

# ODOT SUSTAINABILITY PLAN

VOLUME 2

## SUSTAINABILITY MANAGEMENT FRAMEWORK FOR ODOT'S INTERNAL OPERATIONS



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## Structure of the Sustainability Plan

The Oregon Department of Transportation (ODOT) is a leader in sustainability. From the use of biofuels in its fleet to putting solar panels on right-of-ways, ODOT practices sustainability in its day-to-day operations. At ODOT, sustainability is providing for current needs without sacrificing the needs of future generations.

In September 2008, ODOT released Volume 1 of the Sustainability Plan. Volume 1 provides the overall vision for ODOT's sustainability efforts. ODOT has come to realize that while individual sustainability projects at ODOT have been very successful, exemplary stewardship requires a comprehensive plan. To that end, this plan contains both statewide strategic goals and indicators.

This volume, Volume 2, sets goals, strategies and performance measures for ODOT's internal operations, such as its facilities and fleet. Operationalizing sustainability means pursuing a combination of paths to get down to practical, operations level concepts that can be measured yet remain related to the holistic framework from which they were derived.

Volume 3, to be developed, will focus on goals and strategies for ODOT's management of the statewide transportation system for sustainability. Thus, Volume 2 does not address ODOT's operation and management of the greater transportation system such as roadway, design, traffic, right-of-way, contracting; those areas will be addressed in Volume 3.

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# INTRODUCTION



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.

This plan is created pursuant to the 2001 Oregon Sustainability Act. On May 17, 2000, Governor Kitzhaber issued Executive Order No. EO 00-07, calling for a sustainable strategy in internal state government operations. On June 12, 2003, Governor Kulongoski issued Executive Order No. EO 03-03, created to support and drive the goals of the Oregon Sustainability Act, and asking every state agency to

incorporate sustainability into government practice.

As the statewide transportation agency, ODOT's mission is to provide a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians. ODOT is striving to operate sustainably, that is, to be responsible for the impacts of its transportation operations and activities on its workforce, the environment and the planet. The goals and strategies to address these impacts are the focus of Volume 2.

Volume 2 addresses the management of ODOT's internal operations towards sustainability. It complements Volume 1 which presents the overall context of sustainability at ODOT and defines seven focus areas, and Volume 3 which will address ODOT's leadership, planning and management of the statewide transportation system towards sustainability. The intent is to make sustainability an integral part of business at ODOT.

The Sustainability Plan also marks the progress that has been made to incorporate sustainability into agency operations. The plan will be used by ODOT managers and staff in decision-making, purchasing, construction, operations and maintenance of facilities as well as other daily routine activities.

Volume 2 presents overall goals and broad strategies. The goals provide explicit long-range and short-range targets. Strategies outline the actions that will be taken to work toward the goals in the next two to five years.

This document is organized into the following focus areas, described in more detail in Volume 1. The organization of these focus areas reflects the agency's internal management structure:

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

As described in Volume 1, the multiple goals and strategies of sustainability must be balanced against and complement each other.

Oregon's economic recovery will be aided by establishing a commitment to lasting solutions that simultaneously address economic, environmental and community well-being. We should not continue to trade one essential aspect of well-being off against another, but we should take actions that will sustain Oregon's assets and put Oregon on the path to long-term prosperity in all aspects of life.

Sustainability is doing business with an eye to the triple bottom line - economy, community and environment. Oregon state government must define sustainability, produce goals within state government to achieve sustainability, identify challenges to achieving sustainability and measure our performance based on sustainability.

- Oregon Governor Kulongoski, June 17, 2003, EO 03-03

### How Goals and Strategies Were Developed

The sustainability goals and strategies for ODOT's internal operations were developed through discussions among the Sustainability Program Manager, the program development consultant team, and the managers and staff of the affected areas. They reflect the sustainability plans of existing ODOT programs, policies, and plans, the Governor's executive orders and agenda, and state legislation. They are often a continuation or an enhancement of current ODOT practices.

The ODOT Sustainability Council reviewed and modified Volume 2's goals and strategies before they were sent to managers and staff throughout ODOT for review and comment. Comments were discussed at Council meetings and changes were made accordingly.

### The Goals

The goals are the roadmap to implementing sustainability throughout ODOT. Goals in this plan are specific to the focus areas and represent both long-term and short-term objectives.

Many of the goals reflect existing statewide goals such as the governor's energy efficiency goals, the Renewable Energy Action Plan goals, and the greenhouse gas reduction goals of ORS 468A.200-226. In other cases, ODOT managers developed the goals. Although the agency may not achieve every goal, simply by focusing attention on trying to achieve the goal, ODOT will move beyond what would have been achieved in a business-as-usual scenario.

### Strategies

Strategies focus on essential actions needed to reach the goals. The plan will primarily be implemented through these actions. Usually the strategies are oriented to actions to be taken in the next two to five years. More detailed actions are in current work plans or will be in future work plans.

Many of the strategies benefit more than just the focus area where they are listed. For example, the Land Use/Infrastructure strategy to locate major facilities easily accessible to a concentration of stores and restaurants benefits the Energy Use and Climate Change focus area. Employees would be able to walk, bicycle or perhaps use transit to reach stores and eating areas, using less gasoline and reducing greenhouse gas emissions. Sometimes strategies may not be appropriate for some employees because of the nature of their jobs; for example, some maintenance workers located in rural areas to care for rural highways are unable to access amenities without driving.

### Performance Measures

Performance measures ensure that ODOT's progress on sustainability can be measured over time.

Performance measures will allow ODOT to:

- Measure success
- Quantify progress toward the goals
- Recognize strategies that need improvement
- Be accountable to the public, Oregon Transportation Commission and the Oregon Legislature

Although every effort was made to select performance measures where information and performance measures exist, much of the data required to adequately measure ODOT's progress towards sustainability is not currently collected. New processes need to be put into place to gather these data. This will be one of the first steps in implementing the Sustainability Plan.

This document notes the current state of the performance measures with the following symbols:

- 1 = Data is currently collected and available
- 2 = Data is not currently collected but will be straightforward to initiate
- 3 = Data is not currently collected and will require some effort to initiate

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There are many difficulties inherent in data collection in a large, decentralized, and diverse organization. The scope of the organization – 4,700 employees spread all over the state, 2,500 motorized vehicles, more than a thousand buildings of many different types – means that identifying and aggregating relevant data can be a substantial challenge.

For example, ODOT uses many different waste haulers throughout the state. These vendors often differ in what client information and account information they gather. In addition, waste tonnage is not typically noted on bills. Often, a monthly rate is charged for a certain size dumpster regardless of how full it is at pick up. This makes data collection about waste generation challenging.

Some of the performance measures are part of work plans; others are new. This plan attempts to balance the desire for a comprehensive set of performance measures now with the realities of data collection. Because of changing circumstances and the ability to collect certain data, the performance measures themselves may change. Future versions of the Sustainability Plan will include updated performance measure standards once data streams have been set up and a baseline is established.

### Implementation and Lead Work Groups

Lead Work Groups are to implement the plan and track progress towards goals through the use of performance measures. These work groups are responsible for collecting data and for implementing best practices to ensure that goals are attained.

### The Business Side of Implementation

Sustainability planning requires an integrated systems approach to design and decision-making. This process should be integrated into the organization, adapting business systems and enhancing internal collaboration and communication. This approach will reward and encourage long-term thinking, innovation, creativity and recruitment and retention of employees. The intangible benefits of a sustainability program act as core value drivers to the organization, enhancing health and safety, and diversity.

Sustainability strategies can produce significant cost reductions. Recycling, waste and water reduction programs can reduce costs and carbon all along the supply chain. Energy efficiency improvements can represent an emissions-free energy resource. And increased efficiency in material use can create more value with less environmental impact.

Some strategies will reduce consumption, such as turning off computers and lights and double-sided printing. Some will have payback periods that are relatively short-term, such as new refrigerators and energy-efficient vehicles and facilities. Other strategies represent long-term changes that may be more difficult to implement and to calculate environmental savings, such as telecommuting and increased use of transit, walking and bicycling to work. Strategies involving energy efficiency may include opportunities to re-coup costs through grants and/or tax incentives.

The specific actions for implementing sustainability strategies and their budget impacts will vary from Region to Region and program to program. Each Region and program will need to consider the most cost-effective and appropriate means and timing for implementation. Recent experience in implementing sustainability strategies shows long-term savings if greater capital costs are invested in the short-term. For example, ODOT has proven success in lowering its energy bills by installing more-efficient lighting systems, like LED lights and induction lights.

### Definition of Major Facilities

When the term “major facility” is used in this document, it means any facility owned or leased by ODOT that is either: 1) an administrative, support services or maintenance building with 50 or more regular occupants, or 2) any rest area facility.

## FOCUS AREAS

The goals and strategies in Volume 2 are divided into seven focus areas. These are, in no priority order:

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

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. The goals and strategies in Volume 2 are directed at responsibilities, programs and activities related to ODOT's internal operations. The content of each focus area in Volume 2 reflects the agency's internal management structure.

### A Note about Project-Level Design and Construction

Noticeably missing from the focus areas is ODOT's project-level design and construction practices. ODOT constructs, maintains and improves roadways, bridges and multi-use paths. These activities require ODOT to work with a wide-range of stakeholders; therefore these activities are both internal and external to ODOT. Sustainability in project-level design and construction will be addressed in a separate, independent document. To the extent that project-level design and construction impacts the external operation of the transportation system, they will also be addressed in Volume 3.

focus area:

## Energy/Fuel Use and Climate Change

The State of Oregon is taking steps to address the twin goals of controlling climate change and solving the national problem of dependence on foreign oil.<sup>1</sup> ODOT recognizes that transportation sources in Oregon generate over a third of greenhouse gas emissions in the state and contribute to dependence on foreign oil.

