

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



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 Lane County ACT
 Lane Transit District
 League of Oregon Cities
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 Metro & JPACT
 Mid-Willamette Valley ACT
 North Carolina Department of Transportation
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 Oregon Environmental Council
 Oregon Regional Solutions
 Oregon Transit Association
 Oregon Transportation Commission
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 Region 1 ACT
 Rogue Valley ACT
 Safe Routes to School National Partnership
 South Central Oregon ACT
 South East ACT
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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.

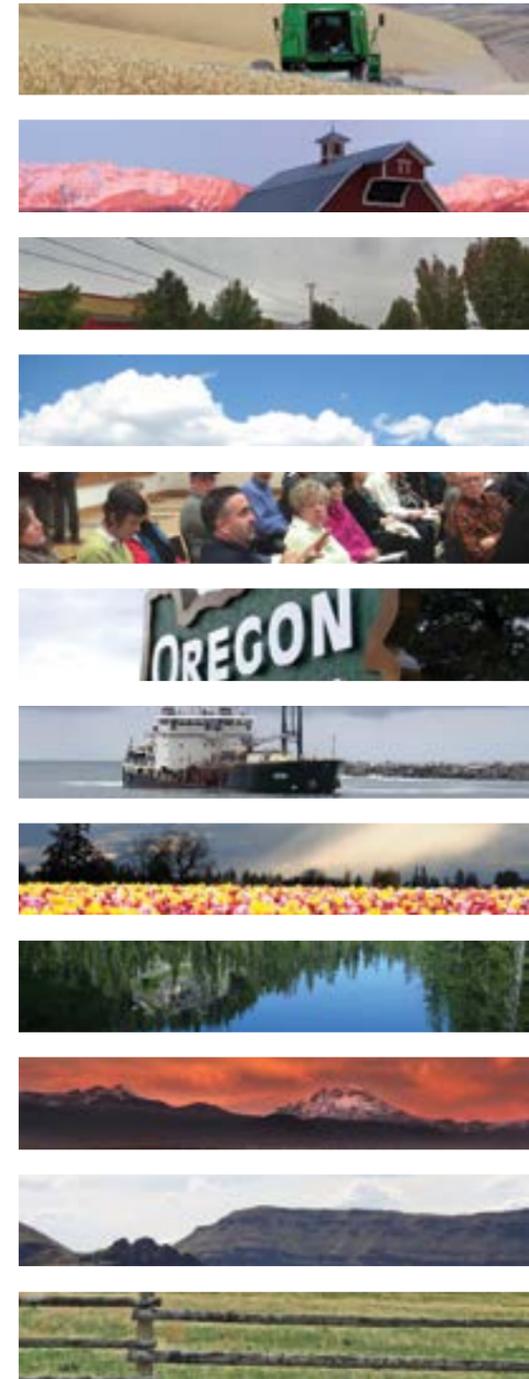
The *second section* details the panel's vision and key findings along with priorities from all regions of Oregon.

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.

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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



