



Nature

HISTORY

Discovery

Oregon Parks and Recreation Department



FRAMEWORK FOR A SUSTAINABLE FUTURE

Written in Partnership with Good Company, Eugene.



December 12, 2002



Oregon

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To: OPRD Staff

Our Commission and the Department has adopted a goal to achieve sustainability in our operations, development and business practices by the year 2014. This objective is expressed in Goal 2 of Target 2014.

Framework for a Sustainable Future lays the groundwork for achieving that objective. It helps us understand what sustainability is and provides some ideas on policy, approach and practice that will guide us toward the future. It is not prescriptive; but, it does provide some examples that should stir our thinking and cause us to look at our business, operational, development and resource management practices in a different light and cause us to adopt practices that use, develop and protect resources in a sustainable manner.

Achieving sustainability will require a commitment from each of us as well as many of our stakeholders. It will require some of us to become champions to give life to good ideas and, it will require a comprehensive approach guided by these principles. We shouldn't expect to see all the answers in a list or chart; innovation will lead success.

This *Framework* provides us with a place to begin our efforts. Logical next steps include adoption of these ideas and others into our way of doing business and the establishment of performance measures and benchmarks to measure our progress.

OPRD has already embraced sustainability and has been recognized as a leader in Oregon state government. With your continuing commitment, we will be at the forefront of creating a sustainable future.

Michael Carrier
Director

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Oregon Parks and Recreation Department FRAMEWORK FOR A SUSTAINABLE FUTURE

Executive Summary

The activities of the human race have been out of balance with the planet's constraints. Our activities not only challenge the health and survival of ecosystems, they also challenge the health and survival of humans as well. The systemic problems in our economy and society are now widely recognized, and there is growing consensus that we need clear frameworks, commitments and plans for action.

Many individuals and institutions are seeking ways to take action, and Oregon is at the forefront of this search. This document is Oregon Parks and Recreation Department's first step toward describing principles and steps for action.

The document is arranged as follows:

<p>I. Movement Toward Sustainability in Oregon</p> 	<p>The first section below describes how OPRD and the Oregon state government have committed to clear ideals of sustainability. We also present a definition of sustainability that is now in common use. This legal backdrop is important because it shows the level of consensus in the state to understanding and acting on these major challenges.</p>
<p>II. Principles of Sustainability for OPRD</p> 	<p>The second section moves beyond the standard definition of sustainability by articulating more specific principles of sustainability. These principles and their corollaries, which draw on innovative and leading-edge efforts elsewhere, represent OPRD's attempt to move from the vague definition to operational principles. This section also describes the key stakeholders in OPRD's spheres of influence and concern.</p>
<p>III. Sustainability Objectives</p> 	<p>This section goes to the next layer of depth by describing the areas for thinking and action throughout OPRD's infrastructure and organization.</p> <p>This section does not provide specific guidance for every possible facet of OPRD's work. Instead, it operationalizes the principles and gives illustrative examples.</p>
<p>IV. Three-year Action Plan</p>	<p>The final section provides immediate action items and areas for action for the near future.</p>

This document concludes with a glossary of terms and a list of references.

I. Movement Toward Sustainability in Oregon



For many people in our state and in the world, nature is thought to be a part of something that is greater than and exclusive from us as humans. The protected natural area that has minimal resemblance to the constructed world of humans is the place where we come to enjoy and learn about the cycles of nature and renew our spirit. For that reason, Oregon Parks and Recreation Department has a clear role in demonstrating to and educating the visitors about how their actions impact nature. It is particularly important to teach visitors to see the long-term effects of their activities.

For some, the long-term perspective is the foundation of what people call sustainability. This theme is demonstrated in the mission of OPRD and the official mandates from Oregon state government. Note the reference to multiple generations in each statement:

OPRD Mission

Provide and protect outstanding natural, scenic, cultural, historic and recreational sites for the enjoyment and education of *present and future generations*.

Governor Kitzhaber's Executive Order (EO-00-07)

Sustainability means using, developing and protecting resources at a rate and in a manner that enables people to *meet their current needs and also provides that future generations can meet their own needs*. Sustainability requires simultaneously meeting environmental, economic and community needs.

