehicle registration fees
- First-time title fees on new vehicles
- A new vehicle excise tax
- State gas tax indexing
- Local gas tax and registration fees
- Studded tire tax
- Modify State Highway Fund distribution
- Bonding
- Lottery revenue
- Statewide property tax
- Employer/employee payroll tax
- General fund dedication
- Cigarette, alcohol, & cannabis tax
- Bicycle excise taxes
- Increase state and federal bicycle & pedestrian dedication
- Establish a 'next generation' revenue task force

Mid-term options

- Roadway tolling
- Public private partnerships
- Carbon taxes
- Per-mile road user charges

Long-term options

- Act on recommendations of a 'next generation' revenue task force
- Establish a transportation utility commission

Near-term options for consideration

In the near-term, Oregon can stem the immediate transportation funding crisis by passing a transportation funding package. A number of funding options are available, including increasing the traditional suite of user taxes and fees, as well as creating new fees where appropriate to ensure equitable contributions by transportation system users. Local governments can also be given greater ability to raise money for their transportation needs. Providing additional funding for non-highway modes is also critical.

New state investment in transportation funding can have the added benefit of reducing administrative and regulatory costs for local transportation jurisdictions. Through the use of 'fund exchange', federal funds can be exchanged with state funds to reduce administrative and regulatory costs to local jurisdictions that deliver transportation projects. This exchange would be easy to implement but requires increased state funds to exchange with federal funding.

Increase existing taxes and fees

In the short term, the most productive option for raising money for the road system is to increase the fuel tax and other established driver and motor vehicle fees—particularly since gas prices are currently low and Oregon has the lowest driver and motor vehicle fees of any state in the nation.[1] Driver-related fees (such as driver license issuance) should also be sufficient to cover the cost of providing the service through the DMV. Options include:

- Increase the state fuel tax *(currently 30-cents per gallon)*
- Increase vehicle registration fees
- Increase driver license fees

Take advantage of low gas prices to enact a temporary fuel tax for maintenance

With fuel prices expected to stay low for some time, an opportunity exists to channel some of the savings consumers enjoy into infrastructure investment through a temporary fuel tax increase. This temporary gas tax could supplement a general gas tax increase, and help address the current backlog of maintenance on local and state roads. The Legislature could set a target price for fuel, and then direct a portion of the cost savings below that level into the State Highway Fund. For example, if the target gas price were set at $2.50 per gallon and the portion to be directed into infrastructure investment were set at 25%, a gas price of $2.00 would direct 12.5 cents per gallon into the highway fund. The Legislature could also set a cap on this temporary fuel tax increase.

Create new vehicle fees to ensure fairness

The Legislature should consider creating new vehicle-related fees to ensure fairness:

- A supplemental registration fee on high efficiency vehicles that pay little or no gas tax would ensure they pay their fair share for the use of the roads; this could serve as a precursor to shifting high efficiency vehicles to a per-mile road usage charge once such a system is implemented.
- A first-time title fee on the purchase of new vehicles could be levied either as a flat fee or a percentage of vehicle purchase price. This would ensure that higher income individuals, who are more likely to buy new vehicles, pay according to their ability.

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[1] "Car-Ownership Costs Ranked By State | Bankrate.com," *Car-Ownership Costs Ranked By State | Bankrate.com*. http://www.bankrate.com/finance/auto/car-ownership-costs-by-state.aspx
see also: Rough Roads Ahead: The Cost of Poor Highway Conditions to Oregon's Economy, 2014, Oregon Department of Transportation. https://www.oregon.gov/ODOT/COMM/Documents/RoughRoads2014.pdf

- A new vehicle excise tax could be levied as a percentage of a new vehicle purchase price.

Index taxes and other user fees to inflation

Most tax revenue— including income, property, and sales tax revenue—rises over time as prices, incomes, and property values increase. The fuel tax and driver/motor vehicle fees that are the foundation of road funding in Oregon remain flat, so over time their revenue streams are eroded by inflation. Indexing existing taxes and fees to inflation would ensure we don't continue losing ground. Options include:

- Index state fuel tax rates to inflation.
- Index driver and motor vehicle fee rates to inflation.

Local funding options

Even though they receive half of new State Highway Fund resources and a substantial share of Oregon's federal highway funding, local governments still fall significantly short of the resources they need to maintain and improve their local transportation systems. The lack of a sales tax and property tax restrictions have forced local governments to be creative in raising transportation funding—or go without resources needed to meet basic needs. The Legislature should unshackle local governments, making it easier to raise the money needed for local infrastructure across all modes. Local options are particularly needed in the Portland metro region where maintenance, safety enhancements, and improved capacity is needed across the entire transportation system. Options include:

- Allow elected city councils and county commissions to enact gas tax increases rather than requiring they be sent to voters.
- Allow elected city councils and county commissions to enact registration fee increases rather than requiring they be sent to voters in counties with populations under 350,000.
- Structure an opportunity for a vote on an increase in user fees or other taxes across the entire Portland metro region that would allow for comprehensive regional transportation investment. *Provisions could be included that ensure local governments are using transportation funding appropriately and efficiently.*

Create a permanent *Connect*Oregon fund

The *Connect*Oregon program has proven to be a vital source of funding for aviation, marine, rail, transit, and bicycle/pedestrian capital projects that can't be funded through the State Highway Fund. This program should grow in size and be made permanent in order to ensure sustainable and predictable funding for these modes. With adequate funding, *Connect*Oregon, which currently only provides capital funding for projects, could also include a component to help pay for operating transit and passenger rail. Options for funding the program include:

- Permanently dedicate a portion of lottery revenues to transportation.
- Establish a statewide property tax with revenue dedicated to transportation.

Increase state support for transit operations

The State of Oregon provides relatively little support to transit operations. Many systems across the state struggle to provide service, and many can't even use all their federal funding due to lack of matching funds. The state should provide additional dedicated funding for transit operations and also provide additional tools for local districts to raise funds. Options include:

- An additional *employee* payroll tax for transit districts currently levying an *employer* payroll tax.
- Enhanced *employer* or *employee* payroll tax authority for smaller transit districts.
- Establish a statewide *employer* or *employee* payroll tax.

- Establish a statewide property tax.
- Establish a *net income tax* that would include other forms of income in addition to employee payroll.
- Continue and enhance state general fund dedication to transit.

Increase support for passenger rail

Oregon faces the potential for cessation of the Amtrak Cascades service between Eugene and Portland because the state has inadequate dedicated funding for passenger rail operations costs. Options for providing sustainable funding to address this shortfall include:

- Dedicate a small portion of a statewide payroll tax, statewide property tax or lottery revenues for passenger rail operations.
- Dedicate a portion of new local payroll taxes for transit (e.g., TriMet and LTD) toward passenger rail operations.
- Create a special district among the counties served by Cascades to fund passenger rail capital projects and operating costs.

Fund bicycle/pedestrian infrastructure

The draft Oregon Bicycle/Pedestrian Plan lays out a need for $100 million in annual investment in active transportation infrastructure, far more than available funding streams currently provide. Oregon has a number of options to begin closing the gap:

- ***Implement a bicycle excise tax.*** To ensure that bicyclists are contributing to the infrastructure they use, the Legislature should consider creating a new tax on the sale of bicycles. Relative to bicycle registration or licensing which would have high administrative costs relative to potential revenue, a bicycle excise tax of 5-10% could raise substantial funding for bicycle infrastructure, and create opportunities to leverage additional federal dollars that require a local match.
- ***Increase the share of the State Highway Fund dedicated to active transportation.*** In conjunction with a state transportation funding package, the Legislature should consider increasing the 1% set-aside of State Highway Fund resources to 1.5% or 1.75%.
- ***Dedicate additional federal funds.*** Legislative approval of additional state revenue would allow ODOT to increase its investment of federal funds in active transportation, particularly in trails outside the road right of way that can't be funded from the State Highway Fund.

Cigarette, alcohol, and cannabis taxes

Currently, $0.02 per pack of cigarettes is dedicated by statute to special transportation for senior citizens and people with disabilities. While this is a declining revenue source, the cigarette tax and amount dedicated to transportation could be increased. Additionally, new taxes on alcohol and cannabis (which often lead to impaired driving) could help fund non-roadway transportation such as public transit. A tax on these could not only provide more stable operations revenue for existing public transit, but could potentially contribute to reductions in impaired driving by helping to fund enhanced transit service.

A studded tire excise tax

Vehicles with metal tire studs cause about $4 million per year in damage to Oregon's state highways and additional damage to local roads.[2] An excise tax or other fee on the sale or use of studded tires could help recover some of the costs of this damage.

[2] http://www.oregon.gov/ODOT/COMM/Documents/StuddedTireReport2014.pdf

Near-term administrative actions for consideration:

Modify State Highway Fund distribution formulas to ensure equity among local governments

Current formulas for distributing State Highway Fund resources among cities and counties are based on population and vehicle registrations, respectively. These formulas should be more aligned with need and ownership of the road system to ensure that resources flow to where they are needed and to ensure greater equity. *Modifications to distribution could include provisions that ensure local governments are using road funding efficiently.*

Bond proceeds to address immediate needs

Taking out a mortgage allows a family to buy a house faster than if they had to save up enough cash to cover the cost; similarly, bonding allows the state to "buy" transportation projects more quickly than if we had to save up cash to build projects. The Oregon Legislature has successfully used bonding to leverage additional transportation funding into immediate projects. While ODOT's debt service has grown in recent years, it remains at a reasonable and prudent level that has kept the department's credit rating high and its cost of borrowing low. Additional bonding will require new sources of revenue, and prudent financial management would limit new debt service to one-third of any additional revenue. As a result, the Legislature should use bonding primarily for projects for which the state would derive an immediate and significant benefit and leave most of any new revenue to ensure long-term sustainable transportation funding.

