



**The Oregon Department of Transportation
Sustainability Plan
Volume 1: Setting the Context**

September 2008



Sustainability Plan

Role of This Document

This document, Volume 1 of the Oregon Department of Transportation's Sustainability Plan, is a multi-year document that provides the overall vision and rationale for ODOT's sustainability efforts and provides background for the other volumes. The document explains the context for considering sustainability and introduces the focus areas that will be used to incorporate sustainability into agency operations and transportation system-related activities. Volumes 2 and 3 add the goals, strategies and indicators of the Plan. Volume 2 focuses on ODOT internal goals and strategies for achieving sustainability; Volume 3, on ODOT's management of the statewide transportation system for sustainability.

Acknowledgments

The Sustainability Plan was developed by the ODOT Sustainability Council and Damon Fordham, ODOT Sustainability Program Manager, with the assistance of Joshua Proudfoot and Joshua Skov of Good Company, Carolyn Gassaway, and ODOT managers and staff.

Contact Information

Marjorie Lifsey
Sustainability Program Manager
Oregon Department of Transportation
355 Capitol St. NE
Salem, OR 97301
Email: marjorie.c.lifsey@odot.state.or.us
Web: <http://www.oregon.gov/ODOT/SUS/>

Copyright Permission

The Oregon Department of Transportation grants permission to reproduce material in this publication with the understanding that none of the material will be used to imply ODOT endorsement of a particular product, method, or practice. It is expected that those reproducing the material in this document give appropriate acknowledgment of the source of the material.

Table of Contents

Sustainability in Oregon

Sustainability Background.....	4
Oregon’s Sustainability Mandates.....	4

Sustainability and Transportation

Transportation Challenges in Oregon.....	5
A Response Emerges: “Sustainable Transportation”.....	7
Oregon’s Vision for Sustainable Transportation.....	8
Accessibility and Mobility.....	8
Accessibility.....	8
Efficient Mobility.....	9
What This Means for Oregon’s Transportation System.....	10
Responses Depend on Multiple Agencies and Jurisdictions..	10
ODOT’s Role.....	11

Sustainability Planning at ODOT

ODOT’s Sustainability Program.....	12
Previous Sustainability Plans.....	13
Relationship to Other Plans and Policies.....	13
Sustainability and the Oregon Transportation Plan.....	13

An Introduction to the Focus Areas

Focus Areas.....	15
Health and Safety.....	15
Social Responsibility.....	16
Environmental Stewardship.....	16
Land Use and Infrastructure.....	17
Energy/Fuel Use and Climate Change.....	17
Material Resource Flows.....	18
Economic Health.....	19
ODOT’s Sustainability Lens.....	20
Volumes 2 and 3.....	20

Appendices.....

1	Objectives for Agencies from ORS 184.421.....	22
2	Executive Order 06-02.....	23
3	ODOT Strategic Direction.....	27
4	ODOT Organizational Structure.....	28
5	ODOT Sustainability Council members.....	29
6	Summary of Oregon Transportation Plan.....	30
7	Oregon Transportation Plan Goal 4 - Sustainability.....	32

Sustainability in Oregon

Sustainability Background

Human beings are witnessing a singular moment in human history: we are beginning to experience limits in the Earth's resources and to recognize the need to create a more sustainable course for our future. At the same time, the Earth is in the midst of major climate changes, with huge, but largely unknown, impacts to where and how we live, grow food, use energy and conduct our livelihoods. Ironically, our success in serving the needs of growing populations and economies is simultaneously undermining the potential for future generations to meet their needs. Recognizing this crisis, people and governments worldwide are working to find ways to meet environmental, economic and community needs in a sustainable way.

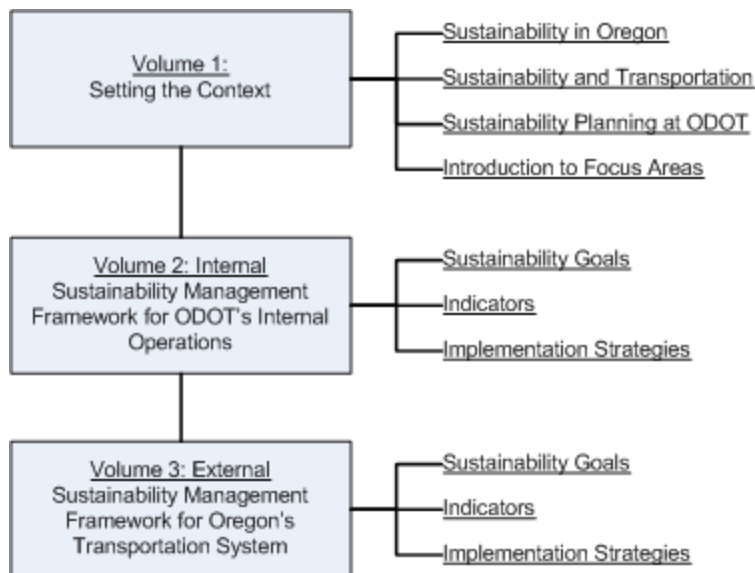


Figure 1

Since 2000, Oregon's governors and state legislature have mandated sustainability objectives for state agencies, the university system and others. This Sustainability Plan responds to these objectives and speaks both to Oregon Department of Transportation staff and to Oregonians who are involved with the state's transportation system. It includes short-term goals to be achieved by 2012 and long-term goals to be achieved by 2030. The plan is divided into three volumes. This document, Volume 1, describes the context for the plan and the vision and framework for ODOT's sustainability goals and strategies.

Volume 2 contains sustainability goals and

strategies for internal ODOT practices. Volume 3 contains sustainability goals and strategies for management and operation of the statewide transportation system, including the parts owned and operated by regional and local jurisdictions and the private sector, so Volume 3 also identifies how and where ODOT will support the actions of other agencies, jurisdictions and initiatives throughout the state. *Figure 1 shows how the three volumes of the Sustainability Plan interrelate.*

Oregon's Sustainability Mandates

In 2000, Governor Kitzhaber enacted an Executive Order that promoted sustainability in state government operations. In 2001, the state legislature passed the Oregon Sustainability Act, which set objectives for state agencies in conducting their internal operations and external missions and created the Oregon Sustainability Board to provide oversight to sustainability efforts in the state. Governor Kulongoski's Executive Orders have expanded the scope of state agency sustainability planning and initiatives and encouraged sustainability practices in universities, local governments and the private sector.

This Sustainability Plan responds to these mandates and to the challenges facing ODOT's internal operations and Oregon's transportation system. The focus areas presented in Volumes 2 and 3 reflect the specific challenges described later in this document.

Sustainability and Transportation

Transportation Challenges in Oregon

Our way of life depends on an efficient, functional transportation system to access food, work, education, healthcare, businesses and services as well as other needs. The definition of an efficient, functional transportation system that is adequate to meet Oregonian's needs has changed dramatically within the past ten years. Now we see that the transportation system has to respond to many new challenges including climate change and rising fuel prices, as well as to environmental, social and economic needs. The transportation system also must be safe, adequately-funded and supported by a well-trained workforce. These are big challenges.

Sustainability mandates in Oregon

Executive Order 00-07 was enacted by Governor Kitzhaber and promoted sustainability in state government operations primarily through the adoption of certain practices by the Department of Administrative Services. EO-00-07 was rescinded by EO-06-02.

The Oregon Sustainability Act was adopted by the Oregon Legislature in 2001 (Oregon Revised Statute (ORS) 184.421) and provides state agencies with 10 objectives for conducting their internal operations and 10 objectives for carrying out their missions to support sustainable communities (see Appendix 1). Further, it created the Oregon Sustainability Board to provide oversight to sustainability efforts in the state.

Executive Order 03-03 was enacted by Governor Kulongoski to broaden the scope of state agency sustainability planning efforts. It supported the Oregon Sustainability Act and directed 20 of Oregon's larger agencies to designate a sustainability coordinator and write a sustainability plan. EO-03-03 was rescinded by EO-06-02.

Executive Order 06-02 ("Sustainability for the 21st Century") re-energized the sustainability agenda in the state by reaffirming the agency sustainability planning process and creating several interagency teams to address specific sustainability initiatives such as greenhouse gases, purchasing, electronic waste, and energy. This executive order also addressed sustainability in the private sector and in Oregon's university system. It reauthorized the Oregon Sustainability Board and rescinded earlier sustainability executive orders. See Appendix 2.

Other policies and mandates for specific areas of sustainability are presented in Volumes 2 and 3 of ODOT's Sustainability Plan.

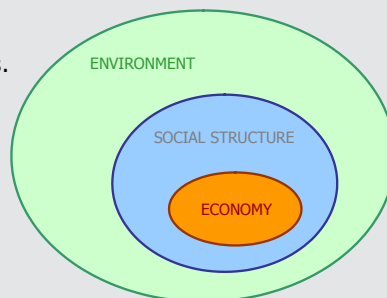
What does "sustainability" mean?

The term "sustainable development" emerged in the 1980s as researchers began studying the systematic relationships between human societies and their effect on nature. The Brundtland Report, published in 1987 by the World Commission on Environment and Development, was the first major intergovernmental report codifying the term "sustainable development" as a strategy for linking societal development with protection of the environment. The concept of sustainable development has now broadened and often is referred to with one word, "sustainability."

The Oregon Sustainability Act of 2001 (ORS 184.421) defines sustainability as using, developing and protecting resources in a manner that enables people to meet current needs while providing for future generations to meet their needs, from the joint perspective of environmental, economic and community objectives.

Within this three-part definition of sustainability, there is an implicit hierarchy. The resources provided by the earth's natural systems (the environment) are critical for the smooth functioning of our social systems (adequate water supplies, safe transportation systems, other reliable infrastructure). Without well-functioning social systems, our economic systems cannot be productive. The sustainability hierarchy, then, starts with the natural and physical systems of the earth providing the critical support for our social systems, followed by a healthy, functioning social system allowing our economic systems to thrive.

Sustainability, then, can be viewed as a uniquely broad and long-term concept that addresses quality of life and efficiency concerns. It is a global concept addressed at the local level, and it applies a timeframe that considers costs and benefits over lifetimes rather than one- or two-year cycles.