The Oregon Sustainability Act (HB 3948)

'Sustainability' means using, developing and protecting resources at a rate and in a manner that enables people to *meet their current needs and also provides that future generations can meet their own needs*, from the joint perspective of environmental, economic and community objectives.

Department of Administrative Services Policy on Sustainable Facilities and Guidelines (#125-6-010)

Using resources in a way and at a rate that allows people *to meet their needs and future generations to also meet theirs*. It also means meeting environmental, economic, and community needs.

While it is important that OPRD educate the public about the enduring effects of our decisions for and on nature, it is important to remember that all of our budget and work practices not only affect the environment, but in fact, are a subset of nature. For that reason, OPRD must begin the process of educating ourselves and doing the best with the tools, minds and resources we have.

II. Sustainability for Parks: Guiding Principles

There are many ways to describe sustainability. The definitions that Oregon state government is using not only acknowledge areas of balance between current and future generations, but also among environmental, economic, and human needs. Unfortunately, these short definitions do not go far enough. They do not readily prescribe functional solutions for an organization’s functions. The following principles provide a starting point for the more specific objectives described in the next section.

These principles are not a technical or scientific description of everything that needs to happen to have sustainability. Instead, the goal is to describe the principles of a sustainable world in ways that provide a stepping-stone toward understanding better practices for OPRD. In particular, the goal is to have a list of principles that employees look to for inspiration, and which other stakeholders can use to understand how OPRD is striving toward sustainability.

PRINCIPLE 1: RESOURCE & MATERIALS USE

<p>Zero Waste</p>	<p>Nature has no waste! A process in the living world may produce wastes – but only “waste” from the standpoint of that plant or animal, since it is always usable in or by another part of the ecosystem. Ultimately, the waste of one process is food for another.</p> <p>Humans have, unfortunately, learned to be different. However, OPRD, inspired by the successes of leading businesses and institutions in “unlearning” habits of waste, believes that major progress toward zero waste is possible with techniques and systems that reduce or eliminate waste, facilitate recycling, and rethink the use of materials. In short, we need to close the loop of inputs & outputs.</p>
<p>Zero Hazardous Substances</p>	<p>In nature, many toxins (such as heavy metals) lie buried in the earth and largely outside of biological cycles. Many biological chemicals and poisons exist, but for specific biological purposes rather than persistent, unintended consequences. Human synthetic chemical use has, by contrast, become pervasive and sloppy, often with devastating effects on human and ecosystem health.</p> <p>The use of “zero hazardous substances” as a principle demonstrates a commitment to finding and using better techniques and materials to follow nature’s lead in the judicious and targeted use of chemicals.</p>
<p>Climate Neutrality</p>	<p>Climate change is one of the greatest environmental challenges for humankind. Although it is of global significance, virtually all human activities at all scales contribute to it when they consume fuel or energy. This means that any organization should have a strategy for reducing its climate impact.</p> <p>OPRD’s operations have large on-going needs in the areas of transportation and on-site energy use, which (as they are currently practiced) are both major producers of green house gasses (GHG)</p>

PRINCIPLE 2: BALANCE WITH LIVING SYSTEMS

<p>Enhance Ecosystem Functions</p>	<p>OPRD is both a steward of the ecosystems that host its parks, and a bridge between visitors and those ecosystems. This gives OPRD a great responsibility and opportunity. Sustainability for these ecosystems (and therefore for the services they provide for visitors) requires long-term management, development and operational practices that support ecosystem needs.</p>
<p>Separate & Appropriate Use</p>	<p>Part of a sophisticated sustainability approach is to acknowledge what a certain ecosystem requires for its health, and therefore which human uses are consistent with that long-term health...It's not just "what" uses are appropriate, but also "where" and "how" they can be appropriately allowed, or provided for.</p>