ODOT is actively working toward reducing the amount of greenhouse gases emitted by its operations and the transportation sector by collaborating with others to develop innovative responses, minimizing energy use in facilities, increasing fuel efficiency and use of low carbon fuels in the fleet, and encouraging employees to reduce their commuting energy use.

This focus area is divided into the following sub-areas:

- (1.1) Greenhouse Gas Emissions
- (1.2) Building Energy Use (Electricity and Natural Gas)
- (1.3) Fleet Fuel Use
- (1.4) Employee Commute



## (1.1) GREENHOUSE GAS EMISSIONS

### Introduction

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ODOT is a major user of fuel and electric energy. Inherent in ODOT's operations is the release of greenhouse gases. To be sustainable, ODOT is rethinking the way fuel and electricity are used for its fleet and facilities. The agency is striving to reduce its greenhouse gas emissions by 1) reducing consumption of energy, and 2) using renewable energy or alternative fuels.

In 2007 the Oregon Legislature passed a statute to reduce greenhouse gas levels from 75 percent below 1990 levels by 2050. Under this directive, ODOT has taken major steps to reduce its energy used by fleet and facilities. For example, ODOT uses biofuels to run its fleet and is on target to meet the Governor's goal of 25 percent of energy used from renewable resources by 2025. Overall, the agency is on track to meet the Governor's goals for biofuel use and energy conservation.

### Key Successes and Current Activities

- ODOT's Fleet Section is leading the state in the use of biofuels for trucks.
- ODOT's Innovative Partnership Program is working with partners to prepare the infrastructure and signs for charging stations for electric plug-in cars over the next two to five years.
- A solar photovoltaic cell layout was installed on the new roof of Building Q to provide energy for that building and other buildings in the East Salem Compound.
- Two of ODOT's 2004 Toyota Prius vehicles were converted to 100 mpg electrical vehicles, one located on the East Salem Compound and one at Region 1. ODOT is tracking the efficiency and energy use of these vehicles.
- ODOT Financial Services is investing in more efficient appliances and computers as old appliances and computers need to be replaced.

### Lead Work Groups

- Support Services Branch - Facilities and Fleet Services Sections
- Office of Maintenance and Operations
- Financial Services Branch

### Long-Run Goal

1. Achieve greenhouse gas levels produced from energy used by ODOT's fleet and facilities that are 75 percent below 1990 levels by 2050.

### Short-Run (2012) Goals

1. Arrest growth in emissions from ODOT fleet and facilities by 2010 and reach 10 percent below 1990 levels by 2020.
2. Phase out the use of heating, ventilation, and air conditioning (HVAC) systems that contain high global warming potential refrigerants.

### Related Policy Mandates

House Bill 3543 (The Climate Change Integration Act) (now ORS 468A.205) created specific greenhouse gas emissions reduction goals for the state:

1. By 2010, arrest the growth of Oregon's greenhouse gas emissions and begin to reduce them.
2. By 2020, achieve greenhouse gas levels that are 10 percent below 1990 levels.
3. By 2050, achieve greenhouse gas levels that are at least 75 percent below 1990 levels.

OTP Strategy 4.1.2 encourages the development and use of technologies that reduce greenhouse gases.

### Strategies

- Collect data and work on best practices as directed in the DAS Greenhouse Gas Interagency Team report.<sup>2</sup> Explore options for purchasing green power to meet the Governor's mandate through all local utilities.
- Assess ODOT's carbon footprint from internal operations and measure progress on a yearly basis.
- Implement the strategies identified in other areas of this plan that would reduce greenhouse gas emissions.

**Performance Measure**

1. Total greenhouse gas emissions from ODOT’s building, energy, transportation and solid waste sources (see DAS Greenhouse Gas Emissions Interagency Team report). – 2

## (1.2) BUILDING ENERGY USE (ELECTRICITY AND NATURAL GAS)

**Introduction**

ODOT’s goal is to reduce energy consumed in the day-to-day operations of its facilities. ODOT has been actively working to implement Governor Kulongoski’s goal of reducing the energy consumption of state-owned buildings by 20 percent. ODOT is looking at ways of reducing consumption through use of energy-efficient technology and the reduction or re-use of materials.

In 2007 the Oregon Legislature passed HB 2620 which requires that public entities spend 1.5 percent of the total contract price of a public improvement contract for new construction or major renovation of a public building on solar energy technology. This legislation was incorporated into OAR 330-135-0010 to 330-135-0055. That same year the Oregon Department of Energy (DOE) requested all electrical, natural gas, and propane usage in the agency be entered into the DOE database.

In July 2008 DOE adopted rules (OAR 330, Div. 130) to implement Governor Kulongoski’s goal. The rules call for reducing the amount of energy used in existing buildings by at least 20 percent by 2015 from the amount used in 2000 and for minimizing energy use in new and renovated facilities designed and constructed by state agencies.

**Key Successes and Current Activities**

- ODOT changed internal utility billing and energy use tracking processes to allow more efficient reporting.
- Facilities Services is installing energy-efficient lighting, windows, insulation, thermostats, and white roofs to reduce energy costs in certain buildings when a replacement is needed.

**Lead Work Groups**

- Support Services Branch - Facilities Section
- Office of Maintenance and Operations
- Conservation and Alternative Resource Teams (CARTs)

**Long-Run Goals**

1. To meet the mandates, reduce electricity use of facilities 50 percent below 2000 levels.<sup>3</sup>
2. Meet 100 percent of total electricity needs at ODOT facilities by new renewable energy sources by 2025.<sup>4</sup>

**Short-Run (2012) Goals**

1. Reduce ODOT’s energy use 10 percent below 2000 levels by December 2010.
2. Reduce ODOT’s energy use 20 percent by 2015.
3. Meet 25 percent of total electricity needs at ODOT facilities by new renewable energy sources by 2010.<sup>5</sup>

**Related Policy Mandates**

ORS 276.900 states that “It is the policy of the State of Oregon that facilities to be constructed or purchased by authorized state agencies be designed, constructed, renovated and operated so as to minimize the use of nonrenewable energy resources and to serve as models of energy efficiency.”

OAR 330-130 prescribes procedures to minimize energy use in new and renovated facilities designed and constructed by state agencies; guidelines for implementing these procedures are given in the State Energy Efficient Design (SEED) Program Guidelines. According to the administrative rule, “to assure that the 20 percent energy use reduction by 2015 goal is met, interim energy reduction goals shall apply: (a) 10 percent reduction in energy use by a state agency by December 31, 2010; (b) 15 percent reduction in energy use by a state agency by December 31, 2012.”

Governor Kulongoski would like state agencies to purchase 100 percent of their energy from renewable sources by 2010.

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**Did you know?** ODOT is among the largest users of electricity within Oregon state government, using approximately 45 million kilowatt hours of electricity in its facilities in 2006.

**Strategies**

- Increase renewable power alternatives in electrical supply.
- Monitor and track ODOT’s energy use and report on it regularly.
- Institutionalize energy conservation as an agency practice to insure self-evident low cost or no cost activities are carried out by staff as routine practice.
- Retrofit existing buildings for energy conservation.
- Add white roofs using tax credits through power purchase agreements.
- Switch lighting fixtures to more efficient lights, reduce light levels where appropriate, and use day lighting and task lighting.
- Use standby modes in equipment and copiers.
- Develop management-supported building occupancy standards for heating and cooling.
- Generate energy on-site where appropriate.
- Use Energy Star equipment.<sup>7</sup>
- Enforce directives to turn off personal computers when required.

**Did you know?** Reducing state government energy consumption by 20 percent overall can reduce the average state government’s annual energy bills by as much as \$16 million and save nearly 1.2 trillion Btu<sup>6</sup> annually in energy use (ACEEE, 2003).

**Did you know?** Generating renewable power can lead to local job creation for state and local governments. For example, the manufacture, construction, installation, and maintenance of 1 megawatts of solar photovoltaics, which is sold as green power, requires and sustains 22 jobs (Apollo Alliance, 2007).

**Performance Measures**

1. Total electricity use (kWh) – 1
2. Renewable energy as percentage of electricity grid mix – 2

**(1.3) FLEET FUEL USE**

**Introduction**

ODOT’s Fleet Section is actively working to meet state goals for fuel efficiency and increase the use of alternate and low carbon fuels and sustainable transportation techniques to operate its 5,000 pieces of light fleet and heavy fleet equipment, including 3,339 motorized vehicles. ODOT continues to research and incorporate state-of-the-art technology in its fleet to make it more efficient.

**Key Successes and Current Activities**

ODOT’s Support Services Branch’s Fleet Section:

- Uses 24 percent of B-20 biodiesel in the fleet and is on track to maintain and exceed 25 percent B-20 usage by summer 2010.
- Replacing all petroleum powered trailer mounted variable message signs (VMS) with 100 percent solar/battery storage technology and light-emitting diode (LED) lamps.
- Installation of engine coolant cab heaters (Autotherm energy recovery system) in new and some older vehicles to draw heat from the engine’s coolant system, allowing the engine to shut down between shifts, lunch periods and breaks with the benefit of reduced idle time.
- Is replacing ODOT’s older light fleet with new high output, low emission diesel engine vehicles that average 44 mpg highway and will burn biodiesel.
- Added two 100 mpg plug-in electric vehicles (PHEV) to ODOT’s fleet in 2008.
- Installed two electric car charging stations, one in Salem and one in Portland, and is exploring the feasibility for expanding electric plug-in facilities.

- Scheduled ongoing presentations to internal staff on peak oil, new technology, use of alternative fuels, idle reduction efforts and proper tire inflation.
- Updated the policy and fleet manual on proper tire inflation and maintenance to reduce tire wear and fuel consumption and improve safety.

