

# Metro | Agenda

Meeting: Metro Council  
Date: Thursday, October 7, 2010  
Time: 2 p.m.  
Place: Council Chambers

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## CALL TO ORDER AND ROLL CALL

### 1. INTRODUCTIONS

### 2. CITIZEN COMMUNICATIONS

### 3. AUDITOR COMMUNICATION

3.1 Audit Report: Public Engagement: Strengthen Capacity **Flynn**

3.2 Audit Report: Leave Management: Improve Monitoring Capacity **Flynn**

4. Consideration of the Minutes for September 30, 2010

### 5. ORDINANCES – FIRST READING

5.1 **Ordinance No. 10-1247**, For the Purpose of Amending Metro Code Sections 2.04.500 through 2.04.580 to Establish Metro’s Sustainable Procurement Program.

### 6. RESOLUTIONS

6.1 **Resolution No. 10-4198**, For the Purpose of Adopting Metro’s Sustainability Plan and Authorizing the Metro Chief Operating Officer to Implement the Plan. **Burkholder**

6.2 **Resolution No. 10-4185**, For the Purpose of Approving a Supplemental Multi-year Commitment of Regional Flexible Funding for the Years 2015-2027, Funding the Portland – Milwaukie Light Rail Transit Project, and Project Development for the Portland – Lake Oswego Transit Project, and the Southwest Corridor and Authorizing Execution of an Amendment to the Existing Intergovernmental Agreement with TriMet Regarding the Multi-year Commitment of Regional Flexible Funds. **Collette**

*Public Hearing*

7. CHIEF OPERATING OFFICER COMMUNICATION

8. COUNCILOR COMMUNICATION

ADJOURN

**Television schedule for October 7, Metro Council meeting**

<b>Clackamas, Multnomah and Washington counties, and Vancouver, WA</b> Channel 11 – Community Access Network <i>Web site:</i> <a href="http://www.tvctv.org">www.tvctv.org</a> <i>Ph:</i> 503-629-8534 <i>Date:</i> 2 p.m. Thursday, Oct. 7 (Live)	<b>Portland</b> Channel 30 (CityNet 30) – Portland Community Media <i>Web site:</i> <a href="http://www.pcmtv.org">www.pcmtv.org</a> <i>Ph:</i> 503-288-1515 <i>Date:</i> 8:30 p.m. Sunday, Oct. 10 <i>Date:</i> 2 p.m. Monday, Oct. 11
<b>Gresham</b> Channel 30 - MCTV <i>Web site:</i> <a href="http://www.metroeast.org">www.metroeast.org</a> <i>Ph:</i> 503-491-7636 <i>Date:</i> 2 p.m. Monday, Oct. 11	<b>Washington County</b> Channel 30– TVC – TV <i>Web site:</i> <a href="http://www.tvctv.org">www.tvctv.org</a> <i>Ph:</i> 503-629-8534 <i>Date:</i> 11 p.m. Saturday, Oct. 19 <i>Date:</i> 11 p.m. Sunday, Oct. 10 <i>Date:</i> 6 a.m. Tuesday, Oct. 12 <i>Date:</i> 4 p.m. Wednesday, Oct. 13
<b>Oregon City, Gladstone</b> Channel 28 – Willamette Falls Television <i>Web site:</i> <a href="http://www.wftvmedia.org/">http://www.wftvmedia.org/</a> <i>Ph:</i> 503-650-0275 Call or visit web site for program times.	<b>West Linn</b> Channel 30 – Willamette Falls Television <i>Web site:</i> <a href="http://www.wftvmedia.org/">http://www.wftvmedia.org/</a> <i>Ph:</i> 503-650-0275 Call or visit web site for program times.

**PLEASE NOTE: Show times are tentative and in some cases the entire meeting may not be shown due to length. Call or check your community access station web site to confirm program times.**

Agenda items may not be considered in the exact order. For questions about the agenda, call the Metro Council Office at 503-797-1540. Public hearings are held on all ordinances second read and on resolutions upon request of the public. Documents for the record must be submitted to the Clerk of the Council to be included in the decision record. Documents can be submitted by e-mail, fax or mail or in person to the Clerk of the Council. For additional information about testifying before the Metro Council please go to the Metro web site [www.oregonmetro.gov](http://www.oregonmetro.gov) and click on public comment opportunities. For assistance per the American Disabilities Act (ADA), dial TDD 503-797-1804 or 503-797-1540 (Council Office).

Agenda Item Number 3.1

**Audit Report: Public Engagement: Strengthen Capacity**

Metro Council Meeting  
Thursday, Oct. 7, 2010  
Metro Council Chambers



## **Public Engagement:**

*Strengthen capacity to improve results*

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September 2010

A Report by the Office of the Auditor

Suzanne Flynn  
*Metro Auditor*

Audit Team: Mary Hull Caballero, *Sr. Management Auditor*  
Kristin Lieber, *Sr. Management Auditor*



Knighton Award  
for Auditing

### **Metro Audit Winner of ALGA 2009 Gold Award**

The Office of the Auditor has been awarded the Gold Award for Small Shops, which was presented at the 2010 conference of the Association of Local Government Auditors (ALGA) in San Antonio in May. The winning audit was the *Oregon Zoo Capital Construction* audit, completed in November 2009.

### **Metro Ethics Line**

The Metro Ethics Line gives employees and citizens an avenue to report misconduct, waste or misuse of resources in any Metro or Metropolitan Exposition Recreation Commission (MERC) facility or department.

The ethics line is administered by the Metro Auditor's Office. All reports are taken seriously and responded to in a timely manner. The auditor contracts with a hotline vendor, EthicsPoint, to provide and maintain the reporting system. Your report will serve the public interest and assist Metro in meeting high standards of public accountability.

*To make a report, choose either of the following methods:*

**Dial 888-299-5460 (toll free in the U.S. and Canada)**  
**File an online report at [www.metroethicsline.org](http://www.metroethicsline.org)**



SUZANNE FLYNN

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## MEMORANDUM

September 29, 2010

To: Carlotta Collette, Acting Council President  
Rod Park, Councilor, District 1  
Carl Hosticka, Councilor, District 3  
Kathryn Harrington, Councilor, District 4  
Rex Burkholder, Councilor, District 5  
Robert Liberty, Councilor, District 6

From: Suzanne Flynn, Metro Auditor 

**Re: Audit of Public Engagement**

The attached report covers our audit of Metro's public engagement efforts. This audit was included in our FY2009-10 Audit Schedule. Our objectives were to determine expenditure on communications products and services and to evaluate the effectiveness of public engagement efforts. We looked specifically at the use of public engagement in the Urban and Rural Reserves decision-making process and Metro's web site.

For the purposes of this audit, we defined communication activities as two-fold, either for the purpose of informing the public or for the purpose of receiving information back from the public. Based upon our analysis of expenditure, we concluded that Metro's communication efforts were focused primarily on informing the public. We believe that in order to be more effective, public engagement activities should be better supported. At this point, there is not a clear understanding or management of an agency-wide approach.

We have discussed our findings and recommendations with Michael Jordan, COO, and Jim Middaugh, Communications Director. A formal follow-up to this audit will be scheduled within 1-2 years. We would like to acknowledge and thank the management and staff in the departments who assisted us in completing this audit.



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## Summary

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Metro communicates with the public for a variety of reasons. Some of its communication strategies were intended to change people's behavior, such as encouraging them to drive less or garden with native plants. Others were to provide information about parks, natural areas, and recycling facilities. Some strategies were intended to solicit the public's input about policy decisions.

This audit evaluated the effectiveness of Metro's efforts to engage and learn from the public about regional policy choices. To conduct our analysis we separated communication into two categories, one was communication "to inform" and the other was communication "to engage." Communication "to engage" was defined both as providing information and listening to the public.

We determined that while Metro had a responsibility to engage the public, spending patterns indicated that this was not a priority. Metro spent \$13.2 million from FY2006-07 to FY2008-09 on communications staff, materials, and services. Seventy-three percent of the overall expenditures went for information purposes and 27% was for public engagement.

Metro's Communications Department did not have a strong role in decisions made about investments in communication. Our analysis indicated that the Department controlled only 3% of Metro's expenditures for materials and services dedicated to communication activities. While the Communications employees were centralized under the supervision of the Department director, they were assigned to projects by funding source and not used according to specific skills needed.

We reviewed two communications efforts, the web site and a public process to assist in policy decision-making. We found similar problems in each.

After analyzing the content and use of the web site, we determined that only a small portion of the web pages on the site were viewed. We found a large percentage of web site visitors surveyed trusted information from Metro. Similar to national research, we found a correlation between satisfaction with the web site, how much trust the user placed in Metro, and how likely they were to engage.

In its recent public engagement process to determine urban and rural land reserves for the region, Metro designed two approaches. One used a steering committee with diverse interests and the other provided opportunities for the general public to provide input. We found that both efforts could have been stronger. The committee did not arrive at a consensus as planned. Without demographic information, Metro could not determine if the representation of public input was demographically balanced.

As a result of our analysis, we recommended that Metro reassess its spending priorities on communications so that public engagement efforts can be more effective. The Communications Department should specify staffing and spending for public engagement efforts and evaluate them upon completion.



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## Background

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Metro is a regional government with far-reaching and diverse responsibilities. As such, Metro communicated with the public on a variety of topics to achieve its goals. Some of its communication strategies were intended to influence people's behavior, such as encouraging them to drive less or garden with native plants. Others were intended to solicit the public's input about policy decisions.

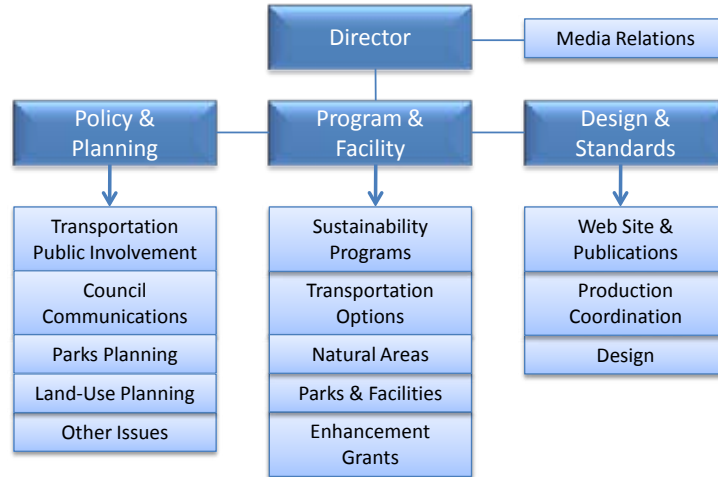
This audit made a distinction between communication that was intended to inform and communication that was intended to engage the public in a dialogue. We defined communication "to inform" when Metro delivered messages to the public, such as Walk There maps and natural gardening guides. We defined communication "to engage" when, in addition to providing information, Metro received information from the public, such as testimony at hearings or written comment.

Federal and state laws and regulations required Metro to engage the public, most significantly in the areas of transportation investments and land-use. Metro had broad latitude in interpreting legal requirements for public engagement. With few exceptions, legal requirements obligated that input be sought but did not prescribe how to obtain it. Metro's Charter also required that Metro have a citizen engagement process and a citizen's committee to aid communication between the public and the Council. The Council adopted guiding principles for citizen involvement in 1997.

Organizationally, employees who provided services for communications projects were in the Communications Department. However, the authority to decide communications strategies and investments was decentralized among Metro's departments. For that reason, this report discusses both the agency's communication function as well as the Communications Department.

The Communications Department was configured into three units led by managers who reported to the Communications Director. This position was filled by an interim director until December 2008. One unit was responsible for policy and planning, a second unit provided marketing services for individual programs, and the third served as the agency's publications and web site team (Exhibit 1).

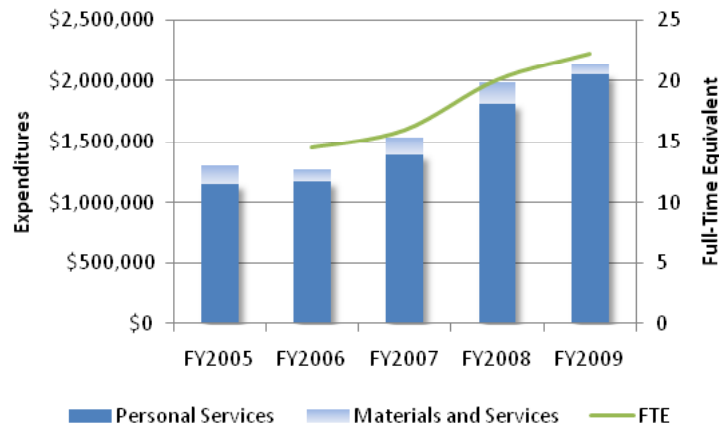
**Exhibit 1**  
Communications Department  
Service Areas by Unit



Source: Auditor's Office analysis of Communications Department organizational chart

There were 25.5 full-time-equivalent employees assigned to the Department in 2010. Communications Department expenditures over the five-year period from FY2004-05 through FY2008-09 were almost all for staff costs, which steadily increased over the years (Exhibit 2). The departmental expenditures and staffing levels in Exhibit 2 under-represented Metro's personal services costs because some employees were accounted for in other departments' budgets, such as Planning and Development and Parks and Environmental Services.

**Exhibit 3**  
Communications Department  
Expenditures FY2004-05  
to FY2008-09 (adjusted for  
inflation)



Source: Auditor's Office analysis

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## Scope and methodology

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The purpose of this audit was to assess how Metro invested its communications dollars over a three-year period and whether its engagement processes and on-line tools were positioned effectively for public input.

Our objectives were to:

- Determine how much Metro spent on communications products and services from FY2006-07 through FY2008-09,
- Evaluate the effectiveness of Metro's web site as a source of information and a tool for engagement in policy decision-making, and
- Evaluate the efficiency and effectiveness of Metro's engagement strategies for the Urban and Rural Reserves policy decision-making process.

We calculated expenditures for Metro's Communications employees and purchases of materials and services using data from the financial system. We identified expenditures for materials and services through contract records, vendor names, and interviews with staff. We extracted expenditures made through contracts as well as those made directly to 154 vendors.

Our scope excluded expenditures for Metro's visitor venues because they rarely engaged the public about policy issues. We excluded expenditures related to educational or programmatic outreach, because they were not related directly to communication. We also excluded any expenditures paid for with a purchasing card. We determined that excluding these expenditures did not materially affect our totals.

We used a case study approach to evaluate the web site and the engagement process for the Urban and Rural Reserves project. For each, we interviewed staff, calculated how much Metro spent, and attempted to determine what outcomes were achieved. We compared methods used by Metro to those recommended by experts as best practices.

For our evaluation of the web site, we conducted an online survey in April and May 2010 and analyzed available performance data. Based on the limited design of the survey, results should not be generalized. For the Reserves project, we interviewed participants and a consultant, observed public hearings, and analyzed zip codes in the legal record provided by participants. We also assessed 2000 Census data by the zip codes for several indicators, including family income, per capita income, race and ethnicity, age, and home ownership.

As part of our preliminary audit work, we conducted tests of Metro's compliance with its public records policies and procedures. We identified some areas that needed improvement and communicated that information in a separate letter to management.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Results

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Governments communicate with their constituents for a number of reasons, but not all communication is public engagement. Sometimes governments provide information or advocate for a specific outcome. Public engagement occurs, however, when governments learn something from the public. Strong public engagement efforts lead to a government's deeper understanding of a community's values and the trade-offs it is willing to make when they conflict. This information can be used to guide policy-making.

That type of knowledge about the public's views is best learned over time, through sustained engagement rather than periodic efforts related to a specific policy. It can result in better, more widely accepted decisions, public confidence in government, and institutional memory that is not lost when staff leaves the agency.

We evaluated the Metro web site and public engagement efforts in the Urban and Rural Reserves project to determine if improvements could be identified to benefit future engagements. Although the web site was a communication tool and the Reserves project a decision-making process, some of the same problems occurred in both. Our analysis indicated areas where Metro could improve its public engagement efforts.

We found that Metro was not well-positioned for public engagement, because it:

- Invested more resources in other forms of communication over public engagement
- Had structural weaknesses in the organization of its communication function, and
- Did not maximize its tools and processes to effectively engage the public

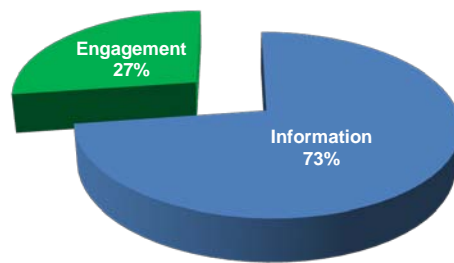
We also found that Metro had assets on which to build a meaningful public engagement system. Almost all respondents to our web survey reported a level of trust in Metro's information. Some public participants we interviewed developed a more favorable opinion of the agency as a result of their participation in the Reserves project.

### **Public engagement not prioritized**

Agency documents were unclear about spending priorities for public engagement. One way to determine an organization's priorities is to evaluate how it spends its money. We found that Metro invested more towards providing information than engaging the public. Metro spent \$13.2 million from FY2006-07 through FY2008-09 on communications staff, materials, and services. Seventy-three percent of the overall expenditures went to information purposes and 27% went to engagement purposes.



**Exhibit 3**  
Expenditures on  
Communications Functions  
FY2006-07 to FY2008-09



Source: Auditor's Office analysis

We concluded that this emphasis on informing:

- Made the agency's public engagement tools and activities less effective
- Led Metro to emphasize stakeholder engagement over public engagement, and
- Increased the likelihood of Metro making decisions without the input of a cross-section of the region.

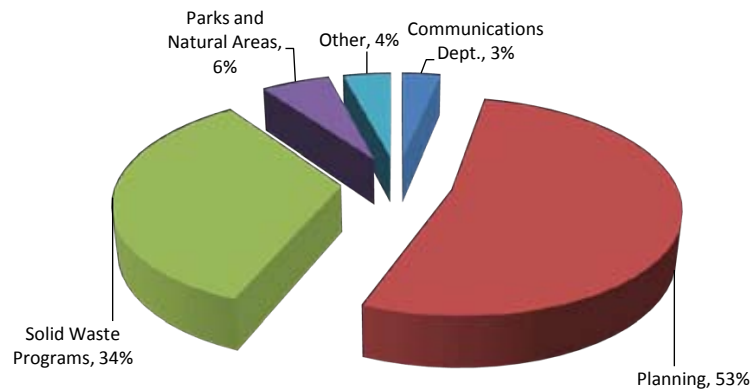
**Communications  
Department's role  
could be strengthened**

The Communications Department did not have a strong role in decisions made about communications investments because it lacked authority over agency-wide spending. Management's response to revenue constraints also kept the Department from using employees' skills strategically.

Funding from six revenue sources paid for the Department's employees. The Department tied specific employees to those funds and physically located them in the departments that paid their salaries. Tying employees to funding sources limited management's ability to use staff where it would be most effective. While it may increase the employees' programmatic knowledge, locating them in individual departments created barriers to sharing expertise within the Communications Department.

On the expenditure side, the Communications Director did not control Metro's spending for communications materials and services. Metro allowed each department to make independent decisions about purchases and did not coordinate or track them across departments. The Communications Department controlled only 3% of the agency's expenditures for materials and services spent on communication activities. Programs related to planning and solid waste controlled most of the payments.

**Exhibit 4**  
Communications Materials  
and Services Expenditures  
Agency-wide  
FY2006-07 to FY2008-09



Source: Auditor's Office analysis

Metro's decision to centralize staff in the Communications Department and decentralize the spending for materials and services across the agency had some negative consequences, such as:

- No manager or department was responsible for overall expenditures and evaluating their effectiveness
- Some investments were made without the input of Metro's in-house Communications Department
- Communications Department employees served two masters: the department that funded the project and the Communications Department management.
- Communications Department managers accepted projects on demand, making it difficult for them to prioritize jobs and manage workflow

The Communications Department recently undertook steps to establish criteria to make staffing decisions. The Communications Framework outlined what types of projects should be done in-house and which would best be done by consultants and other external communications vendors. This Framework was the Department's attempt to control its workflow and cope with the underlying fragmented management system. The criteria established how the Department would respond to requests. In practice, managers were unable to use the criteria to prioritize work. The Framework also did not determine whether the projects should be undertaken at all.

Most of the services outlined in the Communications Framework were for informing rather than engaging. The Department did not have resources for large-scale public engagement projects. When describing how such projects would be staffed, the Communications Framework called for temporary employees, independent contractors, or consultants. Metro had four full-time public involvement employees on staff, but they were assigned to the Planning and Development Department. These employees were not mentioned in the document as a staffing option for other departments, because they were restricted to federally funded transportation projects.

Best practices indicate that activities to gain knowledge about public preferences should be an ongoing activity, not a periodic check in about a single policy decision. According to the Framework, Metro put high-profile, long-term public engagement projects in the hands of temporary employees or consultants. As a result, Metro may not benefit from the experience and community relationships developed by these temporary employees for future engagements. Metro had several projects on its horizon that required public input, including plans for community investments, climate change, parks, travel corridors, the Zoo master plan, and solid waste sites. These efforts could be more efficient and effective if in-house expertise were used.

### **Web site could be used more effectively**

Methods of communication are undergoing significant change. According to recent studies, people increasingly used the Internet to access information and engage with government. The Internet could be a powerful tool for engagement, potentially making communication with the public easier, less costly, and more effective. We looked at Metro's web site because it was a key point of entry to the agency for the public. In examining the web site, we evaluated who it was reaching, how it was managed, and what tools were used. Overall, we found Metro used the web site to inform rather than engage. Few resources were dedicated to it and little attention was paid to whom it was reaching.

Although Metro considered the web site its primary communication vehicle, the site accounted for less than 10% of communication spending in each of the three years from FY2006-07 to FY2008-09. Staffing also presented a barrier to its effectiveness. There were several employees who worked on the web site, but for most it represented only a small percentage of their total job responsibilities. The number of full-time equivalent employees declined from 2.8 to 1.9 over the past three years.

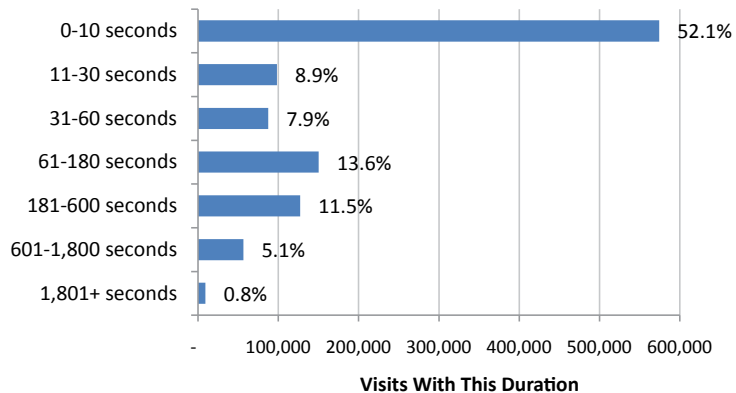
Staff who managed the web site did not control spending decisions. Instead, every department decided independently about which web projects to fund. As a result, no one was responsible for or tracked expenditures. Without understanding how much was spent, it was not possible to determine if Metro was getting a satisfactory return on its investment.