PRINCIPLE 3: LEARNING AND INFORMATION SYSTEMS

<p>Life-Cycle Thinking</p>	<p>A methodology for understanding the complete impacts of products is important. OPRD will strive to incorporate a life-cycle approach to activities with environmental impacts, just as it currently views its budget and facilities issues in life-cycle terms.</p> <p>For products, this means looking at production, distribution, use, reduction and disposal/recycling. For buildings, this means considering embodied impacts side by side with operating impacts over useful life, as well as disposal and/or recycling. Material selection will need to be made based on several environmental factors such as the use effect on natural resources, the ability to recycle these materials, the effect on the environment due to production/transportation, etc, and the effect on the environment as a result of final disposal.</p>
<p>Separate & Appropriate Use</p>	<p>Part of sustainability is to acknowledge what a certain ecosystem requires for its health – and therefore what human uses are consistent with that long-term health.</p> <p>OPRD will seek to understand the ecosystems in which it operates, and to encourage this understanding in park visitors. Over time, effective education will build appropriate expectations in park users.</p>
<p>Information Sharing With All Stakeholders</p>	<p>Part of any enduring system is a process for gathering and disseminating new information. This means acknowledging that things change, and that there are many different stakeholders to learn from and give information to.</p> <p>OPRD is part of a complex web – not just with natural systems, but with diverse stakeholders, including citizens, government agencies, and suppliers (see accompanying diagram on the next page), Achieving sustainable performance will require sharing practices and continual learning and improvement through effective communication.</p>

STAKEHOLDERS & SPHERES OF CONTROL

In Target 2014, Goal Two states, "...the Department will be a model of natural resource conservation by balancing the needs of today's visitors with sound resource management." This goal clearly acknowledges two spheres of control for OPRD. To *be a model* means to demonstrate with our planning, development, operation and maintenance of our parks / offices what can be done. In everything we do, we have at least some degree of autonomy to improve our performance. Internally, we must both educate our entire workforce and grant permission and freedom to employees to pilot new methods for resource conservation.

The second part of the goal highlights a dynamic part of OPRD's environmental impacts: those with shared control. Serving the needs (or wants) of today's visitors may not always be congruent with sound resource management. In circumstances where the visitors' impacts are significant, there must be ongoing education and guidance toward better practices. Of course, visitors are not the only stakeholders we share control with. Other stakeholders include the flora and fauna of the parks, our suppliers, friends groups, volunteers, advocacy groups, and the huge number of other agencies including federal, state, county, and local governments. The most important thing to remember is that moving towards sustainability involves a culture of ongoing improvement and communication with all the stakeholders.

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The diagram above shows the main groups of stakeholders that OPRD must consider. Each of these groups represents challenges and opportunities in the organization's movement toward sustainability.

III. What Will Sustainability Look Like? 2014 Objectives

PARKS AND FACILITIES

Our visitors' joy from the beauty and lessons of the natural world and our cultural heritage is the reason we pursue sustainability. Simultaneously, we are faced with the obvious challenge of managing the impact of 39.5 million annual (joyful) visits. With field employees and volunteers numbering well below 700, it would be easy to get discouraged. Nevertheless, it remains a fact that the daily operations and planning for parks is largely controlled by the OPRD staff, and that, in turn, shapes the experience and impacts of the visitors.

RESOURCE & MATERIALS USE

Waste Elimination

Waste in the field, whether generated by visitors or OPRD personnel should be eliminated to the fullest extent possible. Through the extended use of recycling systems, compost systems and careful water and sewage management, landfill waste charges can be reduced to almost zero. All waste receptacles should be consolidated into one central recycling and compost area on the way out of the parks. Food waste as well as grass clippings and other organic debris should be managed onsite and used as a soil amendment for high use planted areas such as turf areas. When restoring or renovating any part of the built environment of the parks, assess existing structures for reuse or enhancement. If that's not feasible, extra time and space should be made for the deconstruction and reuse of valuable materials. For water, the first step is to reduce the use of potable water for any use other than ingestion. This will happen through the metering of water in the lavatories and phasing out of water intensive toilets and urinals. During the design process – materials chosen for water system storage/conveyance and waste water system storage/conveyance must be durable, leak proof and with the longest economically achievable design life.