### Lead Work Groups

- Support Services Branch - Fleet Services and Facilities Sections
- Fleet Advisory Committee
- Office of Maintenance and Operations
- Financial Services Branch

### Long-Run Goals

1. Gasoline/ethanol: 25 percent of the gasoline used by the fleet vehicles will be E-85<sup>8</sup> by 2025.<sup>9</sup>
2. Biodiesel: 100 percent of the diesel used by state government's fleet vehicles will be B-20<sup>10</sup> by 2025.
3. Purchase biofuels that have a low-carbon lifecycle.
4. Incorporate electric vehicle technology and electric vehicles into the fleet.
5. Incorporate anti-idling technology into all of ODOT's trucks.

### Short-Run (2012) Goals

1. Gasoline/ethanol: Make 10 percent of gasoline used by fleet vehicles be E-85 by 2010.
2. Biodiesel: Make 25 percent of diesel used by fleet vehicles be B-20 by July 2010.
3. Have 50 percent of light-duty gasoline-powered vehicles<sup>11</sup> in ODOT's fleet use alternative fuel, be hybrid, or be best-in-class high-mileage vehicles.<sup>12</sup>
4. Prioritize biofuel purchases based on a life-cycle analysis or sustainability criteria.
5. Incorporate electric vehicle technology and electric vehicles into the fleet as the technology becomes available.
6. Use anti-idling technology in trucks when technically feasible.

### Related Policy Mandate(s)

Oregon's Renewable Energy Action Plan (REAP) mandates the following use of biofuels: 10 percent of the gasoline used by state government's fleet vehicles will be E-85 by 2010, increasing to 25 percent by 2025; 25 percent of the diesel used by state government's fleet vehicles will be B-20 by July 2010, increasing to 100 percent by 2025.

OTP Strategy 4.2.2 supports the conversion of fleets to more fuel-efficient and alternative fuel vehicles, especially those using renewable and cleaner fuels.

**Did you know?** ODOT has the highest transportation fuel use of any Oregon state agency, using 2.3 million gallons of diesel fuels (including biodiesel) and 1.2 million gallons of gasoline in 2006<sup>13</sup>. In fiscal year 2007, 13 percent of the diesel fuels ODOT purchased were B-20 biodiesel, meeting the REAP goal.

### Strategies

- Increase use of alternative fuels, taking into account life-cycle costs.
- Increase the use of hybrid and electric vehicles and equipment.
- Increase average fuel efficiency of the fleet.
- Carry out utilization studies to ensure size of fleet supply meets demand.
- Purchase and install idling reduction in trucks.
- Incorporate fuel efficiency operating techniques in new employee training for fleet users.
- Develop ways to incentivize fuel conservation at the crew manager or individual driver level.
- Switch out incandescent bulbs to LEDs on maintenance equipment such as arrow boards and variable message signs.
- Phase out diesel generators where alternatives (e.g. solar-powered equipment) exist.
- Minimize work-related travel and encourage practices such as teleconferencing and carpooling.
- Use car-sharing services such as "Zipcar" in Portland and other metro areas as feasible.
- Work with retail (i.e. non-bulk) suppliers to increase availability of biofuels.

Performance Measures

1. Total biodiesel use as percent of total diesel use – **1**
2. Total number of trucks using anti-idling technology –
3. Hybrid, best-in-class high-mileage vehicles, and gasoline vehicles using alternative fuels as percent of all light-duty gasoline-powered vehicles – **1**

**Did you know?** Generally, hybrid cars produce 80 percent less harmful pollutants and greenhouse gases than comparable gasoline cars (USDOE, 2004).

**(1.4) EMPLOYEE COMMUTE**

Introduction

The goal is to conserve energy and reduce the agency’s internal operations carbon footprint by driving single-occupancy vehicles less. ODOT encourages ODOT employees to take public transportation, bicycle or walk to work, carpool/vanpool, use highly fuel efficient vehicles and drive less, teleconference or work at home. Currently, like the general public, the majority of employees drive alone to work. The Governor’s Commuter Challenge found that telework and a compressed work-week are the most popular and desired forms of low-carbon commuting. ODOT should also make the use of teleconferencing, video conferencing and other technologies available and easy to use.

Key Successes and Current Activities

- ODOT embraced the 2008 Governor’s Commuter Challenge with robust publicity and participation, winning the large-agency competition handily.
- ODOT’s Virtual Private Network allows employees access to their files and e-mail from remote locations with an estimated 12 percent telework penetration rate (higher than the state’s all-agency average).

Lead Work Groups

- Human Resources
- Public Transit Division
- Communications Section

Long-Run Goals

1. In employee commutes, achieve greenhouse gas emission levels that are 10 percent below 1990 levels by 2020.
2. In employee commutes, achieve greenhouse gas emission levels that are at least 75 percent below 1990 levels by 2050.

Short-Run (2012) Goals

1. In employee commutes, arrest the growth of greenhouse gas emissions by 2010.
2. Increase employee use of public transit.
3. Increase the number of employees walking and bicycling to work.
4. Increase the number of employees carpooling and vanpooling.
5. Increase the amount of telework, when feasible and appropriate.
6. Support and promote the purchase of highly efficient cars by employees.

Related Policy Mandates

ODOT Policy PER 18 (Telecommuting) endorses telecommuting as a work option for selected employees; the policy states that “when appropriately applied, such practice can benefit both the Department and the employee in improved employee performance, enhanced employee morale, reduced commuting miles, and reduced air pollution and traffic congestion.”

OTP Strategy 2.1.1 promotes transportation demand management including van/carpools, parking management programs, telework, flexible work schedules, and use of transit service, bicycling and walking.

**Strategies**

- Develop a system of Employee Transportation Coordinators (ETC) or use Conservation and Alternative Resource Teams (CARTs) throughout the agency to encourage use of carpooling, public transit, walking, bicycling, and telework.
- Establish a baseline of travel information for ODOT employee commute, using a survey or other method.
- Work with DAS to reinitiate the free transit pass program for employees in Salem and Portland as soon as possible.
- Create measurable goals (e.g. percent mode split, VMT reduction, number of events held, etc.).
- Develop an education and outreach plan that gives specifics to the general strategies below.
- Educate human resource representatives on employee commute options.
- Provide employee commute options in all new employee orientation packets and presentations.
- Provide preferential parking for employees using carpools/vanpools, or high fuel efficiency, hybrid, low-emission (e.g., PZEV (partial zero emission vehicles)), and/or alternative fuel vehicles.
- Educate employees about the benefits they can receive under the “Bicycle Commuter Benefits Act.”
- Provide bike parking and shower facilities for staff.
- Encourage manager support for telework and support state-of-the-art technologies for employee use when working at home or meeting with staff at other facilities (e.g. video conferencing and similar technologies).

**Performance Measures**

1. Number of major facilities that have a minimum level of bike parking and shower facilities – 2
2. Percent of all employees with a transit pass – 2

**Did you know?** A typical household spends 18 percent of its income in driving costs – more than it spends on food (Bureau of Labor Statistics).

focus area:

# Material Resource Flows

Sustainability involves not only making facilities and vehicle use energy efficient, but also purchasing materials and equipment that are energy efficient and environmentally friendly, recycling and reusing them whenever possible, and finally selling or disposing of them in an environmentally-responsible manner. These are ODOT’s aims.

This focus area is divided into the following sub-areas:

- (2.1) Major Facility<sup>14</sup> Waste Minimization and Recycling
- (2.2) Office Supplies
- (2.3) Paper Use
- (2.4) Electronics and Computer Purchasing and Waste



## (2.1) MAJOR FACILITY WASTE MINIMIZATION AND RECYCLING

**Introduction**

ODOT’s operational assets including buildings, office furniture and equipment, and fleet equipment represent major public investment. When their useful life is over, they can be recycled, reused or sold to further utilize the materials or recover some of their value and keep them out of landfills. The Support Services Branch handles these recycling or disposal processes.

Key Successes and Current Activities

- Conservation and Alternative Resource Teams (CARTs) in major offices encourage recycling and re-source conservation.
- ODOT Support Services Fleet Section collects, transfers, and disposes of assets ranging from desks, office equipment and fleet equipment in coordination with DAS.
- When building repairs or construction are undertaken, all wood, metals, glass, plastics, roof pavers, and other materials are recycled or sold on eBay by Surplus Property.
- Since 1997 worn out tires have been disposed of/recycled through the vendor that has the statewide price agreement through DAS.
- Since 2000 salvageable aluminum signs have been stripped and reused. Scrap aluminum is sold to metal vendors.
- A Web page is available for all personnel to determine if any surplus equipment may meet the needs of another location in the state.
- ODOT Fleet Section recycles 100 percent of antifreeze and oil products.

Lead Work Groups

- Support Services Branch - Facilities and Fleet Services Sections
- Support Services Branch - ODOT Procurement Office

Long-Run Goal

1. Work toward achieving a 100 percent recycling or reuse rate from all major facilities (i.e. zero unusable or unrecyclable material generated from major facilities).

Short-Run (2012) Goals

1. Recycle 75 percent of total waste stream leaving major facilities including paper, bottles, cardboard, and glass.
2. Reduce total landfill waste volume by 10 percent annually through 2012.

Related Policy Mandates

ODOT Policy ADM 06-02 (Recycling) is aimed at achieving state recycling goals focused on conserving and protecting natural resources; the policy ensures that state-owned property and materials are reduced, reused, and then recycled as appropriate.

DAS Policy 107-011-010 (Resource Conservation) identifies resource conservation and cost saving measures and establishes guidelines to promote the practice of resource conservation including water, energy, recycling, and waste prevention. Although this policy only applies to DAS employees and facilities, it provides useful best practices for ODOT’s operations.