Establish a "next generation" transportation revenue task force

Transportation technology and mobility needs will likely look very different in 30 years than they do today, and revenue mechanisms will need to evolve with these changes. In order to develop and explore next generation funding and rate-setting mechanisms (see below), the Legislature should create a standing body that identifies and develops 'next generation' transportation funding mechanisms.

This task force should look for opportunities to develop additional or replacement fees that direct some of the economic value created by the transportation system into its preservation and improvement. These could shift the current system from its heavy reliance on taxing system *users* to generating additional revenue from those who *benefit* from transportation investments. These could include land value capture, value-based freight fees, and income tax gain share. Because current transportation user fees are largely regressive, an effort should be made to ensure that those who derive significant wealth due to public investments in transportation pay a larger share of costs than they currently do to ensure equity.

Mid-term and long-term options for consideration

In the mid term and long term, new revenue options to supplement traditional user fees should be explored to stabilize state trust funds and provide funding for all modes of transportation. As Oregon looks to future funding options, it should explore modifications to the state constitutional dedication that limits Oregon's ability to invest in non-highway transportation modes.

Tolling for large-scale projects

Oregon should explore tolling options as a strategic tool for large-scale bridge and congestion relief projects, particularly in urban areas. Criteria for the appropriateness of tolling should consider the potential for traffic diversion, local system impacts, administrative costs, and geographic fairness.

Per-mile road usage charges

Oregon has led the nation in developing a per-mile road usage charge to ensure that fuel efficient vehicles—particularly electric vehicles that pay no fuel tax— don't cause transportation funding to crash. Now, after a successful pilot with the ORe*GO* program proving the concept can work, the Legislature should consider a road usage charge to ensure sustainable funding. In the short term a road usage charge could focus on new, more fuel efficient vehicles; in the long run it could spread to all vehicles and potentially be used for time of day pricing of roads that could help address congestion.

A carbon tax

A carbon tax could help Oregon meet our greenhouse gas emissions reduction goals. Due to the state constitution's requirement that any revenue derived from taxes on the use of an automobile go toward roads, a carbon tax applied to motor fuels would direct substantial resources to the State Highway Fund. Every dollar levied on a ton of carbon would be approximately equivalent to a 1 cent per gallon gas tax increase. To reduce greenhouse gas emissions, funding from this source could pay for road projects that have a positive or neutral impact on emissions— such as bikes lanes and sidewalks, road and bridge maintenance and intelligent transportation systems that smooth traffic flow and cut the amount of fuel wasted idling in congestion. The Legislature could also direct carbon tax revenue from non-motor fuel sources to non-highway modes that could help shift trips to less polluting modes or modify the constitutional restriction to allow for a portion of a carbon tax on motor fuels to go to these modes. If combined with a road usage charge, a carbon tax could ensure that people pay a fair amount both for their use of the roads and for the pollution they emit. [3]

Act on recommendations of a "Next Generation" transportation revenue task force

In the long term, Oregon could act up on the recommendations of a 'Next Generation' transportation revenue task force *(see above)*

Develop a transportation utility commission concept

Like energy and water, transportation is largely financed by charging those who use the infrastructure. However, in the utility sector, rates are set by an impartial body based on levels determined to adequately preserve and improve infrastructure needed to effectively deliver service. A transportation utility commission empowered to determine the necessary levels of investment and required user fees could help address this challenge. Because the Legislature cannot delegate its tax-setting authority, such a commission would be charged with recommending investment levels and the resulting taxes and fees to the Legislature for potential action.

[3] For further details on the economic and emissions impacts of a carbon tax in Oregon, see: "*Economic and Emissions Impacts of a Clean Air Tar or Fee in Oregon," State of Oregon Legislative Revenue Office, December 2014.* *https://www.oregonlegislature.gov/lro/Documents/RR%204-14%20SB%20306%20Clean%20Air.pdf*

Appendix B: **Transportation investment principles**

While there are a number of financing options available to fund transportation, the panel identified a set of principles that new investments should be built upon.

Address the immediate funding crisis: In the short term, Oregon must stem the immediate transportation funding crisis. State, city and county roads across Oregon currently face a maintenance backlog that threatens public safety and economic competitiveness. Additionally, deferred maintenance of the transportation system is fiscally irresponsible and will result in increased maintenance costs in the future.

Uphold a user-pays principle: The current means through which Oregon funds its transportation system is based considerably upon the 'user-pays' principle. As policymakers develop new sources of revenue in response to greater fuel efficiency and increasing demand for multimodal infrastructure, they should work to uphold the 'user-pays' principle for transportation funding. The user-pays principle should reflect direct impacts on the transportation system *(e.g., roadway wear and tear)*, and also strive to include external costs *(e.g., environmental impacts, health impacts, land use impacts, congestion, etc.)*

Provide predictable and stable revenue: New transportation investments must provide predictable and stable funding that enables local governments to maintain and improve the transportation system most efficiently.

Make multimodal investments: Investments in Oregon's transportation system must include revenue for non-highway transportation designed to move freight, including aviation, marine and freight rail. Investments must also include revenue for non-highway transportation designed to move people, including bike, pedestrian, transit, and passenger rail.

Make long-term investments in community and economy: In addition to addressing the long-term shortfall in funding for transportation maintenance and repairs, new multimodal investments should be sufficiently robust to enhance the transportation system in response to Oregon's growing economy and population.

Address challenges of inflation: New transportation investments should begin to address core challenges in how transportation is funded. This includes funding options that are responsive to inflation and the growing costs of roadway construction, materials, and labor.

Incentivize efficient use of the system: Fees can influence behavior in ways that optimize use of the transportation system (e.g., pricing parking in urban areas) or can work against state goals (e.g., discouraging non-driving modes) if not applied carefully.

Limit administrative costs and ensure capacity to deliver: In addition to efforts to ensure transportation agencies are using revenue efficiently, new revenue sources should be pursued that have low administrative costs (including infrastructure, collection, and enforcement) relative to their revenue potential.

Be responsive to fuel efficiency and the need to reduce carbon emissions: New transportation investments should begin to address core challenges in how transportation is funded while supporting the state's carbon reduction goals. This includes funding options that are resilient to increased fuel efficiency, and a growing market share of electric vehicles.

Improve equity: The main sources for funding transportation infrastructure that exist today (gas taxes and other user fees, lottery revenue, etc.) are particularly burdensome on low-income Oregonians. As new transportation financing options are developed, impacts on low-income people must be addressed.

As policymakers consider options for funding transportation, it is especially critical that they select funding mechanisms that are effective in achieving the desired result. Investments should aim to provide adequate, sustainable, and long-term solutions, rather than temporary infusions of revenue.

Appendix C: Investing in Transportation: Revenue Options Matrix

		Adequacy of revenue	Responsiveness to inflation	Revenue stability and predictability	Appropriate-ness of dedication (user pays)	Administrative cost (relative to revenue)	Equity by income group
Roadway funding options							
1) Existing user fees	a. Increase state gas taxes	Very Good	Poor	Fair	Good	Very Good	Poor
	b. Increase other user fees *(license, registration, title fees)*	Good	Poor	Very Good	Fair	Very Good	Poor
2) A temporary gas tax		Very Good	Poor	Poor	Good	Very Good	Poor
3) New vehicle user fees	a. Electric vehicle registration fees	Poor	Poor	Good	Good	Very Good	Fair
	b. First-time title fees on new vehicles	Good	Poor	Fair	Fair	Very Good	Good
	c. A new vehicle excise tax	Good	Good	Fair	Fair	Good	Very Good
4) State gas tax indexing		Good	Very Good	Fair	Good	Very Good	Poor
5) Local funding options	a. Local gas taxes	Fair	Poor	Fair	Good	Very Good	Poor
	b. Local registration fees	Fair	Poor	Very Good	Fair	Very Good	Poor
6) Studded tire tax		Poor	Poor	Poor	Good	Good	Fair
Non-roadway funding options							
7) A permanent *Connect*Oregon multimodal fund	a. Lottery revenue dedication	Very Good	Poor	Fair	Poor	Good	Poor
	b. Statewide property tax	Good	Good	Good	Fair	Fair	Very Good
8) Transit and passenger rail funding	a. Employer payroll taxes	Good	Good	Fair	Fair	Good	Good
	b. Employee payroll taxes	Good	Good	Fair	Fair	Good	Fair
	c. Property tax dedication	Good	Good	Good	Fair	Good	Very Good
9) Bicycle and pedestrian funding	a. Bicycle excise taxes	Poor	Good	Fair	Good	Good	Good
	b. Increase state and federal dedication	Good	Poor	Fair	Fair	Very Good	Fair
10) Cigarette, alcohol and cannabis taxes		Fair	Fair	Fair	Fair	Good	Poor
Mid-term and long-term funding options							
11) Roadway tolling		Fair	Fair	Fair	Very Good	Poor	Poor
12) Per-mile road user charges		Very Good	Poor	Very Good	Very Good	Fair	Fair
13) A carbon tax		Good	Poor	Fair	Very Good	Very Good	Poor

Definition of evaluation criteria

Adequacy of revenue	This criterion considers the adequacy of the revenue option as a major funding source for transportation. *While some revenue options may be limited in their capacity to fund non-roadway transportation modes, this criterion strictly considers overall revenue potential relative to need.*
Responsiveness to inflation	Is the funding option responsive to future inflation which will increase the costs of construction materials and labor?
Revenue stability and predictability	This criterion considers the long-term stability of the revenue option due to factors *other than inflation*. This includes improvements in vehicle fuel economy and fuel consumption, as well as potential volatility in consumer behavior.
Appropriateness of dedication *('user pays' principle)*	To what degree does the user of the system pay for their use? Is dedication of revenue to the transportation system an appropriate use of this funding source?
Administrative cost	What is the cost of administration (including infrastructure, collection and enforcement) relative to the potential revenue?
Equity by income group	Does the revenue option disproportionately burden poorer individuals, particularly those who may be limited in their capacity to seek alternative transportation options?