Additionally, the agency did not track the number of visitors and the quality of their experiences to identify whether its strategies were effective. An advantage of online communication is that data to evaluate how it is used is readily available, often at no cost. We found minimal tracking of available data. Employees' work was driven by a continuous stream of requests, rather than by finding out what worked and building on it. Employees said they were too busy managing their day-to-day responsibilities to regularly monitor the web site. Staff used data primarily for technical support, such as monitoring browsers and server usage.

We found frequent use of the web site. In FY2009-10, the main web site had over 1 million visits from more than 680,000 unique visitors, predominantly from the Metro region. Considering the region had an estimated population of 1.6 million in 2009, many people were learning about Metro through the web site.

The unit that produced Metro’s printed material also coordinated the web site and edited its content. The site had thousands of pages, but no system to find out what had real use and value. Visitors viewed only a small portion of the web site’s pages. Over half of visits lasted less than ten seconds and people most frequently left after visiting only one page.

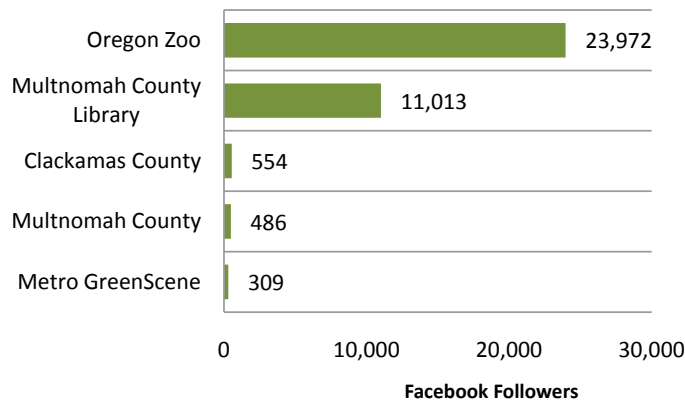
**Exhibit 5**  
Length of Web Visits  
July 1, 2009 to June 30, 2010



Source: Auditor’s Office analysis

During our audit, Metro prepared to launch wider use of interactive tools, such as Facebook and blogs. While it had key technical tools in place, it did not have processes and staffing to support an online dialogue. To date, Metro’s use of these tools had not reached broad audiences, with the exception of the Oregon Zoo. Metro’s main Facebook page, Metro GreenScene, had few followers compared to other area governments.

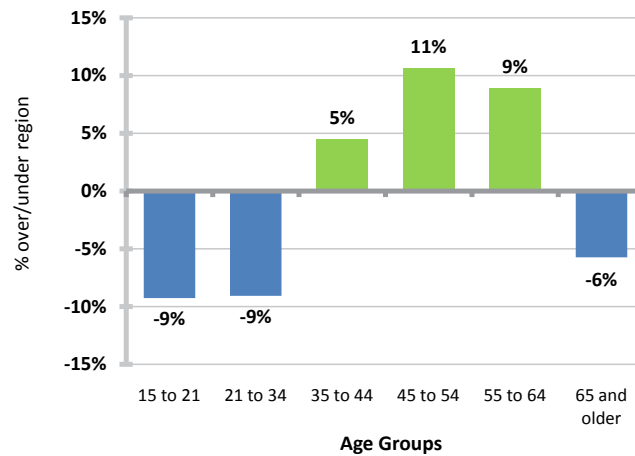
**Exhibit 6**  
Facebook Use  
August 2010



Source: Auditor’s Office analysis

Without a plan for engagement or a method for monitoring use, the web site was not as effective as it could be. We conducted an online survey of web site users. Although our analysis was limited, people under 35 years of age were under-represented among those visitors responding to our survey. This audience was important to engage because the agency often had projects with 20- or even 50-year planning horizons.

**Exhibit 7**  
Age of Web Users Compared  
to Regional Population



Source: Auditor analysis of online survey, 2010

While visitor satisfaction expressed in the survey responses was high, other performance data showed Metro’s audience base had declined over the previous year. Data on the number of visitors to Metro’s web site was available for only two years. Visitors had declined 9% from 750,000 in FY2008-09 to 680,000 in FY2009-10. However, our survey of visitors found respondents were generally satisfied. Most (67%) found what they were looking for, but this varied depending on the topic. More than 80% of people looking for information related to the budget, composting, paint and employment, found it. In one important area, visitors had less success. Only 28% of people looking for contact information found it. This was because Metro did not provide most employee contact information online.

According to national research, there is a correlation between satisfaction with a government agency’s web site, how much trust people placed in that agency, and how likely they were to engage. Our survey produced similar results. Overall, 92% of respondents agreed or somewhat agreed that they trusted information from Metro and 82% agreed or somewhat agreed that Metro wanted to hear their viewpoint. Respondents who found what they were looking for reported trusting information from Metro more. Those who felt Metro wanted to hear their viewpoint were also more likely to trust Metro information.

**Exhibit 8**  
Correlation Between  
Satisfaction, Trust and  
Likelihood to Participate

	Trusted information from Metro generally	Did not trust information from Metro generally
Found what they were looking for	95%	5%
Did not find what they were looking for	83%	17%
Felt Metro wanted to hear viewpoint	99%	1%
Did not feel Metro wanted to hear viewpoint	52%	48%

Source: Auditor's Office analysis of online survey, 2010

**Recent engagement process could have been stronger**

The Legislature granted new authority in 2007 to Metro and Clackamas, Multnomah, and Washington Counties to identify areas of the region for future development and reserve others for agriculture and natural areas. The designation of urban and rural reserves for the next 40 to 50 years was intended to bring a measure of certainty to land-use decision-making. The legislation authorized Metro to designate urban reserves and each of the three Counties to designate their own rural reserves. Metro adopted an ordinance in June 2010 to formalize the designations.

Rules based on the legislation required Metro and the three Counties to pursue a coordinated citizen engagement process. The four jurisdictions decided on a two-track engagement. One track would be a steering committee representing business, agricultural, environmental, social and local governmental groups. The second track would involve separate opportunities for the general public to participate in the decision-making process. Metro staff took lead roles in supporting both the steering committee and the coordinated process for public engagement. Additionally, each County conducted its own activities.

We found that the steering committee took priority over the public opportunities. Metro invested \$1.7 million in the Reserves project overall from July 1, 2007, through April 30, 2010. Of that, 75% went to support the Reserves Steering Committee. The remaining 25% went to public engagement. We concluded that neither effort effectively delivered information to the decision-makers, and that this was the result of an ineffective design and implementation.

**Steering Committee did not arrive at a recommendation**

Metro designed the steering committee to reduce lobbying by individual interests that had emerged each time the Council considered changes to the Urban Growth Boundary. It believed the ultimate decision about the reserves designations would be improved if the individuals could reach consensus and make a recommendation on a long-range plan. The steering committee had 30 members, four of whom were elected officials representing Metro and each County. Those four were the only voting members.

The design of the steering committee seemed comprehensive. It had the technical support of planners from each jurisdiction and the assistance of a professional facilitator. Representation also seemed appropriate. It had direction from the Metro Council in the form of guiding principles. It adopted its own operating principles with two clearly stated goals: To oversee the study of and make recommendations on the designations of urban and rural reserve areas to the Metro Council and County Commissions.

However, the steering committee did not achieve either goal. It oversaw the study of urban reserves, but was disbanded before it could consider rural reserves. It did not produce a consensus recommendation or majority-minority report on urban reserves. We identified several factors that contributed to the steering committee not succeeding:

- Monthly three-hour meetings were structured for presentations instead of consensus-building. Staff and others provided information while committee members listened.
- The timetable was unattainable. The committee held its first meeting long before important information was available. When there was time for discussion, there was no information to discuss. When there was information, there was no time to discuss it.
- Meetings were formal events with microphones and long tables, which discouraged discussion.
- Expectations for the role of the facilitator differed. The contract proposal sought a meeting facilitator, but a professional mediator was hired. The facilitator defined the job narrowly, seeing the role as mediating the differences among the committee's four voting members. Others thought the job was to shepherd the full committee to a recommendation. In the end, the facilitation role, which cost Metro and the Counties \$277,000, was not a significant factor. The voting members eventually reached agreement after the committee disbanded.
- Metro brought in key support too late to maximize its effectiveness. It hired the Planning Department's project manager as a limited duration employee about two weeks before the steering committee's first meeting. No work plans had been developed. The facilitator came on board at about the same time. Had she been brought in early to help with the process design, she said she would have advised convening a smaller group and making time for her to meet individually with each member.

Reach of public  
engagement effort  
unknown

Staff reported that Metro and the Counties provided 180 "discrete opportunities" for the public to provide input. However, Metro does not know if those opportunities involved a "cross-section" of the public, as required by state planning rules.

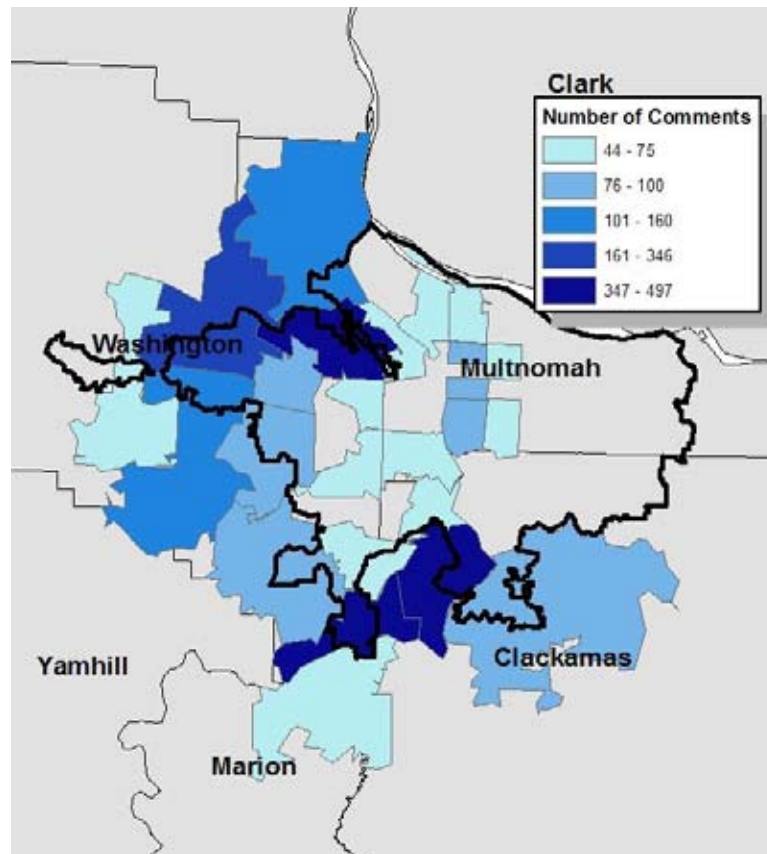
The Oregon Department of Land Conservation and Development required that a cross-section of affected citizens participate in the land-use planning process, but left it to government entities to define what a cross-section of

their jurisdiction was. Metro and the Counties' public involvement plan did not contain such a definition for the region. Best practices state that public engagement should result in demographic diversity. Staff sought no demographic information from those who participated in the process. Had demographic information been collected, it could have been used to monitor results of engagement strategies, target outreach to unrepresented groups, and inform decision-makers about who they were hearing from and who was silent.

We found that comments came primarily from the western and southern sections of the Urban Growth Boundary. Zip codes in central Portland, eastern Multnomah County and northern Clackamas County were not among the top 25 zip codes with the highest number of comments (Exhibit 9).

It may not be realistic to expect everyone in the region to provide input. From the outset, staff predicted more input would come from the region's edge but no plans were in place to monitor whether the prediction held true and if outreach needed to be more targeted to ensure a cross-section of input. Public involvement summaries and reports did not inform decision-makers of the geographic gaps in the input and any demographic groups associated with those areas that had not been heard from.

**Exhibit 9**  
Number of Comments by Top  
25 Zip Codes in Urban and  
Rural Reserves Project



Source: Auditor's Office analysis of public comments documents



Although not conclusive, we used census data to further examine participation. Based on this analysis, it is possible that public engagement might not have been demographically representative. The highest input zip codes were wealthier, less racially and ethnically diverse, and had a higher percentage of home ownership than the region as a whole, according to Census data. These areas also had a higher percentage of 25 to 34 year-olds than the region as a whole. However, this age group did not appear to be well represented by those who attended or testified at the public hearings we observed.

Metro and the Counties could have increased the likelihood of attracting a cross-section of input had they identified that as a goal. That fundamental lack of direction led to the following inefficient and ineffective investment of resources:

- There was a duplication of representation. Many of the same groups represented on the Reserves Steering Committee were also identified as the primary audiences for public outreach.
- Groups that traditionally do not participate in government decision-making were not targeted for engagement. These groups will be affected financially by needed public investments as the region grows. In particular, young people will live the longest with the benefits and consequences of these policy decisions.

As a result, these efforts became an unfocused attempt to reach the general public. Research from the marketing field indicates that targeting audiences is more effective and efficient than general appeals, especially when there are limited funds to invest. Engagements that try to prioritize everyone leave decision-makers hearing mostly from the most motivated and able participants.

Some decision-makers expressed concern about the number of events and repetitive nature of the input from the same participants. We attributed this result to the weak design of the engagement. With little direction about the goals of the public engagement process, coordinators were left without a standard by which to evaluate their performance. Success was defined by the number of open houses and hearings held and the number of people who showed up. These numbers did not reveal who participated and who did not. Had that information been sought and monitored, strategic outreach activities could have been developed as the process went along to solicit more diverse and effective input.

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## Recommendations

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1. To improve the effectiveness of communication efforts, Metro should:
  - a. Establish agency-wide communication goals and priorities that include public engagement
  - b. Develop processes to evaluate and prioritize various communications projects against these goals
  - c. Ensure spending is based on agency priorities
  
2. To improve the effectiveness of public engagement efforts, the Communications Department should:
  - a. Develop objectives for public engagement
  - b. Evaluate public engagement efforts in meeting these objectives
  - c. Use the results of evaluation to improve future engagement
  - d. Specify departmental staffing and funding levels for public engagement
  - e. Assign Communications staff based on skills, rather than funding source
  - f. Increase the likelihood that input from a cross-section of the public will be considered



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## **MANAGEMENT RESPONSE**

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 **Metro** | *Memo*

Date: September 24, 2010  
To: Suzanne Flynn, Metro Auditor  
From: Michael Jordan, Chief Operating Officer  
Jim Middaugh, Communications Director  
Subject: Public Engagement Audit

We would like to thank you and your office for conducting this audit. As you know, we encouraged this review during development of your annual audit schedule and we appreciate the diligence and professionalism shown by your staff in researching and preparing the report. We welcome all of your recommendations. We identified a number of the deficiencies and opportunities that you also identified and have already taken action to address them.

These actions include hiring a new director of communications, creating a centralized communications management team, shifting formerly embedded personnel from other departments to Communications (which accounts for a significant portion of the increased FTE and associated costs you identified), implementing a more function-based team structure and launching several new-media initiatives. Additional changes are underway that are responsive to your recommendations. Those changes, and additional improvements being planned or underway, are highlighted below and organized on the basis of your recommendations, which for summary purposes are grouped under four general categories: prioritization, evaluation, staffing levels and assignments, and ensuring diverse input. We also provided some additional information to address some of your specific findings.

#### **Prioritization**

During the course of your audit the Communications Department established a communications framework. That framework calls for an annual prioritization process, with quarterly updates, for communications investments based on objectives approved by the Senior Leadership Team in response to Council direction. The framework was completed during Fiscal Year 2009 after the time period of your audit was well underway. The FY 2010-11 budget was the first one created using the framework.

While we agree with your finding that the framework did not effectively establish goals or overall agency communications priorities, it did help ensure the Communications Department had a significant role in creating budgets for the Community Investment Strategy, HB 2001 greenhouse gas reduction scenario development, the Sustainable Communities Partnership grant application, the Zoo bond implementation program and the Natural Areas Program education campaign.

The Metro Senior Leadership Team is working to establish an overall agency prioritization strategy. The Communications Department is actively participating in that work. Similarly, as part of the Metro/MERC Business Study, a cross-department team identified a number of potential efficiencies and improvements to web services. A cross-department team will make recommendations about priority web projects. Those priorities will be evaluated by the Senior Leadership Team as part of the annual budget process. We believe these actions, along with your recommendations, have put us on a course to establish a more effective prioritization system.

## **Evaluation**

For the current fiscal year, the Communications Department established a department-wide goal that calls on staff to “consider measurement in all your work.” We believe that clearer objectives are an important start to better evaluation. Metro will expand the use of surveys that ask people who engage with Metro how they heard about the opportunity to participate. Metro recently initiated the use of trackable email. Open and click rates are reviewed and evaluated at least quarterly. In addition, communications staff recently started producing monthly monitoring reports on web usage and monthly monitoring of earned media results. Improving the reports and the use of these reports by management is an important next step.

In early 2008 the Communications Department entered into a series of flexible services contracts to improve the monitoring and evaluation of communications materials and services spending. These contracts provide a mechanism to ensure the Communications Department is consulted on and able to better monitor the effectiveness of a significant portion of the agency’s communications work. The scope of communications-related flexible services contracts was expanded during August of 2010. While we have made strides in tracking communications spending, more work is needed to ensure that all agency-wide communications investments are based on agency priorities and that they are monitored and evaluated.

## **Staffing Levels and Assignments**

Based on agency priorities identified by the Senior Leadership Team, the responsibilities of several communications department staff members were shifted as part of the FY 2010-11 budget process. Additional improvements in timekeeping and cross-project accounting are under consideration but Metro’s diverse range of funding sources makes it difficult to assign staff solely on the basis of expertise while complying with required rules and regulations. Diverse materials and services budgets for many projects were identified by communications staff during budget development and are centrally managed by the Communications Department even though funds remain in the budgets of other departments. More work is needed to improve tracking of those funds so policy-makers and the public are fully aware of the amount and uses of communications resources.

## **Ensuring Diverse Input**

Metro is working on a number of projects to improve its capacity to establish and effectively maintain an ongoing dialogue with a diverse cross-section of the public. For example, the Communications Department recently entered into a contract to test the use of what is known as an Internet Panel. The panel involves recruiting a large, demographically representative group of residents to participate in ongoing public engagement efforts online. The technique is widely used by the private sector but currently is rare in the public sector.

Because demographic information is captured for each panel participant, staff will be able to measure results against demographically specific goals and objectives. The technique also will allow staff to provide more robust information to policy-makers about the people who are participating even if goals are not achieved.

The Communications Department also is exploring the use of other online systems to make it faster and easier for the public to engage with Metro. The department has created the necessary legal and technological infrastructure to support an online comment tool. While there currently is not adequate staff to support its use, management is working to shift resources to support this function. Similarly, Communications Department staff is developing a plan to promote the various opportunities to engage with Metro. Additional resource shifts may be needed to implement the promotion plan.

Through the work of Metro’s Diversity Action Team, Communications Department managers and staff are helping select goals, indicators, strategies and actions for committee participation and public

involvement by communities of color and other underrepresented populations. The goals will help guide communications investments and monitoring. Metro Communications staff members also are creating an Environmental Justice Committee to provide advice about culturally specific engagement work.

## **Other Findings**

### *Informing vs. Engaging*

Your report characterizes Metro's communications-related investments in two categories, to inform and to engage. Metro appropriately invests significant resources in communication that helps people know how best to reduce toxics, recycle, bike, walk, carpool and use transit. That said, we believe your report raises important policy questions about the relative balance of investments in information and engagement. We will pursue those questions during budget development.

### *Reserves as case study*

Your audit used the urban and rural reserves decision as a case study. While Metro played a lead role, it is important to note that this effort was shared among four governments who were not always aligned in their desired outcomes from the process. Because of the complexity of the reserves project Metro and its partners made an informed choice to make significant investments in informing and engaging stakeholders about the nature of the decisions and options to refine choices and areas of conflict. We also believe that when you take into account the significant contributions of partner agencies the overall allocation of resources among engagement and information would appear more balanced.

### *Stakeholders vs. the General Public*

With land use decisions in particular, Metro always attempts to engage the entire regional community while, at the same time, recognizing that its decisions change the long term use of individual parcels of property and so affect specific individuals and families in profound ways. Metro also frequently relies on stakeholders – in particular the region's elected officials and community based organizations -- to serve as representatives of public interests. The appropriate balance between stakeholders and the general public and between ongoing, large-scale engagement and the needs of specific landowners is an area that deserves more strategic consideration and policy discussion at the Metro Council level.

### *Website and Social Media*

We agree Metro's website has many pages that are visited only rarely. For this reason, staff does not spend time managing those pages. In most cases individual pages reflect things like a single news release or a single Council decision. Those pages are static but still available for visitors who need them.

Metro's use of social media is very new. Metro made a conscious decision to experiment with social media tools using its programs and venues before expanding its use into the policy arena. Based on experiments to date the Communications Department is preparing to expand work to grow subscribers, panel members, fans and followers. Metro's use of Twitter recently has attracted a combined 2,300 followers using two separate channels.

We would prefer to see a growing number of visitors to Metro's site. In the past, Metro has not promoted its site. The Communications Department is preparing a campaign to raise awareness of the site and what it offers and to encourage people to join the Internet panel described above. The reach of the campaign is limited by available resources.

Again, we appreciate your thorough evaluation. Your recommendations will help guide important and continued improvements in Metro's ability to effectively inform and engage the region.





**METRO**

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Agenda Item Number 3.2

**Audit Report: Leave Management:  
Improve Monitoring Capacity**

Metro Council Meeting  
Thursday, Oct. 7, 2010  
Metro Council Chambers



**Leave Management:**  
*Improve monitoring capacity*

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September 2010  
A Report by the Office of the Auditor

Suzanne Flynn  
*Metro Auditor*

Audit Team: *Suzanne Flynn, Metro Auditor*  
*Kathryn Nichols, Principal Management Auditor*



Knighton Award for Auditing

### **Metro Audit Winner of ALGA 2009 Gold Award**

The Office of the Auditor has been awarded the Gold Award for Small Shops, which was presented at the 2010 conference of the Association of Local Government Auditors (ALGA) in San Antonio in May. The winning audit was the *Oregon Zoo Capital Construction* audit, completed in November 2009.