Transportation accounts for 34 percent of Oregon's greenhouse gas emissions. Rising concentrations of carbon dioxide, the most significant greenhouse gas, are bringing uneven and unpredictable changes in temperature, rainfall patterns, winds and ocean currents. These climate changes have potentially massive impacts on plant and animal life and sea levels affecting agriculture, forestry, the range of infectious diseases, infrastructure and the safety of coastal communities. We are already seeing the effects of climate change in the shrinking

of glaciers in the Cascades. Although the number of miles each of us travels is not going up, Oregon's transportation greenhouse gas emissions are projected to increase under current business-as-usual scenarios due to increasing population and freight movements. The economic effects of climate change are a big unknown, but they will receive careful attention so that the state can respond with flexibility as needs change.

At the same time, steeply rising fuel prices are affecting all forms of travel and the distribution of commodities by air, motor

vehicle, rail and water. Worldwide, demand for oil is increasing, but supply is not keeping up with the demand. Although experts disagree about when world oil production will peak, even the most optimistic forecasts suggest that peak production will occur in the next 25 years.¹ Some experts suggest we have already experienced a global peak. Higher fuel prices mean higher costs for food and other commodities but also higher costs for transportation use, construction and maintenance.

Higher fuel costs mean people will spend more of their incomes on transportation and not make as many trips by motor vehicles. Having access to public transportation and other options will be more important. Already, many residents of outlying areas are seeing household budgets stretched by increased transportation costs.² Some people are choosing to offset these impacts by living in urban areas with shorter commutes and public transportation.^{3, 4}

We have on-going challenges maintaining air and water quality and environmental stewardship. Transportation emissions pollute the air while unwanted byproducts of road construction and vehicle use pollute rivers, streams and groundwater, impacting fish and the availability of clean water for human consumption. Roads and other transportation infrastructure interrupt fish and animals' migration routes and habitat. ODOT and other government agencies and transportation providers have responded to air and water pollution and other environmental problems using accepted best practices, but these problems have not been entirely solved and still impact the economic success of agriculture, fishing, forestry and other natural resource industries.

Oregon's economy is linked to global markets and relies on airports, marine ports, railways and highways that can carry goods across the state as well as to destinations in other states and other countries. Buying locally grown or manufactured goods can reduce the impacts of long-distance shipping, but for the foreseeable future Oregonians will depend on national and international trade to meet many of their needs. One strategy to reduce the impacts of energy-intensive freight transportation is a well-maintained and operated multimodal transportation system.

Oregon's Transportation System and ODOT

Oregon's transportation system includes everything required to move people, goods and services: airplanes and airports, bike paths, buses and public transit, passenger cars and light trucks, freight and passenger trains, ships, barges, docks and marinas, and of course, streets, freeways and roads, sidewalks, trails and more. Parts of the system are owned and operated by federal, state and local governments, transit districts, port districts, and the private sector.

The Oregon Department of Transportation is charged with providing a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians. ODOT develops plans and programs for Oregon's system of highways, roads and bridges; railway programs; public transportation services; transportation safety programs; driver and vehicle licensing; and motor carrier regulation. ODOT's strategic direction and organizational structure are given in Appendices 3 and 4.

¹ Oregon Department of Transportation, Oregon Transportation Plan, 2006, p. 22.

² Los Angeles Times, Gas prices latest worry for real estate market; The financial burden of longer commutes makes homes in outlying areas that are already reeling even less attractive, June 17, 2008.

³ CNNMoney.com Special Report, One way to handle gas prices: Move; More people are looking to live closer to work and shopping, and find relocating saves them hundreds of dollars a month in gas, accessed June 19, 2008.

⁴ The Olympian, Rural housing market could lose out to urban centers; South Sound homebuyers are looking for houses closer to work, to cut the high cost of commuting brought on by record fuel prices, June 19, 2008.

But transportation funding is not keeping up with maintenance needs or the growing needs of Oregon's population and its economy. Federal and state fuel taxes have stayed the same since 1993 while their purchasing power has decreased as construction, operations and maintenance costs have increased. ODOT and other transportation agencies are emphasizing maintenance and efficiency measures using system and demand management as well as techniques such as life-cycle costing for vehicles and infrastructure. But even making a transportation choice on the basis of life-cycle costing is a challenge since often the best choice in terms of its life-cycle cost is more expensive at the front-end; that expense competes with other expenditures for deferred maintenance that have immediate benefits for safety and efficiency.

Other less visible challenges for sustaining a healthy transportation system involve safety and the transportation workforce. Safety is a key part of a sustainable transportation system, but in 2007 there were 455 fatalities and 27,849 injuries related to motor vehicles in Oregon. The numbers are an improvement over previous years, but still high. Ensuring a safe workplace for ODOT employees is also a challenge. During 2007, 275 employees filed claims for work-related injuries and illnesses despite the agency's strong focus on workplace safety.

Workforce availability is another challenge. Projections made in 2003, following a major investment by the state legislature in state and local bridge and roadway improvements, indicated a shortage of skilled workers was looming. This shortage was exacerbated by aging and retirement trends and continues today. Though the investment has the potential to revitalize the state's economy by creating new jobs in Oregon, the challenge for ODOT is the availability of workers in the specialized field of heavy highway and bridge construction.

All of these challenges are challenges to maintaining our current lifestyles and the health of our environment and our economy in the immediate future, but also to the long-term future for our children and grandchildren. The response is a call for sustainability, defined in the Oregon Sustainability Act of 2001 as "using, developing and protecting resources in a manner that enables people to meet current needs and provides that future generations can also meet future needs, from the joint perspective of environmental, economic and community objectives."

A Response Emerges: "Sustainable Transportation"

The emerging field of "sustainable transportation" attempts to respond to the challenges facing the transportation sector. There is considerable debate about what "sustainable transportation" means, and even whether a truly sustainable transportation system is achievable given the current non-renewable energy demands, emissions produced, and ecosystem and habitat impacts. Nevertheless, the following definition from the European Council of Ministers of Transport has emerged as having broad support.

A sustainable transportation system:

- Allows the basic access and development needs of individuals, companies and society to be met safely and in a manner consistent with human and ecosystem health, and promotes equity within and between successive generations;
- Is affordable, operates fairly and efficiently, offers a choice of transport mode and supports a competitive economy, as well as balanced regional development; and

- Limits emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation, and uses non-renewable resources at or below the rates of development of renewable substitutes, while minimizing the impact on the use of land and the generation of noise.^{5,6}

Oregon's Vision for Sustainable Transportation

Oregonians have also considered what a sustainable transportation system means for our state as part of the Oregon Transportation Plan (OTP) development process. The 2006 OTP provides a vision for the state's transportation system, which serves as a useful description of what a transportation system that has embraced the concept of sustainability might look like.

By 2030, Oregon's transportation system supports people, places and the economy. We travel easily, safely and securely, and so do goods, services and information. Efficient vehicles powered by renewable fuels move all transportation modes. Community design supports walking, bicycling, travel by car and transit wherever appropriate. Our air and water are dramatically cleaner, and community sensitive and sustainable transportation solutions characterize everything we do.

Oregonians and visitors have real transportation choices and transfer easily between air, rail, motor vehicles, bicycles and public transportation; while goods flow just in time through interconnected highway, rail, marine, pipeline and air networks. Our communities and economies – large and small, urban and rural, coastal and mountain, industrial and agricultural – are connected to the rest of Oregon, the Pacific Northwest and the world. Land use, economic activities and transportation support each other in environmentally responsible ways.

We excel in using new technologies to improve safety and mobility. We maximize the use of existing facilities across traditional jurisdictions and add capacity strategically. Public/private partnerships respond to Oregonians' needs across all transportation modes. Transportation system benefits and burdens are distributed fairly, and Oregonians are confident transportation dollars are being spent wisely. By 2030, Oregonians fully appreciate the role transportation plays in their daily lives and in the region's economy. Because of this public confidence, Oregonians support innovative, adequate and reliable funding for transportation.

Accessibility and Mobility

Accessibility

One of the key considerations of sustainable transportation is how to address the question of why transportation occurs rather than thinking about how current transportation patterns can be made more sustainable. The overwhelming majority of travel is for some goal other than the actual physical movement taking place, for example, going to work, taking children to school, or picking up groceries from the store. Only recreational travel, such as riding

How Does This Relate to Access Management?

The terms "access" and "accessibility" in sustainable transportation literature broadly refer to the ability to access goods, services and destinations. "Access management" is a technical term that refers to regulating entrances and exits onto road systems. The two uses are unrelated.

⁵ European Conference of Ministers of Transportation (ECMT) Organization of Economic Coordination and Development, Assessment and Decision Making for Sustainable Transport, 2004.

⁶ There is ongoing work in defining sustainable transportation at the national and international levels. Performance measurement and data collection are areas where additional research is needed.

off-road vehicles or going on a cruise, is an end in itself. Consequently, if we concentrate on the end goal of the travel – the actual need being met – solutions may emerge that allow a person to access the good, service, activity, or destination being sought in more sustainable ways. This concept is sometimes referred to as accessibility: the ability to reach desired goods, services, activities and destinations.

Related but different from the term accessibility is the term mobility. Mobility refers to physical movement, whether by car, bus, train, bike, or foot. Generally speaking, increased mobility results in increased accessibility since the more a person can travel, the more destinations he or she can reach. However, this is not always the case.

Sometimes, a good or service can be accessed without any need for travel. For example, people wanting to see a movie historically traveled to a movie theater, which may have been located some distance from the house. As more homes bought televisions and video players, and home entertainment systems improved, movie rental businesses sprang up in neighborhoods. People began picking up movies on their way home from work or while out buying groceries, often reducing the amount of travel involved in meeting that need. Later, services emerged which send DVDs directly to households through the mail, increasing the efficiency of getting the good (the DVD) into the home. Now options are becoming available to download movies directly from the internet to home entertainment systems, requiring no travel, no use of fossil fuels, no greenhouse gas emissions, and no additional traffic on the road system. This is the essence of moving from a mobility mindset to an accessibility mindset.