Option 1a: Increase state gas taxes

The Oregon state gas tax is currently the primary source of revenue for the State Highway Fund. At 30-cents per gallon of gasoline, the gas tax was last increased by 6 cents in 2011. The gas tax as a highway revenue source currently faces major challenges due to inflation and increased fuel efficiency.

Adequacy of revenue:	*Very Good*	Each cent that the gas tax is increased would raise an estimated $28.3 million per year in the near-term.[4]
Responsiveness to inflation:	*Poor*	A fixed gas tax increase provides a temporary increase in revenue. However, this revenue begins to disappear as inflation increases the cost of labor and construction materials
Revenue stability and predictability:	*Fair*	As vehicles become more fuel efficient and electric vehicles increase their market share, state revenue from the gas tax will continue to decline. Revenue from the gas tax may also be impacted by economic downturns and the global price of oil which impacts rates of fuel consumption.
Appropriateness of dedication: ***('user pays' principle)***	*Good*	The gas tax is considered a revenue source that roughly follows the 'user pays' principle. Gas tax revenue from vehicles that use public roads is constitutionally dedicated to the State Highway Fund. In the past, vehicle size and weight (impact or road) has roughly corresponded with its fuel economy (gas tax paid per mile). However, with the rollout of electric and other highly fuel efficient vehicles, this corresponding relationship is diminishing.
Administrative cost:	*Very Good*	Because the gas tax already exists as a revenue source, there would be negligible costs in administering an increase in its rate.
Equity by income group:	*Poor*	The gas tax is a regressive tax. Additionally, the purchase of fuel efficient vehicles has high upfront costs, meaning the poor are often most severely impacted by increased fuel prices.

Other States: *Oregon's current per-gallon taxes and fees on gasoline and diesel is average compared to other US states.[5] However, this rate is less than other West Coast states, including California (42.3 cents per gallon) and Washington (which approved an increase from 37.5 cents to 44.5 cents in 2015). Six other states approved increases to their per-gallon gas tax rates in 2015.*

[4] Based on the ODOT December 2015 State Transportation Revenue Forecast
http://www.oregon.gov/ODOT/TD/EA/Pages/revenueforecasts.aspx
[5] http://www.api.org/oil-and-natural-gas-overview/industry-economics/fuel-taxes/gasoline-tax

Option 1b: Increase existing driver and vehicle fees:

Oregon's vehicle registration fees for passenger vehicles ($43 per year) are among the lowest in the nation. Increasing registration fees (as well as licensing and title fees) can provide revenue for transportation infrastructure. However, these fees are often lump-sum costs and do not reflect the actual road use tax. Furthermore, because they are generally flat-rate costs and don't reflect miles traveled, they are even more regressive than gas taxes.

Adequacy of revenue:	*Good*	A $10 annual increase in registration fees for passenger vehicles would raise roughly $57.9 million per year in revenue.[6]
Responsiveness to inflation:	*Poor*	Unless increased over time, registration, licensing, and title fees are not responsive to inflation.
Revenue stability and predictability:	*Very Good*	Registration fee revenue reflects the number of vehicles registered in the state. Barring fundamental changes in vehicle ownership, it is a very predictable and stable source of revenue.
Appropriateness of dedication: ***('user pays' principle)***	*Fair*	Dedication of registration fees to the transportation system is an appropriate use of revenue. However, these fees are not reflective of vehicle miles traveled and the corresponding impact to the roadway system.
Administrative cost:	*Very Good*	The cost of administering registration, licensing and title fees is already established. Additional revenue from fee increases come with a negligible administrative cost.
Equity by income group:	*Poor*	Registration fees do not reflect the value of a vehicle within a particular class. Furthermore, they do not reflect vehicle miles traveled. Lower income residents therefore pay the same in registration regardless of the vehicle's value or level of use.

[6] Based on the ODOT December 2015 State Transportation Revenue Forecast
http://www.oregon.gov/ODOT/TD/EA/Pages/revenueforecasts.aspx

Option 2: A temporary gas tax

The Oregon state gas tax is currently the primary source of revenue for the State Highway Fund. Historically low fuel prices may present an opportunity to create a temporary "floor" on fuel prices and capture the difference between market prices and the "floor" as temporary tax revenue.

Adequacy of revenue:	*Very Good*	While in effect, each cent that the temporary gas tax is increased would raise an estimated $28.3 million per year.[7]
Responsiveness to inflation:	*Poor*	Like a fixed gas tax, a temporary gas tax only provides a temporary increase in revenue. This revenue begins to disappear as inflation increases the cost of labor and construction materials.
Revenue stability and predictability:	*Poor*	A temporary gas tax, with rates based on current low fuel prices, offers less stability and predictability than a standard increase in the gas tax. Furthermore, as vehicles become more fuel efficient and electric vehicles increase their market share, state revenue from the gas tax will continue to decline.
Appropriateness of dedication: ***('user pays' principle)***	*Good*	The gas tax is considered a revenue source that roughly follows the 'user pays' principle. Gas tax revenue from vehicles that use public roads is constitutionally dedicated to the State Highway Fund. In the past, vehicle size and weight (impact or road) has roughly corresponded with its fuel economy (gas tax paid per mile). However, with the rollout of electric and other highly fuel efficient vehicles, this corresponding relationship is diminishing.
Administrative cost:	*Very Good*	Because the gas tax already exists as a revenue source, there would be negligible costs in administering a temporary increase in its rate.
Equity by income group:	*Poor*	The gas tax is a regressive tax. Additionally, the purchase of fuel efficient vehicles has high upfront costs, meaning the poor are often most severely impacted by increased fuel prices.

[7] Based on the ODOT December 2015 State Transportation Revenue Forecast
http://www.oregon.gov/ODOT/TD/EA/Pages/revenueforecasts.aspx

Option 3a: New (additional) registration fees for electric vehicles:

Currently, both electric and gas-powered passenger vehicles pay the same amount in registration fees ($43 annually). In addition to registration fees, the average gas-powered passenger vehicle pays $135 annually into the State Highway Fund through state gas taxes. In contrast, electric vehicles contribute no additional revenue to the State Highway Fund. To ensure an equal contribution into the Fund, registration fees for electric vehicles could be increased by $135 annually.

However, the $135 fee is based on average vehicle miles traveled, and does not reflect actual roadway use. Furthermore, this fee can be considered a disincentive to the wider policy goal of promoting greater market share of electric vehicles.

Adequacy of revenue:	*Poor*	An increase of $135 in registration fee for electric vehicles would raise roughly $600,000 per year. While this amount could rapidly increase with a broad deployment of electric vehicles, overall revenue would not increase as registration fees would be offset by the decline in gas tax revenue.
Responsiveness to inflation:	*Poor*	Unless increased over time, registration fees are not responsive to inflation.
Revenue stability and predictability:	*Good*	While the future market share of electric vehicles remains uncertain, a higher fee for electric vehicles ensures predictability for the State Highway Fund that is losing gas tax revenue from the rollout of electric vehicles.
Appropriateness of dedication: ***('user pays' principle)***	*Good*	Dedication of registration fees to the transportation system is an appropriate use of revenue. However, these fees are not reflective of vehicle miles traveled and the corresponding impact to the roadway system.
Administrative cost:	*Very Good*	The cost of administering registration fees on vehicles is an already established fixed cost. Furthermore, the Oregon DMV already identifies hybrid-electric and electric powered passenger vehicles as a distinct vehicle class. The administrative cost of increasing this fee would be negligible.
Equity by income group:	*Fair*	This type of road user charge would primarily impact individuals who can afford to invest in high efficiency vehicles. However, this would have no impact on other vehicle drivers who currently pay a regressive gas tax.

Option 3b: First time title fees on new vehicles

A first time title fee would apply to new vehicle purchases in Oregon. Oregon does not currently impose a fee for first time registrations of new vehicles. Instead, those who register their newly purchased vehicle pay the same $77 passenger registration fee as those registering used or out-of-state vehicles.