### **Metro Ethics Line**

The Metro Ethics Line gives employees and citizens an avenue to report misconduct, waste or misuse of resources in any Metro or Metropolitan Exposition Recreation Commission (MERC) facility or department.

The ethics line is administered by the Metro Auditor's Office. All reports are taken seriously and responded to in a timely manner. The auditor contracts with a hotline vendor, EthicsPoint, to provide and maintain the reporting system. Your report will serve the public interest and assist Metro in meeting high standards of public accountability.

*To make a report, choose either of the following methods:*

**Dial 888-299-5460 (toll free in the U.S. and Canada)**

**File an online report at [www.metroethicsline.org](http://www.metroethicsline.org)**



SUZANNE FLYNN


*Metro Auditor*  
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## MEMORANDUM

September 23, 2010

To: Carlotta Collette, Acting Council President  
Rod Park, Councilor, District 1  
Carl Hosticka, Councilor, District 3  
Kathryn Harrington, Councilor, District 4  
Rex Burkholder, Councilor, District 5  
Robert Liberty, Councilor, District 6

From: Suzanne Flynn, Metro Auditor 

**Re: Audit of Employee Leave Management**

The attached report covers our audit of the differences in employee leave patterns among Metro Departments and the need to improve management. This audit was not included in our FY2009-10 Audit Schedule, but was added after concern had been expressed on Metro's Ethics Line about management practices regarding the use of sick leave. The audit was initiated to review employee use of leave agency-wide and determine if there were differences.

Metro does not routinely review employee leave patterns overall. There are benefits from performing such an analysis. Understanding underlying causes between differences in these patterns among departments can lead to a better understanding of employee needs and potential areas for improvement. This report was intended to provide a baseline for Metro management of employee leave use in FY2007-08 and FY2008-09. It also demonstrates potential measures that Metro might adopt to do this type of analysis on a regular basis.

We have discussed our findings and recommendations with Scott Robinson, Deputy COO, Mary Rowe, HR Director and Teri Dresler, General Manager, Visitor Venues. A formal follow-up to this audit will be scheduled within 1-2 years. We would like to acknowledge and thank the management and staff in the departments who assisted us in completing this audit.



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## Summary

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Managing employee attendance can save money and improve the effectiveness of services. Most experts agree that leave cannot be managed without first analyzing employees' use of leave. Because Metro did not monitor or analyze employee leave agency-wide, it did not have the ability to manage employee attendance.

The Auditor's Office received Ethics Line reports that seemed to indicate different leave practices existed in the different departments. This audit was added to the regular audit schedule in March 2010 in response to those reports. The purpose was two-fold: 1) to assess the incidence and cost of employee leave, and 2) to determine if there were differences among Metro departments and employee categories.

Metro employees had several categories of leave, including holidays, vacation, sick and the federally mandated Family Medical Leave. After reviewing two fiscal years of leave-eligible employee data, we found that total leave hours as a percent of total work time available was similar to national and local rates. However, when we separated the data by department and the employee categories of union hourly, union salaried, non-represented hourly and non-represented salaried, there were significant differences.

Two other measures of leave use confirmed these differences. We calculated the annual average days of total leave taken by employees and the average percentage of employees using leave by week. There was a difference among departments of 22 days in FY2007-08 and 15 days in FY2008-09 in the average days that employees took leave. In any given week, 34% of Metro employees took some amount of leave. Some departments had rates higher than others.

According to best practices, a key element of managing leave effectively is accurate measurement and monitoring. An organization should confirm if there is a problem, identify the type of leave, highlight some of the underlying causes and benchmark leave levels to other similar organizations.

We estimated the direct payroll cost of leave over the two-year period to be \$11.6 million. This represented about 14% of total payroll costs. Because of the variability we saw among departments and employee categories, we concluded that there was an opportunity to better manage employee leave.

Metro has two standards for defining misuse of sick leave. One is found in contract language and the other in personnel policy. We applied both of these standards and found that some employees might be misusing sick leave privileges. Sick leave misuse can cause poor morale and loss of productivity. With better analytical capability, Metro would be able to identify and manage leave misuse.

*Summary Cont'd*

We recommend that Metro improve the quality of data available and its analytical and management capabilities. This audit could be a baseline for future analysis. Metro should assess underlying causes of differences in leave use and develop strategies to better manage leave.

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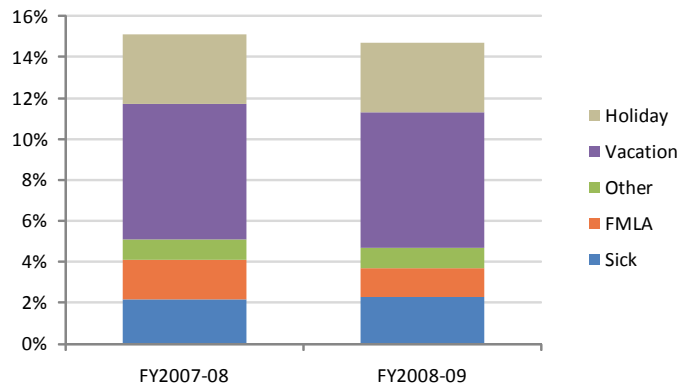
## Background

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Metro provided several types of leave to full and part-time employees as a benefit. Full-time employees received nine paid holidays, two personal leave days, 104 hours sick leave and vacation leave at a rate based on tenure.

Employees in three departments, MERC, Zoo and Parks/Environmental Services comprised about 59% of Metro's leave-eligible workforce. Overall, 64% of Metro's leave eligible staff was unionized. In FY2008-09, employees took on average 34.7 days of leave (includes all leave). This represented 15% of the total work time available.

**Exhibit 1**  
Leave as a Percent of Total  
Work Time Available



Source: Auditor's Office analysis

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## Scope and methodology

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The purpose of this audit was to determine the financial effect of employee leave in incidence and estimated cost. Analysis was conducted to determine if:

- Leave rates were different among departments.
- Leave rates were different among employee categories (represented and non-represented, hourly and salaried, part and full-time).
- There were potential patterns or episodes of leave that suggested misuse.

We also conducted analysis to quantify the direct cost of leave benefits provided and compare Metro to other jurisdictions.

To accomplish our objectives, we extracted employee data for two fiscal years, 2007-2008 and 2008-2009, from Metro's time and attendance system (Kronos) and the human resource management system (PeopleSoft HR). Metro relied on PeopleSoft HR as the system of record and considered this information more accurate. However, detailed records of hours by day were found only in the Kronos system. In combining data from both systems, we took steps to ensure the reliability and accuracy of the information. Excluded from the analysis were employees who were temporary or were part of a union that did not provide for leave benefits in the contract.

For the purposes of this analysis, when we analyzed leave overall, we categorized leave into five areas:

- Holiday
- Vacation (includes personal holidays)
- Other (includes bereavement, administrative, disciplinary, jury duty, military leave, bonus leave, workers comp)
- Sick
- Family Medical Leave Act (federal)

When we analyzed potential leave misuse, we excluded all leave except holiday, vacation and sick leave. Leave that was in conjunction with worker's compensation was also excluded.

We calculated three measures to analyze leave patterns by individual leave type and total leave. These were:

- Leave to Work-Time-Available Rate (leave hours/estimated total work hours)
- Annual Average Time Absent (leave/all employees)
- Weekly Absent Rate (employees absent during week/all employees). For this measure, we excluded holiday leave because most employees would be out in each week that has a holiday. If included, it would have artificially inflated this rate.

We also interviewed Metro staff, contacted the City of Portland and Multnomah County, and reviewed literature to collect best practices in leave management.

This audit was not on the FY2009-10 Audit Schedule but was added to the schedule in March 2010 as the result of concerns reported on Metro's Ethics Line. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

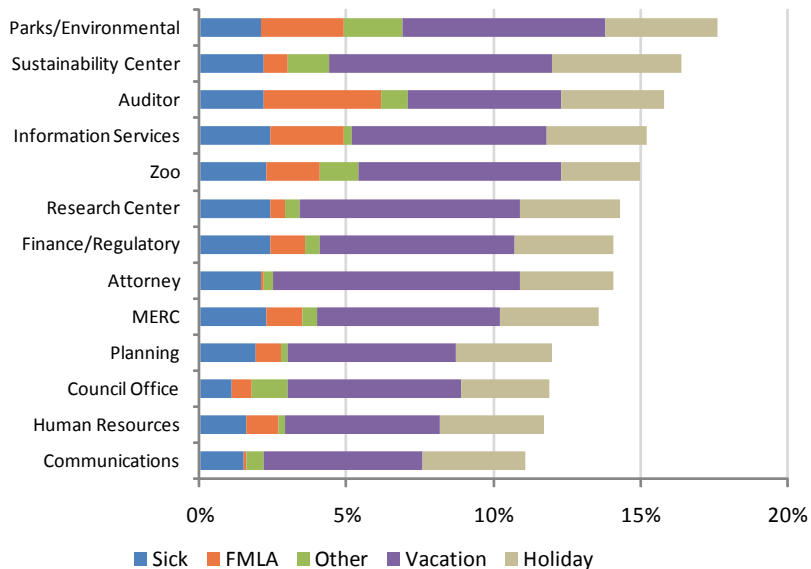
## Results

One measure often used to study leave usage is the ratio of leave to total work-time-available. We found examples of this measure at a national level in the US, Canada and England and in reports from Multnomah County. We calculated this measure for Metro employee leave for fiscal years 2007-08 and 2008-09 and determined that there were differences by department and employee category.

When compared to a 2007 national study, Metro's rates were similar. Metro's overall rate was 15.1% in FY2007-08 and 14.7% in FY2008-09. We estimated the direct payroll costs of leave totaled \$11.6 million over the two-year period. We estimated this to be 14.4% of total payroll costs in FY2007-08 and 13.8% in FY2008-09. According to the 2007 study of 455 organizations, direct costs of absence were 14.2% of payroll, similar to our estimates for Metro. Total leave cost (including indirect costs) would be higher. This same study found that the total cost (direct and indirect) for all major leave categories was 36% of payroll.

When calculated by department, the leave to work-time-available rate showed marked differences. This rate varied from 11.1% to 18.7% among Metro departments. These differences were statistically significant.

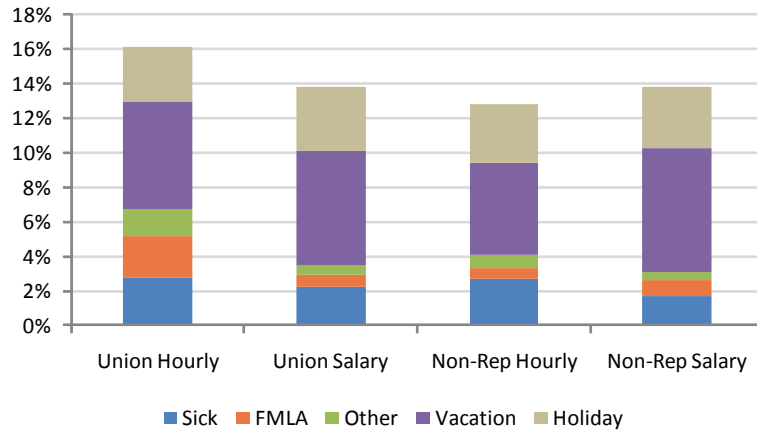
**Exhibit 2**  
Leave to Work-Time-Available  
Rate by Department  
FY2008-09



Source: Auditor's Office analysis

We also reviewed leave to work-time-available rate by the employee categories union hourly, union salaried, non-represented hourly and non-represented salaried. Consistent with research elsewhere, union represented hourly employees had a higher percentage of work time lost to leave.

**Exhibit 3**  
 Leave to Work-Time-Available  
 by Employee Category  
 FY2008-09



Source: Auditor's Office analysis

Although not exactly comparable, Multnomah County completed an analysis of leave in 2008. While the analysis included both full and part-time regular employees similar to this study, the calculation of total hours worked was slightly different. Despite this, the comparison confirmed to some degree the patterns we saw in this study.

**Exhibit 4**  
 Comparison of Metro Leave to  
 Work-Time-Available Rate to  
 Multnomah County

	Metro FY2007-08	Multnomah County FY2007-08
Sick	2.2%	3.2%
FMLA	1.9%	1.2%
Other	1.0%	2.7%
Vacation	6.6%	6.4%
Holiday	3.4%	3.8%
<b>Total</b>	<b>15.1%</b>	<b>17.3%</b>

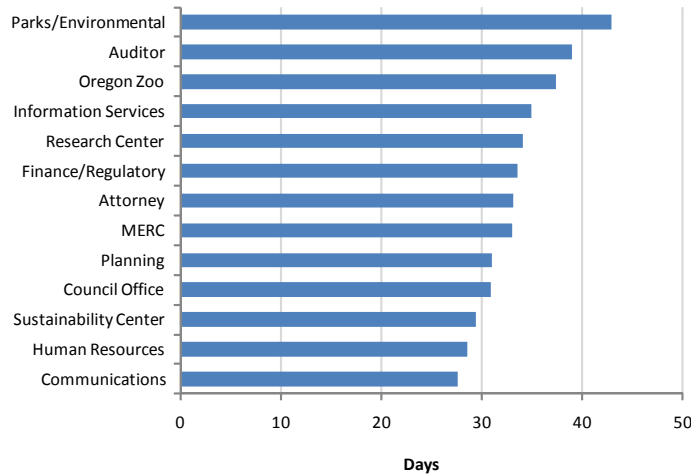
Source: Auditor's Office analysis, Multnomah County Average Annual Sick Leave Report, February 2008.

**Other measures also show differences**

In addition to the leave to work-time-available rate, we also calculated the average leave per employee and the average percentage of employees absent at any time during the week. Each of these measures has been used by other jurisdictions and provided a slightly different perspective.

Metro leave eligible employees were absent on average 36.2 days in FY2007-08 and 34.7 days in FY2008-09. As with the leave to work-time-available rate, there were significant differences among departments and employee categories. There was a difference among departments of 22 days in FY2007-08 and 15 days in FY2008-09. In both years, hourly union employees took the most time off, an average of 38.6 days. This could be because of a lack of flexibility in the work schedule due to the hourly status.

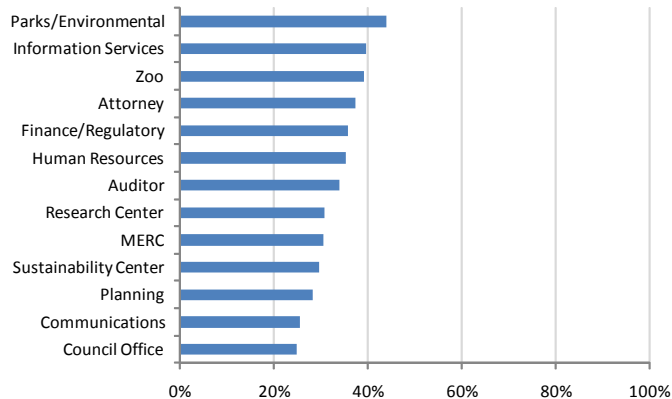
**Exhibit 5**  
Average Days Absent  
FY2008-09



Source: Auditor's Office analysis

In any given week in fiscal years 2007-08 and 2008-09, 34% of Metro employees took some form of leave (Weekly Absent Rate). There were statistically significant differences among departments, with rates at Parks and Environmental Services being the highest in both years.

**Exhibit 6**  
Weekly Absent Rate  
FY2008-09



Source: Auditor's Office analysis

**Better leave management possible**

Research shows that managing attendance can save money and improve effectiveness. Most experts agree that leave cannot be managed without first analyzing leave patterns. A key element of managing leave effectively is accurate measurement and monitoring. An organization should confirm if there is a problem, identify the type of leave, highlight some of the underlying causes and benchmark leave levels to other similar organizations. The fact that we found differences in the use of leave among departments and employee category suggests that Metro could benefit from leave analysis.

There are many reasons why some departments and employee groups could have higher rates of leave use. Some studies have found that age, gender and marital status have an effect on the use of leave. Similarly, we found some significant differences at Metro in leave use by gender, marital status, age and tenure on the job. Older and more tenured employees had higher rates of leave. There were few differences in the average age by department, but employees at the Research Center, Information Services, Zoo and at Parks and Environmental Services had longer tenure with the organization, which might affect their leave rates.

Vacation and holiday leave are planned and, in the case of vacation, subject to supervisory approval. Sick and FMLA leave present challenges and potentially can affect work productivity to a greater degree. Sick leave is primarily unplanned. The effect of unplanned leave can be uneven services, reduced productivity or missed deadlines. Misuse of sick leave can also cause morale problems with employees who use their leave as intended. FMLA leave, while planned, can be longer term than other leave, up to 12 weeks within a one-year period. As a result, organizations generally focus on sick leave and FMLA as leave that needs additional management.

Regionally, we found examples of local governments that regularly review employee leave patterns. The City of Portland has analyzed full-time employee sick leave annually since the early 1990's. Each spring, it produced a report that included the citywide full-time employee average sick leave amount for the previous calendar year. The measure related to a union contract definition of sick leave abuse. One of the contract criteria in determining abuse was if an individual employee's sick leave use was above the citywide average.

Multnomah County first analyzed leave data in 2008 because of layoffs and the need to manage leave better. A committee was formed that reviewed sick leave use. The County reported one of the benefits of the analysis was that they were able to identify employees who might benefit from intermittent FMLA leave. It was also an "eye-opener" for some department directors who were unaware of the extent of sick leave use. The County has recently updated this study for sick leave use only and has re-activated the committee. The Sheriff's Office is designing software that will identify potential abuse and will be used by all Departments once it is completed.

Metro does not systematically analyze leave information to determine patterns or underlying causes. We reviewed Metro's time and attendance software to determine if it was possible for a manager to look in a systematic way at employee leave. We found that it was only possible to look at total leave by employee or work group. This is not sufficient to determine if leave could be better managed.

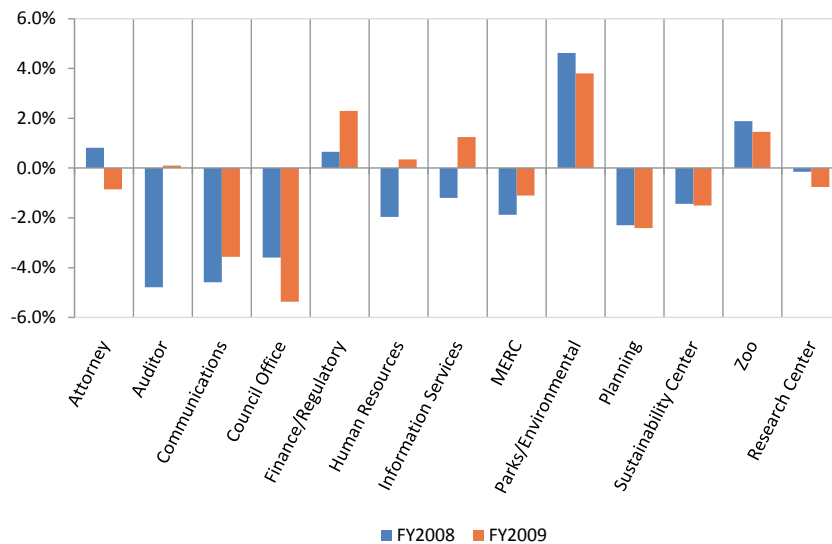


**Variance in sick leave use suggests potential for improved management**

Metro full-time permanent employees earn sick leave at the rate of 104 hours annually. Part-time permanent employees earn sick leave proportionate to the percent of full-time hours worked. Sick leave accrues and has no limit for the total that can be accrued. It is designed for employees who are temporarily unable to work due to illness or doctor’s appointments. It can also be used when a member of the family is ill and needs care.

Our analysis of leave records found 90% of employees in FY2007-08 and 87% in FY2008-09 took sick leave. This accounted for about 2% of total work time available in each year. On average, employees took 5 days of sick leave. On a weekly average, about 11% of employees took some amount of sick leave. The differences among departments in average days taken of sick leave (Exhibit 7) and average percent of employees out in a week were statistically significant. Differences in all of the measures were statistically significant by employee category.

**Exhibit 7**  
Percent Above or Below Average Sick Days Taken



Source: Auditor’s Office analysis

When compared to the annual sick day average of all employees at Metro, the Parks and Environmental Services employee average was 30% higher. These differences cannot necessarily be attributed to sick leave misuse and may be related to other reasons, such as work conditions, poor morale, or situational differences such as age, marital status or gender. Understanding the underlying causes could assist Metro in better managing employee leave and its impact on operations.

**Potential sick leave misuse identified**

According to Metro personnel policy, sick leave was not to be used for personal time off or to extend holidays or vacation leave. Misuse of sick leave was cause for disciplinary action.

Several union contracts with Metro had language that defined criteria to determine sick leave misuse. Generally, misuse was defined as either exhausting all sick leave or using five days in the previous six month period. One union contract provided that sick leave that involved a single incident and was documented by a doctor’s statement or incidents of FMLA, Worker’s Compensation, or Americans With Disabilities Act were excluded. Metro was required to give the employee notice and to ask for an explanation prior to any disciplinary actions.

Taking a very conservative approach, we identified employees who might be misusing sick leave based on the union contract standard. There is no defined standard for non-represented employees. When applied to all Metro employees, we identified about 8% of employees in FY2007-08 and 7% in FY2008-09 that met the criteria. Applying the criteria to employees in unions with contract standards, there were 15% in FY2007-08 and 11% in FY2008-09 who met the criteria. Two-thirds of these unionized employees were from three departments: MERC, Parks and Environmental Services and the Zoo. We found nineteen employees who used sick leave in excess of contract standards in both fiscal years.

Our analysis also included a review of sick leave used either before or after holidays or vacation. This would be a violation of Metro’s personnel rules. We excluded from the analysis any leave that was in conjunction with other types of leave, such as worker’s compensation, bereavement, jury duty or administrative. We identified employees who had multiple episodes of vacation or holiday leave combined with sick leave at either the beginning or end of the leave episode. We examined each of these episodes in a more thorough and detailed manner and made a judgmental determination if it was (1) not misuse, (2) possible misuse or (3) very likely misuse. We defined an episode as “very likely” if there was a repetitive pattern.

**Exhibit 8**  
Potential Sick Leave Misuse Summary

	FY2007-08	FY2008-09
<b>Sick Leave in excess of contract amounts</b>		
Percentage of all Metro employees	8.4%	6.8%
Percentage of employees in unions with standards	14.5%	11.0%
<b>Sick Leave used with vacation/holiday</b>		
Employees with possible or very likely misuse	9.3%	7.1%
Employees with very likely misuse	4.8%	3.1%

Source: Auditor’s Office analysis

In FY2007-08, 68 employees possibly or very likely misused sick leave by using it before or after a holiday or vacation on 146 occasions. In FY2008-09, 53 employees possibly or very likely misused sick leave on 139 occasions. Sixteen of the employees had episodes in both fiscal years. If each of these episodes were found to be misuse, it would represent a productivity loss of 102.5 days in FY2007-08 and 127.9 days in FY2008-09. Over one-half of these employees were employed at Parks and Environmental Services and the Zoo.