Of course, people still want to go to the movie theater and should be able to do so. But now other options are available for that entertainment need, and some of them require no physical movement at all. In this way, energy use, air emissions, and highway congestion can all be reduced. Other examples exist in many different areas including email enquiries to the doctor's office that eliminate the need for an appointment, video conferencing capabilities, internet music downloads, to name only a few. In the future, we will see many more of these alternatives emerge. With this mix of technology improvements and moderate behavior change, significant reductions in single-person trips are possible.

We know that some physical movement will always be necessary. When that is the case, it should be the goal of transportation providers to make it as efficient as possible in terms of energy, financial resources, and greenhouse gas emissions.

Efficient Mobility

Efficient mobility can be achieved by optimizing the transportation system. This can be accomplished in a number of ways. Using transportation demand management (TDM) can eliminate the need for travel or reduce the number of trips being made. Demand-side solutions often prove to be the most cost-effective transportation tool, especially in congested urban areas where new highway capacity is expensive and difficult to provide. Demand-side solutions include carpooling, telecommuting, and marketing efforts such as ODOT's Drive Less Save More campaign which strives to reduce single-person trips.

Another way of providing efficient mobility is to provide modal choices that are efficient in terms of energy use, emissions, and cost. Transportation choices allow people to travel by public transportation or to walk or bike in urban communities, easing congestion. They allow long-distance travelers to choose which mode of travel is most efficient for them – whether by airplane, ship, rail or intercity bus. Choices allow freight shippers the opportunity to haul their

products by the most efficient means, saving time and money. In addition, transportation choices allow those who cannot or do not want to use a motor vehicle to reach destinations that meet their needs. This includes those with low incomes who need to use public transit to reach jobs, and senior citizens who need access to health care and other services without driving themselves.

Finally, particular opportunities for efficiency and optimization exist in the highway system. Intelligent transportation system (ITS) technologies include traveler information, incident response, commercial vehicle electronic clearance, and traffic signal coordination. Pricing strategies like tolling and congestion pricing may also prove to be useful tools for system optimization.

What This Means for Oregon's Transportation System

The state's primary opportunity to sustain and improve access to goods, services, activities, and destinations is in strategically developing the multimodal transportation system while at the same time optimizing the highway system and supporting clean, efficient, alternative-fueled vehicles to use it. The emphasis should be on meeting people's and businesses' needs in the most efficient way. The state should improve ways to achieve accessibility and ensure that when travel is necessary, it is as efficient and sustainable as possible.

Responses Depend on Multiple Agencies and Jurisdictions

Just as the challenges are complex, responding to them is also complex, involving multiple agencies and jurisdictions, businesses and citizens – all those who make decisions about transportation. State, city and county governments, port districts and federal agencies own, maintain, operate and expand Oregon's road and highway networks. Large transit districts, local governments and non-profit and for-profit organizations – more than 230 providers in all – provide public transportation services including light rail, bus rapid transit, fixed bus route, senior, disabled and rural general public transportation and intercity bus. With limited public funding, private mainline and short-line rail companies own and operate most rail lines in Oregon. Port districts and local governments own and operate Oregon's commercial airports, but the private sector provides most air transportation services. Public port districts operate the state's freight marine terminals.

Oregon Department of Transportation...by the numbers

ODOT owns, operates and maintains:

- 19,048 lane miles of roads (about 9 percent of the state's total), carrying more than 60 percent of Oregon's traffic volume
- 1,100 built facilities
- 5,500 vehicles and pieces of equipment with an estimated replacement value of more than \$390 million

The department employs 4,700 Oregonians and has a presence throughout the state with highway maintenance crews, Driver and Motor Vehicle field offices, motor carrier weigh stations and construction projects. In addition, ODOT partners with local governments to support public transportation and bicycle and pedestrian facilities and supports intercity passenger bus and rail services. In 2007 – 2009, ODOT operated with a biennial budget of \$3.5 billion.

bicycle and pedestrian facilities and public transportation for the elderly and disabled; distributes federal grant money for public transportation to local governments and non-profits; supports intercity passenger bus and rail services; manages publicly-funded railroad improvement projects and administers rail-related regulations; licenses drivers and motor vehicles; and regulates commercial motor carriers.

The federal government develops national policy and regulations and contributes funding to all modes of transportation. Metropolitan areas develop regional transportation plans; cities

and counties are responsible for local transportation planning and constructing, operating and maintaining local roads and streets, bicycle/pedestrian facilities and sometimes local public transportation.

Federal and state agencies regulate or impact the policies and activities of ODOT and regional and local governments. For example, the federal Environmental Protection Agency and Oregon Department of Environmental Quality regulate air and water quality. The Oregon Department of Fish and Wildlife oversees fish passage in streams and culverts. The Department of Land Conservation and Development goals and rules impact local and statewide transportation planning and community development patterns. The Oregon Department of Energy is the lead agency in developing alternative fuels and plans for energy supply.

The private sector has a role in providing transportation services and infrastructure in Oregon, including private mainline and short-line rail companies and air carriers. These private firms must also help respond to the challenges of the future, and state policies should enable them to do so profitably. Private firms in other sectors, such as clean technology and renewable energy, are already making huge investments in facilities such as wind and solar power installations due to both their emerging profitability and the availability of new state and federal incentives. Similar opportunities are available in the transportation sector and should be facilitated further.

Finally, individual citizens decide where they will live, how they will travel and where and when they will go. Their choices determine how the transportation system works and how sustainable it is. Multiple trips in a single-occupant vehicle create more greenhouse gas emissions, use more highway capacity and use more fuel per person than bus and walking trips.

ODOT's Role

As the state agency responsible for providing a safe, efficient transportation system in the state, ODOT has a key role in responding to the transportation challenges and in considering sustainable transportation solutions. ODOT directly controls some solutions such as traffic signal timing and access management on state highways, and funds some projects that meet sustainable transportation objectives such as bicycle and pedestrian facilities and public transportation for the elderly and disabled. Other projects require partnering with other state agencies, regional and local governments or the private sector. For example, ODOT partners with local governments to support public transportation, bicycle and pedestrian facilities intercity passenger bus and rail services.

ODOT is already engaged in programs to provide efficient mobility. These programs may simply need to grow over time. Examples include transportation demand management, the integration of transportation with land use planning, the use of intelligent transportation system technologies, congestion pricing, and coordination with local transportation systems. Other programs may need to be initiated, particularly in the area of accessibility. For example, ODOT could develop programs that support accessibility services such as community video conferencing facilities. In addition, opportunities exist to develop a more comprehensive multimodal system and combine it with compact urban design through the DLCD/ODOT Transportation and Growth Management Program. Compact urban design helps make shorter motor vehicle trips, transit, walking and bicycling feasible, conserving fuel and reducing greenhouse gas emissions. These issues are explored in more depth in Volume 3 of this Sustainability Plan.

Sustainability Planning at ODOT

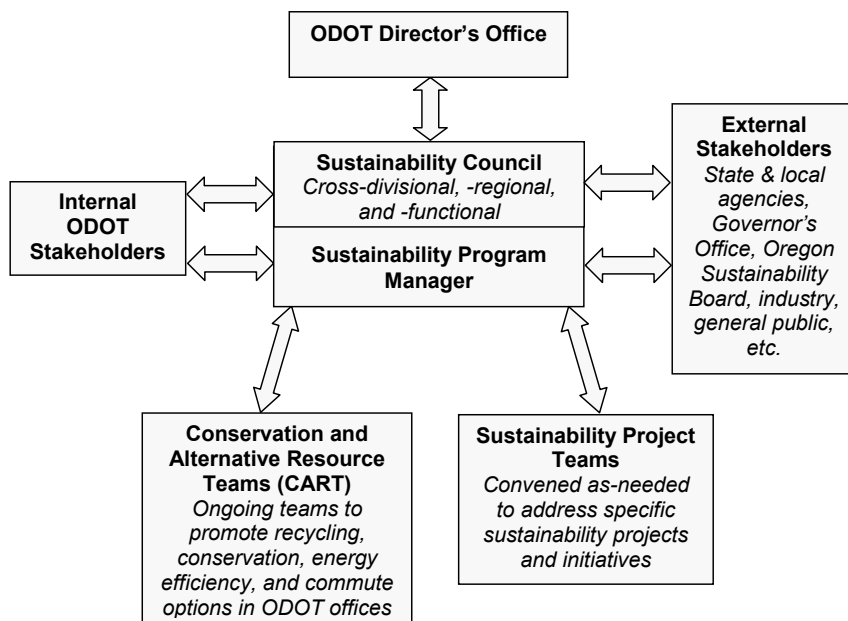
ODOT's Sustainability Program

In response to the state's sustainability mandates and the emerging challenges in the transportation sector, and because of a growing awareness of its value to the agency, ODOT is institutionalizing the concept of sustainability through the development of an integrated and strategic Sustainability Program. This program provides central oversight and coordination and is a resource to staff incorporating sustainability goals into their work. The program is cross-divisional and addresses both internal support functions and the external transportation system-related activities of the agency.

The Sustainability Program Manager is located in the Director's Office and reports to ODOT's Chief of Staff. The manager has broad responsibility to analyze all aspects of the agency's internal and external operations and to identify opportunities to integrate sustainability principles into agency decision-making, management and operations. The manager is responsible for development and implementation of the Sustainability Plan.

The ODOT Sustainability Council, an internal group of managers appointed by ODOT's Director to represent a variety of functional areas and geographic locations, meets quarterly to provide oversight to the plan and the program. This group approves and monitors sustainability work items and recommends policy and practice changes to the Director. Council members are listed in Appendix 5.

Conservation and Alternative Resource Teams (CARTs) act as office "green teams" for the agency, supporting the overall Sustainability Program by implementing on-the-ground initiatives in ODOT facilities. CARTs educate employees about work-related efficiency efforts and promote voluntary participation in those efforts to create a culture of resource conservation awareness. Currently, two formal CARTs are in operation with more planned.