Adequacy of revenue:	*Good*	First time title fees for new vehicles can provide an adequate source of transportation revenue. Each $1.00 increase in new title fees would raise an additional $358,645 in transportation revenue each year.
Responsiveness to inflation:	*Poor*	Unless increased over time, registration fees are not responsive to inflation.
Revenue stability and predictability:	*Fair*	Vehicle sales are relatively consistent from year to year; making title fees associated with newly purchased vehicles a somewhat stable and predictable source of transportation revenue.
Appropriateness of dedication: ***('user pays' principle)***	*Fair*	Dedication of new title fees to the transportation system is an appropriate use of revenue. However, these fees are not reflective of vehicle miles traveled and the corresponding impact to the roadway system.
Administrative cost:	*Very Good*	The cost of administering title fees on vehicles is an already established fixed cost. The administrative cost of creating this fee as applied to new vehicles would be negligible.
Equity by income group:	*Good*	A new title fee is less regressive than many other revenue options outlined. These fees would primarily impact Oregonians who can afford new vehicles.

Option 3c: Excise taxes on new vehicle sales

Over twelve states levy excise taxes on vehicles, with revenue dedicated to transportation. Oregon could levy an excise tax on the sale of new vehicles, and this revenue would be constitutionally dedicated to the State Highway Fund. Similarly, a title fee based on a vehicle's value could be levied on new vehicles registered in Oregon.

Adequacy of revenue:	*Good*	Vehicle excise taxes can be adequate sources of transportation revenue. A 1% excise tax on all new vehicles sold in Oregon could raise $78.0 million per year in transportation revenue.[8] While an excise tax could be significant additional source of revenue, it would likely not be sufficient to replace existing sources of revenue such as the gas tax.
Responsiveness to inflation:	*Good*	The cost of new vehicles can be expected to roughly match increases in overall economic inflation over time. A new vehicle excise tax would therefore likely be responsive to inflation.
Revenue stability and predictability:	*Fair*	Stability of vehicle excise taxes may be impacted by trends toward the purchase of smaller, more fuel efficient vehicles that cost less than large cars and SUVs, and by changes in consumer behavior due to vehicle technology innovations.
Appropriateness of dedication: ***('user pays' principle)***	*Fair*	Under current Oregon law, all revenue collected from a vehicle excise tax would be constitutionally dedicated to the State Highway Fund. However, as with registration fees, there is no direct relation between the amount of revenue collected per vehicle and the per-mile impact of that vehicle on public roadways.
Administrative cost:	*Good*	The administrative cost of collecting excise taxes would be relatively low.
Equity by income group:	*Very Good*	An excise tax on new vehicles is significantly less regressive than the other revenue options outlined. They would primarily impact Oregonians who can afford new vehicles with rates that reflect the value of the vehicle sold.

[8] Source: December 2015 State Transportation Revenue Forecast. *Estimates are FY16-FY21 average values and include the constitutionally required proportional heavy vehicle increase.*

Option 4: State gas tax indexing

Because the purchasing power of gas taxes decreases with inflation and higher construction and materials costs over time, the state gas tax can be 'indexed' in variety of ways. The gas tax rate can be indexed to match the Consumer Price Index (CPI) or the Producer Price Index for highway and street construction.

While indexing as a stand-alone measure does little to increase transportation revenue in the near-term, it can be very effective long-term. If the Oregon state gas tax had been indexed in 1993 (at 24-cents per gallon), the gas tax today would be 39-cents per gallon.

For purposes of this overview, indexing the gas tax rate is reviewed as a stand-alone measure.

Adequacy of revenue:	*Good*	As a stand-alone measure, indexing the gas tax (based on the current 30-cent per gallon rate) does not increase revenue, but rather reduces future diminishment of the gas tax as a revenue source. Over time, this would provide greater revenue than a single fixed-rate increase.
Responsiveness to inflation:	*Very Good*	Whereas a fixed gas tax increase provides a temporary increase in revenue, indexing the gas tax rate helps to ensure that the purchasing power of gas tax revenue matches inflation and/or increased labor and construction costs.
Revenue stability and predictability:	*Fair*	While indexing ensures that available revenue will match inflation, it has no impact on diminishing gas tax revenue due to increased fuel efficiency. Revenue from the gas tax may also be impacted by economic downturns and the global price of oil which impacts rates of fuel consumption.
Appropriateness of dedication: ***('user pays' principle)***	*Good*	The gas tax is considered a revenue source that roughly follows the 'user pays' principle. Gas tax revenue from vehicles that use public roads is constitutionally dedicated to the State Highway Fund. In the past, vehicle size and weight (impact or road) has roughly corresponded with its fuel economy (gas tax paid per mile). However, with the rollout of electric and other highly fuel efficient vehicles, this corresponding relationship is diminishing.
Administrative cost:	*Very Good*	Because the gas tax already exists as a revenue source, additional administrative costs of indexing would be limited to the periodic need to recalculate rates based on a determined price index.
Equity by income group:	*Poor*	The gas tax is a regressive tax. Additionally, the purchase of fuel efficient vehicles has high upfront costs, meaning the poor are often most severely impacted by increased fuel prices.

Other states: *Florida, Maryland, and New Hampshire each adjust their gas tax for inflation based on the Consumer Price Index. Additionally some states have tied gas tax rates to the wholesale price of gas, leading to extreme fluctuations in transportation revenue as the price of gas has risen and fallen.*[9]

[9] http://taxfoundation.org/blog/state-inflation-indexing-gasoline-taxes

Option 5a: Local gas taxes

The Oregon state gas tax is currently the primary source of revenue for the State Highway Fund. Greater flexibility for local governments to increase local fuel taxes would raise additional funds. However, local gas taxes are less effective as a revenue source because they do not trigger an automatic increase in the weight-mile tax for trucks.

These funds would also carry the same constitutional mandate as statewide fuel tax revenue, which is dedicated to highway funding purposes. They also face the same major challenges due to inflation and increased fuel efficiency.

Adequacy of revenue:	*Fair*	Statewide fuel taxes are collected at first sale and administered by ODOT. Local fuel taxes are collected at the local level. This means the adequacy of collected tax revenue will vary by county or city depending on the number of refueling stations.
Responsiveness to inflation:	*Poor*	A fixed gas tax increase provides a temporary increase in revenue. However, this revenue begins to disappear as inflation increases the cost of labor and construction materials.
Revenue stability and predictability:	*Fair*	From the onset, the predictability of this revenue source is questionable given the current difficultly in quantifying and forecasting local fuel taxes. This revenue source may become more predictable over time. As vehicles become more fuel efficient and electric vehicles increase their market share, state revenue from the gas tax will continue to decline. Revenue from the gas tax may also be impacted by economic downturns and the global price of oil which impacts rates of fuel consumption.
Appropriateness of dedication: ***('user pays' principle)***	*Good*	The gas tax is considered a revenue source that roughly follows the 'user pays' principle. Gas tax revenue from vehicles that use public roads is constitutionally dedicated to the State Highway Fund. In the past, vehicle size and weight (impact or road) has roughly corresponded with its fuel economy (gas tax paid per mile). However, with the rollout of electric and other highly fuel efficient vehicles, this corresponding relationship is diminishing.
Administrative cost:	*Very Good*	Because the statewide gas tax already exists as a revenue source, there would be negligible costs in administering an increase in its rate.
Equity by income group:	*Poor*	The gas tax is a regressive tax. Additionally, the purchase of fuel efficient vehicles has high upfront costs, meaning the poor are often most severely impacted by increased fuel prices.

Option 5b: Local registration fees

Oregon's vehicle registration fees for passenger vehicles ($43 per year) are among the lowest in the nation. Allowing local governments to increase registration fees (as well as licensing and title fees) can provide additional revenue for transportation infrastructure. However, these fees are often lump-sum costs and do not reflect the actual road use tax. Furthermore, because they are generally flat-rate costs and don't reflect miles traveled, they are even more regressive than gas taxes.

Adequacy of revenue:	*Fair*	The overall adequacy of local registration fee increases depends upon the participation by local governments in enacting a fee increase, and upon the volume of transactions within their jurisdiction. With Oregon's relatively low registration fees compared to other states, there is room for meaningful increases at both the state and local levels.
Responsiveness to inflation:	*Poor*	Unless increased over time, registration, licensing, and title fees are not responsive to inflation.
Revenue stability and predictability:	*Very Good*	Registration fee revenue reflects the number of vehicles registered in the state. This same information is available at the local level. Barring fundamental changes in vehicle ownership, it is a very predictable and stable source of revenue.
Appropriateness of dedication: ***('user pays' principle)***	*Fair*	Dedication of registration fees to the transportation system is an appropriate use of revenue. However, these fees are not reflective of vehicle miles traveled and the corresponding impact to the roadway system.
Administrative cost:	*Very Good*	The cost of administering registration, licensing and title fees is already established. Additional revenue from local fee increases come with a negligible administrative cost.
Equity by income group:	*Poor*	Registration fees do not reflect the value of a vehicle within a particular class. Furthermore, they do not reflect vehicle miles traveled. Lower income residents therefore pay the same in registration regardless of the vehicle's value or level of use.