**Exhibit 9**  
Potential Days Lost to Sick Leave Misuse

	FY2007-08	FY2008-09
Total days lost	102.5	127.9
Average days per employee	1.5	2.4

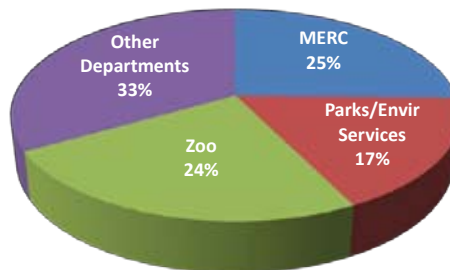
Source: Auditor's Office analysis

**Potential for improved management of FMLA use**

The federal Family and Medical Leave Act of 1993 required employers to provide up to 12 weeks of unpaid, job-protected leave per year. According to Metro personnel rules, employees can chose whether the leave shall be paid from accrued personal leaves (including vacation leave, sick leave, compensatory time leave, personal holiday leave) or be unpaid.

Based on a US Department of Labor survey (2000), the most common reason for taking leave was for the employee's own health. About 22% of Metro leave-eligible employees took FMLA leave in FY2007-08 and 20% in FY2008-09. On average, these employees took 169 hours in FY2007-08 and 129 hours in FY2008-09. More than half of the employees who took FMLA leave were from three Metro Departments (MERC, Parks and Environmental Services, and the Zoo). We estimated the direct cost of FMLA leave to Metro was \$684,400 in FY2007-08 and \$378,600 in FY2008-09.

**Exhibit 10**  
Percent of Employees with FMLA Leave by Department FY2008-09



Source: Auditor's Office analysis

**Metro employee  
data limited**

To conduct this audit, we extracted data about employees and employee leave from two different sources, an automated time and attendance system (Kronos) and human resource information system (PeopleSoft HR). Metro considered its PeopleSoft software as the system of record and that this system had the most accurate data available. However, detailed daily records with hours worked and leave was only available in the Kronos system. Data at the day level is needed to analyze leave patterns for misuse. Because of inconsistencies between the two automated systems, ensuring that the data was accurate and reliable required considerable additional work.

We reviewed management reports to determine if Metro was able to systematically review employee leave and do analysis for misuse patterns. The human resource information specialist prepared regular agency-wide reports on number of employees (census report) but this did not include leave hours used. The specialist stated that reports regarding individual employee's leave were prepared occasionally on a manager's request. We found one report available in Kronos that could be used to generate total regular hours and leave by work location. This report has the potential of providing data needed to calculate lost rate time by leave type. Metro has not studied leave patterns agency-wide or in a systematic way.

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## Recommendations

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### **To improve the quality of data, Metro should:**

1. Standardize employee data entered into the time and attendance system.
2. Improve data quality and agreement across the two software systems, Kronos and PeopleSoft HR.

### **To improve analytical and management capabilities Metro should:**

1. Determine if current functionality is available to produce agency-wide leave reports that allow comparisons among departments and other jurisdictions.
2. If current capability is not sufficient, Metro should put a plan in place to add capacity.

### **To improve leave management, Metro should:**

1. Assess underlying causes for differences in leave use by department and employee class.
2. Develop strategies to better manage leave.
3. Develop processes to identify and address leave misuse.
4. Collaborate with local jurisdictions to benchmark leave measures.



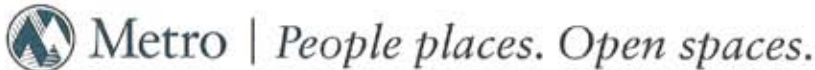
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## **MANAGEMENT RESPONSE**

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**Date:** September 14, 2010

**To:** Suzanne Flynn, Metro Auditor

**From:** Michael Jordan, Chief Operating Officer  
Scott Robinson, Deputy Chief Operating Officer  
Mary Rowe, Human Resources Director  
Teri Dresler, General Manager Visitor Venues

**Cc:** Rachel Coe, Information Services Director  
Amy Davis, Payroll Supervisor  
Jodi Wilson, Benefits Program Manager

**Re:** Management Response to Leave Management Audit

---

The following represents our response to the audit report which will be issued by your office later this month. Current staff is committed to working to address issues raised. The information provided in the audit will serve as a solid baseline in moving forward with managing leave usage. We will continue to take action to properly address the recommendations provided in the audit.

#### **Response to Recommendations in the Auditor's Report**

The following summarizes management's response to the specific recommendations noted in the audit report.

#### **Recommendation:**

##### **To improve the quality of data, Metro should**

- 1. Standardize employee data entered into the time and attendance system.**
- 2. Improve data quality and agreement across the two software systems, Kronos and PeopleSoft HR.**

**Response:** Human Resources is working in partnership with Information Services and Finance to review the payroll and benefits processes. A project plan has been developed to review current processes and system functionality and determine what changes can be made for process improvement. As part of this review Human Resources will also include a review of employee data, codes and definitions that are inputted into each system. A determination will be made whether or not where there would be benefit from standardization of definitions and protocols and action taken accordingly.

**Recommendation:**

**To improve analytical and management capabilities Metro should:**

- 1. Determine if current functionality is available to produce agency-wide leave reports that allow comparisons between departments and other jurisdictions.**
- 2. If current capability is not sufficient, Metro should put a plan in place to add capacity.**

**Response:** This will be added to the current project plan for reviewing system functionality as noted above. The data collected for this audit will serve as a useful baseline in determining appropriate information to collect moving forward. If the current systems do not have that functionality we will develop a proposal to increase our tracking capabilities.

**Recommendation:**

**To improve leave management, Metro should:**

- 1. Assess underlying causes for differences in leave use by department and employee class.**
- 2. Develop strategies to better manage leave.**
- 3. Develop processes to identify and address leave abuse.**
- 4. Collaborate with local jurisdictions to benchmark leave measures.**

**Response:**

Human Resources will further review data and variables that may be influencing leave usage differences in the various departments to determine if there are problems. Human Resources will also survey other local government agencies such as City of Portland, Multnomah County, Oregon Health Sciences University and Clackamas County to determine regional best practices for leave management. We will then work with departments and the collective bargaining units as appropriate to develop strategies for improved leave management where problems exist.

We appreciate the time you and your staff took in conducting the audit and the insight that it provides for continuing to improve efficiencies in the organization.

 9/14/10  
Date  
Michael Jordan  
Chief Operating Officer

 9/14/10  
Date  
Scott Robinson  
Deputy Chief Operating Officer

 9/14/10  
Date  
Teri Dresler  
General Manager of Visitor Venues

  
Date  
Mary Rowe  
Director of Human Resources

---

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	Hr/confidential/audits/audit response leave management 9-10	



**METRO**

Office of the Metro Auditor  
600 NE Grand Avenue  
Portland, Oregon 97232  
503-797-1892  
[www.oregonmetro.gov](http://www.oregonmetro.gov)

Agenda Item Number 4.0

**Consideration of the Minutes for Sept. 30, 2010**

Metro Council Meeting  
Thursday, Oct. 7, 2010  
Metro Council Chambers

Agenda Item Number 5.1

**Ordinance No. 10-1247**, For the Purpose of Amending Metro Code Sections 2.04.500 Through 2.04.580 to Establish Metro's Sustainable Procurement Program.

*First Reading*

Metro Council Meeting  
Thursday, Oct. 7, 2010  
Metro Council Chambers

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF AMENDING METRO	)	ORDINANCE NO. 10-1247
CODE SECTIONS 2.04.500 THROUGH 2.04.580	)	
TO ESTABLISH METRO’S SUSTAINABLE	)	Introduced by Chief Operating Officer
PROCUREMENT PROGRAM	)	Michael Jordan with the concurrence of
	)	Acting Council President Carlotta Collette.

WHEREAS, Metro Code Sections 2.04.500 through 2.04.580 establish Metro’s Recycled Product Procurement Program; and

WHEREAS, the Procurement Officer and Sustainability Program have proposed certain revisions to Metro Code Sections 2.04.500 through 2.04.580 to align Metro’s procurement practices with its sustainability goals; and

WHEREAS, the proposed revisions are entitled Metro’s Sustainable Procurement Program and are attached as Exhibit A; and

WHEREAS, the Metro Council finds that Metro’s Sustainable Procurement Program furthers Metro’s sustainable operations objectives; and

WHEREAS, the Metro Council directs the Chief Operating Officer to establish Sustainable Procurement Administrative Rules within 90 days of the adoption of this ordinance; and

WHEREAS, Metro’s Sustainable Procurement Program applies to all purchases made by Metro; now therefore,

THE METRO COUNCIL ORDAINS AS FOLLOWS:

1. Metro Code Amendment. Metro Code Sections 2.04.500 through 2.04.580, “Metro Recycled Product Procurement Program” are repealed and replaced with ”Metro’s Sustainable Procurement Program” and language in the form attached hereto as Exhibit A.

ADOPTED by the Metro Council this \_\_\_\_\_ day of \_\_\_\_\_ 2010.

\_\_\_\_\_  
Carlotta Collette, Acting Council President

Attest:

Approved as to Form:

\_\_\_\_\_  
Kelsey Newell, Recording Secretary

\_\_\_\_\_  
Daniel B. Cooper, Metro Attorney

**Exhibit A to Ordinance No. 10-1247  
Metro Code Title II, Chapter 2.04.500**

**METRO'S SUSTAINABLE PROCUREMENT PROGRAM**

2.04.500 Purpose and Intent

Metro's Sustainable Procurement Program is created to achieve the following:

- (a) Ensure that Metro's procurement activities meet the Sustainability goals established by the Metro Council.
  
- (b) Ensure that Metro's procurement activities support the definition of Sustainability adopted by the Metro Council.
  
- (c) Support a sustainable environment, economy, and community by:
  - (1) Reducing the environmental impact of Metro government operations and setting the standard for sustainable public purchasing in the region;
  - (2) Supporting businesses and markets located in the Portland Metro region; and
  - (3) Ensuring equitable inclusion of diverse members of our community in our Sustainable Procurement efforts.

Metro's Sustainable Procurement Program applies to all purchases made by Metro.

2.04.510 Definitions

As used in Section 2.04.500 through the end of this chapter:

- (a) "Certified Organic" means the item has been grown according to strict uniform standards that are verified by independent state or private organizations.
  
- (b) "Contractor" means any person, group of persons, consultant, designing architect, association, partnership, corporation, or other business entity that has a contract with Metro (including suppliers) or serves in a subcontracting capacity with an entity having a contract with Metro for the provision of goods or services.



**Exhibit A to Ordinance No. 10-1247**  
**Metro Code Title II, Chapter 2.04.500**

(c) "Designated Products" means Recovered and Sustainable Products designated in Metro's Sustainable Procurement Administrative Rules.

(d) "Ecolabel" means a label that identifies overall environmental preference of a product or service within a specific product/service category based on Life Cycle Cost Assessment considerations and that is awarded Third Party Certification.

(e) "Fair Trade" means a trading partnership, based on dialogue, transparency and respect, which seeks greater equity and contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers.

(f) "Green Building Practices" means a whole-systems approach to the design, construction, and operation of buildings and structures that helps mitigate the environmental, economic, and social impacts of construction, demolition, and renovation, and includes Third Party Certification.

(g) "Habitat Friendly" means development practices that reduce the impact of development on natural resources, look beyond the building envelope and focus on land development and site design that mimic nature's processes, and conserve the natural systems and hydrologic functions of a site.

(h) "Least Toxic" means that no additives that are chemicals of high concern to human or environmental health may constitute part of the product except at levels consistent with background levels in the environment.

(i) "Life Cycle Cost Assessment" means the comprehensive accounting of the total cost of ownership, including the initial costs, energy and operational costs, longevity and efficacy of service, and disposal costs.

(j) "Locally Available" means grown, manufactured, or assembled within 400 miles of the Metro Region or sold from a vendor located within 400 miles of the Metro Region.

(k) "Minimum Recovered Content Standards" means standards established by Metro's Sustainable Procurement Administrative Rules specifying the minimum level of

**Exhibit A to Ordinance No. 10-1247**  
**Metro Code Title II, Chapter 2.04.500**

Recovered Material necessary for designated products to qualify as Recovered and Sustainable Products.

(l) "Post-Consumer Material" means a material or finished product that has served its intended use and has been discarded for disposal or recovery, having completed its life as a consumer item. Post-Consumer Material is a part of the broader category of Recovered Material.

(m) "Practicable" means satisfactory in performance and available at a fair and reasonable price.

(n) "Pre-Consumer Material" means material or waste remaining after manufacture of a product.

(o) "Product Stewardship" means whoever designs, produces, sells, or uses a product takes responsibility for minimizing the product's environmental impact throughout all stages of the product's life cycle.

(p) "Recovered Material" means waste material and by-products which have been recovered or diverted from solid waste and includes both Post-Consumer Material and manufacturing or Pre-Consumer Material.

(q) "Recovered Product" means a product manufactured using Recovered Material and meeting the Minimum Recovered Content Standards established by Metro's Sustainable Procurement Administrative Rules.

(r) "Recycled Paper" means paper meeting the Minimum Recovered Content Standards established by Metro's Sustainable Procurement Administrative Rules.

(s) "Supplier Diversity" means a Sustainable Business Practice that encourages the use of previously underutilized vendors as suppliers.

(t) "Sustainability" means using, developing and protecting resources in a manner that enables people to meet current needs and provides that future generations can also meet future needs, from the joint perspective of environmental, economic and community objectives.

(u) "Sustainable Procurement" means purchasing materials, products, and services in a manner that

**Exhibit A to Ordinance No. 10-1247**  
**Metro Code Title II, Chapter 2.04.500**

integrates fiscal responsibility, social equity, and community and environmental stewardship.

(v) "Sustainable Products" means products that have a lesser or reduced effect on human health and the environment when compared with competing products that serve the same purpose. This comparison may consider Life Cycle Cost Assessment.

(w) "Third Party Certification" means an independent, objective assessment of a service or product completed by someone other than the service provider or product manufacturer.

2.04.520 Metro's Sustainable Procurement Administrative Rules

The Chief Operating Officer shall establish Sustainable Procurement Administrative Rules consistent with this Section to implement the Sustainable Procurement Program. The Sustainable Procurement Administrative Rules shall include:

(a) Guidance on maintaining or referencing lists of preferred Recovered and Sustainable Products as Designated Products.

(b) Guidance for procurement of goods that meet the Sustainability goals established by the Metro Council and that include, without limitation, and where available and Practicable, the following attributes:

- (1) Third Party Certification;
- (2) Product Stewardship;
- (3) Green Building Practices;
- (4) Least Toxic;
- (5) Waste Prevention and Reduction;
- (6) Recovered Material;
- (7) Habitat Friendly;
- (8) Certified Organic;

**Exhibit A to Ordinance No. 10-1247  
Metro Code Title II, Chapter 2.04.500**

- (9) Greenhouse Gas Reduction;
- (10) Locally Available;
- (11) Supplier Diversity;
- (12) Fair Trade; and
- (13) Life Cycle Cost Assessment.

(c) A Minimum Recovered Content Standard for Recycled Paper and Recovered Products.

(d) A schedule and process for implementation of the Sustainable Procurement Program and Administrative Rules.

(e) A schedule for reporting to the Metro Council on the status and performance of the Sustainable Procurement Program and Administrative Rules and the minimum requirements for the report, including the setting of goals to illustrate progress.

(f) A process for assigning Department personnel to evaluate whether it is Practicable to use a particular Recovered or Sustainable Product.

(g) A process for collecting data to evaluate the status and performance of the Sustainable Procurement Program and Administrative Rules.

(h) Direction to the Procurement Officer for revising procurement procedures to comply with the Sustainable Procurement Program and Administrative Rules.

(i) A plan for implementing the joint purchase of Recovered and Sustainable Products and Materials, within Metro and with other public agencies, to reduce the price of these goods.

2.04.530 Metro's Sustainable Procurement Program Responsibilities

(a) The Chief Operating Officer shall support and implement Metro's Sustainable Procurement Program and Administrative Rules.

(b) The Procurement Officer shall:

**Exhibit A to Ordinance No. 10-1247**  
**Metro Code Title II, Chapter 2.04.500**

- (1) Ensure that procurement procedures are revised for consistency with the Sustainable Procurement Program and Administrative Rules.
- (2) Provide Departments with information to facilitate their evaluation and procurement of Recovered and Sustainable Products.
- (3) Inform and advise Departments of their responsibilities under the Sustainable Procurement Program and Administrative Rules; provide training on and ensure compliance with the same.
- (4) Provide information to the Chief Operating Officer to assist with creating and revising Sustainable Procurement Administrative Rules to achieve Metro's Sustainability goals.
- (5) Ensure that Recovered and Sustainable Products are designated whenever Practicable.
- (6) Revise existing procurement standards and specifications to eliminate, where Practicable, discrimination against the procurement of Sustainable Products.
- (7) Transmit Sustainable Procurement Program and Administrative Rules to each Department.
- (8) Establish a strong connection between Metro's Sustainable Procurement Program and Metro's ESB, MBE, and WBE Program.
- (9) Ensure that all invitations to bid or requests for proposal comply with the Sustainable Procurement Program and Administrative Rules.
- (10) Ensure that when considering bids and proposals submitted by Contractors, Metro evaluates compliance with the Sustainable Procurement Program and Administrative Rules.
- (11) Develop a system for tracking Metro's compliance with its Sustainable Procurement Program and Administrative Rules.

**Exhibit A to Ordinance No. 10-1247**  
**Metro Code Title II, Chapter 2.04.500**

(12) Assist the Chief Operating Officer in compiling  
the report required in Section 2.04.5xx.

(c) Department Directors shall ensure that their  
departments comply with the Sustainable Procurement Program and  
Administrative Rules.

2.04.540 Report to Metro Council

Each year the Chief Operating Office shall submit a report to  
the Metro Council that details the status and performance of the  
Sustainable Procurement Program and Administrative Rules.

## **STAFF REPORT**

### **FOR THE PURPOSE OF AMENDING METRO CODE CHAPTER 2.04 IN ORDER TO ESTABLISH A SUSTAINABLE PROCUREMENT CODE**

---

Date: September 24, 2010      Prepared by: Darin Matthews, Procurement Officer, 797-1626  
Molly Chidsey, Sustainability Coordinator, 797-1690

#### **BACKGROUND**

Metro Code 2.04.500 to 2.04.580 sets forth the agency's policies on the purchase of recycled, recyclable and reusable products and materials. These policies were established by the Metro Council in order to encourage the use of such products throughout the agency, comply with state purchasing statutes (ORS 279A, ORS 279B) regarding the purchasing of recycled products, and serve as an example to other public and private agencies.

To bring Metro's procurement efforts in line with adopted sustainability goals, a project team led by Metro's procurement officer and sustainability coordinator updated this section of the Code with the assistance of the Office of the Metro Attorney. The objective was to create a sustainable procurement code that would direct Metro to create a sustainable procurement program and policies which support Metro's sustainability goals, is relevant to all of Metro's internal operations, contains measurable goals, and is viable long-term.

The Metro Council previously passed legislation (Resolution 02-3146B) that encouraged the purchase of wood products from sustainable sources. This will be incorporated into the new procurement policy through the use of third party certifications.

#### **Agency Collaboration**

The project team was comprised of employees from throughout the agency, including Sustainability Center, Finance & Regulatory Services, Oregon Zoo, Parks & Environmental Services, Oregon Convention Center, Human Resources, and Office of Metro Attorney. This core team took the lead in developing a sustainable procurement strategy that was consistent with Metro's goals and priorities.

Additionally, subject matter experts from throughout the agency were engaged to offer input on their respective program areas. This dialogue was essential in helping the project team shape a strategy that worked for the day to day business needs of Metro's various programs.

Stakeholder groups that were also given the opportunity to review and offer feedback into the project included: Environmental Action Team, Green Team, Department Purchasing Coordinators, and Senior Leadership Team.

#### **Review of Best Practices**

The project team reviewed the sustainable procurement policies, codes, and strategies of several organizations. These included Multnomah County, City of Portland, King County, City of Seattle, Greater London Authority, City of Berkeley, and Environmental Protection Agency. Each of these policies was reviewed and the team determined which elements would best fit into Metro's procurement code.

### **Establish Definitions and Terminology**

The current section of Metro Code (2.04.500 to 2.04.580) that deals with sustainable procurement includes practices and terminology that goes beyond buying recycled products. New definitions and terminology were added to reflect the product attributes that are available in the market that would support Metro's sustainability goals through procurement.

The new definitions include: Certified Organic, Compostable, Ecolabel, Green Building Practices, Habitat Friendly, Locally Available, Product Stewardship, Supplier Diversity, and Third Party Certification. Clearly establishing these terms will assist the agency in carrying out the sustainable procurement policy. The committee feels that these definitions best represent current best practices in sustainable procurement in the public sector.

While there is no universally accepted definition of "locally available", the project team elected to use the 400 mile radius, as that is considered to be a day-goods-distance, or available for delivery within one day. Other organizations have used the 150 mile range to define locally available food. For example, Evergreen State College in Washington uses the definition "the Pacific Northwest, focused on 150 mile range from campus." In order to promote the use of local businesses, many Metro purchases will be made from Portland area suppliers. However, in other cases it may be practical to purchase from a supplier outside of the metropolitan area, and therefore the 400 mile range would offer more latitude.

Third party certifications that Metro will rely on in determining which sustainable products are viable include but are not limited to: Forest Stewardship Council (wood products), Green Seal (cleaning products), EPEAT (computer hardware), LEED (building practices), Salmon Safe (urban watersheds), and Energy Star (electronic equipment).

One of the new definitions is life cycle cost, which refers to the consideration of cost over the life of a product (5 years for example) and not just the initial purchase price. As part of the Metro sustainable procurement policy, the project team intends to stress its importance as a procurement tool when buying goods or services. Agency programs should consider the use of life cycle costing when appropriate, as less expensive products may be more costly over time and therefore less sustainable.

### **Role of Procurement Office**

In implementing the new Code, the committee feels that roles and responsibilities need to be clearly defined. Therefore, the proposed Code changes charge the Metro procurement officer with the following responsibilities:

- Revise agency procurement standards and procedures;
- Provide information to all departments on sustainable products;
- Provide training to all agency programs and departments;
- Provide information to the chief operating officer that help achieve agency goals;
- Ensure Metro purchases sustainable products whenever practical;
- Establish link to agency MWESB program;
- Develop checklists to assist Metro departments with compliance;
- Assist COO with annual reporting to the Metro Council.