ORS 459A is the state law relating to materials’ reuse and recycling. Under the law ODOT must comply with DAS guidelines and rules for the generation and collection of solid waste.

Strategies

- Develop waste hauler contracts and performance criteria that incentivize recycling.
- Ensure that all possible paper, cardboard and plastics are recycled.
- At rest areas, provide convenient and easily identifiable recycling options.
- Actively promote recycling and communicate regularly with staff.
- Screen materials purchased for their ability to be recycled.
- Provide battery recycling in all major facilities.
- Send used toner cartridges back to their manufacturer or to local reuse merchants.
- Work with DAS to ensure that its statewide price agreements include low waste packaging and recyclable components where appropriate.

## (2.2) OFFICE SUPPLIES

### Introduction

ODOT's charge is to decrease the agency's overall carbon footprint. Reducing the number of office supply deliveries per building per week can contribute to accomplishing this goal. Where daily deliveries were being made, ODOT is now choosing a once or twice a week delivery schedule. This program is cutting overall carbon emissions from office supply delivery by approximately 80 percent. The agency is also reducing unnecessary waste by using reusable plastic totes to deliver supplies instead of cardboard boxes.

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Other sustainability criteria are important too—whether products have recycled content, are toxic, have excess packaging or are biodegradable. ODOT must work with DAS to develop sustainability criteria for office products and explore ways to expand environmentally preferred product options.

### Key Successes and Current Activities

- The entire Transportation Building, with five floors and many departmental sections, has agreed to a once a week supplies delivery and has switched to reusable totes. This will reduce carbon emissions from office supply delivery by approximately 80 percent from 18.096 tons a year to 3.608 tons. The reusable totes will reduce carton waste by 88 percent.
- The Mill Creek Building chose the once a week delivery option, reducing carbon emissions from office supply delivery by 8.54 tons a year to 1.71 tons, almost 80 percent.
- The DMV Headquarters chose the twice a week delivery option, reducing carbon emissions from office supply delivery by 19.7859 tons a year to 7.908 tons or 60 percent.
- Plans are to roll out this option for all major facilities that purchase considerable office supplies from the vendor on price agreement through DAS.

### Lead Work Group

- Support Services Branch - Procurement Office and Facilities Section

### Long-Run Goal

1. Achieve 100 percent participation by ODOT major facilities participating in a program to reduce carbon emissions and waste products from office supply acquisition and use by 60 percent or better.

### Related Policy Mandates

ODOT Policy ADM 06-02 (Recycling) states that ODOT purchasing policies shall “promote the use of products that produce the least amount of waste, have a high-recycled content, and are produced through environmentally sound methods; promote the use of biodegradable or durable and repairable products; create and sustain markets for environmentally sound products; take into account life-cycle costs and environmental impacts; reflect a preference for minimal packaging that can be returned to vendors, or can be recycled at no cost to the state.”

ORS 279A gives a “preference to the procurement of goods manufactured from recycled materials.”

### Short-Run (2012) Goal

1. Participate with DAS on selection of a new office supply vendor and include approaches to sustainability and recycled products.

### Strategies

- Organize ordering to allow for once or twice a week deliveries.
- Use reusable plastic totes for delivering supplies.
- Use local providers when possible.
- Work with ODOT buildings located near each other to use the same once or twice a week delivery schedule to further decrease carbon emissions.
- Work with DAS to designate environmentally preferred product criteria (e.g., recycled content, embodied energy, toxics content, packaging, recyclability, biodegradability, local suppliers, end-of-life issues, and adequate effectiveness for the task) for major office supplies and equipment product classes.
- Work with approved vendors to expand environmentally preferred product options.
- Provide on-line training to reduce the amount of paper used when doing in-person training.

Performance Measures

1. Recycling rate in major facilities – 3
2. Total waste volume from major facilities – 3

**(2.3) PAPER USE**

Introduction

The goal is to reduce waste and cost of paper by encouraging use of electronic means for files, letter transmittals, contracts, forms, and distributions of solicitation documents. When paper is needed, the goal is to use paper with recycled content, use it on both sides, and recycle it when its use is completed.

Key Successes and Current Activities

- Hard copies of job applications are scanned to save resources and printing, copying, and mailing costs.
- Business Services actively supports electronic records management and development of electronic forms, collaboration tools and workflow products, reducing dependency on paper records and forms.
- Electronic signature technology has been implemented to save paper.
- Procurement documents are now on the Web.
- ODOT’s Recycling Policy requires duplex capability in new printers and double-sided copying by default.
- Conservation and Alternative Resource Teams in major offices encourage double-sided printing and paper recycling.

Lead Work Group

- Support Services Branch - Procurement Office

Long-Run Goals

1. Reduce paper use by 50 percent by 2020 (over 2006 use).
2. Maintain or exceed the 90 percent weighted average post-consumer recycled content goal, and ensure that all paper meets sustainable paper criteria.

**Did you know?** The average U.S. office worker uses an estimated 10,000 sheets of copy paper each year. Depending on the manufacturing technology, making one sheet of paper can use more than 13 ounces of water. Paper production is the third most energy-intensive of all manufacturing industries, using 11.5 percent of all energy in the industrial sector.

Short-Run (2012) Goals

1. Reduce paper use by 20 percent by 2010 (over 2006).
2. Use 100 percent post-consumer recycled content wherever possible, resulting in a weighted average of at least 90 percent post-consumer recycled content.

Related Policy Mandates

ODOT Policy ADM 06-02 (Recycling) requires ODOT to promote the use of products with a high recycled content, to undertake two-sided copying and printing, to use technologies such as e-mail, voice-mail, and electronic publishing to reduce paper use, and to avoid the use of colored papers.

ORS 279A states that “no less than 35 percent of state agency procurements of paper products may be from recycled paper products.”

Strategies

- Develop sustainable paper criteria (i.e. post-consumer content, chlorine content, sustainably harvested wood, and low impact fiber).
- Promote a goal of using every piece of paper on both sides.
- Promote electronic archiving and retrieval of records.
- Encourage a culture of awareness around paper use.

- Maximize use of electronic media where effective and appropriate, including contracting and Requests for Proposals.
- Ensure widespread access to duplex printing and copying capabilities.
- Promote electronic bidding to prime contractors.

**Did you know?** 100 percent post-consumer recycled content paper currently costs about a dollar per ream more than 30 percent recycled content paper, but there is no significant difference between the cost of 30 percent recycled content paper and paper with no recycled content.<sup>15</sup>

### Performance Measures

1. Weighted average of post-consumer recycled content of paper purchases – **3**
2. Percentage of prime contractors using electronic bidding – **1**

## (2.4) ELECTRONICS AND COMPUTER PURCHASING AND WASTE

### Introduction

ODOT procures computers, laptops and related equipment from mandatory use state price agreements with a number of vendors; these agreements are executed by the DAS State Procurement Office. A requirement of the contracts is that all hardware meet specific sustainability certifications. The contractor's goods and services must help to minimize the environmental impact resulting from the use and disposal of the products. Such products, referred to as "Environmentally Preferable Products" (EPPs), include those which contain recycled content, conserve energy or water, minimize waste or reduce the amount of toxic material used and disposed of. The products must meet the most recent set of U.S. Environmental Protection Agency's and Department of Energy's Energy Star guidelines.

The state price agreements specify that the contractor must provide electronic products that minimize the use of toxic and hazardous constituents, and provide products that use recycled content and can easily be recycled.

### Key Successes and Current Activities

- All new purchases of desktops, laptops, and monitors are from DAS State Price Agreements.
- Used electronic equipment is disposed through surplus property and either wiped clean of information and resold or destroyed and recycled through a third party vendor.

#### Information Systems

- Purchases only liquid crystal display (LCD) monitors and has phased out use of monitors with cathode ray tubes.
- Has purchased Web conferencing software and on-line training modules.
- Is moving toward wireless networking in ODOT facilities.
- Is moving toward compliance with the DAS Electronic Waste (E-Waste) Policy.
- Monitors and adjusts ongoing personal computer (PC)/hardware life-cycle management processes to minimize total life-cycle impacts (energy, environmental, cost, maintenance).
- Participates in DAS-sponsored meetings to update PC and laptop configurations to ensure the most sustainable configurations are being placed in the ODOT environment.
- Meets with PC and laptop vendors to learn the latest energy saving changes being incorporated into products.

### Lead Work Group

- Information Systems Branch

### Long-Run Goals

1. Purchase only desktop and laptop computers that meet DAS standards as set forth in the price agreements.
2. Dispose of all information technology (IT) hardware according to industry best practices with maximum feasible recycling and reuse of components.

**Did you know?** A typical desktop computer requires a power supply of 65 to 250 watts, and computers take about 5 percent of electricity used in American offices (lighting uses 20 - 25 percent). Manufacturing a typical computer generates about 139 pounds of waste, of which 49 pounds is toxic. The process also produces 7,300 gallons of waste water and requires about 2,300 kWh of electricity. A typical desktop system with an LCD panel that is left on around the clock can easily consume over \$100 worth of power a year. This implies that over a four- or five-year system life, the capital cost of a typical system might be matched by the cost of the power it consumes.

**Short-Run (2012) Goals**

1. Inventory all existing desktop and laptop computers that do not meet EPEAT Silver standards<sup>16</sup>, and target them for replacement.
2. Dispose of all IT hardware according to the DAS Electronic Waste Policy.

**Related Policy Mandate**

DAS Policy 107-009-0050 (Electronic Waste) requires “all surplus and excess electronic equipment... to be disposed of by re-use, in its current form or by disassembly into usable components or elements, without entering any waste stream or compromising information security requirements” and also directs state agencies to “return the E-waste to any manufacturer or vendor meeting criteria for disposal of hardware and data or to DAS Surplus.”