Option 6: A studded tire tax

Vehicles with metal tire studs cause about $4 million per year in damage to Oregon's state highways and additional damage to local roads.[10] An excise tax or other fee on the sale or use of studded tires could help recover some of the costs of this damage.

Adequacy of revenue:	*Poor*	While a tax on studded tires could address some of the costs of damage caused by studded tires, it would provide little revenue relative to overall transportation needs.
Responsiveness to inflation:	*Poor*	A studded tire tax would not be responsive to inflation.
Revenue stability and predictability:	*Poor*	Use of studded tires has declined from 16% of registered vehicles to 4% of vehicles in the past 10 years. Given this trend, future stability as a revenue sources is very poor.
Appropriateness of dedication: ***('user pays' principle)***	*Good*	A tax on studded tires that is dedicated to the damage that they cause would be an appropriate use of this potential revenue source.
Administrative cost:	*Good*	A tax on studded tires levied at the point of sale could be implemented without significant collection costs.
Equity by income group:	*Fair*	This tax would be limited to people who purchase studded tires and tire replacement frequency would roughly reflect the number of miles driven.

[10] http://www.oregon.gov/ODOT/COMM/Documents/StuddedTireReport2014.pdf

Option 7a: A permanent *Connect*Oregon fund (lottery revenue)

In 2005, the Oregon Legislature created what is now known as *Connect*Oregon - a program focused on improving and expanding the state's multimodal transportation network. The legislature authorized issuance of $100 million in lottery-backed revenue bonds to fund the program in each of the 2005-07, 2007-09, and 2009-11 biennia. Additionally, funding of $40 million, $42 million and $45 million was authorized in 2011, 2013 and 2015 respectively.

Adequacy of revenue:	*Very Good*	Lottery revenue can provide significant funding for non-highway transportation infrastructure. Additionally, the bonding process allows the state to "front load" funding for transportation projects, resulting in an effective and adequate source of non-roadway funding.
Responsiveness to inflation:	*Poor*	Total revenue brought in through the state lottery does not directly tie to inflation. Unless lottery fund dedications to *Connect*Oregon are structured to increase each year, its effectiveness as a revenue source will decrease over time due to inflation.
Revenue stability and predictability:	*Fair*	So long as ODOT maintains a prudent investment portfolio, lottery-backed bonding is a somewhat stable funding mechanism. However, the total revenue brought in by the state through the lottery is primarily driven by consumer behavior.
Appropriateness of dedication: ***('user pays' principle)***	*Poor*	While multimodal projects funded through the *Connect*Oregon fund are selected based on statewide economic benefit, lottery funds for transportation projects do not follow the user-pays principle.
Administrative cost:	*Good*	The administrative costs of the Oregon State Lottery are already accounted for. A continuation or increase to the ConnectOregon program would have little additional administrative cost.
Equity by income group:	*Poor*	State lotteries are widely considered to be highly regressive sources of revenue.

Option 7b: A permanent *Connect*Oregon fund (a state property tax)

Oregon does not currently have a statewide property tax, and existing property taxes are levied at the local level. If a statewide property tax were to be established, the *Connect*Oregon program could authorize direct revenue-backed bonds from a statewide property tax. This funding mechanism could replace or supplement the existing lottery-backed bonding method used to fund *Connect*Oregon today.

Adequacy of revenue:	*Good*	A statewide property tax could be a significant source of revenue for non-highway transportation.
Responsiveness to inflation:	*Good*	Property taxes reflect the assessed value of real property and are therefore somewhat responsive to inflation.
Revenue stability and predictability:	*Good*	Property taxes are generally a stable and predictable source of revenue.
Appropriateness of dedication: ***('user pays' principle)***	*Fair*	While multi-modal projects funded through the *Connect*Oregon fund are selected based on statewide economic benefit, property taxes for transportation projects only loosely follows a user-pays principle.
Administrative cost:	*Fair*	Property taxes in Oregon are currently levied at the local level. Some additional administrative costs would be associated with a new statewide property tax.
Equity by income group:	*Very Good*	Property taxes are significantly less regressive than the other transportation revenue options outlined.

Option 8a: *Employer* payroll tax (for transit and passenger rail)

TriMet, Lane Transit District, and the cities of Wilsonville, Canby, and Sandy currently levy a local *employer* payroll tax to cover transit operations costs. The *employer* payroll tax rate currently ranges from 0.5% to 0.7337%, with a maximum of 0.8% set by statute. The cap on *employer* payroll taxes could be increased, local tax authority could be expanded, or the tax could be implemented statewide.

Adequacy of revenue:	*Good*	Employer payroll taxes are a major source of operations revenue for TriMet, LTD, Wilsonville, Canby, and Sandy.
Responsiveness to inflation:	*Good*	Assuming that wages increase at a rate similar to inflation, payroll taxes are generally responsive to inflation.
Revenue stability and predictability:	*Fair*	Payroll taxes revenue can be volatile due to fluctuations in the economy and labor market. For example, the recent economic recession led to a dramatic reduction in payroll tax revenue for TriMet, forcing the agency to make some reductions in service even as demand increased.
Appropriateness of dedication: ***('user pays' principle)***	*Fair*	Employer payroll taxes dedicated to transit does not directly follow the 'user pays' principle. However, transit that serves workforce needs can provide major benefits for employers including reduced cost of providing employee parking.
Administrative cost:	*Good*	Employer payroll taxes are relatively easy to implement and don't have major administrative costs.
Equity by income group:	*Good*	Employer payroll taxes are levied on the employer as a percentage of wages paid to employees.

Option 8b: *Employee* payroll tax (for transit and passenger rail)

Draft legislation in 2015 and 2016 proposed establishing *employee* payroll tax authority for jurisdictions that currently levy an *employer* payroll tax. The proposed tax would have been paid by *employees* on wages at a rate of 0.185%. Local authority to levy an *employee* payroll tax could be established, or the tax could be implemented statewide.

Adequacy of revenue:	*Good*	Similar to *employer* payroll taxes, *employee* payroll taxes could be significant sources of transportation operations revenue. For example, a 0.185% employee payroll tax levied in the Portland metro area would generate over $70 million in annual revenue for TriMet.[11]
Responsiveness to inflation:	*Good*	Assuming that wages increase at a rate similar to inflation, payroll taxes are generally responsive to inflation.
Revenue stability and predictability:	*Fair*	Payroll taxes revenue can be volatile due to fluctuations in the economy and labor market.
Appropriateness of dedication: ***('user pays' principle)***	*Fair*	Employee payroll taxes dedicated to transit do not directly follow the 'user pays' principle. However, transit that serves workforce needs can provide major benefits for employees.
Administrative cost:	*Good*	Employee payroll taxes would be relatively easy to implement without major administrative costs.
Equity by income group:	*Fair*	Employee payroll taxes are levied as a percentage of wages. They are considered by many to be more regressive than employer payroll taxes. However, they are significantly less regressive than many other transportation revenue sources, including transit fare boxes.

[11] Memo: Proposed Tax to Benefit Public Transit, June 22, 2015, Legislative Revenue Office

Option 8c: Property tax dedication (for transit and passenger rail)

Local property taxes serve as major sources of revenue for a number of smaller transit districts across the state. However, many local jurisdictions are limited in their capacity to increase property taxes to meet transit funding needs due to statutory constraints. In addition to local property taxes, a new statewide property tax could be established with revenue dedicated to transit.

Adequacy of revenue:	*Good*	Local and state property taxes can be significant sources of revenue to address transit needs.
Responsiveness to inflation:	*Good*	Property taxes reflect the assessed value of real property and are therefore somewhat responsive to inflation.
Revenue stability and predictability:	*Good*	Property taxes are generally a stable and predictable source of revenue.
Appropriateness of dedication: ***('user pays' principle)***	*Fair*	While investments in transit have broad community and economic benefits, property taxes for transit does not closely follow the user-pays principle.
Administrative cost:	*Good*	Property taxes in Oregon are currently levied at the local level, and the administrative cost of collecting this tax is already accounted for. Some additional administrative costs would be associated with a new statewide property tax
Equity by income group:	*Very Good*	Property taxes are significantly less regressive than the other transportation revenue options outlined.

Option 9a: A bicycle excise tax

A tax on bicycle purchases could be dedicated to bicycle improvements in existing roadways as well as non-roadway transportation. While past efforts to create local bicycle licensing requirements have been shown to have prohibitively high administrative costs relative to revenue, an excise tax on new bicycle and/or bicycle equipment would have limited administrative costs. A 1% excise tax on new bicycle purchases in Oregon would generate an estimated $439,000 in revenue each year.[12]

Adequacy of revenue:	*Poor*	Given the major infrastructure needs on the non-roadway system, bicycle excise taxes are a relatively poor source of revenue.
Responsiveness to inflation:	*Good*	The cost of new bicycles can be expected to roughly match increases in overall economic inflation over time. A new bicycle excise tax would therefore likely be responsive to inflation.
Revenue stability and predictability:	*Fair*	The price of an average bicycle and overall sales volumes for new bicycles has remained fairly steady from year to year. Unlike vehicles, bicycles are not subject to fuel efficiency market trends, which may drive consumers to purchase smaller, less expensive vehicles.
Appropriateness of dedication: ***('user pays' principle)***	*Good*	Assuming dedication of revenue to bicycle infrastructure, a bicycle excise tax upholds the 'user pays' principle.
Administrative cost:	*Good*	An excise tax could be implemented without significant collection costs. However, there could be issues concerning what types of bicycles and bicycle equipment should be exempt from taxation. Compared to more onerous bicycle registration revenue concepts, a straightforward excise tax would not be overly burdensome.
Equity by income group:	*Good*	An excise tax on new bicycles could be set up to be a non-regressive tax. At a reasonable tax rate, bicycle excise taxes would primarily impact Oregonians who can afford new and expensive bicycles without significantly impacting the price of used or less expensive bicycles. To further address equity concerns, this tax could be structured to apply only to new bicycles over a certain value.