### **Accountability of Department Directors**

The sustainable procurement team also believes that Metro department directors should play a key role in carrying out this policy. The following responsibilities have been established for directors:

- Require contractors and suppliers to use sustainable products and practices to the maximum extent practical;



- Collaborate with the Metro procurement office in providing training and support throughout the agency;
- Designate staff to analyze compliance with sustainable procurement code in the procurement and contracting process;
- Provide information to the procurement office on the performance of sustainable products.

### **Tracking and Reporting**

The procurement office will monitor and track sustainable purchases for Metro, and report on an annual basis to the Metro Council. In addition to dollars spent on sustainable goods and equipment, tracking in select commodity areas (i.e. copy paper) will be beneficial. Procurement will work with the Office of Sustainability in order to normalize the data by business practices. An example of this could include paper use per MRC employee.

### **Fair Labor Practices**

The project team believes that a key area of sustainability is the provision of local family wage jobs that support and strengthen our local economy. Therefore, the inclusion of employee compensation as part of the selection criteria should be a standard in Metro RFP's for services. This was done recently for the operation agreements for Metro South and Central and proved to be successful. Simultaneous to the sustainable procurement policy, Metro is also working at strengthening its contracting program for minority, women and emerging small business. These recommendations also include the consideration of wages and benefits in the awarding of agency contracts.

## **ANALYSIS/INFORMATION**

1. **Known Opposition** None known.
2. **Legal Antecedents** Metro Code 2.04.500 through 2.04.580, ORS 279A.100
3. **Anticipated Effects** Increased purchase of sustainable products and materials; establishment of roles and responsibilities for Metro procurement office and other departments.
4. **Budget Impacts** The purchase of sustainable products will have a minor budgetary impact, but staff resources will be needed to implement the program. Additionally, it is common that the acquisition cost (initial purchase price) of a product may be higher, even if it is a better value over time.

## **RECOMMENDED ACTION**

Metro Council approves the proposed revisions to Metro Code 2.04 in order to establish a sustainable procurement code.

Agenda Item Number 6.1

**Resolution No. 10-4198**, For the Purpose of Adopting Metro's Sustainability Plan and Authorizing the Metro Chief Operating Officer to Implement the Plan.

Metro Council Meeting  
Thursday, Oct. 7, 2010  
Metro Council Chambers

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING METRO'S ) RESOLUTION NO. 10-4198  
SUSTAINABILITY PLAN AND AUTHORIZING )  
THE METRO CHIEF OPERATING OFFICER TO ) Introduced by Chief Operating Officer Michael  
IMPLEMENT THE PLAN ) Jordan with the concurrence of Acting Council  
) President Carlotta Collette

WHEREAS, Metro's most important service as a regional government is planning and policy making to preserve and enhance the quality of life and the environment for the people of the Metro region and for future generations; and

WHEREAS, in 2003 the Metro Council adopted Resolution No. 03-3338, For the Purpose of Directing the Metro Chief Operating Officer to Establish a Sustainable Business Model For Metro Departments and Facilities and to Undertake Related Duties, to direct creation of a sustainable business model for internal Metro government operations; and

WHEREAS, in Attachment A to Resolution No. 03-3338, the Metro Council identified five internal sustainability goals for Metro facilities and operations; and

WHEREAS, the five internal sustainability goals relate to the following areas: greenhouse gas emissions, toxics, waste, water, and habitat; and

WHEREAS, for each of Metro's five sustainability goal areas, Metro staff has identified a set of strategies and actions to attain those goals within a certain time frame; and

WHEREAS, Metro's Sustainability Plan ("the Plan") provides a framework for implementing the strategies and actions needed to address Metro's five sustainability goal areas; and

WHEREAS, the Metro Council supports development and implementation of Metro's Sustainability Plan and recognizes the Plan as an effective way to take a regional approach to sustainability, now therefore

BE IT RESOLVED that the Metro Council hereby adopts Metro's Sustainability Plan and authorizes the Metro Chief Operating Officer to implement the Plan, including any amendment to the Plan that the Chief Operating Officer deems necessary.

ADOPTED by the Metro Council this \_\_\_\_\_ day of \_\_\_\_\_ 2010.

\_\_\_\_\_  
Carlotta Collette, Acting Council President

Approved as to Form:

\_\_\_\_\_  
Daniel B. Cooper, Metro Attorney

[www.oregonmetro.gov](http://www.oregonmetro.gov)



# Sustainability Plan

for Metro internal and business operations

August 2010

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## EXECUTIVE SUMMARY

In 2003, Metro Council adopted a resolution that directed Metro to develop a sustainable business model for internal government operations, and set an ambitious target for those operations to be sustainable within one generation, by 2025. Five target areas were identified: greenhouse gas emissions, toxics, waste, water, and habitat. These goals were refined during the course of creating a sustainability plan for Metro operations. The planning horizon for these goals is 2025, with the exception of greenhouse gas emissions, for which a target is set for 2050.

- Greenhouse gas emissions: Reduce direct and indirect greenhouse gas emissions (CO<sub>2</sub>e) 80 percent below 2008 levels by 2050.
- Toxics: Eliminate the use or emissions of persistent bioaccumulative toxics (PBT's) and other priority toxic and hazardous substances.
- Waste: Recover all waste for recycling or composting, and reduce overall generation of waste.
- Water: Reduce water use 50 percent below 2008 levels.
- Habitat: Metro's parks, trails and developed properties positively contribute to healthy, functioning urban ecosystems and watershed health. Metro's natural areas are healthy, functioning ecosystems.

Since the original goals were adopted in 2003, progress has been made toward greening Metro's operations. However, an analysis of performance in these five goal areas shows that much work has yet to be done. For example:

- Metro's operations generated 56,062 MT CO<sub>2</sub>e in 2008, the equivalent of powering 5,000 homes. Largest emission sources are supply chain emissions and electricity consumption.
- More than 90 percent of the products in Metro's chemical inventory have a high hazard rating in one of three categories (environmental toxicity, human toxicity, and physical hazard).
- Recycling recovery ranges widely, from less than 10% recovery at some parks, to more than 70 percent recovery at the Oregon Zoo.
- Metro operations use more than 285 million gallons of water annually, roughly equivalent to the water usage of 9,300 Portland residents.
- Metro's effective impervious area is 96 percent of total impervious area, an area of roughly 110 acres. 2/3 of Metro developed properties do not use habitat-friendly development practices.

For each of Metro's five sustainability goal areas, a set of strategies and actions have been identified. These strategies and actions provide a framework for the work that needs to be done to reach the 2025 goal targets. The strategies and actions are meant to be applicable across Metro's operations, and are not prescriptive to particular facilities or sites.

Greenhouse gas emission reduction strategies focus on reducing emissions from Metro's largest emission sources: supply chain, electricity, and fuels. Program improvements are also needed to establish tracking for the many GHG emission sources, as well as a funding strategy for projects that will reduce emissions from operations.

Toxics reduction strategies include improvements to Metro's chemical inventory, then a systematic replacement of toxic products with less-toxic alternatives where available. Buyers need to be empowered to make better choices when making procurement decisions, and new ways to assess less-toxic alternatives as well as measuring progress developed.

Waste reduction strategies include a new focus on waste prevention, upstream from the "end of life" management of recyclable materials.

Water Conservation strategies focus on a greater understanding of water usage throughout Metro's operations, then systematically implementing water efficient options wherever possible.

Habitat enhancement strategies vary from site to site, so assessment of habitat and stormwater opportunities for each site is a priority, as is creation of new requirements for stormwater and habitat-friendly development practices in construction and maintenance of Metro sites.

Across all goals, several program elements are needed to manage Metro's sustainability efforts over time. These include: accountability for plan implementation, training for Metro employees, building funding and staff capacity to implement, creating policies and procedures necessary, updating goals and targets as needed and tracking progress of sustainability plan implementation and impact on goal areas.

## INTRODUCTION

As a regional government committed to promoting sustainable communities, Metro has good reason to reduce the ecological footprint from its own operations and “walk the talk.” Like many public agencies, the services that Metro provides to the region come at a cost to natural and community resources.

Metro formalized their commitment to sustainable operations in 1999 when a cross-agency environmental action team was formed. In 2003, a resolution was adopted by Metro Council that called for development of a sustainable business model for internal operations of the agency. This resolution included five environmental goals to be met by 2025 regarding greenhouse gas emissions, toxics, waste, water and habitat<sup>1</sup>.

Since then, Metro has achieved some significant results in making its operations more sustainable. These include:

- The Oregon Convention Center is certified as a LEED Existing Building at the silver level, and also certified by Salmon Safe for its sustainable landscape and stormwater management practices.
- The Oregon Zoo pioneered on-site composting of animal waste, helping it to achieve a 72 percent recycling rate.
- The Metro Regional Center purchases 100 percent renewable power, contributing to the development of new renewable energy sources.
- The Metro Central Transfer Station adopted an Environmental Management System that provides accountability for implementation of sustainable operations.

While many projects were completed that support these five environmental goals, Metro lacks a clear vision or plan for achieving agency goals. This plan was amplified by recommendations made by the Metro Auditor in a 2009 report. The report concluded that Metro should: 1) set clear policies and goals for sustainability; 2) reduce organizational barriers to sustainability by clarifying responsibilities and roles internally for implementation and creating a funding structure to support sustainable operations; 3) create tools needed to implement a sustainable business model including a data management system and formalize greenhouse gas emission protocols; and 4) measure progress towards meeting the objectives and disseminate the results of efforts.<sup>2</sup> This plan addresses all four of these recommendations.

This sustainability plan is intended to guide Metro’s sustainable operations efforts to the next level by guiding practices and projects to achieve Metro’s long-term sustainability goals. The plan identifies environmental impacts of Metro’s operations, sets a baseline from which progress can be

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<sup>1</sup> Metro Council resolution 03-3338, “Establish a sustainable business model for Metro departments and facilities and to undertake related duties,” 2003.

<sup>2</sup> “Sustainability Management: focus efforts and evaluate progress”, 2009. Suzanne Flynn, Metro Auditor.  
<http://www.oregonmetro.gov/index.cfm/go/by.web/id=32285/level=4>.



measured over time, and creates a framework of the specific strategies and actions that need to be completed to meet the goals.

The scope of this plan is limited to Metro's internal operations. Metro oversees five very different types of operations: public event venues, the zoo, solid waste facilities, parks and natural areas and one office facility. Because of the diverse portfolio of operations, the sustainability plan was developed to be applicable to all operations, regardless of type. While implementation of the plan will vary from one facility to the next, the plan identifies the actions common to all.

It is important to note that this plan focuses on environmental impacts, not the full "triple bottom line" of sustainability. When updating the sustainability goals in the future, Metro should develop meaningful goals for integration of the social equity and economic prosperity aspects of sustainability. During implementation of this plan, Metro's actions will benefit not only the environment, but also the community and the economy. These multiple benefits are the hallmark of any sustainability effort, and are well suited to supporting Metro's sustainability value and reaching Metro's sustainability goals.

### **Metro sustainability value**

We are leaders in demonstrating resource use and protection in a manner that enables people to meet current needs without compromising the needs of future generations, and while balancing the needs of the economy, environment and society.

*Adopted by Metro Senior Leadership Team July 2010*

## PART 1: SUSTAINABILITY GOALS AND INDICATORS

### Goal refinement and indicators

Metro's adopted sustainability goals were refined for the purposes of creating this plan to aid the development of specific and targeted strategies and actions. The table below summarizes the goals as refined, as well as the indicators selected for setting a baseline of performance and monitoring progress over time.

Goal as adopted in 2003	Refined goal	Indicators	Goal year
<i>Zero net increase in carbon emissions</i>	Reduce direct and indirect greenhouse gas emissions (CO <sub>2</sub> e) 80 percent below 2008 levels by 2050.	<ul style="list-style-type: none"> <li>Greenhouse gas emission sources for Scopes I, II and III</li> </ul>	2050 <sup>3</sup>
<i>Zero discharge of persistent, bioaccumulative, toxic chemicals</i>	Eliminate the use or emissions of persistent bioaccumulative toxics (PBT's) and other priority toxic and hazardous substances.	<ul style="list-style-type: none"> <li>Percentage of chemical products used at Metro facilities that have ingredients with a "3" rating in MSDS inventory for health, environmental or physical hazard</li> </ul>	2025
<i>Zero waste disposed or incinerated</i>	Recover all waste for recycling or composting, and reduce overall generation of waste.	<ul style="list-style-type: none"> <li>Waste generated by weight (garbage plus recycling)</li> <li>Percent recovered for recycling or compost (recycling rate)</li> </ul>	2025
<i>Fifty percent reduction in water usage</i>	Reduce water use by 50 percent below 2008 levels.	<ul style="list-style-type: none"> <li>Gallons of water consumed from water utilities and on-site sources</li> </ul>	2025
<i>Zero net loss of biodiversity and productive, healthy habitat for forests and riparian areas</i>	Metro's parks, trails and developed properties positively contribute to healthy, functioning urban ecosystems and watershed health. Metro's natural areas are healthy, functioning ecosystems. <sup>4</sup>	<ul style="list-style-type: none"> <li>Percentage effective impervious area (EIA)</li> <li>Number of habitat-friendly practices used on developed properties</li> <li>For natural areas, number of acres and restoration activity type by acre</li> </ul>	2025

<sup>3</sup> While the time horizon for this plan and goals is 2025, long-term goals for reducing greenhouse gas emissions are typically set at 2050 in accordance with the most current climate science.

<sup>4</sup> Numerical targets for effective impervious area and use of habitat-friendly development practices will be determined by site-specific habitat and stormwater assessments.

## Indicators of progress toward sustainability goals

The 15-year time horizon for this plan is both ambitious and aspirational. To track progress toward these goals, interim targets have been identified for each goal area. They consist of both numerical targets as well as goals for improving processes. Since each facility has different opportunities for improvement, these targets provide a framework for measuring progress Metro-wide, not absolute benchmarks for each facility. These interim targets should be recalibrated after facility audits and work plans are completed and opportunities have been identified.

### GHGs: Reduce greenhouse gas emissions 80 percent below 2008 levels by 2050.

	SCOPES 1, 2 and 3 EMISSIONS (excluding Supply Chain) <b>Reduction targets (quantitative)</b>	SCOPE 3 SUPPLY CHAIN EMISSIONS <b>Process targets (qualitative)</b>
3 Years (2013)	<ul style="list-style-type: none"> <li>Arrest GHG emissions</li> </ul>	<ul style="list-style-type: none"> <li>Develop a process to quantify Scope 3 emissions reductions and establish quantitative targets.</li> </ul>
5 Years (2015)	<ul style="list-style-type: none"> <li>15 percent reduction</li> </ul>	<ul style="list-style-type: none"> <li>Advance efforts to reduce Scope 3 emissions based on current best practices and available tools and data.</li> </ul>
10 Years (2020)	<ul style="list-style-type: none"> <li>25 percent reduction</li> </ul>	
15 Years (2025)	<ul style="list-style-type: none"> <li>40 percent reduction</li> </ul>	
40 Years (2050)	<ul style="list-style-type: none"> <li>80 percent reduction</li> </ul>	

### Toxics: Eliminate the use or emissions of PBT's and other priority toxic and hazardous substances by 2025.

	<b>Reduction targets (quantitative)</b>	<b>Process targets (qualitative)</b>
3 Years (2013)	<ul style="list-style-type: none"> <li>20 percent reduction in chemical products in use at Metro with a "3" rating in one or more hazard categories (health, environment or physical hazard)<sup>5</sup></li> </ul>	<ul style="list-style-type: none"> <li>Complete inventory with current ingredient information obtained for all chemical products in use, including quantity used. Include products used by contractors on Metro property.</li> <li>Develop process to quantify use of less-toxic preferable products and establish interim targets.</li> </ul>
5 Years (2015)	<ul style="list-style-type: none"> <li>45percentreduction in the percentage of chemical products used at Metro facilities that have ingredients with a "3" rating in <i>at least one</i> category.</li> <li>Products with a "3" rating in <i>all 3</i> hazard categories are no longer in use</li> </ul>	<ul style="list-style-type: none"> <li>Advance efforts to reduce toxic emissions from durable goods and indirect emissions, and establish quantitative interim targets for reducing these emissions. Increase procurement of less-toxic preferable products.</li> </ul>
10 Years (2020)	<ul style="list-style-type: none"> <li>No chemical products used at Metro facilities have ingredients with a "3" rating, including those used by contractors.</li> </ul>	
15 Years (2025)	<ul style="list-style-type: none"> <li>All chemical products used at Metro facilities are designated preferable products, or earn a "1" rating in all 3 hazard categories.</li> </ul>	

<sup>5</sup> Product hazard evaluation criteria were established to rate the potential health, environmental and physical hazard risks of chemical products in the inventory. See toxics baseline section and appendix for methodology.

**Waste: Recover all waste for recycling or composting, and reduce overall generation of waste by 2025.**

	<b>Reduction targets (quantitative)</b>	<b>Process targets (qualitative)</b>
3 Years (2013)	<ul style="list-style-type: none"> <li>Metro facilities recover 50 percent of waste for recycling or compost (average).</li> </ul>	<ul style="list-style-type: none"> <li>Establish monthly waste and recycling reporting for all Metro locations.</li> </ul>
5 Years (2015)	<ul style="list-style-type: none"> <li>Metro facilities recover 75 percent of waste for recycling or compost.</li> <li>Increase recycling at parks to 25 percent recovery.</li> <li>Reduce waste generated 10 percent from baseline.</li> </ul>	<ul style="list-style-type: none"> <li>Develop long-term waste generation targets.</li> </ul>
10 Years (2020)	<ul style="list-style-type: none"> <li>Metro facilities recover 90 percent of waste for recycling or compost.</li> </ul>	<ul style="list-style-type: none"> <li>Advance efforts to reduce overall waste generation.</li> </ul>
15 Years (2025)	<ul style="list-style-type: none"> <li>Metro facilities divert 100 percent of waste for recycling, compost or other sustainable waste treatment method (i.e. anaerobic digestion).</li> </ul>	

**Water: Use 50 percent less water from 2008 levels by 2025.**

	<b>Reduction targets (quantitative)</b>	<b>Process targets (qualitative)</b>
3 Years (2013)	<ul style="list-style-type: none"> <li>15 percent decrease in water consumption</li> </ul>	<ul style="list-style-type: none"> <li>Establish water tracking and reporting system. Include all submeters.</li> </ul>
5 Years (2015)	<ul style="list-style-type: none"> <li>30 percent decrease</li> </ul>	
10 Years (2020)	<ul style="list-style-type: none"> <li>40 percent decrease</li> </ul>	
15 Years (2025)	<ul style="list-style-type: none"> <li>50 percent decrease</li> </ul>	

**Habitat: Metro’s parks, trails and developed properties positively contribute to healthy, functioning urban ecosystems and watershed health. Metro’s natural areas are healthy, functioning ecosystems.**

	<b>Reduction targets (quantitative)</b>	<b>Process targets (qualitative)</b>
3 Years (2013)	<ul style="list-style-type: none"> <li>Arrest and begin to reduce effective total impervious area (EIA) on developed properties.</li> </ul>	<ul style="list-style-type: none"> <li>Identify habitat and stormwater improvement opportunities on Metro developed properties through site assessments. Set numerical targets for effective impervious area (EIA) and increasing use of habitat-friendly development practices.</li> <li>Establish quantitative interim targets for Metro’s natural area properties.</li> </ul>
5 Years (2015)	<ul style="list-style-type: none"> <li>Advance efforts to reduce EIA and increase use of habitat-friendly development practices on Metro’s developed properties, quantitative targets to be developed based on site assessments.</li> </ul>	
10 Years (2020)		
15 Years (2025)		

## PART 2: SUSTAINABILITY IMPACTS AND BASELINE ANALYSIS

### Impacts assessment

While Metro had a clearly articulated direction for action in the areas of greenhouse gas emissions, toxics, waste, water and habitat, the sustainability plan project team wanted to affirm that action in these areas would address the major impacts of Metro's operations. It completed an impacts assessment to provide a high-level qualitative summary of the unintended negative consequences of Metro's operations, and to identify gaps between those impacts and the adopted goals.

During a workshop in January 2010, representatives from all of Metro's functional areas identified impacts in terms of inputs (resources required for Metro's operations) and outputs (waste and other byproducts produced as a result of those operations). Outputs were categorized into three categories: environmental, economic and social.

### Major impacts

- **Inputs:** The primary inputs of natural resources for Metro's operations include fossil fuels, water and material goods. Fossil fuels are used to provide building energy and to power vehicles from Metro's fleet as well as from visitors to Metro locations. Water is a key resource for many facilities, from the Zoo's exhibits, to irrigation at parks. Material goods include office supplies, food service items, promotional materials and building construction materials.
- **Outputs:** Major outputs can be grouped into three primary categories: greenhouse gas emissions, solid waste and water waste and runoff. All three of these outputs were investigated further in the quantitative baseline analysis.

### Impacts not addressed by goals

While most of Metro's environmental impacts fit within one or more of the five sustainability goals, several key gaps were identified where a major impact was not addressed by the goals.

- Social aspects of sustainability efforts include negative impacts from traffic congestion, noise, equity regarding access to nature and social impacts from the procurement of goods and services.
- Economic aspects of sustainability efforts include lack of preference for using locally-made products, locally-grown food, or locally-based contractors.
- Environmental impacts of air toxics and stormwater run off are not specifically addressed by the goals. This includes toxic air pollutants such as diesel particulate emissions, sulfur dioxide and other byproducts from internal combustion engines. Additionally, water usage is addressed by the goals, but storm water runoff is not.

As a result of this assessment, this plan addresses diesel particulate air pollution in the toxics section, and stormwater runoff in the habitat section. Future updates to this plan should address the social and economic impacts of Metro's operations.

## Baseline assessment: Introduction

### Why create a baseline?

As the adage goes, what gets measured gets done. In order to measure progress toward meeting Metro's sustainability goals, a starting point is needed from which progress can be measured. For the purposes of creating this baseline, data was collected and analyzed to generate a baseline of performance in the five goal areas across all of Metro's facilities and locations.

### 2008: A snapshot in time

The furthest year back with the most complete data available was 2008. It is important to note that since the goals were adopted in 2003 but little measurement took place between then and 2008, this baseline will not account for operational improvements that resulted in environmental benefits during that time.