Sustainability Project Teams are convened as needed to address specific sustainability projects and initiatives. These teams may be formal groups that meet regularly or informal collaborations of staff that get together for a limited period of time to address a particular need. Teams have worked on internal greenhouse gas emission tracking, neighborhood electric vehicles, fleet use of biodiesel, vehicle emissions issues and other initiatives. *Figure 2 shows an organizational chart for ODOT's Sustainability Program.*

Figure 2

Previous Sustainability Plans

In response to Executive Order 03-03, ODOT formalized its sustainability activities in March 2004 with the adoption of its first Sustainability Plan. The plan built on the environmental and sustainability activities already going on in the agency. These activities included addressing the requirements of the Clean Water, the Clean Air and the Endangered Species Acts, the creation of the Routine Road Maintenance Guide to provide best management practices for water quality and habitat, the establishment of the fish passage program, and the Motor Carrier Division's Greenlight Program.⁷

The 2004 ODOT Sustainability Plan included three main actions:

- Renew the vision of a balanced, multimodal transportation system that includes sustainability considerations in the update of the Oregon Transportation Plan (OTP).
- Implement the Oregon Transportation Investment Act (OTIA) III State Bridge Delivery Program construction projects in a sustainable manner.
- Develop an ODOT maintenance yard Environmental Management System.

Since the 2004 Sustainability Plan's adoption, ODOT has worked to implement its three goals. Sustainability concepts were integrated into the 2006 update of the Oregon Transportation Plan by including a sustainability goal and incorporating sustainability concepts in the other goals. (More information about the OTP is given below and in Appendices 6 and 7.) The OTIA III State Bridge Delivery Program is being delivered using Context Sensitive and Sustainable Solutions,⁸ including tools such as performance-based permitting, context mapping, process streamlining, and specifications for alternative fuels and recycled materials. An Environmental Management System (EMS) has been created for ODOT's maintenance yards, guiding staff in managing the storage, use and disposal of different kinds of materials.

Relationship to Other Plans and Policies

This updated Sustainability Plan supersedes the 2004 Sustainability Plan and strives to provide a more strategic and comprehensive approach for incorporating sustainability in the agency and in its management of the statewide transportation system while continuing the intentions and commitments initiated in the 2004 Plan.

The plan responds to the state's sustainability mandates, including Executive Orders and statutes, as well as incorporating policy direction from the Oregon Sustainability Board. It integrates with other agency plans and policies, including internal operational policies, and expands on the sustainability objectives of the 2006 OTP.

Sustainability and the Oregon Transportation Plan

The OTP is the 25-year statewide multimodal plan required by the state legislature that includes policies and planning for aviation, highways, mass transit, pipelines, ports, rails and waterways. Although sustainability is woven throughout the OTP,⁹ the Sustainability Goal addresses key

⁷ The Greenlight Program is a weigh station pre-clearance program that electronically screens trucks for safety and regulation compliance as they approach at highway speeds. Trucks that pass the screen do not have to stop at the weigh station.

⁸ Originally developed for the Oregon Transportation Investment Act (OTIA) III State Bridge Delivery Program, Context Sensitive and Sustainable Solutions (CS3) builds upon current planning, design and project delivery efforts that emphasize stakeholder involvement and project flexibility. CS3 incorporates sustainability by emphasizing recycling and reuse of materials, use of renewable fuels, optimization of life-cycle costs, strengthening the state's workforce, and meeting economic objectives.

⁹ For a complete list of the OTP goals, see Appendix 6. Appendix 7 contains the Sustainability Goal and its policies and strategies.

sustainability issues. The goal calls for the state to provide a transportation system that meets present needs without compromising the ability of future generations to meet their needs, distributes benefits and burdens fairly, offers choices among transportation modes, and is operated, maintained and improved to be sensitive to both the natural and built environments. The goal's supporting policies call for the state:

- To provide a transportation system that is environmentally responsible and encourages conservation and protection of natural resources;
- To support efforts to move to a diversified and cleaner energy supply, promote fuel efficiencies and prepare for possible fuel shortages, and
- To increase access to goods and services and promote health by encouraging development of compact communities and neighborhoods that integrate residential, commercial and employment land uses to help make shorter trips, transit, walking and bicycling feasible.

The direction of the OTP is primarily reflected through the goals and strategies in Volume 3 of this Sustainability Plan. Volume 2, which focuses on goals and strategies for implementing sustainability in ODOT's internal operations, primarily reflects ODOT's internal policies and procedures.

Legal Requirements for the Oregon Transportation Plan

ORS 184.618 requires state agencies to use the OTP to guide and coordinate transportation activities. The OTP also responds to federal requirements for transportation and state requirements under Land Conservation and Development Commission (LCDC) Goal 12: Transportation. Under Goal 12's Transportation Planning Rule, ODOT is required to prepare a statewide transportation system plan, and the OTP fulfills this requirement. Regional and local transportation system plans must be consistent with the statewide plan.

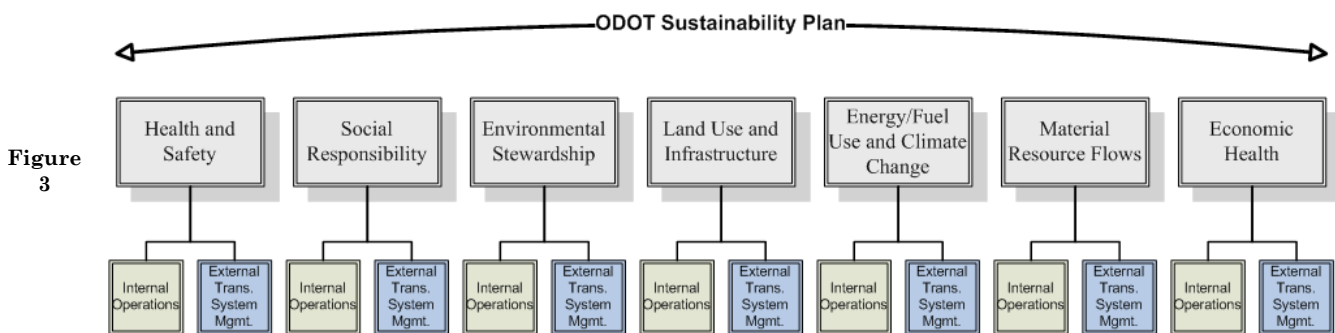
An Introduction to the Focus Areas

Volumes 2 and 3 of ODOT's Sustainability Plan contain the goals and strategies for achieving sustainability, the indicators used to track progress, and a description of implementation activities. Volume 2 addresses the management of ODOT's internal operations towards sustainability; its goals and strategies will be implemented by ODOT staff and contractors. Volume 3 focuses on the management of Oregon's transportation system towards sustainability; its goals and strategies will affect regional and local governments, transportation providers, shippers and other stakeholders as well as ODOT staff. Together with Volume 1, they provide a strategic framework for managing ODOT's internal and external operations towards sustainability.

Focus Areas

The goals, indicators, strategies, and actions in both Volumes 2 and 3 are divided into seven focus areas. They are listed and discussed in no priority order and shown graphically in Figure 3.

- Health and Safety
- Social Responsibility/Workforce Well-Being and Development
- Environmental Stewardship
- Land Use and Infrastructure
- Energy/Fuel Use and Climate Change
- Material Resource Flows
- Economic Health



These focus areas are comprehensive and cover the major sustainability issues involving ODOT and the state transportation system. They mirror those used by other large organizations. Some of the focus areas will be most effectively addressed directly by ODOT while others may need to be addressed by other agencies, jurisdictions or the private sector with ODOT's support.

Health and Safety

Being able to lead a healthy, safe life is a basic need for all humans and fundamental to being able to sustain our society. Fatalities and injuries for almost all modes of transportation have been lower in this decade than the previous decade in Oregon, but 455 people died and 27,849 were injured in motor vehicle crashes alone in 2007. How ODOT designs, manages construction, and maintains transportation infrastructure and regulates, licenses, and provides education to drivers and others affects the safety of the transportation system.

Internally, ODOT has a legal and ethical responsibility to support the health and wellness of its employees. For example, operation and maintenance jobs involve risk and must be consciously

managed by the agency to ensure employee safety and well-being. Health and wellness programs can lead to reduced workers' compensation claims, reduced use of sick leave, and improved employee productivity. ODOT also has a responsibility to provide a working environment that offers information and opportunities that allow employees to improve their physical and mental well-being.

Social Responsibility/Workforce Well-Being and Development

Since people need transportation to access food, health care, jobs and services, transportation must be available to everyone. The state's policy is to promote a transportation system that is accessible to all potential users, including the transportation disadvantaged. The system should have multiple travel choices that are easy to use, reliable and cost-effective. The kinds of choices should be appropriate for the population of the area and the distance from urban centers. For example, public transportation services in rural areas may specifically target the elderly, disadvantaged or disabled while urban areas should have a broader public transit system.

Social responsibility is also needed when transportation infrastructure potentially disrupts neighborhoods or bisects communities, impacting their livability and economy. The state's policy, as defined in the OTP, is to provide all Oregonians, regardless of race, culture or income, equal access to transportation decision-making so that all Oregonians may share fairly in benefits and burdens of transportation improvements and investments and enjoy the same degree of protection from disproportionate adverse impacts. This policy addresses decisions that might benefit certain groups and burden others.

Implementing a workforce well-being and development program makes good business sense. ODOT's internal activities have direct impacts on individuals, groups and communities, from contracting practices, hiring decisions and employee health to the sourcing of materials. When the legislature passes a transportation funding bill, it both stimulates the economy and increases the transportation-related workforce. ODOT should continue to work to ensure that jobs in the agency are open and accessible regardless of race, culture or gender, and that contracts are open and available to small minority-owned businesses as well as larger companies.

Environmental Stewardship

Transportation activities often burden the ecosystems on which society depends for clean air and water, economic vitality, and general quality of life. Transportation infrastructure consumes land and typically involves significant areas of impervious surface. It alters habitats and waterways along corridors and may obstruct routine movement and migration patterns of animals and fish, affecting their feeding, shelter and reproduction needs. Normal, everyday use of the transportation system degrades habitat by contaminating water run-off and polluting the air. Greenhouse gas emissions contribute to global climate change. Construction, operation and maintenance activities may negatively impact the environment but also afford opportunities for addressing direct and indirect environmental impacts.