[12] Estimate based on national bicycle sales data from the National Bicycle Dealers Association for 2014, extrapolated to Oregon based on population.

Option 9b: Increase state and federal dedication for bicycle and pedestrian infrastructure

Under Oregon state law, at least 1% of revenue from the State Highway Fund must be dedicated to bicycle and pedestrian infrastructure, and often actual dedication exceeds this minimum. The legislature could increase this minimum set-aside, though this would *not* increase overall funding for transportation. Increasing the percent of state funds dedicated to bicycle and pedestrian infrastructure could allow ODOT to increase its investment of federal funds in active transportation, particularly in trails outside the road right of way that can't be funded from the State Highway Fund.

Adequacy of revenue:	*Good*	Increasing the minimum 1% state set-aside could provide significant revenue for bicycle and pedestrian infrastructure. For example, a 1% increase could provide more than $5 million in active transportation funding, and this revenue could leverage significant additional federal dollars.[13] However, increasing the minimum state set-aside for bicycle and pedestrian infrastructure would *not* increase overall state funding for transportation.
Responsiveness to inflation:	*Poor*	Revenue from the State Highway Fund comes primarily from gas taxes and user fees, which are not responsive to inflation. Increasing the percent set-aside for bicycle and pedestrian infrastructure does not address this long-term challenge.
Revenue stability and predictability:	*Fair*	A majority of State Highway Fund revenue comes from the gas tax. As vehicles become more fuel efficient and electric vehicles increase their market share, state revenue from the gas tax will continue to decline. Additionally, the federal government has not addressed future insolvency of the federal Highway Trust Fund.
Appropriateness of dedication: ***('user pays' principle)***	*Fair*	State and federal transportation funding comes from a variety of sources including gas taxes, user fees, and general funds.
Administrative cost:	*Very Good*	Changing the amount of revenue dedicated to bicycle and pedestrian infrastructure has no additional administrative cost.
Equity by income group:	*Fair*	State and federal transportation funding comes from a variety of regressive and non-regressive sources, including gas taxes, user fees, and general funds.

[13] Source: Calculated from December 2015 State Transportation Revenue Forecast.

Option 10: Cigarette, alcohol, and cannabis taxes

Currently, $0.02 per pack of cigarettes is dedicated by statute to special transportation for senior citizens and people with disabilities. While this is a declining revenue source, the cigarette tax and amount dedicated to transportation could be increased. Additionally, new taxes on alcohol and cannabis (which often lead to impaired driving) could help fund non-roadway transportation such as public transit.

Adequacy of revenue:	*Fair*	The $0.02 per cigarette pack that is dedicated to the Special Transportation Fund provides approximately $8.5 million per year.[14]
Responsiveness to inflation:	*Fair*	If taxes are levied by percent of sales rather than by volume, they could be somewhat responsive to inflation.
Revenue stability and predictability:	*Fair*	Stability of these revenue sources is uncertain and is driven by consumer behavior.
Appropriateness of dedication: ***('user pays' principle)***	*Fair*	Cigarette, alcohol, and cannabis taxes dedicated to transit do not closely reflect the user-pays principle. However, revenue from these sources could be directed toward transit service that is aimed at reducing impaired driving.
Administrative cost:	*Good*	These taxes can be levied at the point of sale without major administrative costs.
Equity by income group:	*Poor*	Taxes on cigarette, alcohol, and cannabis are generally regressive.

[14] http://www.oregon.gov/ODOT/PT/resources/guidance-library/stf-guidebook.pdf

Option 11: Road and bridge tolling

Currently, there are no public roads within the state of Oregon that levy a toll. However, two privately-owned bridges crossing the Columbia River (Bridge of the Gods and Hood River Bridge) levy tolls. Other states have made greater use of tolling as a revenue source for new transportation infrastructure, including bridge tolling, existing lane tolling, and new lane tolling.

Adequacy of revenue:	*Fair*	Tolling of selected highways and bridges is proven to be a reliable generator of revenue for specific transportation projects. However, unless tolling is deployed broadly, it is an inadequate source of revenue for the transportation system as a whole.
Responsiveness to inflation:	*Fair*	Unless increased over time, traditional tolling is unresponsive to inflation. However, toll rates can be increased by the Oregon Transportation Commission without a legislative vote, making them easier to adjust for inflation.
Revenue stability and predictability:	*Fair*	Tolling facilities are proven to be major generators of revenue. However, economic downturns, changes in VMT, and changes in driver behavior brought about by tolling, including evasion, rerouting, and shifting development patterns can make tolling volatile as a revenue source.
Appropriateness of dedication: ***('user pays' principle)***	*Very Good*	Toll revenue on public roads in Oregon would be constitutionally dedicated to the transportation system. Tolling can easily capture user fees for a particular asset or segment. However, evasion and rerouting can have the unintended consequence of significantly impacting transportation assets outside a tolled area. Several states allow tolls from one project to be used to provide front-end financing for other toll roads or transit facilities.
Administrative cost:	*Poor*	Tolling comes with high administrative costs including the cost of collection and enforcement. The widespread use of electronic toll collection systems can significantly reduce operation and administrative costs. However, current tolling technology still requires extensive roadway infrastructure.
Equity by income group:	*Poor*	Tolls are highly regressive, and tolls that are levied on particular assets rather than system-wide create unequal burdens on roadway users to contribute to the transportation system at large.

Other states:

A total of 42 states have some form of statewide or regional tolling facilities, with 20 states having privately operated toll facilities. In recent years, several states have developed high-occupancy-toll (HOT) lanes, wherein single-occupancy vehicles can pay for travel in underutilized high-occupancy vehicle (HOV) lanes.[15]

[15] http://www.ncsl.org/research/transportation/toll-facilities-in-the-united-states.aspx

Option 12: Per-mile road user charge

In July 2015, Oregon launched the nation's first statewide road user charge pilot program. Known as ORe*GO*, the program provides the option for motorists across the state to pay a **1.5-cent per mile** road user charge in lieu of the 30-cent per gallon state gas tax. If a per-mile fee were widely adopted as a replacement to the state gas tax, transportation revenue would not be compromised by increases in fuel economy and an increasing market share of high efficiency vehicles. *The per mile road user charge could be adjusted by vehicle weight, class, or size, and can be indexed to inflation.*

Adequacy of revenue:	*Very Good*	A 1.5 cent per mile rate is designed to largely match the rate the average motorist currently pays in gas tax. At this fixed rate it would not lead to a significant increase in transportation revenue, but a higher rate could be a significant source of revenue.
Responsiveness to inflation:	*Poor*	At a fixed rate of 1.5 cents per mile, road user charge revenue is equally susceptible to declining purchasing power as compared to the gas tax. However, as with the gas tax, a per-mile rate could be established that is indexed with inflation.
Revenue stability and predictability:	*Very Good*	The road user charge solves the challenge of lost transportation revenue stemming from greater fuel efficiency. By replacing the gas tax with a per-mile charge, vehicles pay equally for use of the road regardless of vehicle type. A road user charge may still be impacted by economic downturns and global energy costs, both of which impact vehicle miles traveled.
Appropriateness of dedication: ***('user pays' principle)***	*Very Good*	Revenue from a per-mile road user charge would be constitutionally dedicated to the State Highway Fund. As vehicles enter the market that use little to no gasoline, the road user charge more effectively follows the 'user pays' principle by charging for use of the road. This objective is slightly limited by the fact that the road user charge makes no distinction between vehicle efficiency (impact on air quality), and the construction and maintenance cost of the road driven (freeways vs. forest roads, etc.)
Administrative cost:	*Fair*	Because it involves new technology, the future administrative cost of a road user charge system on a large scale remains somewhat uncertain. ODOT estimates that operation of the road user charge system will cost about ten percent of revenue raised once the number of payers reaches 100,000 and under five percent with one million payers.[16] *Implementation of a road user charge could lead to cost savings if the mechanism were to replace other revenue mechanisms with high administrative costs such as registration fees.* [17]
Equity by income group:	*Fair*	At a fixed rate of 1.5 cents per-mile, drivers of personal occupancy vehicles pay equally for use of the road regardless of vehicle type. While poorer residents would pay a larger percent of their income than wealthier residents, and people in rural areas often need to drive more miles, these costs inequities are already borne by existing gas taxes. Poorer residents and people in rural areas who drive lower-efficiency vehicles could actually see cost savings in a scenario where a road user charge replaces state gas taxes.[18]