### Methodology

Data on the following indicators was collected for each goal area:

- **Greenhouse gas emissions:** A comprehensive analysis of more than 75 distinct data sets was completed for the GHG emissions inventory, including: building electricity and natural gas, fuel, fleet, supply chain purchases, St. Johns landfill, commute patterns, refrigerants, long-haul transport of waste and others. Emissions are reported in metric tons of carbon-dioxide equivalent (MT CO<sub>2</sub>e).
- **Toxics:** An inventory chemical products and corresponding material safety data sheets (MSDS) was completed, entered into a database hosted by OHSU's Chemical Risk Information System, and analyzed for health, environmental and physical hazards. Toxics use is reported in number of high-hazard chemicals in Metro's inventory.
- **Waste:** Waste and recycling collection data was obtained from haulers. Waste is reported in tons of overall waste generated, as well as the percentage of that waste diverted for recycling or composting. Waste composition information is also presented.
- **Water:** Water usage data was collected from water providing utilities, as well as from well water records. Water use is reported in CCF, or hundred cubic feet (equivalent to 748 gallons).
- **Habitat:** Several metrics were selected for measuring habitat health and enhancement of Metro's developed and natural properties. Effective impervious area (EIA) is used to measure the amount of stormwater runoff leaving a site; EIA is total impervious surface area minus any areas that that slow, reduce, infiltrate or cleanse stormwater runoff onsite. The number of habitat-friendly or low impact practices used on Metro properties (such as ecoroofs or rain gardens) number of acres, and number of acres where pre-restoration, restoration and long term maintenance activities are taking place round out the habitat metrics. These metrics were analyzed for as many locations for which data was available. Metro's operations were grouped into similar functional areas for the purpose of presenting the baseline data (see Table 1).

**Table 1: Functional areas within Metro operations.****Metro operations functional areas**

<b>Oregon Zoo</b>	Includes more than 25 facilities and exhibits on the Zoo campus.
<b>MERC venues</b>	Portland Center for the Performing Arts (Keller Auditorium, Schnitzer Hall, Hatfield Hall) Expo Center and Oregon Convention Center.
<b>Parks and natural areas</b>	Oxbow and Blue Lake regional parks, Boreland Field Station/Native Plant Center, Glendoveer Golf Course, Pioneer Cemeteries, Cooper Mountain Nature Park, Mt. Talbert, Howell Mason, Smith and Bybee Wetlands, Chinook Landing, Sauvie Island and Gleason boat ramps and bond-acquired natural areas.
<b>Solid waste facilities</b>	Metro Central and South transfer stations, Central and South household hazardous waste facilities, MetroPaint and the closed St. Johns Landfill.
<b>Metro Regional Center</b>	Metro's sole office building.

**More information available**

A high-level summary of the baseline findings is provided in this plan for context and to provide a sense of scale for the actions proposed. For further reading, four detailed reports are available upon request:

- Sustainability Baseline Analysis (2010): baselines for waste, water and habitat, as well as a summary of Metro's toxics baseline. Completed by Brightworks.
- Greenhouse Gas Emissions Inventory Report (2010): complete analysis of greenhouse gas emissions from Metro operations. Completed by Metro.
- Status Report: Metro Chemical Inventory Hazard Evaluation and Management Tool Project (2010). Completed by OHSU Chemical Risk Information Service.
- Waste Composition Studies (2009): Analysis of the garbage from six Metro locations generated during October 2008. Reports cover PCPA theaters, Expo Center, Blue Lake Park, Oxbow Park, Metro Regional Center and the Oregon Zoo. Completed by Sky Valley and Associates and City of Portland.

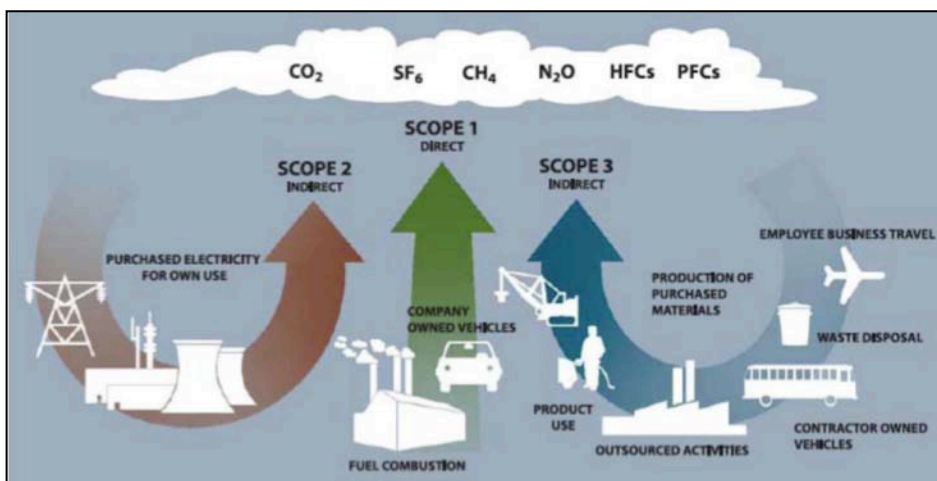
## Baseline assessment: greenhouse gas emissions inventory

### Greenhouse gas emissions inventory methodology

The inventory establishes a snapshot of greenhouse gas emission sources from Metro’s internal operations in order to target investment and business practice decisions that have the greatest effect in meeting the greenhouse gas (GHG) emissions reduction goal and interim targets.

All three emission scopes are addressed in Metro’s GHG inventory (see figure 2) which includes direct and indirect emissions from the agency’s operations. Metro used Good Company’s G3C calculator to complete this analysis. The calculator is based on widely-accepted GHG reporting protocols.<sup>6</sup> All emissions are reported in **metric tons of carbon-dioxide equivalent (MT CO<sub>2</sub>e)**.

Figure 2: Greenhouse gas emissions inventory scopes



In many GHG inventory protocols, emissions sources and activities are defined as either producing **direct** or **indirect** GHG emissions. Direct emissions are emissions from sources owned or controlled by a particular organization. Indirect emissions are emissions that result from the activities of an organization, but occur at sources owned or controlled by a separate entity. To distinguish direct from indirect emissions sources, three “scopes” are defined for traditional GHG accounting and reporting.

- Scope 1:** All direct GHG emissions occur from equipment and facilities owned and/or operated by Metro (excluding direct CO<sub>2</sub> emissions from biogenic sources, which are reported separately – See St. Johns Landfill section).
- Scope 2:** Indirect GHG emissions from the generation of purchased electricity, heat or steam consumed by Metro owned facilities.
- Scope 3:** All other indirect emission sources that result from Metro activities but occur from sources owned or controlled by another company or entity, including: business travel, embodied emission in material goods purchased, and services contracted, by Metro; emissions from landfilled solid waste; and emissions associated with Metro employee commute patterns.

Source: World Resources Institute, The Greenhouse Gas Protocol, p. 25.

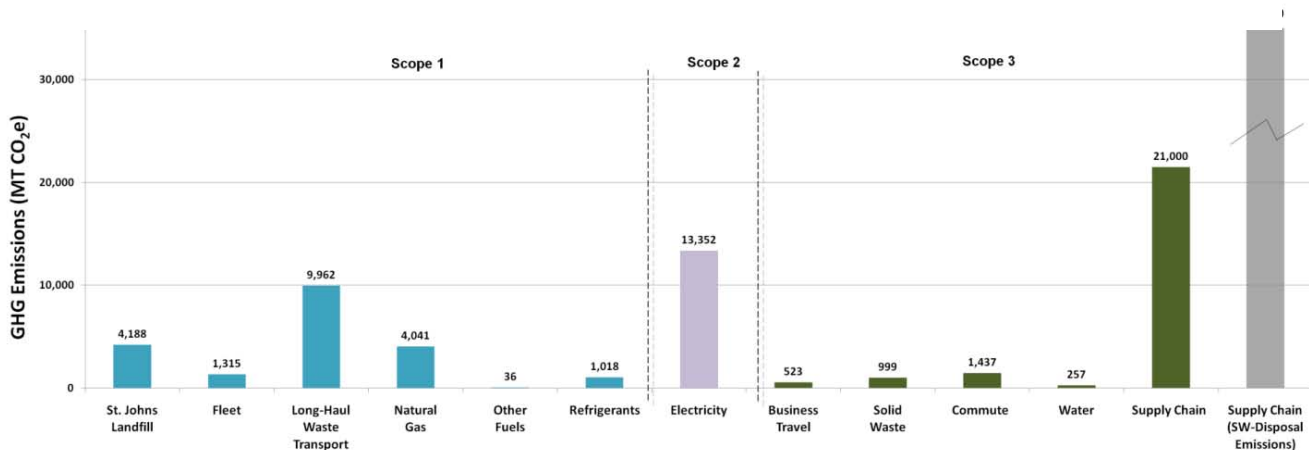
<sup>6</sup> The Local Government Operations (LGO) Protocol was developed as a collaboration of The Climate Registry (TCR) the California Air Resources Board (CARB) the California Climate Action Registry (CCAR, now the Climate Action Reserve) and ICLEI Local Governments for Sustainability. The LGO Protocol follows the same format as The Climate Registry’s General Reporting Protocol (GRP).



### GHG inventory results summary

**Metro’s total emissions equal 58,062 MT CO<sub>2</sub>e(2008).** Metro’s emissions from vehicle fuel and building energy consumption account for 36,555 metric tons carbon dioxide equivalent (MT CO<sub>2</sub>e) shown in Figure 3 as Scope 1 and Scope 2 emissions. Estimated Scope 3 emissions total 33,235 MT CO<sub>2</sub>e, which accounts for the emissions from mission-critical operations and activities related to Metro operation, but outside of its direct control. See GHG inventory report for details of this analysis.

Figure 3: GHG emissions from Metro operations (2008)



Scopes I and II yield 33,912 MT CO<sub>2</sub>e. For sense of scale, this is equivalent<sup>7</sup> to:

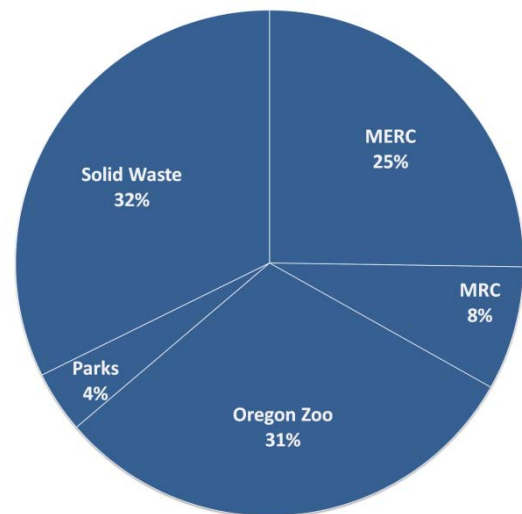
- Annual emissions from 6,484 passenger vehicles
- Annual emissions from the energy consumed by 2,886 homes (US average)

Scope III emissions yield 24,215 MT CO<sub>2</sub>e. For sense of scale, this is equivalent to:

- Annual emissions from 4,630 passenger vehicles
- Annual emissions from the energy consumed by 2,061 homes (US average)

Figure 4 provides a breakdown of the total GHG emissions for calendar year 2008 by functional area. MERC, the Oregon Zoo and Solid Waste functional areas each account for roughly one-third of Metro’s total 2008 emissions; and the Metro Regional Center (MRC) and Parks account for eight and four percent, respectively.

Figure 4: Agency-wide greenhouse gas emissions (2008) by functional area

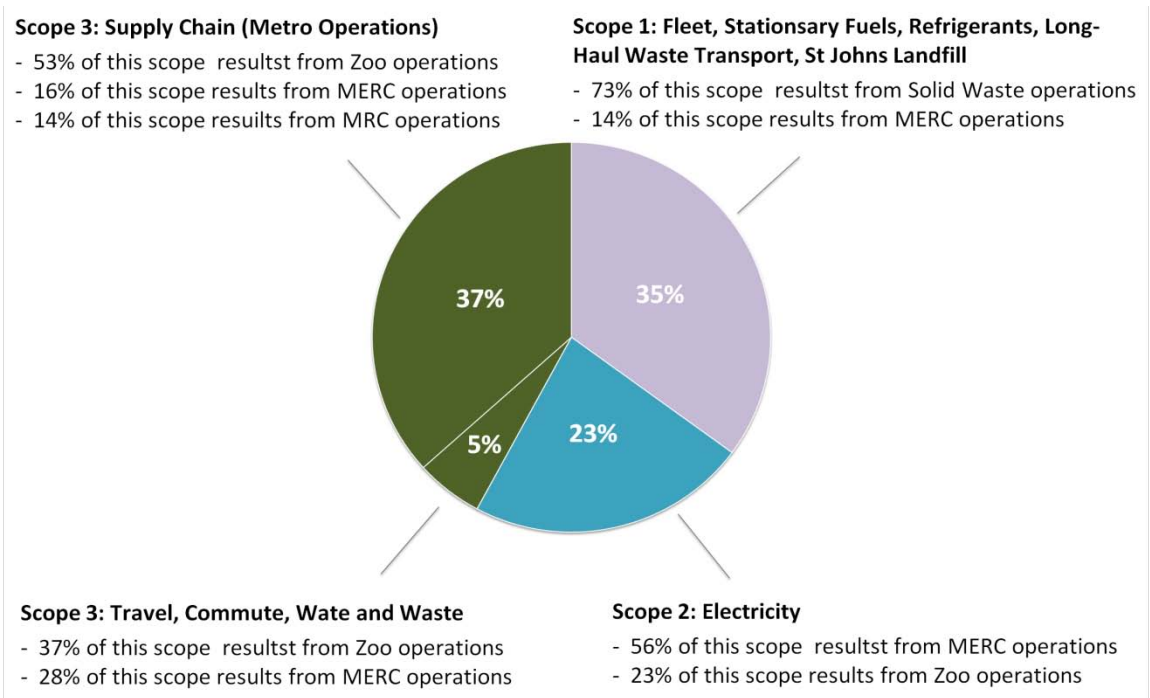


<sup>7</sup> Source: <http://www.epa.gov/RDEE/energy-resources/calculator.html>

Figure 5 includes a breakdown of GHG emissions for calendar year 2008 by emissions scope and distinguishes supply chain emissions within the total share of Scope 3 emissions. Roughly 73 percent of the total Scope 1 emissions (owned vehicle fuel use, natural gas consumption for building heat and refrigerants) come from Solid Waste operations, with MERC accounting for the next largest source at 14 percent. Scope 2 emissions (electricity) account for the second largest emissions source at 23 percent of Metro’s total GHG emissions and 57 percent of all Scope 2 emissions result from MERC operations.

The Scope 3 emissions, Metro’s largest emissions source, in Figure 4 are separated out into two general categories; (1) the purchase of potable water, solid waste disposal, employee commute and business travel and (2) supply chain emissions from purchased materials and services. Supply chain emissions make up the largest portion of Scope 3 emissions, the majority of which come from Zoo operations. The remaining Scope 3 emissions comprise five percent of Metro’s total emissions, and similar to the supply chain emissions, the two largest sources result from operations at the Zoo and MERC functional areas.

**Figure 5: Agency-wide greenhouse gas emissions (2008) by emissions scope**



The results above demonstrate a substantial opportunity to reduce the GHG emissions and climate impact from Metro operations. Scope 1 (direct emissions) arise from sources over which Metro has direct control and which reflect the greatest opportunity for reductions. Scope 2 (indirect emissions) electricity emissions are substantial, primarily due to Metro visitor venues. These Scope 2 emissions also provide a significant opportunity for reductions despite being categorized as indirect, through changes in the amount of electricity Metro operations consume. Scope 3 (indirect emissions) are those which are shared with entities providing the product or service and present similar control challenges as Scope 2 emissions, although slightly more complicated strategies are

required to address Scope 3 emissions (for more detail see the Greenhouse gas emissions goal interpretation section in appendix).

### Data quality and availability

The inventory attempts to estimate emissions from all of Metro’s facilities but due to data limitations, a number of Metro’s facilities are not included in the inventory. It is also important to note that complete data sets were not available for each facility that is included in the inventory. The **Metro GHG Emissions Baseline Inventory 2008** report includes a more detailed analysis of the existing data gaps and inventory methodology.

In addition to not including some facilities in the inventory, this analysis does not capture the transportation related impacts of visitors to Metro owned facilities and venues due to data and resource limitations. While Metro does not have direct control over how visitors choose to travel to Metro owned properties, Metro does play a significant role in regional transportation planning and has the capacity to promote alternative transportation modes at the majority of Metro’s facilities, especially the visitor venues. It is recommended that future GHG analyses attempt to include these “visitor” impacts.

#### Case study: Green building and energy audits at PCPA theaters

Sustainability and energy efficiency are important issues in the world of performing arts. The number of performers and touring shows demanding environmentally sensitive policies from venues increases every year. There is also a national trend by public assembly venues to reduce, reuse and recycle as best as possible. To get ahead of this sustainable operations trend, PCPA completed a LEED-Existing Buildings study of two of their theater facilities: Antoinette Hatfield Hall (built in 1987) and Keller Auditorium (opened in 1917 and updated in 1968). The purpose was to determine whether it would be possible to achieve LEED Existing Building certification for either location.



Thorough studies at both of the venues created benchmarks for PCPA practices in energy efficiency, water consumption, cleaning practices, recycling and toxics use. In addition, a detailed energy audit was performed in partnership with the Energy Trust of Oregon. That study identified the state of the buildings’ heating and cooling systems, energy use trends and opportunities for increased energy efficiency.

These studies have allowed PCPA to establish a baseline from which it can advance efforts to gain LEED EB certification. They also help PCPA to lay out a path for future efforts. Coupled with the energy audits, the focus on sustainability will allow PCPA to lower operational costs while offering clients and patrons a more environmentally conscious venue for live theater in Portland.

## Baseline analysis: Toxics inventory

### Toxics baseline methodology

An inventory of chemical products and corresponding material safety data sheets (MSDS) was completed to establish a baseline for toxics in use at Metro operations. This chemical product inventory was entered into an electronic database hosted by the Center for Research on Occupational and Environmental Toxicology at Oregon Health Sciences University called the Chemical Risk Information System. Metro sought toxicity analysis of the chemicals in the inventory and contracted with OHSU to develop the **Metro Chemical Inventory Hazard Evaluation and Management Tool**. This web-based system was designed to help ensure compliance with the OSHA Hazard Communication Standard and to provide health, environmental and physical hazards analysis of the chemical products in use at Metro.

Using this tool, Metro evaluated the potential health, environmental and physical hazard risks of chemical products in the inventory using product hazard evaluation criteria. Each product ingredient in the inventory was assigned a 1, 2 or 3 rating for health, environmental and physical hazards (a rating of 1 indicates low hazard, and a rating of 3 indicates high hazard). An overall rating in these three areas was then given to the product. A description of the methodology for assigning the rankings in each category for a product is included in the appendix.

Using this scale, a baseline was established of the number of chemical products used at Metro facilities that have ingredients with a 3 designation (worst) for health, environmental, or physical hazard.

### Toxics baseline summary

There are currently 3,638 products in the Metro chemical product inventory. Of these, 58 percent have a 3 rating in one of the categories, 37 percent have a number 3 rating in at least two categories and 10 percent have a 3 rating in each of the three hazard categories. Overall, 10 percent of the products in the inventory have the worst hazard rating across all three hazard categories.

Metro's chemical inventory contains more high-hazard rankings for human health toxicity than the other two hazard categories (environmental toxicity and physical hazard). More high-hazard chemicals are found in the Zoo's chemical inventory than most other Metro locations, which is likely due to the unique nature of their operations (i.e. creation of outdoor exhibits) (see figure 6).

#### **Metro Chemical Inventory Hazard Evaluation and Management Tool**

What products are in the inventory at your Metro facility? Check the database.

<http://www.ohsu.edu/croet-cris/metro/metro.cfm>

Contact the Sustainability Program for login and password.

Figure 6: Location of products in Metro inventory with high hazard rating in all categories (health, environmental and physical) (2008)

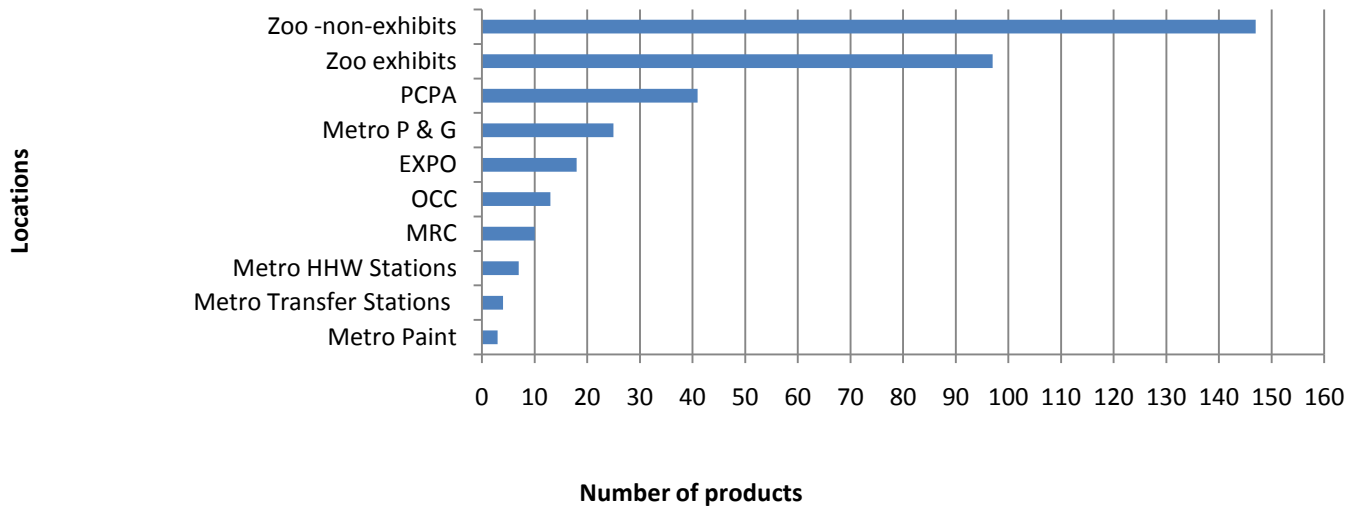
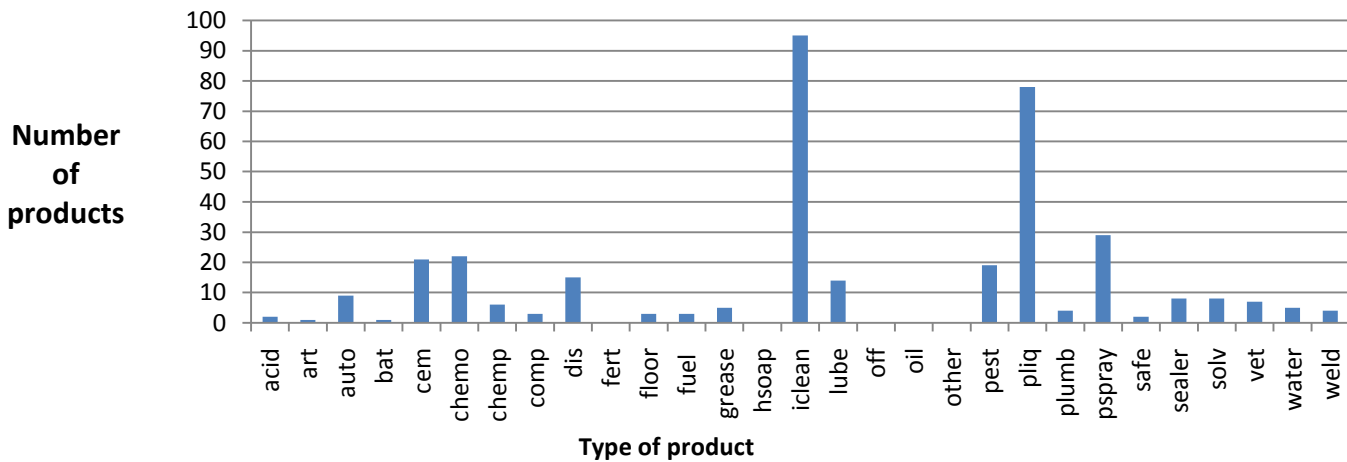


Figure 7: Product Types in Metro inventory with a high hazard rating in all categories (health, environmental, and physical) (2008)



Cleaning products and paints are the product categories with the most products in the inventory with a 3 ranking. For a list of all use type categories, see appendix.