Minimizing the adverse environmental impacts of ODOT's operations and of Oregon's transportation system is critical, as much of Oregon's economy is built on its natural resources. Agriculture and forest-based industries directly depend on water supply, topsoil quality, and climatic conditions. Visitors to the state value the availability of outdoor recreation and beautiful natural areas, benefiting the tourism industry. Other industries are connected less directly to natural resource availability and environmental conditions, but still benefit from ecosystem services provided by nature such as clean air, water purification, and flood control – provided at far lower cost than replacing them technologically.

Land Use and Infrastructure

How society develops or protects land is a fundamental challenge in our pursuit of sustainability. The design of urban areas is a fundamental driver of whether or not Oregonians can meet their needs efficiently and with minimal impact to the environment. Spread out suburban development patterns drive much of our dependence on fossil fuels and much of our direct consumption of habitat and farmland. Many urban developments constructed today and the transportation facilities that serve them will be around for the next 75-100 years, so planning and building for the future are extremely important.

Solo trips increase vehicle miles traveled

Population growth has been responsible for only a quarter of the increase in passenger vehicle miles traveled (VMT) in the U.S. over the last couple of decades. A larger share of the increase can be traced to the effects of a changing urban environment, namely to longer trips and people driving alone.¹⁰ High fuel prices can lower VMT; they are lowered the most when there are other transportation options. Compared to other metropolitan areas with similar population size, the Portland Metro area has a lower VMT per capita because of its compactness and travel options.

10 Urban Land Institute, Growing Cooler: The Evidence on Urban Development and Climate Change, September 2007.

Transportation and other land uses can enhance each other if they are integrated. If state and local transportation systems and land uses work together, Oregonians will have more options for travel, lower travel times on major corridors, and more efficient access to goods and services. As stated in the OTP policy, the state can encourage development of compact communities and neighborhoods that integrate housing, businesses and employment to help make shorter vehicle trips, transit, walking and bicycling possible. However, a significant challenge for ODOT in this area is coordination with multiple local, regional, state, and federal agencies with responsibility for land use and transportation.

Internally, where ODOT chooses to site administrative buildings, maintenance yards, and DMV offices has an impact on the daily lifestyles and travel behavior of employees. Locating offices near eating places, housing and public transportation where possible frees employees from having to use a car to get to work, run errands, or go out to eat lunch.

Energy/Fuel Use and Climate Change

Transportation represents the largest single share of total energy use in Oregon (40 percent¹¹) and is responsible for 34 percent of the carbon dioxide emitted in the state – more than any other source. Carbon dioxide is the most significant greenhouse gas.

The possible regulation of carbon emissions may be one of the greatest challenges for the current transportation system. Countries, corporations, and financial institutions around the world are preparing for higher fossil fuel and energy costs as energy providers internalize the cost of carbon emissions. Locally, power generators and utilities have already begun to increase budgets to account for the potential future cost of carbon dioxide emissions. As fuel costs increase, the way we use fossil fuels will likely change significantly.

Climate change will affect ODOT's infrastructure and how it is managed. Based on research performed at the University of Washington, warmer temperatures projected for the Pacific Northwest by global climate models for the mid-21st century would cause more winter precipitation to fall as rain instead of snow, increase winter stream flow, elevate the typical winter snowline, and result in earlier snow melt, moving spring peak flows earlier in the year.¹² The displacement of snow with rain in areas of moderate elevation will challenge the

11 Oregon Department of Energy, State of Oregon Energy Plan 2007-2009, March 2008.

12 Climate Impacts Group, University of Washington, <http://www.cses.washington.edu/cig/res/hwr/hwrkeyfindings.shtml>, website accessed May 2008.

Did You Know?

There is now scientific consensus about changes in the global climate caused by human activity. The Intergovernmental Panel on Climate Change.* Fourth Assessment Report, Summary for Policymakers includes the following key conclusions:

- Warming of the climate system is unequivocal.
- Warming in the last 100 years has caused about a 0.74 °C increase in global average temperature.
- Eleven of the 12 years in the period (1995-2006) rank among the top 12 warmest years since 1850.
- Most of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed increase in human-caused greenhouse gas concentrations.
- The probability that this is caused by natural climatic processes alone is less than 5 percent.
- World temperatures could rise by between 1.1 and 6.4 °C (2.0 and 11.5 °F) during the 21st century and:
 - Sea levels will probably rise by 18 to 59 cm (7.08 to 23.22 in).
 - There is a confidence level >90 percent that there will be more frequent warm spells, heat waves and heavy rainfall.
 - There is a confidence level >66 percent that there will be an increase in droughts, tropical cyclones and extreme high tides.

*The Intergovernmental Panel on Climate Change (IPCC) was established in 1988 by the United Nations to evaluate the risk of climate change brought on by humans. The IPCC published its first assessment report in 1990. The latest assessment report – the fourth – was released in 2007. The IPCC bases its assessment mainly on peer reviewed and published scientific literature. National and international responses to climate change generally regard the UN climate panel as authoritative. All IPCC reports face extensive review. For example, the Summary for Policymakers from Working Group I of the Fourth Assessment Report was produced by some 600 authors from 40 countries. Over 620 expert reviewers and a large number of government reviewers also participated. Representatives from 113 governments reviewed and revised the Summary line-by-line before adopting it and accepting the underlying report.

design of existing stormwater systems, bridge piers, and earth embankments. On a longer timeframe, but still over the expected lifespan of ODOT's new facilities, sea levels may rise enough to allow major storms to regularly damage Highway 101 and disrupt coastal ports. ODOT is participating in state initiatives including the Oregon Global Warming Commission to address these challenges.

A related challenge is our reliance on foreign oil. The United States uses about a quarter of the world's oil yet has less than five percent of the population. The US imports more than half of its consumption of oil, and the imported share grows every year. Transportation uses about two-thirds of the total

oil consumed in the US. Oregon produces no oil, and so every dollar spent on gas in Oregon is a dollar exported. While Oregon is unlikely to find all of our transportation energy close to home in the near future, we can work to purchase cleaner, renewable alternatives in the region and improve efficiencies to reduce costs and conserve energy supplies.

As stewards of Oregon's transportation infrastructure and services, ODOT must take an active role in supporting the most appropriate modes and fuels for personal travel and freight distribution and helping to reduce vehicle miles traveled. In so doing, ODOT may have to broaden its role to new areas, change the way it designs and builds infrastructure, seek new funding mechanisms, and deepen its relationships with key entities such as rail carriers, transit providers, and land use planners. ODOT will also have to continue to analyze its own operations to find opportunities to maximize energy efficiencies and the use of alternative fuels.

Material Resource Flows

Material resources represent a crucial part of meeting our needs as individuals, as households, and as a society. However, opportunities exist for meeting our needs in more efficient ways. At the beginning of the life cycle, careful material selection ensures that we minimize financial costs as well as minimize the environmental cost of natural resource extraction and depletion. At the end of the life cycle, recycling, and reuse can similarly reduce financial and environmental impacts.

The material inputs to, and wastes from, ODOT's operations represent important environmental impacts and economic decisions by the agency. The construction

Snow predictions reflect global warming

Snow model simulations performed by the University of Washington show that by 2025, snow conditions for the Stevens Pass ski area (elevation 4500 ft.) will change significantly, with the likelihood of a December 1 opening declining by 25 percent and the likelihood of rain when the ski area is open potentially increasing by 50 percent.

and maintenance of transportation infrastructure require large volumes of many materials over long periods of time. This complexity presents a number of challenges.

First, it requires that sophisticated systems for managing assets, tracking performance and gathering information are used throughout the agency. While ODOT has already developed a maintenance yard

Environmental Management System and an Asset Management initiative, the scope of these programs may need to be broadened in the future. Second, incorporation of new technologies and emerging best practices will be needed, requiring re-evaluation of practices. Third, internal and external communication is critical. ODOT will need to collaborate with stakeholders and regulatory agencies such as the Department of Environmental Quality and Department of State Lands and others.

Internally, ODOT must work to ensure that the agency is minimizing the waste generated from office buildings and maintenance yards, and maximizing the materials that can be recycled. Areas in which to focus include office supplies, paper, and electronic waste. This may mean helping to support and develop recycling markets.

Economic Health

Oregon's economy is diverse, relying on agriculture, forest products, manufacturing, technology-based businesses and a variety of service-related industries. These require a range of transportation services from low cost, low speed rail, barge and ship to frequent, fast truck and air services. In turn, these services require infrastructure, maintenance and operations that will allow them to deliver services and goods reliably and cost-effectively. They need reliable and adequate funding in order to sustain Oregon's economic health.

But the methods of funding transportation in Oregon are inadequate to maintain the current system. The current funding structure does not keep up with inflation. Funding priorities for privately owned infrastructure may not support statewide transportation goals.

The last state motor vehicle fuel tax increase was in 1993 to \$.24 per gallon, and the last increase at the federal level was in 1993 to \$.184 per gallon. Just from 2006 to 2030, inflation alone at 3.1 percent per year will reduce the tax's spending power by 40-50 percent. Construction costs are rising at more than 4.3 percent a year. Gains in fuel efficiency and use of alternative fuels, while good for the environment and other goals, will further reduce revenues for state and local roads.

Other modes such as intercity rail and intracity transit also lack adequate funding. While there is a desire for the state to invest in public transit and rail services, the willingness of Oregonians to pay for such investments is uncertain. Without real alternatives for traveling and shipping goods, transportation system users rely on cars and trucks to get around, thereby placing additional demands on an already congested and deteriorating highway system.

Freight modes use different amounts of energy

Different modes of freight transportation have different levels of "energy intensity" --the amount of energy it takes to move one ton of cargo one mile. These are shown below.¹

<u>Mode</u>	<u>BTU/ton-mile</u>
Air	28,000
Truck	3,337
Ship	471
Barge	368
Rail	345

¹ David Evans & Associates and Sorin Garber Consulting, Profile of the Regional Freight Transportation System in the Portland-Vancouver Metropolitan Region, January 2007.

Did You Know?

A common misconception is that sustainable strategies are too expensive. In fact, when considered strictly in terms of upfront costs, sustainable options are often competitive with conventional solutions. However, the real value comes when a longer timeframe is used to make the decision – over the life cycle of a "sustainable" investment, the net financial, environmental, and social benefits are typically well worth any additional upfront capital.