[16] Road Usage Charge Pilot Program 2013, ODOT

[17] "*Rather than solely replacing fuel taxes, mileage fees could be structured as a general-purpose road-funding mechanism that replaces most state and local transportation revenue sources currently in use. Beyond increasing the mileage-fee revenue base and thus reducing the ratio of system costs to gross receipts, this could also reduce or eliminate the administrative costs associated with other revenue mechanisms, many of which are far less efficient than fuel-tax collection.*" RAND Corporation: Mileage-Based User Fees for Transportation Funding

[18] For Further details, see ODOT's *Final Report on Impacts of Road Usage Charges in Rural, Urban, and Mixed Counties*

Option 13: A carbon tax

A carbon tax could help Oregon meet its greenhouse gas emissions reduction goals. Due to the state constitution's requirement that any revenue derived from taxes on the use of an automobile go toward roads, a carbon tax applied to motor fuels would direct substantial resources to the State Highway Fund. Every dollar levied on a ton of carbon would be approximately equivalent to a 1 cent per gallon gas tax increase.[19]

Adequacy of revenue:	*Good*	Depending on the tax rate set per ton of carbon, a carbon tax could be a major source of transportation revenue and potentially adequate to replace the current gas tax.
Responsiveness to inflation:	*Poor*	Like the gas tax, a carbon tax would not be responsive to inflation unless indexed to inflation.
Revenue stability and predictability:	*Fair*	As with the gas tax, revenue from a carbon tax would likely decline as vehicles become more fuel efficient and electric vehicles increase their market share. However, a carbon tax would have the advantage of pricing emissions from the electric and natural gas sectors, ensuring that transportation revenue does not disappear as vehicle fleets change to alternative fuels.
Appropriateness of dedication: ***('user pays' principle)***	*Very Good*	Similar to the gas tax, a carbon tax would roughly follow the 'user pays' principle. Carbon tax levied on gas consumption by vehicles that use public roads is constitutionally dedicated to the State Highway Fund. Additionally, a carbon tax would have the advantage of pricing emissions from the electric and natural gas sectors, ensuring that transportation system users who purchase alternative fuel vehicles are also contributing to transportation revenue.
Administrative cost:	*Very Good*	A carbon tax could be set up to charge wholesale fuel suppliers, a pool that would be relatively small. Once implemented, a carbon tax would have low administrative costs.
Equity by income group:	*Poor*	Similar to the gas tax, a carbon tax would be regressive. Additionally, the purchase of fuel efficient vehicles has high upfront costs, meaning the poor are often most severely impacted by increased fuel prices.

For further details on the economic and emissions impacts of a carbon tax in Oregon, see: *"Economic and Emissions Impacts of a Clean Air Tar or Fee in Oregon," State of Oregon Legislative Revenue Office, December 2014.* *https://www.oregonlegislature.gov/lro/Documents/RR%204-14%20SB%20306%20Clean%20Air.pdf*

[19] http://www.icbe.com/carbondatabase/priceconverter.asp

Appendix D: Investing in transportation: Funding applicability matrix

Modal applicability	Federal sources		State revenue sources							Local revenue sources				Potential revenue sources					
	Federal highway funding	Federal transit funding	State fuel taxes	Licenser and vehicle registration fees	Weight-mile tax	Off-highway fuel taxes	State general fund	State lottery funds	Aviation fuel tax	Local option gas tax	Local option registration fee	Local property tax	Local payroll taxes	Statewide property tax	Statewide payroll tax	Road and bridge tolling	Per-mile road user charges	Carbon tax *(motor fuel sources)*	Carbon tax *(non-motor fuel sources)*
State highways: Operations, maintenance, and preservation																	✓	✓	
State highways: Bottleneck enhancements, major projects, etc.																✓	✓	✓	
County roads & bridges																	✓	✓	
City roads & bridges																	✓	✓	
Bike/ped enhancements *(within roadway system)*																	✓	✓	
Bike/ped enhancements *(outside roadway system)*														✓	✓				✓
Transit (capital expenses)														✓	✓				✓
Transit (operations)	*	*												✓	✓				✓
Passenger rail (operations)														✓	✓				✓
Freight intermodal facilities														✓	✓				✓
Freight rail capital enhancements														✓	✓				✓
Marine enhancements														✓	✓				✓
Aviation enhancements														✓	✓				✓

existing revenue source
potential revenue source
not applicable, or constitutionally restricted

* some restrictions on use of funds
✓ recommended application of potential revenue

Appendix E: Oregon's needs: A sense of scale

Finding	Needs	Source	Investment needs (est.)
Maintenance and preservation	**Current revenue** / **Annual maint. need** / **Difference** Pavement: $110 m / $200 m / -$90 m Bridge: $70 m / $235 m / -$165 m Seismic Pres.: $0 m / $70 m / -$70 m **Total: $180 m / $505 m / -$325 m**	*Draft Rough Roads Ahead II* report estimates, 2016	$325 million of new revenue invested each year could adequately maintain a state of good repair on bridges and pavement, and integrate seismic preservation efforts
Seismic resiliency	**Seismic PLUS program phases** / **Total bridge cost** / **Landslides/ rockfalls cost** 1: $738 m / $197 m 2: $632 m / $272 m 3: $612 m / $483 m 4: $640 m / $126 m 5: $1,432 m / $0 m **Total: $4,054 m / $1,078 m**	*Seismic PLUS* report, 2014	$257 million invested each year could complete the Seismic PLUS Plan within 20 years, addressing 718 vulnerable bridges and 1185 potential landslide zones
Roadway bottlenecks	**Bottleneck** / **Estimated cost** Interstate Bridge (Oregon share): $450 m I-5 Rose Quarter: $400 m I-5 Salem to Albany: $400 m I-205 Stafford Abernethy: $350 m Beltline/Delta: $300 m U.S. 97 north Bend: $200 m I-5 truck climbing lanes (x12): $120 m Grants Pass South Y: $100 m OR 217: $100 m SB Aux lane Wilsonville to OR551: $75 m **Total: $2,495 m**	Estimates provided by ODOT Highway Division	$250 million invested each year could address 10 of Oregon's biggest bottlenecks within 10 years
Transit	Special transportation statewide: ○ **Urban systems. $41** ○ **Rural and small urban: $18.5 m** General public transportation: ○ **Rural and small urban: $22 m** Public transit facilities: $4.5 m ○ **Rural and small urban: $4.5 m** Transit vehicle state of good repair: ○ **Rural and small urban: $22 m**	ODOT Public Transit Division estimates: https://visionpanel.files.wordpress.com/2015/10/gtvp-public-transportation-considerations-outline.pdf	$108 million invested annually could meet the basic mobility needs of seniors and people with disabilities, help close gaps in service, and better leverage federal funds
Bicycle and pedestrian	• **Add 55 miles of bikeways, shoulders and sidewalks per year:** *$12 million annually [would complete state and local system within 36 years]* • **Improve 50 street crossings per year:** *$7.5 million annually* • ***Safe Routes to School:*** *$5 million annually would provide traffic safety education delivered to 100% of students graduating from elementary schools*	ODOT Active Transportation Division estimates provided to Vision Panel subcommittee: https://visionpanel.files.wordpress.com/2015/10/bptpr_draft_report_outline_dec2015.pdf	$24.5 million invested annually could complete 55 miles of new bikeways, shoulders and sidewalks each year, complete 50 street crossings each year, and provide traffic safety education for all graduating elementary students

Appendix F: Vision Panel *preliminary* findings, January, 2016

In January, 2016, the Transportation Vision Panel released a series of preliminary findings for feedback from regional and community stakeholders:

Reduce roadway bottlenecks and enhance freight network alternatives

Invest in Bottleneck Elimination: Prioritize increasing capacity and throughput of existing roadway bottlenecks on corridors of statewide significance.

Invest in Freight Network Alternatives: Invest in enhancing capacity and efficiency of rural highway corridors *(e.g., US-97, etc.)* that create freight network alternatives and reduce congestion on constrained urban highways *(e.g., I-5, I-205, etc.)*

Invest in strategic intermodal freight infrastructure

Intermodal Freight Facilities: Identify and invest in intermodal facilities and freight connectors *(e.g., transload facilities, port drop sites, inland ports, etc.)* that reduce highway demand for freight

Develop a State Marine Plan: Integrate and better link Oregon's ports and marine transportation system through a system plan and investment plan. This plan could better tie the marine system with the Freight Plan and other transportation modal plans, help determine statewide funding priorities that impact the marine system *(e.g., road, rail, and waterway system improvements)*, address marine land use issues, and help organize shipper alternatives *(e.g., barging of containers along the Columbia River, etc.)*

Create a Permanent Freight Multimodal Fund: Create a permanent freight multimodal fund (similar to ConnectOregon) that helps coordinate and support strategic investments in non-highway transportation assets.

Invest in transit service improvements targeting road congestion and system gaps

State and Local Transit Investments: Invest in transit as a tool to relieve freight and roadway congestion (particularly in urban areas) and begin to close statewide gaps in service. Investment can be achieved by additional state funding dedicated to transit operations *and* by providing additional tools for local districts to raise funds. Investments should aim to maximize potential for federal matching funds, as well as reliability and efficiency of transit service.