**Strategies**

- Monitor and ensure compliance/alignment with the DAS E-Waste Policy.
- Explore additional options to improve handling of E-waste to include:
  - Vendor take-back opportunities for IT equipment
  - Sale to third party for verified use
  - Disposal through third parties whose recycling and disposal processes are certified and well-documented
- Continue to research and purchase equipment that is more durable and upgradeable and has longer useful life.
- Consider the feasibility of thin-client architecture.<sup>17</sup>

**Performance Measure**

1. Percent of desktops and laptops in use that meet DAS energy requirements in price agreements with vendors – **2**

focus area:

# Environmental Stewardship

This focus area goes to the heart of ODOT's responsibility and commitment to maintaining and operating the agency's facilities in a sustainable, environmentally-sensitive manner. ODOT's environmental stewardship includes protecting watersheds and landscapes from harmful chemicals and hazardous waste, reducing water use, and protecting air quality. It also includes protecting employees and the public from indoor air pollution.

The focus area is divided into the following sub-areas:

- (3.1) Site Landscaping and Stormwater at Major Facilities
- (3.2) Maintenance Yard Environmental Management
- (3.3) Hazardous Materials and Custodial and Landscape Chemicals Used in Major Facilities
- (3.4) Water Use at Major Facilities



## (3.1) SITE LANDSCAPING AND STORMWATER AT MAJOR FACILITIES

### Introduction

To be more sustainable, the goal for site landscaping at ODOT facilities is to use non-invasive and low-maintenance plants, with a preference for native plants. Choosing these plants will minimize water use, chemical use and energy used for maintenance needs such as mowing.

ODOT's goal is to minimize contaminants from ODOT facilities. With respect to stormwater, the Support Services Branch is currently working with Maintenance Districts to inventory all water sources, injection wells, and other sources to ensure that ODOT practices do not inadvertently damage the watersheds. Many wells or drains that were not designed to avoid leakage into the adjacent creeks, rivers, or watershed have been closed in order to minimize the amount of stormwater discharged into surface water and streams.

### Lead Work Groups

- Support Services Branch - Facilities Section
- Office of Maintenance and Operations
- Technical Services - Geo-Environmental

### Long-Run Goals

1. Landscape all new and existing major facilities with non-invasive and low-maintenance plants, with a preference for native plants, when feasible.
2. Treat 100 percent of stormwater from impervious surface at all major facilities if and before it enters nearby surface water and streams.
3. Reduce impacts to adjacent streams.
4. Develop and implement stormwater management plans for maintenance yards.

### Short-Run (2012) Goals

1. Employ specifications for all new major facilities requiring the planting of non-invasive and low-maintenance plants, with a preference for native species.
2. Work with the ODOT Vegetation Management Committee to identify criteria and opportunities to plant native species, non-invasive and low-maintenance plants at existing major facilities.
3. At new facilities with impervious surfaces, treat stormwater from impervious surfaces if and before it enters nearby surface water or streams.
4. Develop stormwater management plans for high priority maintenance yards.

**Related Policy Mandate**

ODOT Policy ADM 06-02 (Recycling) states that ODOT shall “Plan, build, and maintain buildings and grounds for least environmental impacts; Use vegetation and grounds practices that are environmentally sound; Employ environmentally sound pest management.”

**Strategies**

- Use native, non-invasive and low-maintenance plants in landscaping.
- Support or fund research on the most appropriate use of non-invasive and native plants at ODOT’s facilities.
- Identify high-priority yards for stormwater management plan creation.
- Identify stormwater that is not currently treated at major facilities, maintenance yards and parking lots.
- Use pervious or permeable concrete to reduce stormwater impacts, when feasible.

**Performance Measures**

1. Percentage of landscaping at all new major facilities with native or non-invasive plants – **3**
2. Percentage of run-off being treated at major facility paved parking surfaces before being discharged into a stream or surface water – **2**

**(3.2) MAINTENANCE YARD ENVIRONMENTAL MANAGEMENT**

**Introduction**

ODOT’s Maintenance Yard Environmental Management System (EMS) was initiated in 2004 to provide best management practices for the storage, use and handling, and disposal of all materials used and found at maintenance yards. The EMS is an extremely comprehensive management system for ODOT’s facilities and includes specific standards for the handling and storage of hazardous waste, in addition to solid waste and waste water.

ODOT’s Maintenance Spill Control and Containment Program provides safeguards to protect watersheds from accidental spills of fuels and other fluids as required by federal Environmental Protection Agency and state Department of Environmental Quality regulations. Many of ODOT’s maintenance yards have barrels of oil, other equipment fluids, and bulk tanks on the grounds to handle storage of various fuels to ensure that crews are able to do their work effectively. This efficiency comes with the added responsibility to ensure that all materials are safely stored to minimize damage from errors when filling equipment with fuel or damage from vandals.

**Key Successes and Current Activities**

- ODOT sections successfully implemented a program to bring all of ODOT’s maintenance yards into compliance with Clean Water Act and Safe Drinking Water Act requirements for managing oil and fuel, preventing and containing spills that might affect water supplies, and preventing, containing and cleaning up pollution that affects groundwater. They implemented the laws’ requirements at more than 50 maintenance yards in 18 months.
- The Salem Fleet Repair Shop was presented with a DEQ Pollution Prevention Excellence award for making environmentally friendly changes to its operations, particularly the use of lubricants and oils.

**Lead Work Groups**

- Office of Maintenance and Operations
- Support Services Branch - Fleet and Facilities Sections

**Long-Run Goals**

1. Fully implement the EMS standards at maintenance yards.
2. Update the EMS handbook on a regular basis to reflect new laws, regulations and policies.
3. Evaluate all products to ensure that products, tools, and equipment purchased by ODOT are sustainable.

**Short-Run (2012) Goal**

1. Ensure all maintenance yards are in compliance with the EMS standards for the seven priority procedures.

**Related Policy Mandate**

ODOT Policy MAI 31 (Environmental Management of ODOT Maintenance Facilities) sets up principles that guide the management of Department highway maintenance facilities toward improvements in environmental stewardship, sustainability, and compliance with state and federal laws.

**Strategies**

- Offer training programs to pertinent ODOT employees on the EMS.
- Encourage employees to take time to learn the EMS.
- Recognize and/or reward employees who successfully implement EMS.
- Identify systemic issues preventing compliance with EMS and identify resources to address them.

**Performance Measure**

1. Aggregate measure of number of maintenance yards in compliance with EMS – **3**

### **(3.3) HAZARDOUS MATERIALS AND CUSTODIAL AND LANDSCAPE CHEMICALS USED IN MAJOR FACILITIES**

**Introduction**

ODOT strives to reduce the use of hazardous chemicals and materials in major facilities, and persistent pesticides and herbicides on landscapes near major facilities. This includes the use of custodial chemicals and paints and finishes that are harmful to indoor air quality. When planning to remodel or construct new facilities, the agency examines air quality options, including the appropriate level of air exchange to ensure air quality and to ensure that air quality is a part of any eco-friendly design. To avoid using pesticides and herbicides, the agency uses alternative plantings and removal practices, such as hand weeding, wherever possible.

**Key Successes and Current Activities**

- An interagency agreement with the Department of Corrections has been re-issued to define the use of inmates on the transportation system and use of tools. Inmates have removed non-native, noxious weeds, and other vegetation around major facilities and on the transportation system.
- Major asbestos removal work has been completed at the Salem Truck Shop, various maintenance stations, Building A in Region 2 and the Transportation Building.
- The Fleet Section recycles used oil and antifreeze.

**Lead Work Groups**

- Support Services Branch - Office of Procurement and Facilities Section
- Office of Employee Safety and Risk
- Office of Maintenance and Operations
- Major facilities building managers

**Long-Run Goal**

1. Use products, materials, and application procedures that pose the least risk to humans and the environment to achieve the desired result.

**Short-Run (2012) Goals**

1. Track the amount of hazardous waste generated at each maintenance yard and truck shop, with the goals of reducing the amount generated each year at each major facility and maintaining conditionally exempt status under federal laws.
2. Use cleaning chemicals approved by Environmental Choice and Green Seal when feasible.
3. Identify hazardous materials at facilities that pose a serious risk to human health and take steps to eliminate those hazardous materials.

Strategies

- Create a process and system to track the amount of hazardous waste generated at maintenance sites and truck shops.
- Review Oregon DEQ and EPA’s risk assessments of hazardous chemicals on a regular basis, and modify chemical use accordingly.
- Educate employees about hazardous materials that are identified as posing an unacceptable risk to human health.
- Specify requirements for custodial and landscape chemicals in leased facilities contracts.
- Update ODOT custodial contracts based on current DAS custodial supply contract language.

Performance Measure

1. Amount of hazardous waste generated at each maintenance yard and truck shop each year – 1

**(3.4) WATER USE AT MAJOR FACILITIES**

Introduction

With Oregon’s increasing population, using water at the current rates is not sustainable. The implications for wasting water are costly. ODOT can help local communities cut costs and save resources by taking measures to reduce water use in buildings, landscape irrigation and rest areas.

Lead Work Group

- Support Services Branch - Facilities Section

Long-Run Goals

1. Use water in internal buildings at levels representing full implementation of low-flow fixtures.
2. Harvest rainwater for appropriate use as described in state law wherever cost-effective.

Short-Run (2012) Goals

1. Reduce water use 25 percent in major facilities over 2008 baseline.
2. Track water use at all major facilities.

Related Policy Mandates

ORS 184.423 states that “State operations should be conducted in ways that significantly increase the efficient use of...water.”

OTP Strategy 4.1.1 calls for practicing stewardship of air, land and water.