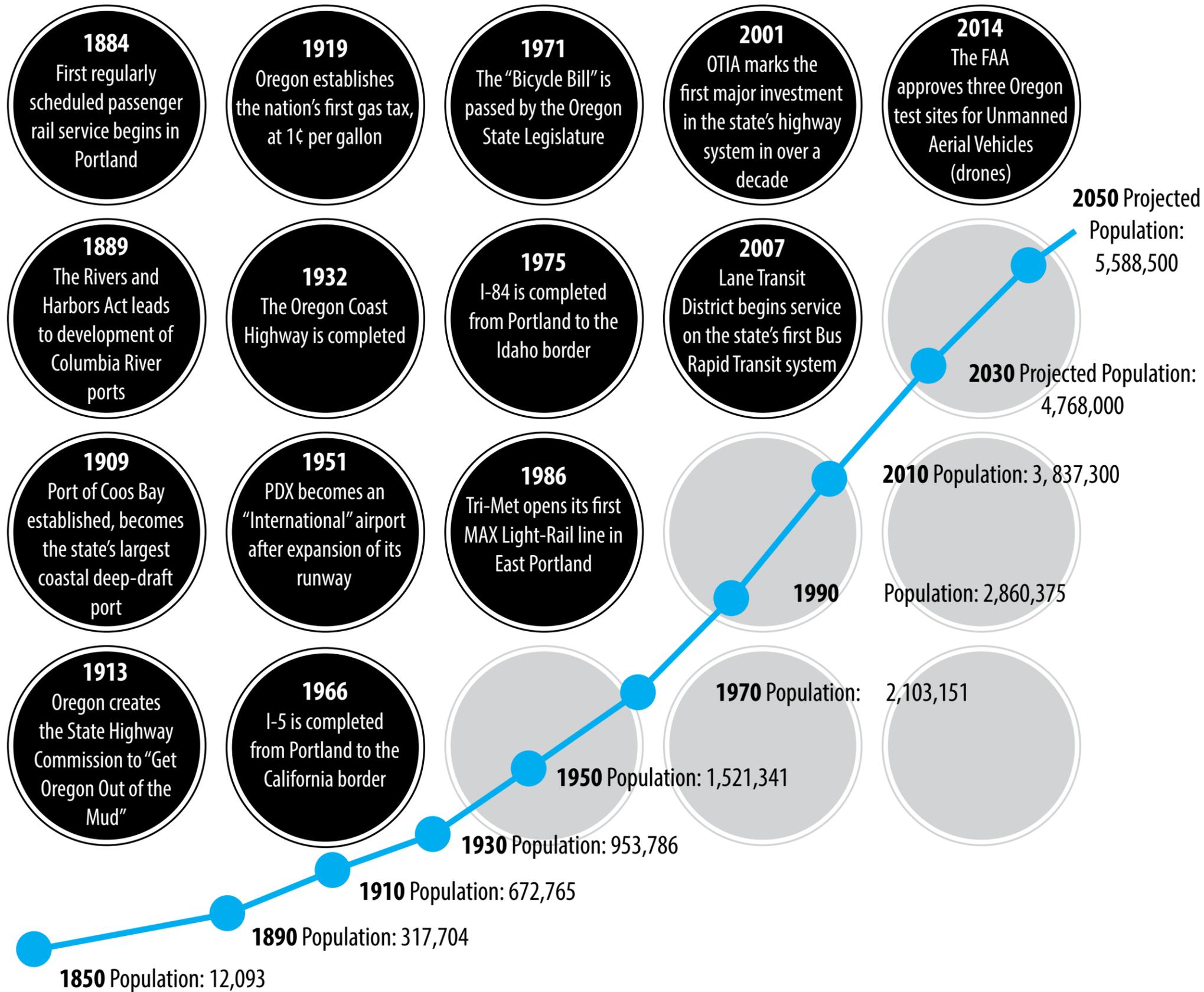
11,000+
public transit stops



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



7,669
bridges statewide



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.

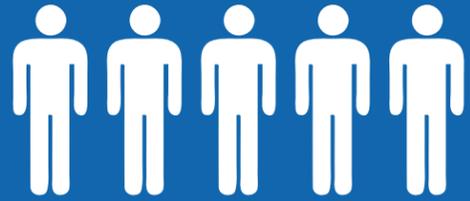
Oregonians have a longstanding passion for quality transportation. A "good roads" movement at the turn of the 20th Century helped to "Get Oregon out of the Mud" led by the Legislature and the State Highway Commission. Oregon has also welcomed innovators, like Samuel Lancaster, to design and build the 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



Aging transportation infrastructure

439

structurally deficient bridges in Oregon



Shifts in technology



carsharing

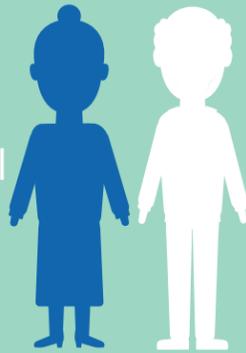


more unmanned aerial vehicles

Needs of an aging population

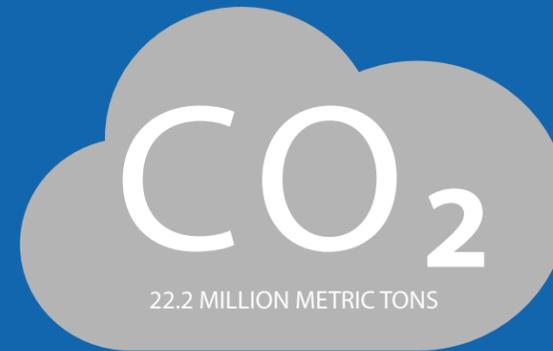
Today about 14.7 % of Oregonians are over the age of 65; nearly

20% of Oregon's population will be by 2035



Greenhouse gas emissions

39% of Oregon's greenhouse gas emissions come from the **transportation sector**



CO₂

22.2 MILLION METRIC TONS

connected and automated vehicles



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**

\$15.1 MILLION in increased trucking costs due to the **loss of Terminal 6 service**



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

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

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

TRANSPORTATION MAINTENANCE

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

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

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.

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

BIKE AND PEDESTRIAN INVESTMENTS

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.

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 ConnectOregon fund: A permanent ConnectOregon 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.

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.

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

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 and natural gas 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:

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.

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

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.

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.