In addition to showing number and distribution of products in the inventory with a 3 rating, Metro identified specific health hazards of the inventory.

- **Carcinogens:** Metro’s chemical inventory contains 51 confirmed or probable carcinogens.
- **Developmental toxins:** Eleven developmental toxins are present in the inventory.
- **Persistent Bioaccumulative Toxics (PBT’s):** 61 percent of the chemicals in the inventory are persistent, 17 percent are bioaccumulative and 39 percent are toxic. (A PBT chemical is persistent, bioaccumulative and toxic.)

### Data quality and availability

- Product data is old or incomplete. Data is based on MSDSs (Material Safety Data Sheets) and 15 percent of the products in the inventory do not have sufficient data on the MSDS to allow a health, environmental, or physical rating. Many of the MSDSs are older; 58 percent pre-date the year 2000. Lastly, herbicides and pesticides used by Metro contractors are not included in this inventory.
- The database does not include the percentage of the ingredients in the product, nor does it address the amount of that product used in Metro's operations. Less than half of the ingredients listed on the MSDSs currently in the database include information on ingredient percentage, and no information was obtained on the quantities of products used during the product study.
- Database does not include durable goods that may contain toxics. These include fluorescent lamps (mercury) computers (brominated flame retardants) and furniture (formaldehyde).

#### Case study: Sustainable development of Graham Oaks Nature Park

Metro's newest park, Graham Oaks Nature Park in Wilsonville, includes many elements of sustainable site design.

The pervious pavement in the parking lot manages stormwater and removes pollutants. The solar panels on the restroom feed into the City of Wilsonville's electric grid and the stonework at the plazas and overlooks is Columbia River Gorge basalt stone.



The structures and hardscapes at the park include: a parking lot with pervious pavement and stormwater swales planted with native trees, shrubs, grasses and wildflowers to improve water quality; a pedestrian bridge that crosses Arrowhead Creek reused from another Wilsonville park site; low impact, environmentally appropriate and locally produced materials, such as the restroom (a pre-fab kit from Roseburg) and the ecoroof on the picnic shelter (from Baker City); a restroom painted with recycled MetroPaint; and a picnic shelter topped with an ecoroof to be planted in late summer 2010.

The plants used to restore the site's oak woodland habitat are native plants, trees and shrubs grown at Metro's Native Plant Center, where the wildflowers seeds were also sowed. The native ornamental plantings along walkways were also grown at Metro's Native Plant Center. Interpretative messaging and signage educates visitors on the historical, cultural, natural and sustainable practices of Graham Oaks and help tell the story of the site. Benches are detailed with hand forged metal oak trees, and local artist Mauricio Saldana has sculpted a 6,000 pound acorn as one percent of total project cost is used for the arts.

## Baseline analysis: Waste generation and recycling

### Waste baseline methodology

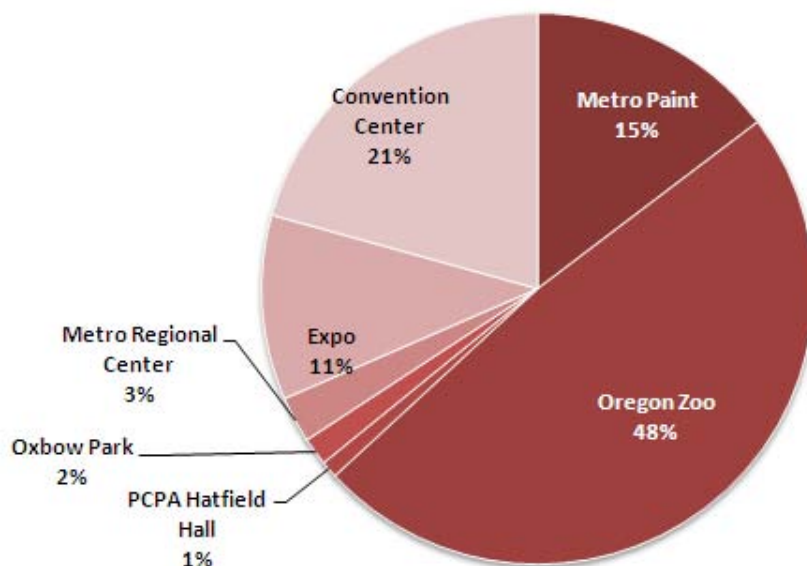
To create a baseline of waste generation and recycling, data from waste haulers that service Metro locations was used. This data includes the estimated weight of solid waste picked up from each location, as well as the percentage of that waste that is diverted for recovery (recycling or compost). In addition, waste composition was determined through waste sorts conducted at six Metro locations.

### Waste baseline summary

**Metro facilities and operations generated about 2,600 tons of waste in 2009.** Of this, about half is diverted for recycling and compost, resulting in about 1,200 tons of garbage disposed in landfills annually. Waste generation and recycling varies significantly by facility and functional area. The Oregon Zoo, Oregon Convention Center, Expo and MetroPaint combined generate 94 percent of Metro's total identified annual waste generation (Figure 8). MERC facilities contribute 25 percent of Metro's waste each year (Expo accounts for 12 percent and Oregon Convention Center accounts 13 percent of the total waste). The Oregon Zoo is the largest generator of waste (about 53 percent of the total waste generated) but it also has the highest recycling rate of Metro's locations.

MetroPaint is also a significant waste contributor (381 tons per year). MetroPaint does not currently track recycling from its operations, mainly because the market for recycling used steel and plastic paint cans has disappeared.

Figure 8: Percentage of total weight of waste generated by facility (2009). PCPA is undercounted due to lack of data.



**Table 1: Waste recovered for recycling and composting at Metro facilities.**

	2006	2007	2008	2009
Zoo	67%	69%	69%	72%
Metro Paint	NDA	NDA	29%	0%
Oxbow Park	NDA	19%	NDA	8%
Oregon Convention Center	31%	56%	48%	56%
Expo	5%	10%	13%	17%
PCPA Antoinette Hatfield Hall/Admin	NDA	38%	NDA	39%
Metro Regional Center	NDA	58%	62%	64%

NDA - No data available.

Recycling rates vary widely across Metro’s facilities (see Table 1). The top recyclers in 2009 were the Oregon Zoo (72 percent) Metro Regional Center (64 percent) and the Oregon Convention Center (56 percent). Each of Metro’s functional areas (see page 12) has a different waste profile (Table 2). Waste composition was determined through waste audits conducted by Sky Valley and Associates in collaboration with the City of Portland Recycle at Work program. This analysis showed that as of 2008, there were still significant opportunities for diverting materials from Metro’s own waste stream to recycling or composting.

**Table 2: Waste composition by facility (2008 sample).**

Waste Characterization by Facility (2008)	Zoo	OCC	Hatfield	Expo	Regional Center	Blue Lake	Oxbow	Average
Food & food soiled paper	21%	30%	41%	30%	30%	32%	39%	32%
Garbage	9%	13%	16%	18%	12%	9%	8%	12%
Miscellaneous	1%	3%	4%	4%	30%	14%	10%	9%
Food wrapped in plastic	6%	8%	12%	11%	4%	8%	12%	9%
Recyclable paper	0%	17%	0%	10%	7%	7%	5%	7%
Animal waste	41%	0%	0%	0%	0%	0%	0%	6%
Yard waste	1%	14%	1%	2%	1%	9%	5%	5%
Other plastic	2%	2%	7%	2%	7%	4%	4%	4%
Plastic Containers	2%	4%	3%	4%	3%	4%	4%	4%
Metal	1%	2%	2%	4%	2%	5%	5%	3%
Glass containers	0%	2%	1%	3%	1%	6%	6%	3%
Scrap paper	4%	0%	13%	0%	0%	0%	0%	2%
OTHER*	10%	7%	1%	2%	13%	2%	3%	5%

\* OTHER includes wood, textiles, carpet, small electronics, and batteries.

Note: the MRC Miscellaneous category includes 116 pounds of diapers from the Metro Kids daycare, as well as 106 pounds of strobe lights (likely the result of an illegal dump onto Metro property).

**Data quality and availability**

- Metro facilities outside of Portland lack waste data. Waste and recycling data is inconsistently reported, or not reported at all, for Metro’s locations outside of the city of Portland (hauler franchise areas).
- Available recycling data does not include materials recycled outside of the waste hauling contracts, such as electronics or furniture.
- Waste composition data is limited. Waste sort data should be repeated with some regularity to determine opportunities for improving waste prevention, reduction and recycling.



## Baseline assessment: Water consumption

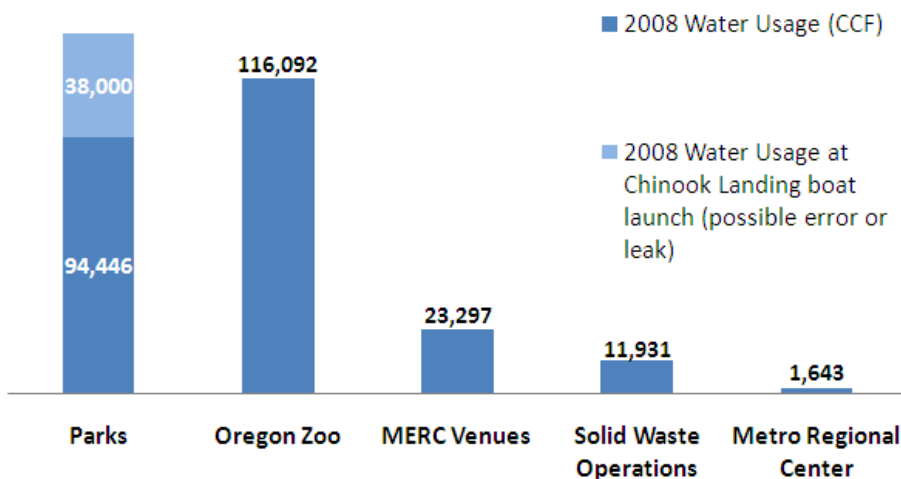
### Water baseline methodology

Water usage data was collected from water providing utilities, as well as from well water usage records. Water use is reported in CCF, or hundred cubic feet (equivalent to 748 gallons).

### Water baseline summary

**Metro’s properties collectively consume 285 million gallons per year.** This analysis indicates where Metro’s primary water uses are, and provides insight into Metro’s greatest opportunities for reducing water usage.

Figure 9: CCF of water used by functional area, 2008



The Oregon Zoo is Metro’s largest water user, and represents about 40 percent of Metro’s total annual water usage. Estimates for water usage at the Oregon Zoo indicate that further study is required; data on two-thirds of the zoo’s water use remains unknown.

Glendoveer Golf Course is the top water user of Metro’s park facilities, and is Metro’s second largest water user

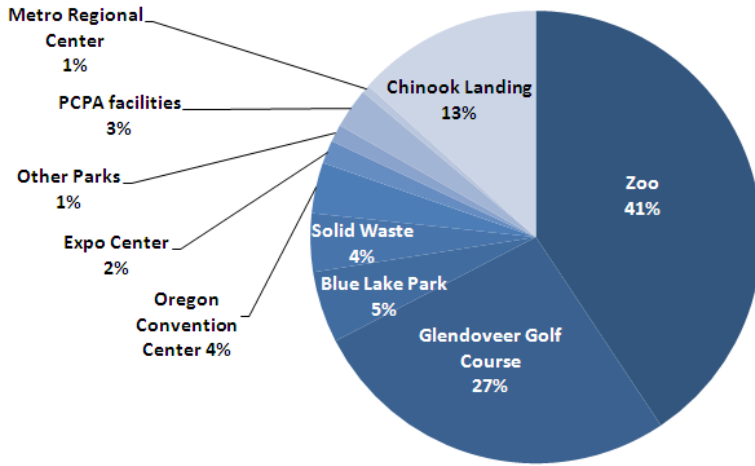
overall, judging from estimates of water usage from two onsite wells used to irrigate the golf course.

Both of these areas present significant opportunities for reducing water usage through improving water efficiency at the Zoo and at the Glendoveer Golf Course (Figure 10).

### Data quality and availability

- Reading records from water submeters are rarely kept.** While water usage data is available at the meter level from the water utilities, detailed information about where water is used within the facility or location is rarely available. This is especially true for the Zoo.

Figure 10: Relative water usage by facility (2008)



- Chinook Landing boat launch water records are suspiciously high. Records from the City of Fairview showed very high water usage in 2008 that indicate a faulty water meter or possibly an unnoticed leak. This anomaly is being investigated by the Parks and Environmental Services department.
- Water usage data not available for the Native Plant Center. This facility draws small amounts of water directly from the Tualatin River to irrigate native plant seedlings at this Metro operation in Tualatin.

**Case study: Reducing water use at the Zoo**

Since exhibits are estimated to account for about 20 percent of the Oregon Zoo’s water usage, Zoo staff is looking for way to make that use more efficient.<sup>8</sup>In an effort to keep the pool in the Zoo’s Humboldt penguin exhibit clean, approximately 3 gallons of water are skimmed off the pool every minute. In addition, the entire 25,000 gallon pool is dumped into the sanitary sewer every week. Over the course of the year, this effort to maintain a clean environment for the penguins results in the use of millions of gallons of water. As the fourth largest water user in the City of Portland, finding ways to reduce the Zoo’s water usage was integrated into the proposed projects to complete under the voter-approved Zoo bond measure.



The first of the projects to address water usage at the Zoo will provide a new filtration system for the penguin exhibit. This upgrade will allow the Zoo to cleanse and re-circulate much of the water in the penguin exhibit, bringing the water usage for this exhibit down to approximately 200,000 gallons per year, reducing annual water usage at the penguin exhibit by about 80 percent.

<sup>8</sup> Estimated water usage at the Zoo, from Oregon Zoo Stormwater Master Plan, 2009.

## Baseline analysis: Habitat and stormwater

### Habitat baseline methodology

Habitat health and function are impact areas identified within Metro’s sustainability goals and are central to its mission. For this baseline, developed properties were distinguished from natural areas with respect to the appropriate metrics. An analysis of stormwater treatment is included in this baseline analysis because it is closely related to habitat health and function. For example, sustainable site design reduces stormwater’s impact on water quality and the health of rivers, streams and riparian areas by detaining, treating and/or infiltrating stormwater on-site. This supports native plants, recharges aquifers and prevents erosion and habitat destruction. A list of habitat-friendly practices developed by Metro includes best practices such as rain gardens, swales, stormwater planters, rainwater harvesting, porous pavement, native landscaping, green streets, sustainable site design and green roofs.

For each developed property, data was collected to determine the amount of impervious area on-site (hardscapes that include roofs, parking lots and sidewalks) (Figure 11). Data was also collected to identify the square footage of impervious areas treated by habitat-friendly development practices (also known as low-impact development, or LID) and to determine the number of habitat-

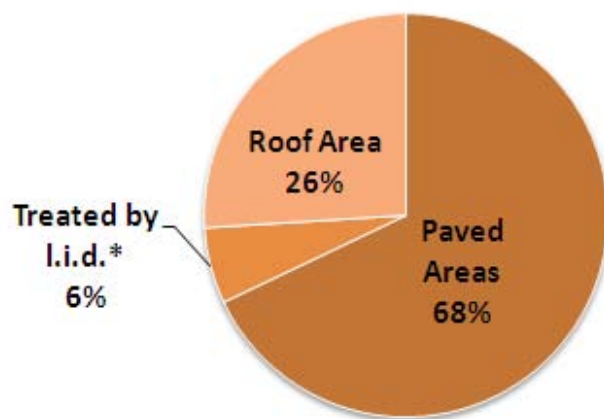
### What are habitat-friendly development practices?

Some examples of habitat-friendly development practices (or low-impact development – l.i.d.), as defined by Metro’s Nature in Neighborhoods program, are:

- Pervious pavement and porous concrete
- Ecoroofs
- Rain gardens
- Tree planting
- Use of native plants
- Bioswales and flow-through planters

See appendix for full list.

Figure 11: Impervious Surface Type Summary (2008)



friendly, or LID practices in use. The data was used to calculate Metro's overall effective impervious area (EIA) which is a measure of impervious areas not treated by LIDs and instead drain directly to a sewer or receiving waterway. The higher the amount of EIA, the more significant the property’s negative impact on water quality and wildlife habitat. For natural areas, the available data used in this baseline analysis includes the total number of classified acres and the number of acres undergoing a variety of restoration activities. This data provides a snapshot of Metro’s habitat management and

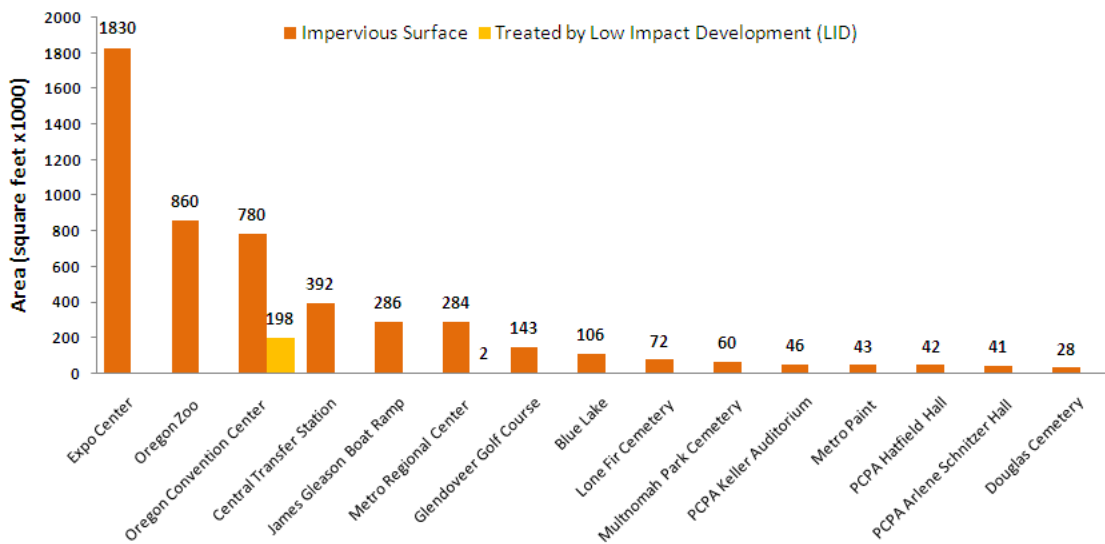
restoration activities which in turn provides an indication of the general health and function of those ecosystems. For example, habitat on acres classified as “Refinement and Long-term maintenance” are subjected to restoration activities related to the long-term shaping and maintenance of the site as it moves towards its desired future condition (a healthy, functioning ecosystem) and to the ongoing care of natural areas required to ensure the preservation of the habitat and water quality protection functions.

**Habitat baseline summary**

**Metro’s total effective impervious area (EIA) represents 96 percent of its total impervious area.** This means the vast majority of hardscapes drain directly to sewers and streams instead of being treated on-site. The total EIA across all Metro properties is **equivalent to 110 acres.** This contributes negatively to habitat quality and water quality issues and creates stormwater management challenges throughout the region.

Some Metro properties were not included in the effective impervious area analysis because all stormwater is captured, infiltrated or treated on site via habitat-friendly practices or retention ponds. These properties include Metro South Transfer Station, Cooper Mountain Nature Park, Mt. Talbert Nature Park, Smith and Bybee Wetland and Chinook Landing boat launch on the Columbia River. Nearly all of Metro’s urban developed properties have an EIA of 100 percent. The notable exception is the Oregon Convention Center, which has an EIA of 75 percent due to the rain garden. Metro Regional Center has an EIA of 99 percent due to a small 2,500-foot ecoroof (Figure 12).

**Figure 12: Impervious surfaces and area treated by low-impact development at Metro properties with stormwater runoff impacts**



### **Overall, two thirds of Metro developed properties have no habitat-friendly practices in place.**

The number of habitat-friendly practices used on-site is a good indication of a property's commitment to using innovative, multi-beneficial design solutions during construction, retrofit and remodel projects. Thus, determining where these practices are used and how many are utilized is useful for determining where illustrative examples, lessons learned and the most effective implementation opportunities might be. The largest number of habitat-friendly practices used at any one Metro property is at Cooper Mountain Nature Park, where five practices are in place.

### **Data quality and availability**

- Habitat indicators need further development. The habitat metrics included for this plan are intended to serve as a general trend indicator or "snapshot" of Metro's progress towards and contribution to the region's ecological health. There are a number of indicators that will either be collected during site assessments (such as percentage of native landscaping) and/or developed over time (such as development of site conservation plans) that will provide a more robust picture of habitat health and enhancement on Metro properties.

#### **Case study: Rain garden at Oregon Convention Center**

The landscape of the Oregon Convention Center expansion is designed to educate the community and its visitors about water quality. In addition to the native plants, minimized lawn area and efficient irrigation technology, a rain garden was integrated into the facility's design. It serves to filter and cool the extensive stormwater that runs off the large roof and site surface area. The rain garden provides an aesthetic, urban demonstration project for the handling of storm water. This signature feature is a solution to the need for disconnected downspouts from the city's combined sewer system, collecting and cleansing storm water before its release into the Willamette River.