Strategies

- Use low-flow fixtures in new construction of all rest areas and major facilities.
- Switch out water fixtures in existing major facilities for low-flow alternatives where possible.
- Demonstrate water saving measures at rest areas as an educational and demonstration initiative, including waterless urinals, low-flow fixtures, and drip irrigation.
- Undertake rainwater harvesting pilot projects where appropriate.

Performance Measures

1. Total gallons of water used by a major facility – 3
2. Percent of rest areas participating in the water saving pilot initiative – 3

**Did you know?** Improvements in water efficiency in state facilities through metering and monitoring systems can decrease annual energy consumption by 10 percent (Watery, 2002).

focus area:

# Land Use and Infrastructure

When ODOT builds new facilities or remodels existing facilities, the agency can reduce its carbon footprint by reducing energy use and using sustainable materials. This includes both siting facilities so that they are easily accessible and developing facilities that meet low carbon and energy efficiency standards.

This focus area is divided into the following sub-areas:

- (4.1) Siting of Major Facilities<sup>18</sup>
- (4.2) High Performance Major Facilities

## (4.1) SITING OF MAJOR FACILITIES

### Introduction

New major facilities should be located in a manner that supports compact land use and encourages employees to reduce energy. State policy calls for siting state offices and other facilities when feasible in central business areas that are highly accessible to the public and that have pedestrian and transit services. Siting facilities in urban centers encourages the use of walking, bicycling and transit services by both ODOT staff and members of the public. ODOT's goal is to site major facilities in both large and small urban centers except when the operations of the facility, such as a maintenance station or rest area, are incompatible with the urban center. Maintenance stations, for example, involve dust, noise and 24-hour lighting that may be inappropriate for an urban setting.



### Key Successes and Current Activities

- ODOT's Region 1 headquarters building in Portland moved to an urban renewal area with walking, bicycle and transit access.

### Lead Work Group

- Support Services Branch - Facilities Section

### Long-Run Goal

1. Ensure that all major facilities, new and existing, except maintenance stations and rest areas meet the threshold for combined index<sup>19</sup> of access to consumer-focused business services and access to alternative modes.

### Short-Run (2012) Goal

1. Ensure that all new major facilities except maintenance stations and rest areas meet the threshold for combined index of access to consumer-focused business services and access to alternative modes.

### Related Policy Mandates

DAS Policy 125-6-115 (Facility Siting) states that "agencies shall...locate state offices, and other facilities, when feasible...in or surrounding the central business district of "cities," and the "capitol area"... or other areas which are designated as urban centers...and are highly accessible<sup>20</sup> to the public, have fully developed pedestrian circulation system(s), and have high quality transit service."

Executive Order 94-07 (Siting State Offices in Oregon's Community Centers) states in part, "State facilities, and state agencies' use of space, shall serve to strengthen Oregon's cities and their central districts by conserving existing urban resources, using existing infrastructure and services, and encouraging the development and redevelopment of central business districts and other mixed-use centers.

OTP Strategy 4.3.6 calls for considering the proximity and availability of public transportation when siting public facilities and services.

Strategies

- Locate major office facilities easily accessible to a concentration of stores, restaurants and businesses unless specifically exempted.
- Create two new indices to reflect access to consumer-focused business services and access to alternative modes.
- Use the new indices together as a combined index in evaluating options for leased facilities; incorporate it into the DAS “hot sheet” process involving leases for facilities over 10,000 square feet that go through a DAS Request for Proposal (RFP) process.
- Evaluate parking and transit subsidies provided to staff to ensure equity (e.g., if parking is provided at no charge, provide similar benefits to transit and bicycle users).

Performance Measure

1. Index of access to alternative modes (walking, biking and transit) from new major facilities – 3

**(4.2) HIGH PERFORMANCE MAJOR FACILITIES**

Introduction

ODOT recognizes optimizing its major facilities’ performance is essential to achieving economic and environmental benefits. Sustainability efforts are being integrated into the design of all new facilities and into major renovations. In addition to meeting the required SEED and LEED<sup>21</sup> guidelines, cost-effective innovative technologies are being investigated and incorporated into new and existing facilities. Total cost of occupancy is being considered, not just initial cost, when decisions are made on major systems and materials. Operating costs, including energy, maintenance, and replacement costs, are included in the life-cycle cost analysis.

Key Successes and Current Activities

- ODOT is targeting renovation of the Transportation Building in Salem for LEED Gold based on a cost-benefit study that showed a high performance environmentally-friendly design saved money over the building’s future lifetime.
- All new maintenance yards are built as high performance sites (LEED) that include stormwater sediment containment and oil separation. New yards utilize a variety of sustainable materials, have reduced energy consumption, and are designed to contain spills.
- New safety rest area designs target the use of low-flow toilets, sky-lighting and other energy reduction efforts. Designs also include pre-treating waste water through a filtering system to increase the life of drain fields.
- Two new replacement residences, located at Santiam Junction, were constructed to Energy Star and Energy Advantage specifications, including the kitchen equipment installed.

Lead Work Group

- Support Services Branch - Facilities Section

Long-Run Goal

1. Build/retrofit 100 percent of new and existing major facilities to meet certified LEED performance standards.

Short-Run (2012) Goal

1. Build 100 percent of new major facilities to meet high performance standards for air, water, and energy use.

Related Policy Mandate

DAS Policy 125-6-010 (Sustainable Facilities Standards) requires design to a Leadership in Energy and Environmental Design (LEED) Silver rating for all new state-owned buildings, and a LEED Certified rating for all major state-owned building renovations.

### Strategies

- Use LEED high-performance standards in constructing or renovating major facilities, unless specifically exempted.
- Explicitly use life-cycle cost analysis in construction and major renovation decisions.
- Consider requiring LEED high-performance criteria for major leased buildings in contract renewals.

### Performance Measure

1. Percent of non-exempt new major facilities that meet high-performance standards (LEED-EB, LEED-NC) or equivalent in accordance with other state agency criteria – **1**

focus area:

## Economic Health

ODOT's purchasing decisions can contribute to Oregon's economy when the agency buys locally or uses life-cycle costing for major expenditures, making the economy and the agency's economic health more sustainable. Purchases can also support products that are environmentally-responsible.

This focus area is divided into the following sub-areas:

- (5.1) Local Purchasing
- (5.2) Life-Cycle Costs

### (5.1) LOCAL PURCHASING

#### Introduction

ODOT has been reviewing ways to encourage purchasing locally to help with the economic health of Oregon. Current Oregon statutes will not allow state agencies to specify local purchasing only although ORS 279A gives a preference to goods or services that have been manufactured or produced in Oregon if price and other criteria are otherwise equal. ODOT has put together a Small Contracting Program which is geared towards working with the minority small businesses within Oregon for contracts under \$100,000.

ODOT also implements ORS 279 which obligates public bodies to buy from Qualified Rehabilitation Facilities when their products or services meet the requirements. State agencies can contract for a list of products and services. ODOT uses, for example:

- Local vendors who employ persons with disabilities, such as Garten Services for recycling and Step Forward Activities Inc. for printer cartridge procurement.
- Temporary services for additional staff to help on a project.
- Janitorial services to clean the ODOT-owned buildings including the DMV offices and depots.

#### Lead Work Group

- Support Services Branch - Procurement Office

#### Long-Run Goal

1. Make all purchases for internal operations where feasible meet criteria for being local.

#### Short-Run (2012) Goals

1. Establish a goal for ODOT on contracting out for the Small Contracting Program.
2. Establish the Small Contracting Program database, templates, and procedures and start tracking data for future goal setting.



**Related Policy Mandate**

ORS 279A gives a “preference to goods or services that have been manufactured or produced in this state if price, fitness, availability and quality are otherwise equal.”

**Strategies**

- Develop rigorous criteria for localness based on transportation impacts, remote production impacts, and local economic development.
- Identify local vendors.
- Work with local companies to incubate locally produced products.
- Establish a database that includes a pre-qualified list of vendors for a variety of disciplines.

**Performance Measure**

1. Percent of contracts let over the preceding year stating preference for local purchases – **3**

**(5.2) LIFE-CYCLE COSTS**

**Introduction**

Life-cycle cost is the total cost to the state of acquiring, operating, supporting, maintaining and (if applicable) disposing of items being acquired. For internal operations, ODOT uses life-cycle costs mainly for facilities’ construction and fleet purchases. Life-cycle costing should be considered on more types of procurements such as Information Technology hardware, cell phones, and office furniture.

**Key Success and Current Activities**

- ODOT undertook a comprehensive life-cycle cost-benefit analysis to determine the best approach for renovating the Transportation Building in Salem.
- Life-cycle costing has been used in purchasing fleet equipment.

**Lead Work Groups**

- Financial Services Branch - Cost Allocation
- Support Services Branch - Procurement Office

**Long-Run Goal**

1. Replace low bid contracting with best value life-cycle contracting, including deployment of comprehensive tools and training for purchasers and capital projects decision makers.

**Short-Run (2012) Goal**

1. Do a simple life-cycle cost evaluation for all capital expenditures over \$100,000. Continue the effort in fleet equipment purchases and add the value to IT hardware.

**Related Policy Mandates**

ORS 184.423 states that “Investments in facilities, equipment and durable goods should reflect the highest feasible efficiency and lowest life cycle costs.”

OTP Strategy 4.1.6 calls for using life-cycle costs in purchase of equipment and selection of materials.

**Strategies**

- Conduct life-cycle cost training.
- Develop simple and easy to use life-cycle cost tools.
- Develop more robust, comprehensive life-cycle cost tools.
- Look to other states that have life-cycle costing already in their process.