Coastal Oregon



Oregon Valley & Metro



Southern Oregon

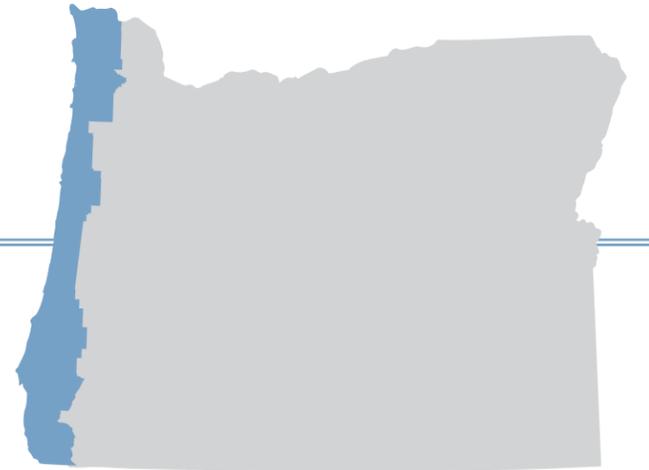


Central Oregon



Eastern Oregon

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



\$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.

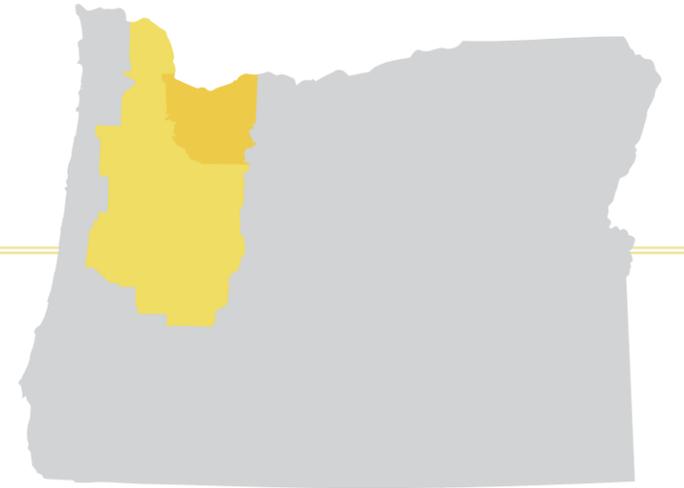
There are 23 ports throughout Oregon, including five deep-draft marine ports and four shallow-draft marine ports.

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.

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 through 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