WASTE ELIMINATION EXAMPLES

- Adaptive reuse of buildings and structures
- Deconstruction to extract high value materials
- Look to Ft. Stevens as a model recycling program
- Composting is widely used for turf in parks leaving cuttings on lawn when frequently cut or bagged and composted as a future topdressing
- Waterless urinals
- Composting or Gray water toilets (Lobby DEQ)
- Low flow and timed metered faucets and shower heads
- Irrigate with gray water when possible (Lobby DEQ)
- Reuse high value materials
- Extend existing building life, by using long life expectancy building materials
- Audit/maintain water system integrity
- Zero leakage, long life expectancy water and wastewater systems design

SAMPLE HAZARDOUS SUBSTANCE ELIMINATION TECHNIQUES

- No Toxic Release Inventory chemicals
- Use citric acid based disinfectants
- Eliminate use of products in aerosol cans
- Buy cleaning products in bulk and reuse containers
- Paint will meet or exceed California VOC regulations with prevalent use of recycled paint.
- Cleaning of spraying equipment does not drain to waterways
- Mow-strips under fence lines and around fixed site furniture to eliminate the need for herbicides.
- Only non-toxic wood preservatives

HAZARDOUS SUBSTANCE ELIMINATION

In order to reduce hidden costs of storage, training, handling, health risks, and disposal OPRD will seek to eliminate the use of hazardous chemicals in the daily maintenance of the facilities. Fortunately, many National Parks have already taken this challenge on successfully (Yellowstone and the Grand Tetons). In order for this to be successful, there needs to be a careful phasing out of the existing stockpiled chemicals. There is considerable debate about whether existing chemicals should be immediately replaced and disposed of as hazardous waste or used until they are gone. Given the budget conditions of the state, we will use what is currently stored and phase in non-hazardous cleaning agents as fast as they are affordable and available under the purchasing agreements.

Climate Neutrality & Energy Use

Global warming can be controlled through the reduction in energy used for buildings and for transportation. The first step is to maximize the efficiency of buildings through passive features and efficient lighting and appliances. (Exceptions should be made to preserve the integrity of buildings with historic or cultural value). By 2014 all electricity purchased should be from renewable sources or generated on site as much as practical. Fees for use of luxury accommodations (cabins, yurts, hookups etc.) should reflect the true cost to OPRD for the power. For in-park utility and visitor management, bicycles and electric vehicles should be in use. For large loads or travel outside of the parks, alternative fuel powered vehicles should be employed as the state of the industry allows. Every effort should be made to support visitor access to parks near urban centers via public transit or carpooling.

LIVING SYSTEMS

Separate & Appropriate Use

In order to be able to serve the visitors for generations to come, we have to ensure that some parks are not “loved to death.” The amenities and experiences offered in the state parks are diverse and serve the recreation needs and wants of widely varying cultures and value sets. OPRD can serve a variety of visitors’ recreation needs and maintain our commitment to the preservation and protection of the *natural, scenic, cultural, (and) historic* features realizing that not all park sites will be able to meet all visitor needs. Most of these uses are provided in ways in which they can peacefully co-exist. If that is not possible, they are separated and provided in their own areas, if available.

Each park offers unique experiences. Many of the state parks are pressured to accommodate more activities and use than is appropriate, with the risk of losing the unique features that define the place. Some of these features are land formations while others are ecosystems or habitats. Careful planning, as provided for in the master planning process and management planning for cultural and natural resources should be in place to prevent the systematic destruction of these places. Extra effort should be made to communicate to the visitors which parks serve what activities and at what intensity of use.