**Performance Measure**

1. Percent of expenditures over \$100,000 undergoing a simple life-cycle cost evaluation – **3**

focus area:

# Social Responsibility/ Workforce Well-Being and Development

25

ODOT must have a fully skilled, competent and diverse workforce to carry out its mission sustainably. As the number of retirements increase, ODOT must recruit employees with diverse backgrounds, retain the expertise of experienced employees, and develop employee skills to meet new challenges to the agency and the transportation system.

This focus area is divided into the following sub-areas:

- (6.1) Workforce Diversity
- (6.2) Employee Retention and Professional Development



## (6.1) WORKFORCE DIVERSITY

### Introduction

ODOT recognizes the economic, business and human rights value of diversity and actively pursues strategies for current employees, job applicants, and contractors to attain equity and equality in all employment and contractual opportunities offered by ODOT. It is good business sense and part of the agency's social responsibility. Due to the increasing number of retirements in the workforce, ODOT faces significant challenges to retain business and institutional knowledge and expertise within its ranks while at the same time recruiting new employees with diverse experiences and backgrounds that will enable ODOT to be a vibrant successful employer of choice. ODOT will continue to employ and develop positive, creative and innovative tools for recruiting, achieving and supporting a diverse workforce to sustain its ability to carry out its transportation mission.

### Key Successes and Current Activities

- ODOT's Diversity Council was created in 1999 to promote an understanding of diversity within ODOT and in the communities it serves.
- ODOT and the Department of Human Services are the primary sponsors of an annual Diversity Conference that in 2008 saw the participation of over 1500 state employees.
- ODOT has taken deliberate steps to reach out to students at Historically Black Colleges and Universities. Under the direction of ODOT's Office of Civil Rights, the Workforce Development Plan was designed to help build a diverse, skilled construction workforce to meet the needs of ODOT projects and the Oregon heavy-highway construction industry now and in the future. To support the plan, Regional Workforce Alliances were developed as a system for recruiting, training, supporting and retaining women and minorities in the construction trades.
- Internal training curriculum includes "Cultural Awareness" and "Respectful Workplace." ODOT continues to update and develop additional diversity-related training options.
- ODOT has created several internship and pipeline programs. The ODOT Internship Program is designed to allow students matriculating through an accredited post-secondary program the opportunity to gain practical experience.
- ODOT participates in national and regional career fairs that encourage transportation careers for women and minorities.
- ODOT acted to provide positions to areas that were only "one deep" in order to provide opportunities for advancement and succession planning.

### Lead Work Groups

- Human Resources Branch
- Diversity Council

Long-Run Goals

1. Move beyond number counting of protected classes to ensure a fully integrated and valued, diverse workforce for all “groups” – sustaining the workforce of tomorrow.
2. Achieve survey returns that indicate a positive working environment for all employees no matter how they define their diversity status.
3. Engage established affinity groups in welcoming and integrating new employees, regardless of their backgrounds, into their local work and social communities.

Short-Run (2012) Goal

1. Reach benchmark (parity) for federally-mandated protected classes based on county and statewide demographics.

Related Policy Mandates

ODOT Policy PER 09-04-01 (Diverse Workforce) states that “ODOT commits itself to deliberately achieve and maintain a diverse workforce that collectively values and benefits from respecting its diverse population, and promotes a culture of inclusiveness in all things and in all matters.”

ODOT Policy PER 01-04 (Equal Employment Opportunity / Affirmative Action) states that ODOT “shall value the principles of equal employment opportunities, affirmative action, and diversity...and shall proactively lead on issues of equality and diversity, and on the promotion of Equal Employment Opportunity and Affirmative Action.”

ODOT’s Affirmative Action Plan (July 2009-2011) summarizes the policies, tools, guidance, goals, and responsibilities relating to affirmative action within the agency.

Strategies

- Develop a plan for identifying diversity as a value to the agency through the commitment and initiative of the Oregon Transportation Commission (OTC) and the ODOT executive leadership team.
- Build a framework by which all agency employees can understand the intrinsic value that every individual brings to the workplace.
- Establish thresholds that encourage, support and promote on-going professional development tracks, increasing all employees’ depth and breadth of perspective.
- Support the work of the Diversity Council and Affirmative Action Plan goals.
- Continue and enhance those strategies and processes which encourage a variety of applicants to become a part of ODOT candidate pools, thereby ensuring a more diverse workforce for the agency.
- Partner with schools and universities to develop greater interest in math and science, thereby increasing potential for entry into technical and construction careers.

Performance Measure

1. Employment demographics compared to county and statewide demographics for protected classes – 1

**(6.2) EMPLOYEE RETENTION AND DEVELOPMENT**

Introduction

All organizations are faced with the challenges of retaining talent as competition continues to increase in virtually every skill set. Employees cite several key reasons for staying with an employer. The top reasons include recognition by top management, strong working relationship with a direct supervisor, being listened to and having ideas accepted, skill utilization, training and development, fair and equitable treatment, and clearly stated and understood expectations. The case for talent retention includes several factors, perhaps most importantly maintaining institutional knowledge, bolstering in-house training resources, long-term cost reduction to the taxpayer and mentor/internship program successes for new employees. Taking these factors into consideration has allowed the agency to assess its strengths and strategies for more aggressive retention outcomes over the next several biennia. By sustaining employment, ODOT inherently becomes more sustainable.

ODOT must provide opportunities for career development in order to have a fully-skilled and engaged workforce. The ODOT Workforce Development Policy identifies high-level training and development

opportunities and financial resources that encourage career development in state service. The Human Resources Branch and business lines use internal and external resources to provide ODOT employees much of the training needed to perform their present jobs and continuously improve efficiency and productivity. In addition to providing needs assessment, course design and development, delivery and training contract administration, Human Resources also provides a learning management system that is used department-wide for training administration, registration, record-keeping, and reporting.

### Lead Work Group

- Human Resources Branch

### Key Successes and Current Activities

- ODOT has published the Career Path Guides which provide general direction for several stages of career development activities in technically oriented disciplines.
- ODOT's Performance Appraisal Guide helps managers coach and develop employees, set goals, and evaluate performance.
- ODOT's Employee Development Plan encourages employee participation in learning activities that enhance current skills and develop tools that will increase abilities, job security and promotional opportunity.

### Long-Run Goals

1. Make key motivational factors such as compensation and pay, benefits, work environment, quality and quantity of work, career development opportunities, and related factors competitive with other public and private organizations.
2. Work toward providing 100 percent of employees the support and training they need to do their jobs and develop professionally.

### Short-Run (2012) Goals

1. At a minimum, maintain current levels of annualized turnover for key job functions and work to improve them.
2. Create additional training curricula and identify external sources for providing educational opportunities for employees' skill enhancement.
3. Further develop leadership skills in all agency employees, with a focus on the inclusion of workforce diversity.

### Strategies

- Conduct employee satisfaction assessments.
- Analyze key motivational factors of the younger (35 and under) workforce and neo-retired (55 and older) identified in employee satisfaction assessments, and support organizational changes required to address those factors.
- Ensure exit surveys are completed candidly with confidentiality guaranteed.
- Ensure supervisor/staff disputes are dealt with by an independent party in an effective and equitable manner.
- Provide recruitment and retention bonuses and other incentives as appropriate.
- Undertake succession planning for key job functions.
- Support alternate forms of accomplishing work including flexibility in time, location, and work structure.
- Meet the Oregon Progress Board benchmark of 50 percent of employees receiving at least 20 hours of training per year.
- Increase training and professional development opportunities for employees who do not work in the Salem-Portland area.
- Increase the use of training and development planning tools so that 50 percent of all employees have an individualized employee development plan in place.
- Aggressively engage management in competency training that includes successful strategies of management, inclusion and generational differences, and emphasizes retention issues to facilitate a strong employee/supervisor bond and a welcoming and open work environment.
- Undertake succession planning for key job functions and provide training resources that ensure knowledge transfer and the sustainability of business knowledge and best practices.

- Support successful mentoring efforts by developing and publishing guidelines for mentors and protégées.
- Develop and leverage partnerships with other agencies and educational institutions to maximize training courses offered and to reduce duplication of offerings.
- Support and develop goals for individualized employee development plans.

Performance Measure

1. Percent of non-seasonal employees leaving the agency with less than five years of service – 2

Related Policy Mandate

ODOT Policy PER 14-04-01 (Workforce Development) outlines the resources available to employees to assist with performing the duties of their current position and to encourage their career development in state service.

focus area:

# Health and Safety



To carry out its responsibilities, ODOT needs a healthy workforce. Its employees, in return, need to be able to rely on a safe work environment that continuously reduces risk of injury. These are the basis for maintaining a sustainable workforce.

This focus area is divided into the following sub-areas:

- (7.1) Employee Safety
- (7.2) Employee Wellness

## (7.1) EMPLOYEE SAFETY

Introduction

The Highway Division Employee Safety program has been in existence since the early 1950s, and the current department-wide safety and health program (Office of Employee Safety) since the 1980s; it was recently expanded to include the Office of Employee Safety and Risk to align with the DAS Risk Program. The program includes a safety policy, established safety programs, standards, and advisories. Division and Region Safety Action Plans identify specific activities and expectations related to safety, health, and risk management. The Sustainability Plan aims to enhance and further these programs.

One important element of employee safety throughout ODOT is ergonomics. The goal of ergonomics is to design the work task and the environment to fit the worker in order to avoid awkward body postures, such as over-reaching, and repetitive work. These place the worker at risk of injury.

Key Successes and Current Activities

In 2008 the ODOT Office of Employee Safety and Region Safety Manager:

- Developed the 2009 Safety Calendar as an educational tool.
- Developed a health promotion program.
- Developed an improved defensive driver training program.
- Coordinated train-the-trainer sessions for 11 safety classes with over 50 participants from throughout ODOT.
- Educated employees on occupational safety, occupational health and wellness topics.
- Conducted 20 indoor air quality and five other industrial hygiene studies.