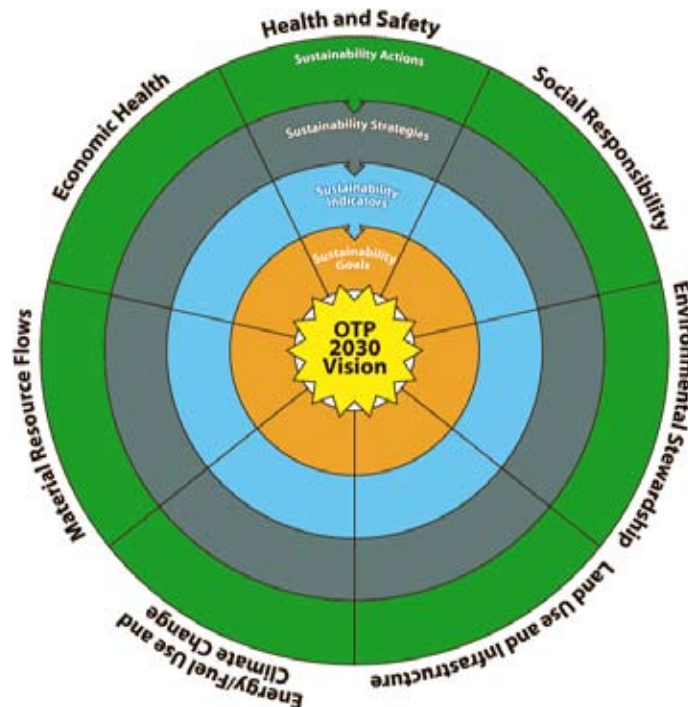
While there are challenges in funding the transportation system, the state nevertheless does make significant investments in the system every biennium. Opportunities exist to broaden the benefits derived from these investments and to take a more strategic, long-term approach so that infrastructure and operational expenditures support sustainability goals.

Internally, opportunities exist to support Oregon’s economy with ODOT’s purchasing decisions by buying locally and better integrating life cycle cost analysis into budget processes. ODOT’s procurement processes can enable the purchase of goods and services with the best value over their life cycle rather than those with the lowest up-front cost. Purchases can also support “green” products such as biodiesel and compost erosion control, which divert waste from landfills and have an improved environmental footprint.

ODOT’s Sustainability Lens

Figure 4 shows ODOT’s Sustainability Lens. This diagram gives a visual indication of the strategic management framework presented in Volumes 2 and 3. It shows how the different focus areas and the Goals, Indicators, Strategies, and Actions interrelate. The Sustainability Lens can be thought of as a way to maintain a focus on sustainability as the agency and its external partners work to meet the 2030 vision presented in the OTP.

Figure 4: ODOT’s Sustainability Lens



Volumes 2 and 3

This volume is the foundation for the balance of the plan, which contains two additional volumes. Volume 2 contains sustainability goals and strategies for internal ODOT practices. The issues range from workforce diversity, site landscaping, building energy use, fleet fuel use, employee commutes, chemicals used in major facilities, waste minimization and recycling to purchasing practices. Volume 3 contains sustainability goals and strategies for management and operation of the statewide transportation system, including the parts owned and operated by regional and local jurisdictions and the private sector. It focuses on issues ranging from improving transportation safety, providing equitable transportation solutions, minimizing transportation-related environmental impacts, integrating transportation and land use, reducing fossil fuel consumption and greenhouse gases and working toward zero-waste in transportation materials to implementing sustainable transportation funding.

Appendices

Appendix 1	Objectives for Agencies from ORS 184.421
Appendix 2	Executive Order 06-02
Appendix 3	ODOT Strategic Direction
Appendix 4	ODOT Organizational Structure
Appendix 5	ODOT Sustainability Council members
Appendix 6	Summary of Oregon Transportation Plan
Appendix 7	Oregon Transportation Plan Goal 4 - Sustainability

APPENDIX 1: OBJECTIVES FOR AGENCIES FROM ORS 184.421 THE OREGON SUSTAINABILITY ACT

- (1) In conducting internal operations, state agencies shall, in cooperation with the Oregon Department of Administrative Services, seek to achieve the following objectives:
- (a) State purchases should be made so as to serve the broad, long-term financial interests of Oregonians, including ensuring that environmental, economic and societal improvements are made so as to enhance environmental, economic and societal well-being.
 - (b) Investments in facilities, equipment and durable goods should reflect the highest feasible efficiency and lowest life cycle costs.
 - (c) Investments and expenditures should help promote improvements in the efficient use of energy, water and resources.
 - (d) State operations should be located in diverse locations, including rural and distressed communities.
 - (e) State operations and purchases should help maintain vital and active downtown and main street communities.
 - (f) State purchases should help support opportunities for economically distressed communities and historically underemployed people.
 - (g) State operations should reflect partnerships with communities and businesses.
 - (h) State operations should help reduce adverse impacts on native habitats and species and help restore ecological processes.
 - (i) State operations should be conducted in ways that significantly increase the efficient use of energy, water and resources.
 - (j) State operations and purchases should reflect the efficient use and reuse of resources and reduction of contaminants released into the environment.
- (2) In supporting sustainable communities, state agencies shall seek to enable and encourage local communities to achieve the following objectives:
- (a) Resilient local economies that provide a diversity of economic opportunities for all citizens.
 - (b) Workers supported by lifelong education to ensure a globally competitive workforce.
 - (c) An independent and productive citizenry.
 - (d) Youth supported by strong families and communities.
 - (e) Downtowns and main street communities that are active and vital.
 - (f) Development that wisely and efficiently uses infrastructure investments and natural resources.
 - (g) Affordable housing available for citizens in community centers.
 - (h) Healthy urban and rural watersheds, including habitats for fish and wildlife.
 - (i) Clean and sufficient water for all uses.
 - (j) Efficient use and reuse of resources and minimization of harmful emissions to the environment.
- (3) Intensification of efforts to increase the economic stability of communities designated as economically distressed.
-

APPENDIX 2: EXECUTIVE ORDER 06-02 SUSTAINABILITY FOR THE 21ST CENTURY

Pursuant to my authority as Governor of the State of Oregon, I find that:

Sustainability represents a significant economic opportunity for the State of Oregon. Sustainability enables state and local government to operate in a more efficient and effective manner. Sustainability benefits all Oregonians, urban and rural. Oregon prospers when the economy, the environment, and our communities support each other.

Oregon's business and higher education sectors increasingly are focusing on the opportunities presented by sustainable development. The Oregon Business Plan has identified Sustainable Industries as a key development cluster for the state. The Oregon University System is pursuing opportunities to increase the focus on research and development related to sustainable technologies.

Executive Order 03-03 directed the Oregon Sustainability Board and certain state agencies to develop policies and practices to make Oregon a more sustainable state, consistent with and in furtherance of the goals regarding sustainability adopted by the Legislative Assembly in 2001.

The primary intent of Executive Order 03-03 was to establish meaningful and measurable sustainability planning within state agencies and to encourage state agencies to lead by example in this important area.

The efforts of the Oregon Sustainability Board and forward-thinking state agency directors and personnel have resulted in the following achievements:

- All 20 state agencies included in Executive Order 03-03 developed sustainability plans for their agencies and continue to update those plans and integrate them into their budgetary and strategic planning.
- Environmental management system ("EMS") plans have been developed within three state agencies.
- The state light duty vehicle fleet is transitioning to alternative fuel and hybrid vehicles and is using increasing amounts of ethanol and biodiesel.
- The state established a "green" building policy requiring all new state buildings to meet, at a minimum, the U.S. Green Building Council's Leadership in Energy and Environmental Design ("LEED") program's silver equivalency status, with major renovations also requiring LEED certification.
- State procurement practices are beginning to include life cycle costs and sustainability considerations when making contracting and purchasing decisions, from computer equipment to janitorial supplies.
- The state dedicated L.L. Stub Stewart State Park, the first Oregon state park developed with sustainability as a primary objective.
- The Oregon Department of Transportation (ODOT) is incorporating sustainability into its \$1.3 billion bridge repair program. One benefit of this innovative approach is that environmental baselines are assessed before design begins for each project, resulting in more efficient permitting, better environmental results and millions of dollars of projected cost savings.

Collectively, these and other successes resulted in economic, environmental and community benefits to the state and prove that state policy makers do not need to choose between the economy and the environment when making decisions aimed at providing a prosperous and sustainable future for Oregonians.

NOW, THEREFORE, IT IS HEREBY ORDERED AND DIRECTED:

1. The Oregon Sustainability Board ("Board") shall continue as an executive branch board serving at the pleasure of the Governor. The Board shall consist of 11 members representing business, local government and natural resource sectors and shall reflect the geographic diversity of Oregon. The members of the

Board, including the Chair, will be appointed by the Governor. The Chair shall establish the agenda for Board meetings and generally provide leadership and direction to the Board. A quorum for Board meetings shall consist of a majority of the appointed members. The Board shall strive to operate by consensus; however, the Board may approve measures and make recommendations based on an affirmative vote of a majority of the quorum present. The members of the Board shall not be entitled to the reimbursement of expenses or to the per diem provided in ORS 292.495.