SOME ENERGY BEST PRACTICES

Buildings:

- ✓ Day Lighting
- ✓ Passive Cooling
- ✓ Fully Insulated
- ✓ Efficient Lighting And Appliances
- ✓ Occupancy Sensors
- ✓ On Demand Hot Water
- ✓ High Efficiency Heating Only As Needed When Heating Required

Energy Source:

- ✓ 100% Renewable
- ✓ Generated on site where feasible
- ✓ Wind at the coast and gorge
- ✓ Solar east of Cascades
- ✓ Geothermal (wherever feasible)
- ✓ Non-dam small hydro (wherever feasible)

Visitor Transportation:

- ✓ Partner with local transit districts to reduce vehicle impact
- ✓ Weight fees toward vehicles, not visitors

Watershed & Wetland Protection

Water is one of the essential elements of life for humans, wildlife and plants. This combined with the Endangered Species Act listing of salmon and other species is the reason we need to protect waterways and wetlands. In general, native plant buffers should be maintained around wetlands. Crossings of all waterways should be kept to a minimum allowing natural habitats to exist. To prevent erosion and sedimentation from storm water runoff, as well as pollution from gasoline and oil, pervious paving should be installed wherever possible. Consider no paving and low impact paving alternatives where traffic patterns allow. Along the heaviest traffic areas and parking, bio-swales and vegetation strips should be created to catch and filter runoff.

Nuisance and Invasive Species Management

In order to protect natural areas from invasive species, some basic principals should be applied. Turf areas should be minimized. For all other planted areas, native drought tolerant species should be specified. For removal of invasive plants such as Canadian Thistle, Himalayan Blackberry, English Ivy, Holly etc., mechanical methods should be used for large initial removal projects. (Consider goats and/or steam). Appropriate, hand applied chemicals should only be used for on-going maintenance. Where a large space has been cleared, a competitive native plant should be planted. For nuisance plants such as poison oak, only hand sprayed herbicide should be used. Poison oak is a native plant that should be allowed to grow in areas that are not frequently used by visitors. For the elimination of pests, Integrated Pest Management strategies should be used.

LEARNING & INFORMATION SYSTEMS

Design & Planning

The engineers, designers, and planners of all construction in the parks have a unique responsibility in decision-making for infrastructure that will influence visitors and employees for years to come. Those decisions should be guided by a few principles. All decisions should be filtered to consider the life cycle costs to the budget and the environment. Most of the time, the greatest financial costs and environmental impacts of a material or built system occur during its operation or maintenance. Many of the operation and maintenance costs and impacts are visible only to those in the field. For this reason, all designs and plans should undergo a review by the maintenance personnel. Typical things to consider include: assessing the existing structure or site for historic, cultural or reuse value, recycled content of materials, hazardous content of the materials and how many resources will be consumed over the lifetime of the product/structure/system.

METHODS TO CONSIDER

Sewage:

- ✓ Ban RV dumping with formaldehyde treatments/other hazardous chemicals
- ✓ On site use and treatment of gray water (lobby DEQ)
- ✓ On site sewage treatment away from waterways and wetlands
- ✓ Connect to city and sanitary districts where possible

Buffers and Habitat:

- ✓ Turf at least 100 feet from riparian or wetland areas
- ✓ Irrigate with non-potable water and adjust for weather conditions
- ✓ Allow browning during low water years/seasons.
- ✓ Inventory all streams and channels including seasonal
- ✓ Leave natives in trenches/banks and allow for some debris
- ✓ Restore channelized streams to natural channels with native plants and woody debris
- ✓ Create shaded artificial ponds where beneficial to wildlife

Paving / Site Drainage:

- ✓ Maintain trails with mulch or water bars to prevent erosion into streams
- ✓ Remove sediment and heavy metals from parking areas and trails with composting bioswale, vegetation strips and constructed wetlands
- ✓ Replace asphalt and concrete with pervious surfaces to reduce peak flows

Employees

The field personnel are the hubs of all relevant information systems. They live with the successes and failures of design and policy as well as the pleasure and displeasure of the visitors. It is essential that their role in sustainability must be made clear. They are the nervous system of the department. Their review and input into the design process is critical and communication must be well maintained. They must communicate to the planning and management structure the state of the parks and the state of the visitor experience. They must also be fluent enough in the issues to educate the visitors and listen to their concerns and joys. The field personnel should also be the front end of data collection and customer satisfaction surveys. This data should be aggregated through the upcoming Financial Management System.