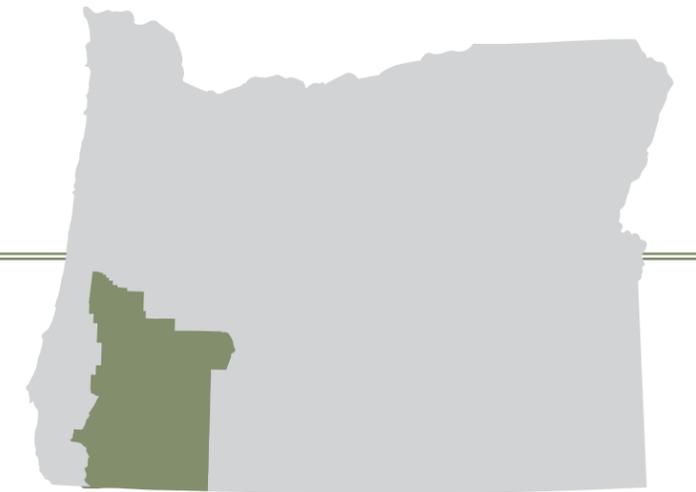
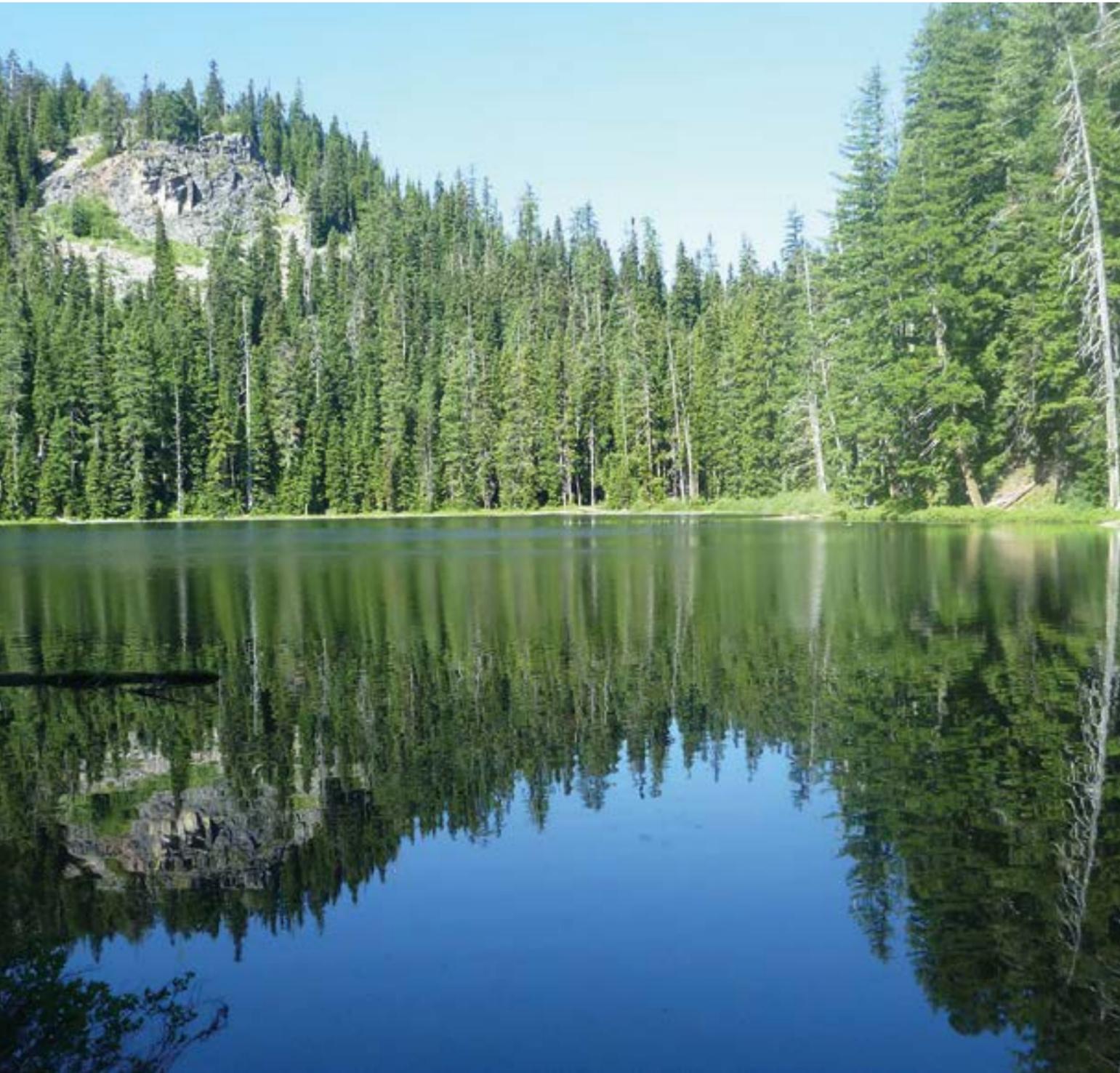
An improved and expanded Safe Routes to School program is a priority in the metro region. Completion of the city sidewalk network, particularly in East Multnomah County, is particularly important to community members.

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.



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.”

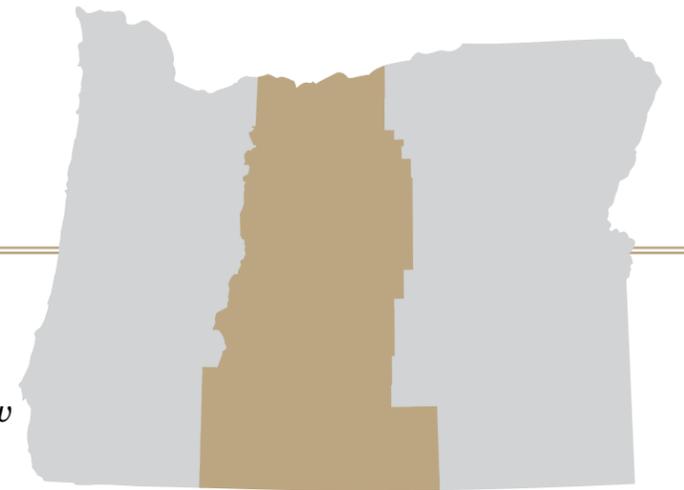
-Mike Card
Combined Transport
Central Point, OR

“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



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.

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.

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.



17.5% INCREASE
in overnight lodging in the
Columbia Gorge region



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

Eastern Oregon



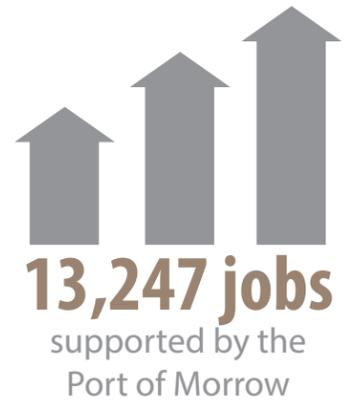
Oregon's eastern region is a land of contrast and wonder. Its greater seasonal variations, high deserts, and forests of pine and juniper make it Oregon's gateway to the western continental expanse of the United States. It boasts a diversity of geography: arid land formations, mountain ranges, extensive 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.





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 <i>ConnectOregon</i> 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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