2. The Board is directed to manage and carry out the following primary objectives:

a. Assist Local Governments and the Private Sector with the Development of Sustainability Practices.

i. The Board shall coordinate a multi-agency effort to develop a “Sustainable Practices” toolbox for state and local governments and for the private sector. The Department of Administrative Services (DAS) and the Oregon Economic and Community Development Department (OECDD) shall lead this effort. The Board, together with DAS and OECDD, shall determine the appropriate components of the toolboxes, which may include information regarding best practices, sustainability certification programs and processes, training opportunities and case studies.

ii. The Board shall coordinate the development of a Sustainability Awards Program to promote and advance the inclusion of sustainable practices in government and the private sector. OECDD shall be the agency primarily responsible for assisting the Board with this effort, with staff assistance, as needed, from the Department of Agriculture (DOA), the Department of Environmental Quality (DEQ), the Department of Land Conservation and Development (DLCD), DAS and the Department of Energy (DOE).

b. Promote Sustainable Economic Investment and Development. In this area, the Board shall give priority to efforts related to renewable energy and working landscapes.

i. The Board’s energy focus requires working with the private sector, academic institutions, non-profits and state and local governments to maximize practices in Oregon that create economic opportunities, while also promoting renewable and efficient energy use, reducing greenhouse gas emissions and reducing material use and costs. One priority area should be to assist efforts to develop viable bioenergy markets in Oregon.

ii. The working landscapes focus requires working with the natural resource sectors, academic institutions, non-profits, state and local government and consumers to incent and promote practices that help agricultural, ranching, forestry and fishing sectors achieve value-added market opportunities that are built and marketed around sustainable practices. Such opportunities include replication of the Oregon Natural Beef model in the wood products and agricultural sectors and efforts to strengthen initiatives, such as the Oregon Sustainable Agriculture Resource Center (OSARC), that promote better coordination, collaboration and integration of public and private efforts and resources and aim to enhance investment and job creation and retention while also achieving better environmental results.

c. Advance Sustainability Performance in State Government. The Board shall continue to work with state agencies that have developed sustainability plans and shall assist agency efforts to update and improve sustainability planning and to monitor and measure achievements. The Board shall also oversee the following new pilot initiatives with identified state agencies and shall receive regular reports from the agencies on progress:

i. DAS shall coordinate a State Procurement Interagency Team that will include DOE, ODOT and DEQ. This interagency team shall develop recommended procurement acquisition models and training that take into account relevant sustainability principles, including, but not limited to, life-cycle cost assessment, energy impact assessment, and vendor take-back, re-use, re-charge, and re-build assessment. This task shall be completed by December 31, 2006.

ii. DAS shall coordinate a Greenhouse Gas Emissions Interagency Team which shall include DOE, ODOT, and DEQ. This interagency team shall develop a methodology for state agencies to develop greenhouse gas emission baseline assessments and recommend best practices for reducing greenhouse gas emissions.

This task shall be completed by December 31, 2006.

iii. Beginning in 2007, DAS shall provide annual reports to the Sustainability Board detailing the greenhouse gas reductions that have been achieved within each agency vehicle fleet. Each state agency that operates a vehicle fleet shall develop a greenhouse gas reduction baseline and annual reduction targets utilizing the methodology developed by the Greenhouse Gas Interagency Team and shall annually report emission reductions to DAS. This report shall include the volume of ethanol and biodiesel used by agency fleets and any costs savings attributable to the use of more fuel-efficient vehicles and alternative fuels.

iv. DAS shall collaborate and coordinate with California and Washington on possible regional purchasing strategies that aggregate the three states' purchasing power to maximize environmental and economic value. DAS shall report to the Board regarding these efforts.

v. DAS, in coordination with the Strategic IT Investment Team and DEQ, shall develop electronic waste disposal procedures that enable and encourage product take back, protect the security of information, recycle usable equipment and protect the environment. This task shall be completed by June 30, 2006.

vi. DOE shall coordinate an Energy Efficiency Interagency Team that will include DAS and the Oregon University System. The Energy Efficiency Interagency Team shall develop strategies to meet the Governor's previously announced goal of 20 percent energy efficiency savings in state government and education institutions in ten years, including consideration of the expanded use of energy service contracts in the public sector.

vii. OECDD, in coordination with DOE, and within existing funding and authority, shall establish and administer a renewable energy feasibility revolving loan fund to assist community renewable energy projects develop the information needed to assess the technical feasibility of developing renewable energy projects.

viii. The Department of State Lands is encouraged to coordinate an interagency team including ODF, DOE and DLCD to develop a streamlined process for developing renewable energy on state lands and waterways and for issuing leases for private sector development on state lands and waterways.

3. The Board shall be assisted in carrying out its activities by the following:

a. Sustainability Leadership Team. A Sustainability Leadership Team shall be comprised of the following: the Governor's Sustainability Policy Advisor (Chair), the Sustainability Board Chair and the Directors of the following agencies or their designees: DAS, OECDD, DOE, ODOT, DEQ, and such other members as may be requested by the Governor. The Leadership Team shall meet regularly, shall advise the Governor and the Board, as appropriate, and shall assist the Board with carrying out its responsibilities under this Executive Order.

b. Interagency Sustainability Network. DAS shall coordinate an Interagency Sustainability Network ("Network"). The Network shall be an informal forum of state agency personnel. The purpose of the Network is to exchange ideas and practices and to develop new approaches to sustainability among state agencies.

c. Oregon Solutions. Oregon Solutions shall periodically report to the Board regarding opportunities for sustainability related projects. The Board shall provide guidance to Oregon Solutions and to state agencies regarding projects that simultaneously address economic, environmental, and community concerns, as well as the ten community objectives listed in ORS 184.423(2). The Board and the Leadership Team shall identify opportunities for state agencies to participate in Oregon Solutions projects.

d. Sustainability Web Site. DAS will ensure that the state's sustainability website, SustainableOregon.net, continues to be a resource for the public and interested stakeholders.

4. Oregon University System. The Governor's Office shall work with a person designated by the

Chancellor to develop and carry out a sustainability initiative for the Oregon University System. The Chancellor's designated coordinator will work with the institutions of higher education, the Academic Excellence Committee of the Board of Higher Education, the Oregon Innovation Council, OECDD and other state agencies to assess the feasibility of, and to implement research and development efforts regarding areas that include, but are not limited to: (1) green building and forest products; (2) water systems and management; and (3) renewable energy. The coordinator shall also facilitate efforts to implement the OUS Sustainability Plan and to develop further policies to integrate sustainability into academic programs, operations and research and outreach within the university system. The coordinator shall work with the Governor's Office, the Board of Higher Education, the Oregon University System, the Oregon Innovation Council, OECDD and other state agencies to secure funding to accomplish this initiative.

5. Executive Orders EO-03-03 and EO-00-07 are superseded by this Executive Order and rescinded.

Done at Portland, Oregon this 19th day of January, 2006

APPENDIX 3: ODOT'S STRATEGIC DIRECTION

ODOT's Mission

To provide a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians.

ODOT's Values

These are the values that guide our decision-making and which we follow in implementing ODOT's mission and goals.

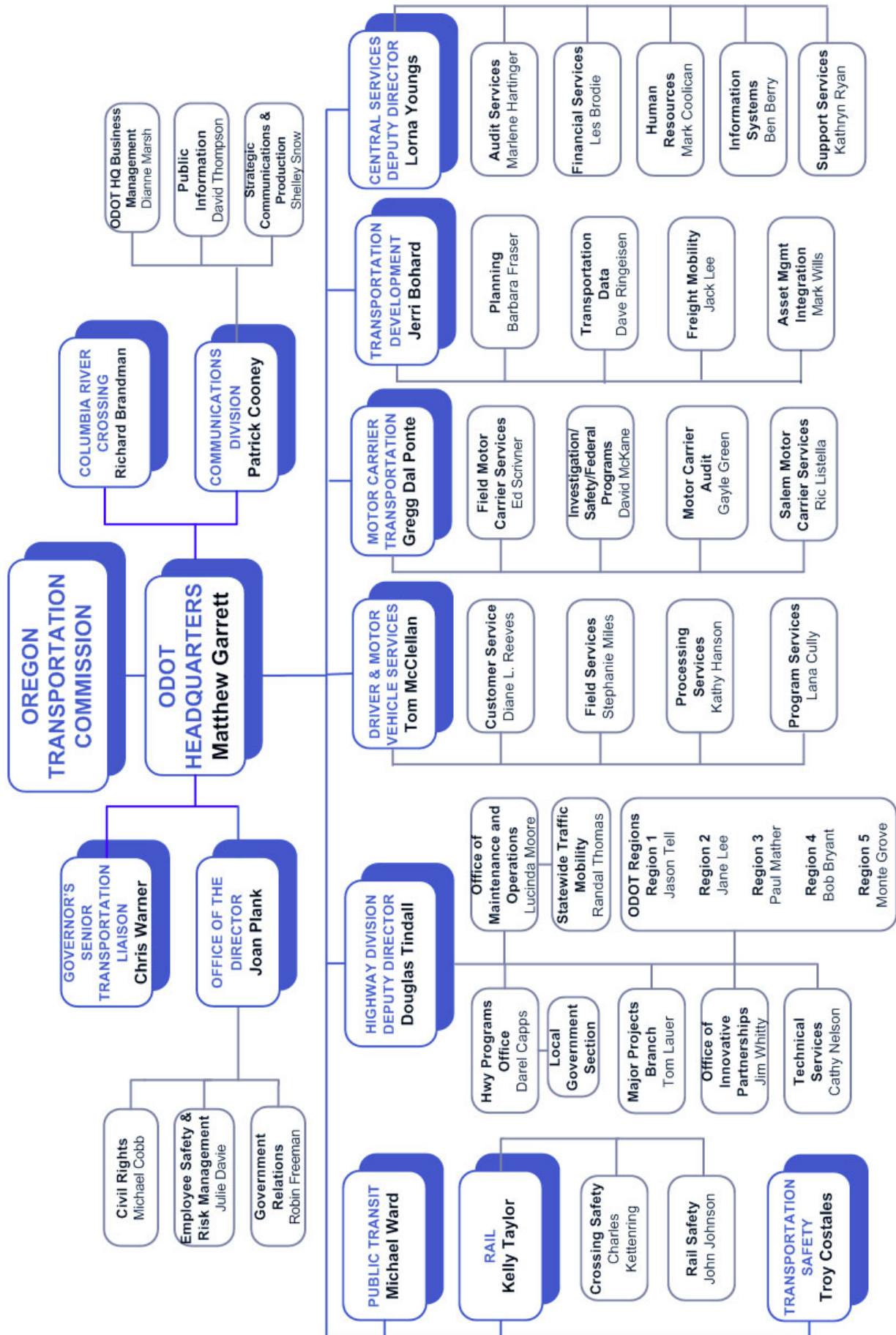
- **Safety:** We protect the safety of the traveling public, our employees and the workers who build, operate and maintain our transportation system.
- **Customer Focus:** We learn from and respond to our customers so we can better deliver quality, affordable services to Oregonians and visitors. Our customers include travelers, freight movers and others who use our services and facilities.
- **Efficiency:** We strive to gain maximum value from the resources entrusted to us for the benefit of our customers.
- **Accountability:** We build the trust of customers, stakeholders and the public by reporting regularly on what we are doing and how we are using the resources entrusted to us.
- **Problem Solving:** We work with the appropriate customers, stakeholders and partners to find efficient, effective and innovative solutions to problems.
- **Positive Workplace:** We recognize innovation and initiative, we show respect for all, and we honor diversity.
- **Environment:** We provide services and facilities in ways that protect and enhance the environment.