The focus of the education should be on the basics of sustainability. Through annual trainings, permission should be granted for the employees to make their part of OPRD more efficient. Through annual reviews, it should be made clear that they are expected and will be evaluated based on their contribution to the sustainability of OPRD. Through newsletters or list serves, innovations should be shared.

Grant Administrators

OPRD has the privilege and responsibility to administer many grant programs. In the programs where it is appropriate, OPRD should ask applicants what measures they are taking to work towards sustainability. Preference should be given to those grantees that have met all other requirements and show the greatest commitment to the pursuit of sustainability in their project or methods.

Visitors

The visitors will notice the incremental changes. Some may embrace the changes, while others may be annoyed. To ensure the maximum success of every program that affects the visitors, the story of costs and environmental impacts needs to be shared. Interpretive signage at the points of consumption of natural resources could help frame the understanding of the use of meters or other operational practices. There should also be interpretive signage for newer maintenance programs that might otherwise draw criticism. For example, a sign would be helpful for a large compost pile for grass clippings. OPRD's Interpretive Coordinator should assist and advise the field on where and how to effectively tell these stories.

While educating the visitors is essential, it is even more important that they are listened to and observed. Businesses continue to thrive when they do good market research to ensure that they are serving their customers' needs. Often there is much time and money wasted debating whether or not visitors will enjoy or will be displeased with a new program, policy or experience. OPRD should take that time and money and make sure that solid satisfaction research is done to guide our decision-making. We should make every effort to educate the public about what we are doing and how it benefits the environment and saves costs in the long run.

Life Cycle Costs Include:

- ✓ Purchasing
- ✓ Delivery
- ✓ Handling
- ✓ Storage
- ✓ Scrap loss
- ✓ Disposal, recycling or re-use
- ✓ Software tool from CH2MHill to figure
- ✓ O& M costs
- ✓ Life expectancy

Life Cycle Impact Assessments include:

- ✓ Impacts of raw materials extraction and processing
- ✓ Manufacturing/production toxicity
- ✓ Transport means/distance
- ✓ Use
- ✓ Maintenance/frequency
- ✓ Storage
- ✓ Disposal/reuse/recycle
- ✓ Disposal impact on environment

Some Specifying Guidelines Examples:

- ✓ Be specific about details that are critical to avoid low bid concerns
- ✓ Specify reuse and/or partial deconstruction to extend the life of buildings & materials
- ✓ Specify salvaged/recycled/sustainably harvested materials when affordable
- ✓ Dimensional lumber to eliminate waste
- ✓ Phase out PVC and consider PE
- ✓ Use ACQ for pressure treated wood

OFFICE ENVIRONMENT & COMMUNICATIONS

The offices and communications (printing) have a significant environmental impact. Much of it is controlled directly by other agencies such as the future facility on the mall and the printing practices of DAS printing. Fortunately these portions are actively pursuing higher environmental standards. The building is to be one of the “greenest” buildings in the state and the printing operations of DAS are ISO 14000 certified. The rest of the impacts produced by the offices and the employees in Salem are largely a matter of behavior or culture. For behavior or culture to change, champions should be identified to create systems that are as convenient as possible, mimic current patterns and build on existing systems.

RESOURCE & MATERIALS USE

Waste Elimination

The most conspicuous office waste relates to paper. Fortunately this is a relatively easy one to conquer with reduced use, reuse and recycling. Other significant quantities of waste can be found in or around the lunch- room. Extensive recycling centers including composting or worm bins should be provided. For promotional and informational brochures, consider a web-based kiosk that prints information on demand only. This would allow for easy updates to materials and may significantly reduce printing impacts and waste.

PAPER BEST PRACTICES

- Send documents electronically
- Archive electronically
- Print on both sides of the paper
- Use non-confidential scrap paper for drafts
- Re-use large envelopes with address labels

SAMPLE PURCHASING BEST PRACTICES

- Locally made
- Paper should be 100% post consumer, process chlorine free
- Soy based inks
- Refillable printer cartridges
- Non hazardous cleaning products
- Low or no VOC coatings
- Flat screen monitors
- Ergonomic furniture and devices
- Used or durable furniture

PURCHASING

While DAS has been working to develop some greener purchasing agreements, it's entirely possible that OPRD will want to move faster than the purchasing agreements allow. For this reason, OPRD must have a strong line of communication with DAS to ensure that the agreements evolve as fast as possible.