### Lead Work Group

- Office of Employee Safety and Risk

### Long-Run Goal

1. Work towards having zero injuries on the job.

### Short-Run (2012) Goal

1. Work towards achieving annual goals developed by the Safety Leadership Team to reduce injuries and risk exposures.

### Related Policy Mandate

ODOT Policy PER 05 (Occupational Safety and Health) states that ODOT “is committed to a safe and healthy workplace through continuous improvement efforts in accident prevention, education, equipment maintenance, and compliance with all state and federal regulations.”

### Strategies

- Make available the Department of Administrative Services (DAS) management self-assessment tool used for the Statewide Safety and Wellness Initiative.
- Continue to set annual goals in the ODOT Employee Safety Plan.
- Support each division’s Safety Action Plans and provide regular review and updates.
- Conduct follow-up to Washington State University safety and wellness survey.
- Give all new employees an ergonomic assessment.
- Purchase equipment that addresses risk factors, attempting to recycle equipment that is fully serviceable and meets current ergonomic standards or using alternative products.
- Use a partnership of Central Services Division personnel, such as Information Systems, Facilities, ODOT Procurement Office, and the Office of Employee Safety and Risk when considering new computer equipment, and when constructing or remodeling facilities which will result in changes to employee workstations and lighting.

### Performance Measure

1. Total number of time loss claims per 100 positions – **1**

**Did you know?** According to the Bureau of Labor Statistics data, every year, more than one million members of the U.S. workforce experience a work-related back injury. This equates to approximately 25 percent of all work-related injuries and worker’s compensation claims being back injuries

## (7.2) EMPLOYEE WELLNESS

### Introduction

Employee wellness programs are a key part of making ODOT sustainable by ensuring that its workforce is healthy. Employee health and general well-being affect both job satisfaction and job productivity. At this time ODOT does not have a dedicated FTE, however the Safety Leadership Team (SLT) is working to incorporate wellness into its work. ODOT’s goal is to provide a robust wellness program to offer employees opportunities to significantly improve their health and well-being which in the long run will result in fewer worker injuries and illnesses and improved morale in the workplace.

### Key Success and Current Activities

- Safety Leadership Team adopted the promotion of employee wellness as part of their work.
- ODOT has a webpage dedicated to employee wellness
- ODOT subscribes to and distributes a Wellness Council of America newsletter to employees.

### Lead Work Group

- Office of Employee Safety and Risk

### Long-Run Goal

1. Work toward achieving and maintaining a healthy workforce.

30

### Short-Run Goals (2012)

1. Provide information, education, tools, encouragement and support on health and wellness to each ODOT employee.
2. Implement wellness initiatives and resources agency-wide.
3. Ensure employees in the rural areas of the state have access to health screening opportunities.

### Strategies

- Maintain a written ODOT Health Promotion Program Guidelines.
- Maintain an informative Intranet wellness page.
- Develop a survey to measure employee wellness and employee satisfaction with the wellness program.
- Support and facilitate Public Employees Benefit Board (PEBB) health screenings and flu shot clinics. Encourage ODOT employee participation in PEBB-sponsored events and initiatives.
- Seek vendors who provide healthy snack alternatives to conventional vending machine offerings.
- Encourage employee participation in fitness and wellness activities.
- Promote healthy lifestyle choices by making available educational material and opportunities.
- Work with Division and Region Safety and Wellness Committees to establish local wellness promotion activities and measures.
- Research cost-effective screening options for employees in rural areas where PEBB does not offer health screenings or health practitioners are limited.

## PLAN IMPLEMENTATION

Successful implementation of the goals and strategies of this volume of the Sustainability Plan depends on revision of management practices and the actions of ODOT's employees at all levels. While some actions depend on policy and budget choices that the executive staff and managers make, others depend on the attitudes and daily actions of staff.

At the policy level, ODOT already participates on interagency task forces and develops agency responses to sustainability and climate change issues through internal interdisciplinary task forces. ODOT participated in the Governor's Climate Change Integration Group and provides input to the Oregon Global Warming Commission as well as to other interagency initiatives. ODOT's Climate Change Executive Group of senior executive staff provides overall direction to the interrelationship of greenhouse gas production, global climate change and the planning and operation of Oregon's transportation systems. The Climate Change Technical Advisory Committee is developing an understanding of the implications of climate change initiatives to the agency; it provides technical advice regarding the interrelationship of greenhouse gas production, global climate change and the planning and operation of Oregon's transportation system, as well as the potential impacts of climate change on transportation infrastructure.

At the staff level, ODOT staff members continue efforts to incorporate sustainability daily and can increase them by turning off computers as required, reducing paper use, considering sustainability issues when making all purchases, driving fuel-efficient vehicles, recycling, reusing and finding other sustainable ways to carry out agency responsibilities.

Some of the plan's strategies are already a part of doing business at the agency, but others may require a cultural change. Those actions already being implemented are apparent in the Key Successes and Current Activities section under each Focus Area. To affect additional cultural change at ODOT, the plan requires (1) the use of sustainability values in agency decision-making, (2) increased education, training and communication about sustainability, and (3) biennial work plans to implement the plan's goals and strategies.

To ensure that sustainability is a part of doing business at ODOT, the Sustainability Council recommends that sustainability be added to the list of ODOT values that guide decision-making and be distributed broadly throughout the agency. The PLUS model decision-making tool should also include sustainability. Draft internal policies on Green Facilities and Green Office Practices that complement and implement goals in Volume 2 should be completed and adopted.

The ODOT Sustainability Program Manager should undertake various activities to communicate the importance of sustainability and methods for implementing the goals and strategies of the plan. These activities should include educational brownbag and training sessions, articles in agency publications, provision of resources through a Web site, presentations by experts, work with Region-based sustainability teams, and regular communications with managers and staff.

Under the direction of the Sustainability Plan Implementation Manager (the ODOT Support Services Branch Manager), managers responsible for overseeing specific sub-areas of Volume 2 should develop biennial work plans to implement the strategies. These work plans should include methods for collecting data for performance measures and tracking them.

Additional Conservation and Alternative Resource Teams (CARTs) should be formed to encourage change in the workplace. CARTs, small "green teams" of interested employees at major ODOT offices, can help educate employees about work-related conservation efforts such as recycling, energy saving and commuting options. The agency's Driving Force Award on the Environmental Value should be expanded to include awards on sustainability innovations.

## NOTES AND REFERENCES

- 1 Climate Change Integration Act. ORS 468A.205. More recently, in the 2009 Oregon Legislative Session, see HB 2186 (Low Carbon Fuel Standard and Metropolitan Planning Organization Greenhouse Gas Task Force on Transportation Land Use).
- 2 Department of Administrative Services Interagency Team Report, *Greenhouse Gas Emissions of State Operations: State of Oregon 2008*.
- 3 The first baseline year that total agency electrical use data (buildings, maintenance yards, rest areas, highway lighting, signals, ramp meters, tunnel lighting, bridges, weigh station equipment, etc.) are available is 2005.
- 4 This goal is from the Renewable Energy Action Plan (REAP).
- 5 This goal is from the Renewable Energy Action Plan (REAP).
- 6 All combustible materials have a BTU rating. For instance, propane has about 15,000 BTUs per pound and wood (dry) has about 7,000 BTUs per pound.
- 7 Energy Star is a U.S. Environmental Protection Agency and U.S. Department of Energy joint program to promote energy-efficient products and practices to reduce greenhouse gas emissions. The Energy Star label is on more than 50 product categories for home and office.
- 8 E-85 is a fuel blend of 85 percent ethanol and 15 percent gasoline.
- 9 These goals are from the Renewable Energy Action Plan. REAP goals apply to the entire state fleet and not to individual agencies. While ODOT will likely easily meet the biodiesel goal, the ethanol goal will likely be met only in combination with other agencies' use.
- 10 B-20 is a fuel blend of 20 percent biodiesel and 80 percent petroleum.
- 11 "Light-duty gasoline powered vehicles" is defined as passenger cars and vans, SUVs, and pickups under 3/4-ton.
- 12 To qualify as "best-in-class high-mileage" for these purposes, a vehicle must be among the top three vehicles in its size class according to EPA's [www.fueleconomy.com](http://www.fueleconomy.com) Web site.
- 13 Greenhouse Gas Emissions Interagency Team Report, August 2007.
- 14 "Major facility" means any ODOT-owned or leased office, administrative or maintenance building with 50 or more regular occupants, or any rest area bathroom facility.
- 15 2007 OfficeMax Office Products Catalog and list price as of September 2007.
- 16 Electronic Products Environmental Assessment Tool (EPEAT) is a procurement tool designed to help institutional purchasers evaluate, compare, and select desktop computers, laptops, and monitors based upon their environmental attributes. EPEAT Silver computers meet higher standards than the basic Bronze level.
- 17 The thin client is a PC with less of everything. In a thin client/server system, the only software that is installed on the thin client is the user interface, certain frequently used applications, and a networked operating system. Its low power consumption saves energy.
- 18 "Major facility" means any ODOT-owned or leased office, administrative or maintenance building with 50 or more regular occupants, or any rest area.
- 19 The combined index needs to be developed.
- 20 DAS Policy 125-6-115 defines "highly accessible" as "access connects the area in multiple directions to existing or planned concentrations of development, is available by multiple modes, is more direct than circuitous, and is evaluated from the perspective of the parties developing the greatest number of trips."
- 21 LEED is the Leadership in Energy and Environmental Design standards from the U.S. Green Building Council. SEED is the State Energy Efficiency Design program administered by the Oregon Department of Energy.