ODOT's Goals

- Improve safety.
 - Move people and goods efficiently.
 - Improve Oregon's livability and economic prosperity.
-

APPENDIX 4: ODOT'S ORGANIZATIONAL STRUCTURE

Oregon Department of Transportation



October 2008

*Interim

APPENDIX 5: SUSTAINABILITY COUNCIL MEMBERS

Jerri Bohard, Chair
Administrator, Transportation Development Division
Planning Business Line Team (PBLT) Representative

Michael Cobb
Manager, Office of Civil Rights
Diversity Council Liaison

Jim Cox
Advanced Contracting Unit Manager, Major Projects Branch
Project Delivery and Context Sensitive and Sustainable Solutions (CS3) Representative

Gary Farnsworth
Area Manager, Region 4
Project Delivery Leadership Team (PDLT) and Regions Representative

Dick Fenske/Karla Keller
Dick Fenske: Maintenance and Operations Manager, Region 2

Karla Keller: Maintenance and Operations Manager, Region 1
Maintenance Leadership Team (MLT) and Regions Representative

H.A. (Hal) Gard
Manager, Geo-Environmental Section
Technical Leadership Team (TLT) Representative

Kathryn Ryan
Manager, Support Services
Central Services Management Team (CSMT) Representative

Dinah Van Der Hyde
Policy Manager, Public Transit Division

Jim Whitty
Manager, Office of Innovative Partnerships and Alternative Funding

APPENDIX 6: SUMMARY OF OREGON TRANSPORTATION PLAN

The Oregon Transportation Plan (OTP) was adopted by the Oregon Transportation Commission (OTC) on September 20, 2006. The OTP is the state's long-range multimodal transportation plan and ODOT's overarching policy document. The OTP establishes goals, policies, strategies and initiatives that address the core challenges and opportunities facing Oregon. The following excerpts summarize the most relevant parts of the OTP for the Sustainability Program.

Challenges

The challenges facing Oregon's transportation system are major:

- A 41 percent increase in population by 2030 and accompanying economic growth will increase demand for transportation and add to wear and tear on existing infrastructure.
- The competitive global economy demands fast, efficient transportation for people, goods and services. By 2030, an 80 percent increase in freight tonnage, moving mostly via truck, will have to navigate through extended periods of peak hour traffic.
- The increasing congestion will undermine the state's economic competitiveness by lengthening delivery times for goods and services. Accidents, stalled vehicles, weather, work zones and other incidents cause about 50 percent of traffic delay.
- Uncertain global oil supply and increasing prices will cause unpredictable worldwide economic and transportation changes within the next 25 years.
- Transportation is causing global warming and other environmental degradation.
- Lack of land use and transportation integration means lost opportunities for community livability and economic activities.
- International and domestic terrorism threatens transportation security.
- Transportation-related accidents kill or injure thousands of people each year.
- Institutional relationships and divided responsibilities among state, regional and local governments and public and private transportation providers impede our ability to achieve shared strategic objectives.
- Transportation financing does not maintain the existing system or provide opportunities for expansion of vital air, highway, port, public transportation and rail facilities, services and technology.

The Plan's Assumptions

The OTP makes basic assumptions based on background papers, technical analyses, committee discussions and public comment, including the following:

- Oregonians expect to get the most value possible from transportation funding.
- Maintaining existing facilities and services, managing transportation systems efficiently and optimizing technologies are basic to delivering transportation in Oregon.
- By 2030 Oregon's transportation system needs to accommodate 41 percent more population and an 80 percent increase in freight tonnage.
- Transportation strategies have to adapt to global environmental and economic changes including global warming, uncertain worldwide petroleum supply and high fuel prices.
- Although the state land use program may change, basic land use and transportation-related programs are expected to continue.
- The Portland metropolitan area is the economic hub of the state; however, Oregon's economic vitality is dependent on all parts of the state.
- Rural areas have unique problems involving isolation and low density.

The Goals

- Goal 1 – Mobility and Accessibility: Providing a balanced, efficient, cost-effective and integrated multimodal transportation system that ensures appropriate access to all areas of the state, the nation and the world.
- Goal 2 – Management of the System: Optimizing the existing transportation infrastructure capacity with improved operations and management.

- Goal 3 – Economic Vitality: Promoting the movement of people and goods in a safe, energy-efficient and environmentally sound manner.
- Goal 4 – Sustainability: Providing a transportation system that meets present needs without compromising the ability of future generations to meet their needs, distributes benefits and burdens fairly, and is operated, maintained and improved to be sensitive to both the natural and built environments.
- Goal 5 – Safety and Security: Building, operating and maintaining a safe and secure transportation system.
- Goal 6 – Funding the Transportation System: Creating a viable, long-term transportation funding structure.
- Goal 7 – Coordination, Communication and Cooperation: Pursuing coordination, communication and cooperation among transportation users and providers to align interests and to enable the system to function as one system.

Key Initiatives

- A. Maintain the existing transportation system to maximize the value of the assets. If funds are not available to maintain the system, develop a triage method for investing available funds.
 - B. Optimize system capacity and safety through information technology and other methods.
 - C. Integrate transportation, land use, economic development and the environment.
 - D. Integrate the transportation system across jurisdictions, ownerships and modes.
 - E. Create a sustainable funding plan for Oregon transportation.
 - F. Invest strategically in capacity enhancements.
-

APPENDIX 7: OREGON TRANSPORTATION PLAN GOAL 4 – SUSTAINABILITY

To provide a transportation system that meets present needs without compromising the ability of future generations to meet their needs from the joint perspective of environmental, economic and community objectives. This system is consistent with, yet recognizes differences in, local and regional land use and economic development plans. It is efficient and offers choices among transportation modes. It distributes benefits and burdens fairly and is operated, maintained and improved to be sensitive to both the natural and built environments.

Policy 4.1 – Environmentally Responsible Transportation System

It is the policy of the State of Oregon to provide a transportation system that is environmentally responsible and encourages conservation and protection of natural resources.

Strategy 4.1.1

Practice stewardship of air, water, land, wildlife and botanical resources. Take into account the natural environments in the planning, design, construction, operation and maintenance of the transportation system. Create transportation systems compatible with native habitats and species and help restore ecological processes, considering such plans as the Oregon Conservation Strategy and the Oregon Plan for Salmon and Watersheds. Where adverse impacts cannot reasonably be avoided, minimize or mitigate their effects on the environment. Work with state and federal agencies and other stakeholders to integrate environmental solutions and goals into planning for infrastructure development and provide for an ecosystem-based mitigation process.

Strategy 4.1.2

Encourage the development and use of technologies that reduce greenhouse gases.

Strategy 4.1.3

Evaluate the impact of geological hazards and natural disasters including earthquakes, floods, landslides and rockfalls, on the efficiency and sustainability of the location and design of new or improved transportation facilities as appropriate.

Strategy 4.1.4

Work collaboratively to streamline permit procedures and gain efficiencies to transportation system improvements while meeting or exceeding environmental benefits or regulations.

Strategy 4.1.5

In the construction and maintenance of transportation infrastructure and facilities, reduce the consumption of non-renewable construction materials, promote their efficient use and reuse, and reduce other environmental impacts such as stormwater impacts where appropriate.

Strategy 4.1.6

To determine the most cost-effective investments, consider using life-cycle costs in transportation maintenance, purchase of equipment, selection of materials, and design and engineering of infrastructure where appropriate.

Strategy 4.1.7

To accomplish environmental stewardship and increase efficiencies, use environmental management systems.

Policy 4.2 – Energy Supply

It is the policy of the State of Oregon to support efforts to move to a diversified and cleaner energy supply, promote fuel efficiencies and prepare for possible fuel shortages.

Strategy 4.2.1

Support efforts to develop a long range plan for moving toward a diversified and cleaner energy supply. Work with federal, state, regional and local jurisdictions and agencies as well as transportation providers, shippers and the general public.

Strategy 4.2.2

Support the conversion of passenger vehicles and public transportation fleets to more fuel-efficient and alternative fuel vehicles, especially to those using renewable and cleaner fuels. Review and change the tax credit provisions to encourage these activities as appropriate.

Strategy 4.2.3

Work with federal, state, regional and local jurisdictions and agencies as well as transportation providers, shippers and the general public to develop a contingency plan for fuel shortages affecting passenger and freight transportation.

Policy 4.3 – Creating Communities

It is the policy of the State of Oregon to increase access to goods and services and promote health by encouraging development of compact communities and neighborhoods that integrate residential, commercial and employment land uses to help make shorter trips, transit, walking and bicycling feasible. Integrate features that support the use of transportation choices.

Strategy 4.3.1

Support the sustainable development of land with a mix of uses and a range of densities, land use intensities and transportation options in order to increase the efficiency of the transportation system. Support travel options that allow individuals to reduce vehicle use.

Strategy 4.3.2

Promote safe and convenient bicycling and walking networks in communities.

- Fill in missing gaps in sidewalk and bikeway networks, especially to important community destinations such as schools, shopping areas, parks, medical facilities and transit facilities.
- Enhance walking, bicycling and connections to public transit through appropriate community and main street design.
- Promote facility designs that encourage walking and biking.

Strategy 4.3.3

Promote location-efficient incentives in Oregon to help increase the opportunities for individuals and families to purchase homes and businesses within areas well served by transit.

Strategy 4.3.4

Promote transportation facility design, including context sensitive design, which fits the physical setting, serves and responds to the scenic, aesthetic, historic and environmental resources, and maintains safety and mobility.

Strategy 4.3.5

Reduce transportation barriers to daily activities for those who rely on walking, biking, rideshare, car-sharing and public transportation by providing:

- Access to public transportation and the knowledge of how to use it.
- Facility designs that consider the needs of the mobility-challenged including seniors, people with disabilities, children and non-English speaking populations.

Strategy 4.3.6

Consider the proximity and availability of public transportation when siting public facilities and services.