CLIMATE NEUTRALITY & ENERGY USE

By 2014, OPRD's office energy should be from 100% renewable sources. All appliances should be Energy Star certified. Computers should have “sleep” features where the monitor shuts down after five minutes of not being used.

Currently, there are some very simple solutions to common energy waste. For those that require more light at their desk, supply task lighting. Require that people turn off their monitors during breaks, lunch, overnight and on the weekends. Weigh the costs and benefits of fixing hours of operation to prevent lighting and heating the entire space for a few employees.

The greatest climate impacts relate to the transportation patterns of the workforce. Much of that is commuting to and from work. Public transportation and carpool use should be encouraged and perhaps subsidized. The rest of the transportation impact is interacting with the field. For this need, regular, planned trips should be scheduled to ensure the maximum opportunity for alternative energy vehicle reservation and carpooling to occur. The operational fleet should be comprised of fuel efficient, hybrid and alternative fuel vehicles.

- **Commuting Suggestions:**
- Telecommuting as accountability and productivity allow
- Carpooling supported with preferred parking
- Covered & secure bicycle parking
- Supplemented public transit
-
- **Business travel:**
- Phone conferencing
- Full load trips/carpooling
- Alternative fuel, hybrid and fuel efficient vehicles

LEARNING & INFORMATION SYSTEMS

Education of the office employees should be a relatively gradual process. The focus of the education should be on the basics of sustainability. Through annual trainings, permission should be granted for the employees to make their part of OPRD more efficient. Through annual reviews, it should be made clear that they are expected and will be evaluated based on their contribution to the sustainability of OPRD. Through newsletters or list serves, innovations should be shared. Metrics should be created to measure the impacts of the office and to rise to the challenge of making OPRD sustainable. These metrics should be plugged into the FMS.

IV. Three-Year Action Plan Toward Target 2014

So far, this document has translated OPRD's ambitious goals into operational principles and has suggested specific areas for action. This final section lays out a series of short-term goals that, we hope, will provide the foundation for Target 2014 and build enthusiasm and momentum for these efforts, both inside and outside OPRD.

We start with "Early Successes." These should be taken on quickly as they can provide tangible examples of what sustainability is, as well as give the team something to be proud of.

It is worth noting that, apart from predictable resource-efficiency measures, much of our early action will be in the area of Learning and Information. We have chosen this emphasis in order to start getting employees, visitors and other government agencies fully involved in our efforts early on. We recognize that OPRD is not an island; without that collaboration (and the understanding and communication that lead to it), we will not succeed.

EDUCATION

In order to start moving towards sustainability, everyone needs to know that it is going to happen. The initial messages should be brief, frequently reinforced, and emphasize that it is not new and additional work; rather, it is a different way to look at the same work. Also it should be made clear that the change that will follow will be incremental. Through the use of regularly scheduled workplace meetings the message should be shared and made clear. It should be made clear that not only do the employees have permission to innovate in their position, it is expected. Goal setting in performance reviews should include environmental impacts. Trainings on the basics of Sustainability and Life Cycle thinking should be presented to everyone in the organization. Tip sharing systems such as list serves or newsletters in which the idea creator is named should be created for sharing ongoing problems, solutions, and issues.

Early Successes

There are some things that are easy enough and conspicuous enough that they should be pursued right away. Champions for these projects should be identified early and provide sufficient time to achieve the project goals. Employees should be held accountable to keep at it until it is working. Many of these activities involve waste reduction and recycling. Recycling centers should be created for everything that can be recycled at the point of disposal. Composting systems should be established where possible. Paper reduction best practices



should be employed. Monitors should be turned off at breaks, lunch, at night and on the weekends. Hybrid cars should be requested for all trips using state motor pool vehicles. For construction projects, a review of required maintenance practices for the new facility should be made policy.