Invest in bicycle and pedestrian improvements targeting safety, system gaps, and road congestion

Bicycle and Pedestrian Investment: Reduce roadway demand through bicycle and pedestrian system improvements, and to the extent possible, separate bicycle and vehicular traffic on high speed facilities. Complete 'critical connections' in bikeways, shoulders, and sidewalks aimed at improving safety and closing system gaps.

Invest in seismic resiliency

Invest in Seismic Resiliency: Develop and secure a transportation funding package that includes an adequate, sustainable, and long-term revenue stream dedicated to seismic retrofitting and transportation system resiliency. Seismic investments should be integrated with roadway maintenance and bridge preservation efforts. *In addition, undertake the following actions:*

Update the Seismic Plus Program: Ensure integration of planning efforts with California and Washington, and identify immediate investment needs for high-priority transportation assets, including I-5 corridor improvements.

Non-Highway Inventory Assessments: Charge state agencies and special districts with performing thorough inventories and assessments of the seismic vulnerabilities and strengths for non-highway assets *(e.g., aviation, marine, and rail)*.

Local Seismic Needs Assessments: Charge appropriate local agencies and jurisdictions with developing community-based needs assessments that consider transportation vulnerabilities and priorities. Ensure adequate resources are dedicated to performing these assessments.

Make Oregon a transportation innovation 'hub'

Expand Innovation Partnerships: Establish partnerships with companies and other states with the objective of making Oregon a key testbed for the development and deployment of innovative transportation technologies *(e.g., Connected and Automated Vehicle (CAV), Electric Vehicle (EV) technology and trucking innovations).*

Appoint a Transportation Innovation Officer: Consider appointing a "Transportation Innovation Officer" within the Governor's Office to drive interagency coordination in support of transportation innovation.

Increase the flexibility of K-12 student transportation services across the state

Support Local Flexibility of Student Transportation Revenue: Redefine student transportation to ensure that communities are meeting the changing needs of students across the state. Increase flexibility and improve efficiency in how school districts are able to spent transportation revenue *(e.g., transit district partnerships, safe routes to schools programs, etc.).*

Facilitate jurisdictional transfers

Enact a Jurisdictional Transfer Pilot Program: Transfer control of urban state highways to appropriate cities and counties, and county and city roads to state jurisdiction where state and local system benefits can be identified.

In addition to the Preliminary Findings identified by the Vision Panel, each of the panel subcommittees released a summary of their findings. These subcommittee findings can be found here:

https://visionpanel.wordpress.com/preliminary-findings/

Appendix G: Regional forum summaries

Between January and March of 2016, the Vision Panel held a series of eleven Regional Forums across the state. These forums provided an opportunity to ask community members what is important for their region's transportation connections to the rest of the state, how the transportation system impacts local economies, and to assess the strengths and weaknesses of each region's transportation system.

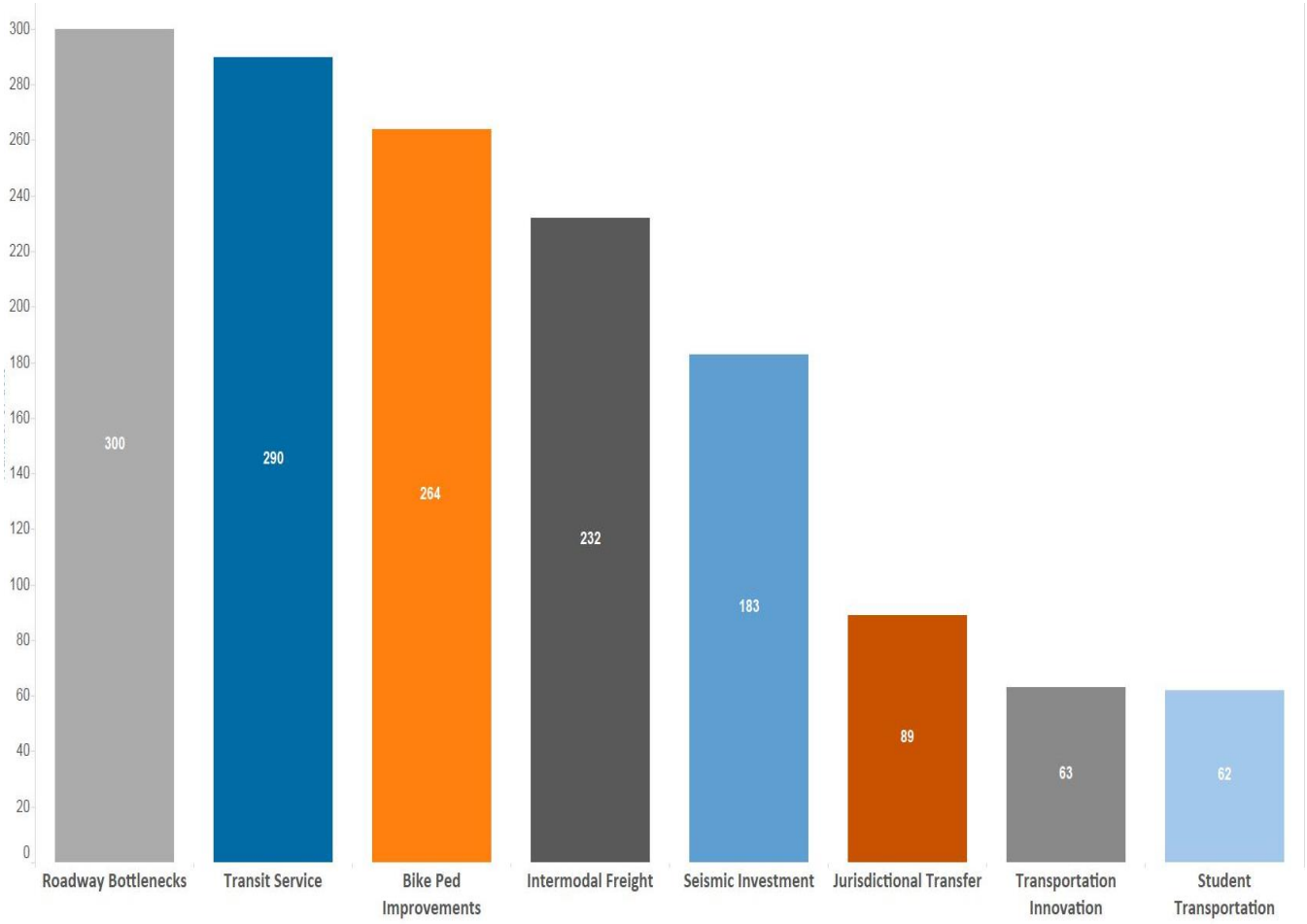
Full summaries of these 11 meetings can be found here:
https://visionpanel.wordpress.com/regional-forum-summaries/

As part of these regional forums, meeting participants were provided a list of the Vision Panel's preliminary findings *(see Appendix E)* and asked to identify their top areas of concern or interest. T**he following provides a snapshot of participant responses by region:***

Region	Roadway Bottlenecks	Transit Service	Bike Ped Improvements	Intermodal Freight	Seismic Investment	Jurisdictional Transfer	Transportation Innovation	Student Transportation
Coast	27.5%	13.1%	13.5%	22.3%	15.1%	4.0%	3.2%	1.2%
Valley	12.9%	25.5%	24.1%	12.9%	9.4%	5.4%	3.5%	6.3%
Metro	27.6%	23.9%	11.6%	12.6%	10.6%	7.8%	2.0%	3.8%
South	11.7%	24.8%	24.1%	4.1%	19.3%	3.4%	7.6%	4.8%
Central/East	21.3%	11.4%	15.8%	21.3%	12.5%	7.6%	6.3%	3.8%
Grand Total	20.2%	19.6%	17.8%	15.6%	12.3%	6.0%	4.2%	4.2%

*Participant responses do not necessarily reflect investment priorities, but rather, areas of concern or interest

The following provides a summary of cumulative participant responses from all 11 Regional Forums:*



* *Participant responses do not necessarily reflect investment priorities, but rather, areas of concern or interest*

Appendix H:

Letters of comment on Vision Panel preliminary findings

Several organizations and agencies submitted letters of comment to the Vision Panel responding to the Panel and Subcommittee preliminary findings. These letters of comment can be found here:

https://visionpanel.wordpress.com/comment-letters-on-preliminary-findings/

Letter #	Organization Commenting	Subject/Area of Focus	Date Submitted
1	The Willamette Falls Locks Working Group	*Freight/River Transportation*	2/25/2016
2	Transportation for Oregon's Future Coalition	*Transportation Innovation*	3/2/2016
3	Transportation for Oregon's Future Coalition	*Transportation Finance*	3/3/2016
4	Transportation for Oregon's Future Coalition	*Roadways and Bridges*	3/9/2016
5	Transportation for Oregon's Future Coalition	*Bike, Ped, Transit, Rail*	3/14/2016
6	Portland Commissioner, Steve Novick	*General*	3/14/2016
7	Central Lane MPO	*General*	3/16/2016
8	Lane Area Commission on Transportation	*General*	3/17/2016
9	Clackamas County Board of Commissioners	*General*	3/22/2016
10	JPACT/Metro	*General*	3/24/2016
11	Safe Routes to School National Partnership	*General*	3/25/2016
12	Travel Oregon	*Transportation Options*	3/30/2016