Studies

In order to understand where OPRD is going, we need to know where we are. To start, there should be a review of all natural resource, habitat, cultural or historic assessments and resource management plans developed for each park. This will help the department determine appropriate use and siting of future amenities. A true cost study should be done to determine the actual financial and environmental costs of each type of visitor. Customer service/market research should be done to evaluate the success of pilot programs that significantly alter the experience of the visitors. Finally, a transportation survey should be done to determine employees' commuting and work travel patterns. This study may reveal other early successes to be had.

DATA AND BENCHMARKING SYSTEMS

In order for OPRD to get to Target 2014, performance measures and benchmarks should be created to track progress and measure success. A robust data collection system needs to be created and should be integrated with the new Financial Management System and the Project and Facilities Management System. This information will make decision-making clearer and will make successes more apparent. For example, if waste were tracked by type, a new reduction policy's effectiveness could be evaluated.

Partnership Dialogue (Pilot Project Strategy)

Finally, OPRD must begin to communicate our movement to all the varying agencies and groups of people we work with to help them be a part of this important endeavor. Regular communication with DAS may be the most important. We may need to lead the shaping of some policies and practices within the state if guidance lags behind our efforts to achieve sustainability. Since we will be innovating in our pilot projects, we may have to work more with departments like DAS Motor Pool and Purchasing, DEQ and the Oregon Office of Energy to support our efforts. For example, we don't want to pay fines/permit fees to use gray water appropriately; i.e., in a way that it is less



harmful to the environment than if we continued as we are. These same pilot projects need to be turned into standards as soon as they are demonstrated to be sustainable in economic and environmental terms.

In addition to our ongoing efforts with existing partners, every reasonable effort should be made to develop new partnerships with public or private groups. By reaching out to local groups such as youth or retiree groups, OPRD may also support the development of human, cultural or community assets as well as our natural resources.

Perhaps, for our most conspicuous and capital-intensive pilot projects, we should solicit the financial support of the private sector. To be sure, we will have to work with all our stakeholders if we are to achieve our goals.

V. Conclusion:



Our department has always been associated with the conservation of the natural world. In earlier times, when humans consumed fewer resources, conservation meant putting large areas of land aside for recreational use. OPRD led the way for Oregon with the creation and ongoing stewardship of our parks. In these times, however, we need to refocus our efforts, *and our thinking*, to include the daily tasks of our work. Working towards a sustainable future is a noble task that we should take pride in. Doing our job better will result in an enhanced experience for our visitors today and for generations to come.

VI. Glossary:

Deconstruction

Careful disassembly of an existing structure in order to salvage high value materials or systems for reuse and to separate waste components for maximum recycling.

Green House Gasses (GHG)

Any human or natural gasses that contribute to the warming of the planet through the so-called “green house effect.” Major GHGs include: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O) and hydrofluorocarbons (HFCs).

Hazardous Substances

Any ingredient or component of a material or product that is poisonous to living organisms, caustic or explosive. Of particular concern are persistent chemicals that continue to be hazardous well beyond their intended use and may be a concern for multiple generations.

Learning & Information Systems

Feedback loops that allow individuals or groups to realize the impacts of their decisions, plans or activities.

Life Cycle Assessments

A review of the environmental impacts of a product, material, or service from its production, through its use and maintenance, to its reuse or disposal. Sometimes referred to as “Cradle to Grave” or “Cradle to Cradle” assessment.

Life Cycle Costs

The sum total of all expenses for a product, material, or service including cost of purchasing, purchase price, shipping, training, use and auxiliary equipment, maintenance, waste, storage and disposal / return costs. Often referred to as “True Cost.”

Life Cycle Thinking

Considering the resources and energy required over the entire life of the product, material, service, or experience.

Sustainability

Using resources in a way and at a rate that allows people *to meet their needs and future generations to also meet theirs*. It also means meeting environmental, economic, and community needs.

Volatile Organic Compounds (VOC)

Any carbon based chemical that changes into a vapor at a relatively low temperature and contributes to air pollution and ozone formation. Usually considered a health risk for living organisms. Usually found in surface coatings such as paints or finishes.

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