The 318-foot long channel simulates a mountain stream with basalt columns and wetland plants. Terraced cobbled sedimentation basins slow the water, allowing sediments to filter out and increasing time for infiltration. The rain garden collects and treats water from 5.5 acres of roof area. Runoff from the loading dock area is also collected then passed through an oil-water separator before the water flows into another 205-foot vegetated swale. This filtered water enters the rain garden at the lowest detention basin.

The Oregon Convention Center saves \$15,600 on its stormwater bill annually because of the stormwater that would otherwise need to be treated by the municipal stormwater system.

## PART 3: STRATEGIES AND ACTIONS

For each of Metro's five sustainability goal areas, a set of strategies and actions have been identified. These strategies and actions provide a framework for the work that needs to be done to reach the 2025 goal targets. The strategies and actions are meant to be applicable across Metro's operations, and are not prescriptive to particular facilities or sites.

### Methodology

Action planning teams were formed for each of the five goals. Teams included representation from each of Metro's major functional areas, and an outside participant or reviewer for each team. Each of these teams confirmed the strategies that Metro needs to employ in order to meet the goal, and identified actions that should be completed to implement each strategy. Each team developed the strategies and associated actions within the frameworks of several guiding principles appropriate for the goal area and in tune with the baseline findings of largest impact areas.

The actions were then prioritized by team members according to two criteria: **feasibility** and **effectiveness** at meeting the goal. Based on this assessment, the team ranked each action as high priority (both highly feasible and highly effective) medium priority (either highly feasible or effective) or low priority (low feasibility, low effectiveness). In addition, the team flagged a subset of these as actions that are essential to the foundation of this plan and should be completed (or initiated, in some cases) in the first three years after the plan is adopted.

#### Strategies

The means for accomplishing goals

#### Actions

The specific tasks or steps that are taken to implement a strategy

### Action types

In addition to priority, the actions are categorized by the type of action. There are seven action types in this Sustainability Plan:

1. **Assessment:** Actions to conduct more detailed analysis that is needed to inform future work, such as an energy audit at a facility.
2. **Tracking:** Actions to initiate or improve tracking of various sustainability data that are needed to report progress over time on selected indicators.
3. **Programmatic:** Actions related to development of new programs or expanding existing programs.
4. **Procurement:** Actions directly related to the procurement of goods or services.
5. **Operational/Policy:** Actions that call for a change in internal operations, policy, or procedures.
6. **Funding:** Actions related to funding internal sustainability projects.
7. **Education:** Actions to educate Metro employees, and in some cases, Metro's customers.

## Strategies and actions: Greenhouse gas emission reduction

Metro owns and operates a diverse portfolio of facilities that will require specialized strategies to mitigate the climate impacts of Metro's operations. While Metro's greenhouse gas emissions account for a small share of the total regional emissions -- roughly one-tenth of a percent of the total 31 MMT CO<sub>2</sub>e associated with the Metro region -- this reduction target provides an opportunity for Metro, as a public agency, to lead by example in taking an aggressive emissions reduction strategy.

In order to successfully meet the operations reduction goal, Metro will need to examine all areas of operation to identify emission-reduction opportunities.





Installation of solar array at Metro's Cooper Mountain Nature Park, 2009.

### Guiding principles for greenhouse gas emission reduction



- **Reduce energy demand first.** Metro should work to increase energy efficiency of its facilities to the fullest extent feasible as a top priority for reducing GHG emissions. Purchase and/or on-site generation of renewable energy should be a second priority. Procurement of carbon offsets should not be considered until these avenues have been fully pursued, and then only if the offsets meet certain criteria.
- **Address emissions from all three scopes.** Metro should be comprehensive and address all of Metro's greenhouse gas emission sources: energy, transport, and materials. In other words, address all Scope I, II and III emissions.
- **Use most current climate science to guide actions.** The findings from the IPCC (Intergovernmental Panel on Climate Change) outline what is needed in terms of the scale of emission reductions needed to avoid catastrophic climate change (change beyond the point that we can't adapt).

## Greenhouse gas reduction strategies and actions

Greenhouse gas emissions			
Strategy	Actions	Action type	Priority
<b>Strategy 1: Reduce GHG emissions from building operations, maintenance, and siting through energy efficiency and resource conservation.</b>	1.1 <u>Audit buildings for energy efficiency opportunities and develop recommendations for an energy efficiency plan</u> specific to each site. Audit type should be appropriate to the building type (i.e. ASHRAE Level 2 audit for buildings over 10,000 square feet.)	Assessment	High 
	1.2 Implement <u>energy efficiency plans and develop supporting policies</u> for each site audited. Examples of implementation steps could include: <ul style="list-style-type: none"> <li>• Lighting retrofits and upgrades</li> <li>• Establish energy efficiency guidelines/requirements for existing buildings and new construction.</li> <li>• Building retro-commissioning (to test effectiveness of building systems) where appropriate</li> <li>• Building weatherization (insulation, sealing, etc.)</li> <li>• Equipment upgrades (boilers, HVAC, hot water heaters, refrigerators, etc.)</li> </ul>	Operations	High 
	1.3 Identify and evaluate options for <u>reducing GHG emissions from the St. Johns landfill</u> , particularly the flaring of methane and resulting carbon dioxide emissions. Include options for methane management after Metro's contract with Ash Grove Cement expires in 2012.	Operations	High
	1.4 <u>Increase on-site generation of renewable energy at Metro locations</u> . Assess locations for opportunities in partnership with Energy Trust. Implement according to greatest opportunities (i.e. solar, small wind turbines).	Procurement Operations	High
	1.5 <u>Increase purchase of renewable power</u> directly from electrical utilities (Portland General Electric and Pacific Power.)	Procurement Operations	Medium
<b>Strategy 2: Reduce consumption of carbon-intensive fuels, including emissions related to business travel, fleet vehicles, and other fuel-consuming equipment.</b>	2.1 Implement <u>green fleet program to reduce fuel usage</u> by Metro's fleet. Program elements should include: <ul style="list-style-type: none"> <li>• Decrease overall number of fleet vehicles;</li> <li>• Use of Fleet management software which tracks fleet usage;</li> <li>• Use of car-sharing to supplement fleet needs where possible; and</li> <li>• Fleet purchasing policy with procurement hierarchy, increased use of alternative fuel vehicles and purchase of electric vehicles and charging stations.</li> </ul>	Operations Policy	Medium



	<p>2.2 <u>Reduce emissions from the consumption of carbon-intensive fuel</u> related to business operations by adopting sustainable fuel use standards. Standards should include:</p> <ul style="list-style-type: none"> <li>• Provisions for back-up generators, heavy equipment, off-road vehicles and other equipment;</li> <li>• Idle reduction policy for fleet and contractors;</li> <li>• Diesel emission standards for off-road equipment based on EPA’s Tier system, and retrofit or replace equipment to meet those standards; and</li> <li>• Fuel efficiency standards for fleet vehicles and increased use of alternative fuels where available.</li> </ul>	Policy	Medium
	<p>2.3 Identify and evaluate options for reducing GHG emissions from the <u>long-haul trucking of solid waste</u> to the Columbia Ridge Landfill in Gilliam County, OR. Strategies could include alternative fuels or transportation methods, reducing the amount of waste requiring disposal and potential for alternative waste treatment options that would not require as much transport.”</p>	Operations	Medium
	<p>2.4 Create <u>climate-friendly business travel guidelines</u> for Metro employees, including best practices hierarchy of business travel choices. Include workday travel to and from meetings. Include eco-driving awareness and tips for fleet drivers.</p>	Education	Low
	<p>2.5 Establish <u>public electric vehicle charging stations</u> at Metro locations.</p>	Operations	Low
<p><b>Strategy 3: Reduce GHG emissions related to the supply chain and service providers Metro purchases through contracts and procurement.</b></p>	<p>3.1 Include <u>GHG reduction / energy efficiency criteria in all vendor and facility service and equipment contracts.</u></p> <ul style="list-style-type: none"> <li>• Include GHG-reduction preferences/criteria into procurement specifications of bids and RFP’s, or add to boiler plate language for contracts.</li> <li>• Include requirement to purchase Energy Star certified equipment wherever available.).</li> </ul>	Procurement	High
	<p>3.2 Develop and <u>adopt sustainable food procurement standards</u> that reduce GHG emissions from food production, transport and service. To include:</p> <ul style="list-style-type: none"> <li>• Increases purchase of certified organic food;</li> <li>• Increased purchase of local food; and</li> <li>• Sustainable food service ware options including durable dishware and prohibiting disposal of compostable service ware in a landfill.</li> </ul>	Procurement	Medium

<p><b>Strategy 4: Improve internal business practices to support ongoing monitoring and tracking of GHG emissions sources.</b></p>	<p>4.1 Establish process for <u>ongoing tracking of all GHG-related data sources</u> in Metro’s internal operations for tracking of GHG emissions. To include:</p> <ul style="list-style-type: none"> <li>• Identify data sets needed for ongoing GHG tracking and reporting, including all data gaps identified in the GHG inventory completed in 2010. Integrate tracking into normal business practices.</li> <li>• Coordinate ongoing tracking needs with all business operations departments, including but not limited to: Accounting, Procurement, Operations/Facility Managers, Contractors, Fleet management, Information Services.</li> <li>• Use utility tracking software for electricity, natural gas and water, waste.</li> <li>• Establish ongoing working relationship with all utility providers, via account representative if available including: establish regular reporting of utility use data, regular updates of utility-specific GHG emission factors.</li> </ul>	Tracking	High 
	<p>4.2 <u>Identify tools necessary for Metro operations to quantify the GHG reduction potential</u> of facility improvements or upgrades. <i>(Related to Metro’s GHG Tools and Procedures Manual, in development by Research Center.)</i></p>	Assessment	High
	<p>4.3 Conduct <u>annual employee commute survey for all Metro employees</u> (including non-benefits eligible employees) that records travel modes and miles traveled (goes beyond the TriMet Passport program required survey).</p>	Assessment	Medium
<p><b>Strategy 5: Create a funding strategy and appropriate staffing for greenhouse gas reduction efforts.</b></p>	<p>5.1 Develop and implement <u>funding mechanism for projects</u> that reduce GHG emissions, including new and existing capital. Explore ways to generate funding, such as:</p> <ul style="list-style-type: none"> <li>• Set aside avoided costs / savings from energy efficiency investments to pay for future projects;</li> <li>• Use energy incentive program payments (i.e. ETO rebates) to “pay it forward” for future projects.</li> <li>• Develop return on investment (ROI) criteria for energy-efficiency projects and integrate into project proposals. Build relationships with outside funders like Energy Trust of Oregon and other energy incentive programs.</li> </ul>	Funding	High 
	<p>5.2 <u>Require selection of energy efficient options for all projects (new and existing capital)</u>. Establish opportunity review as a pre-planning requirement. Include requirement to purchase Energy Star certified equipment wherever available.</p>	Funding	High

	<p>5.3 Hire an <u>energy manager to develop and implement a comprehensive energy efficiency program</u> for all Metro/MERC facilities. Scope of work could include:</p> <ul style="list-style-type: none"> <li>• Build relationships with utility providers;</li> <li>• Set up ongoing tracking of energy use data;</li> <li>• Fundraising; or</li> <li>• Project planning assistance.</li> </ul> <p>Could be implemented as part of the capital projects division like MERC uses. Funding for position could emulate City of Portland and Multnomah County positions.</p>	Program	Medium
<p><b>Strategy 6: Support and encourage employee opportunities to reduce GHG emissions through behavior changes related to their Metro work day, as well as opportunities for visitors to reduce their emissions.</b></p>	<p>6.1 Provide <u>basic education to Metro employees</u> on climate change, greenhouse gas emissions and what they can do to help reduce GHG emissions at work (i.e. workplace energy conservation).</p>	Education	Medium
	<p>6.2 <u>Reduce emissions from Metro employees commuting to and from Metro work sites</u>. To include:</p> <ul style="list-style-type: none"> <li>• Expand commute option programs to all locations, and extend to non benefits-eligible employees.(i.e. compressed work week, transit pass, bike/walk incentives).</li> <li>• Strengthen telecommuting policy to reduce employee commute emissions.(i.e. MERC use of Citrix to improve employees ability to work from home)</li> <li>• Identify a Transportation Coordinator at each Metro work site.</li> </ul>	Program	Medium
	<p>6.3 Provide <u>options for attendees of public meetings hosted at the Metro Regional Center</u> to reduce their greenhouse gas emissions associated with travel to and from the meeting (i.e. use web-based meeting tools, public transit options, install AV equipment to enable virtual/remote meetings).</p>	Operations	Low
	<p>6.4 <u>Increase parking fees</u> at Metro locations as a way to discourage staff and visitor travel by car.</p>	Policy	Low
	<p>6.5 Develop methods to <u>reduce emissions impacts related to transportation of patrons and customers visiting Metro venues</u>. (i.e. Offer incentives such as a discounted entry fee for taking public transit to the event.)</p>	Operations	Low

## Strategies and actions: Toxics reduction

As a government agency with a focus on reducing toxic materials from the region's solid waste stream, toxics reduction is a key concept for not only community programs, but to internal operations. The wide variety of consumable products in use at Metro's locations poses a unique challenge.

Many products and materials used in government operations contain toxic substances of concern. Exposures to toxic chemicals are linked to a wide array of human health consequences.

Improving Metro's inventory of products (both consumable and durable goods) is necessary for success. These strategies and actions outline a process for systematically identifying and replacing hazardous products used in Metro operations with less-toxic alternatives, and starting with the most toxic products first.







Household hazardous waste collected from Metro region residents.

## Guiding principles for toxics reduction

- **Precautionary principle.** Action should be taken to prevent harm even in the absence of scientifically rigorous proof of harm. In the context of Metro's operations this means that actions should be taken to change, halt or phase-out practices and products that are associated with significant concerns about toxic impacts, often long before these concerns are addressed by regulatory restrictions.
- **Consider hazard, not just risk.** Hazard is the inherent property of a chemical, whereas risk is a calculation of the potential for harm based on concentration, routes of exposure, and other factors. In contrast to a risk assessment approach, which involves complex and often incomplete or inaccurate calculations, a hazard-based approach selects products of concern based on their intrinsic ability to cause harm to health or the environment. This approach is consistent with the precautionary principle.
- **Take a life cycle approach.** Products can have impacts on human health and the environment across their lifecycle, including manufacture, use, storage and disposal. Metro should consider the impacts of hazardous materials not only during storage, and use and disposal at Metro facilities, but also those that result from the manufacture of products.

## Toxics reduction strategies and actions

Toxics reduction			
Strategy	Actions	Action type	Priority
<b>Strategy 1: Complete and bring up-to-date Metro's comprehensive chemical product and materials inventory, including consumable and durable products, as well as other toxics.</b>	1.1 <u>Establish process for ongoing tracking and inventory of chemicals and products that contain toxics</u> in use at Metro. To include: <ul style="list-style-type: none"> <li>Schedule of regular inventory and database update of chemicals in-use, to repeat at least every three years. Include both Metro and MERC material safety data sheets (MSDS) as well as for products used at Metro facilities by contractors; divide MSDS database into In-use and Old MSDS's (to be archived); create standardized procedure and forms for adding products into the database.</li> <li>Identify people responsible for keeping MSDS inventory up to date and train them on how to maintain and add to the inventory.</li> <li>Link to new Safety Policy and Hazard Communication Program (Risk Management).</li> </ul>	Tracking Program	High 
	1.2 Conduct <u>high-level assessment of durable products</u> commonly used at Metro that contain toxics; use list to inform future purchases of less-toxic alternatives (i.e. fluorescent lamps)	Assessment	Medium
<b>Strategy 2: Take action to reduce and/or eliminate the most toxic products and materials first.</b>	2.1 <u>Identify the most toxic products in Metro's inventory and target them for replacement with less-toxic alternatives.</u> To include: <ul style="list-style-type: none"> <li>Replacement of products that score a 3 (most toxic) in MSDS chemical inventory if substitutions are available;</li> <li>Prioritize replacement of heavy metals and other PBT's, including those attributable to durable goods;</li> <li>Prioritize product categories with high quantities of toxic ingredients in inventory (i.e. cleaning products and paints).</li> </ul>	Operations Procurement	High 
	2.2 Reduce use of <u>herbicides and pesticides</u> in all Metro operations. Create and implement an <u>IPM (Integrated Pest Management) policy</u> to reduce use of herbicides and pesticides on all Metro properties. Policy should address the unique needs of different property types, including developed property landscapes and natural area restoration needs. Program should phase out high risk pesticides as indicated by Salmon Safe. Begin tracking and reporting of all herbicides and pesticides used by Metro staff and contractors.	Policy Tracking	High 

	2.3 Adopt <u>diesel particulate matter (PM) reduction strategies</u> for internal operations and on Metro property. Include idle reduction policy and require use of diesel PM control technology for all diesel-burning equipment.	Operations Policy	Medium
<b>Strategy 3: Identify and implement methods for procurement of less-toxic goods and materials through purchasing policies and procedures.</b>	3.1 <u>Reduce purchase of toxic products by requiring or requesting least-toxic options from contractors and suppliers</u> in bids and RFP's. Integrate least-toxic criteria into boilerplate procurement language and other procurement practices. Create an "X-List" of ingredients or materials that Metro will no longer purchase due to their toxicity.	Procurement	High 
	3.2 <u>Increase purchase of sustainable products by adopting least-toxic product standards.</u> Formally adopt third-party certified eco-labels where available (i.e. Green Seal standard for cleaning products) and develop product-specific policies where such eco-labels are not available (i.e. low-mercury lighting). Standards should include performance criteria. Where standards are not available, point buyers to compiled lists of least-toxic products (i.e. City of San Francisco's toxics reduction procurement guide <sup>9</sup> .)	Procurement Policy	High
	3.3 Develop methods to allow <u>price premium for procurement of less-toxic</u> goods and services where the less-toxic option costs more than conventional options.	Procurement	Low
<b>Strategy 4: Educate, train, and provide tools for product users and buyers about how to choose less-toxic options based on standards and criteria.</b>	4.1 Provide <u>education and tools to buyers on how to purchase least-toxic products.</u> Focus first on biggest purchasers of "toxics", and then broaden to include department procurement coordinators (DPC's) and P-Card users. Use a "train the trainer" approach by enlisting green teams, safety committees and some supervisors to educate Metro employees on selecting least-toxic products. Track trainings completed annually.	Education	High
<b>Strategy 5: Develop toxics reduction program assessment metrics to measure progress over time.</b>	5.1 <u>Integrate contracts and procurement records into the chemical inventory.</u>	Tracking	Low
	5.2 <u>Track the quantity of less-toxic products Metro uses</u> (i.e. third-party certified cleaning products) as well as the amount of toxics reduced over time as less-toxic alternatives are phased-in.	Tracking	Low

<sup>9</sup> SF Approved List of Green Products & Services, City of San Francisco. [www.sfenvironment.org/sfapproved](http://www.sfenvironment.org/sfapproved).

	5.3 Develop methods for <u>monitoring P-Card purchases</u> that allow more detail of what is purchased. Managers should review receipts and encourage buyers to purchase less-toxic products. Model after MERC P-Card review process.	Tracking Procurement	Medium
	5.4 Develop a method for <u>measuring the life cycle impacts of Metro chemical and toxics purchases</u> .	Tracking Procurement	Low
<b>Strategy 6: Develop a cross-organization least-toxic alternatives assessment team and process.</b>	6.1 Develop a <u>cross-organization least-toxic alternatives assessment team and process</u> . Identify team composition, specific charge, scope, authority and resources.	Operations Procurement	Medium

## Strategies and actions: Waste reduction

Metro has had a commitment to recycling in government operations since 1991, when an Executive Order established a comprehensive waste program and recycling program for Metro departments and facilities (Executive Order No. 47.) Since then, Metro's recycling programs at its facilities have served as a model for similar facilities across the nation. The Oregon Zoo and the Oregon Convention Center are notable examples.



Metro provides reusable mugs for public meetings.

However, there are still opportunities for diverting recoverable material from the waste stream (such as organic waste) and for waste prevention upstream. The greatest challenge is due to the nature of operating public facilities and having to deal with the waste that is brought in by customers.



While waste disposal is a problem, the impacts of producing the goods that eventually become waste are many times larger than the environmental impacts of the waste itself. When it comes to waste reduction, the more sustainable practice is not just to keep stuff out of the landfill, but to use less stuff in the first place. By adopting waste prevention practices for waste streams that Metro controls (i.e. purchased goods) Metro will be most likely to meet waste reduction targets.

### Guiding principles for waste reduction

- **Meet business recycling requirements.** Since Metro requires commercial facilities in the region to meet basic recycling program criteria, all Metro facilities should model this behavior and follow the best practices for recycling prescribed in that program.
- **Prevent waste before it starts.** Integrate techniques of waste prevention into Metro operations, focusing efforts on preventing waste upstream where it is generated. For example, durable, reusable, and refillable products all prevent waste.
- **Take a life cycle approach.** Consider the waste impacts of the full life cycle of products when making purchasing decisions, which includes the waste generated before or after a product is used by Metro.



## Waste reduction strategies and actions


Waste reduction			
Strategy	Actions	Action type	Priority
Strategy 1: Utilize procurement process to prevent generation of waste.	1.1 Create <u>procurement policies and procedures that support waste prevention and reduction</u> . Examples include: Producer take-back as a procurement tool. i.e. require suppliers/vendors to take back packaging; Request that products be packaged in recyclable packaging, or no packaging at all; Establish a preference for durable, reusable, repairable products in procurement procedures. Provide training for buyers on how to use procurement tools to reduce and prevent waste from materials and services.	Procurement	High 
	1.2 Reduce food service ware and organics waste by adopting <u>sustainable catering standards</u> for public meetings hosted by Metro (both internal and public). For client-based catering and banquet services at visitor venues, continue to develop and offer options that reduce waste.	Operations Policy	Low
	1.3 Utilize <u>life-cycle analysis</u> as a procurement selection tool.	Procurement	Low
Strategy 2: Expand materials reuse opportunities.	2.1 Create <u>centralized surplus and material reuse process for supplies</u> , furniture and equipment. Update existing Metro surplus property disposition policy that prioritizes internal reuse first, then donation, then sale (MERC has a similar policy).	Operations Policy	Medium
	2.2 Promote and improve access to Metro's <u>reuse bulletin board</u> on the Intranet. <sup>10</sup>	Operations	Low
Strategy 3: Improve and expand recycling programs at Metro facilities and properties.	3.1 Meet <u>business recycling requirements</u> at all Metro facilities. <sup>11</sup> Follow best practices such as pairing waste bins with recycling bins and using two-sort systems in public areas of all Metro locations.	Operations	High 
	3.2 <u>Increase organics collection</u> at all Metro facilities where services are available.	Operations	High
	3.3 Integrate principles of <u>Resource Management</u> <sup>12</sup> into next <u>waste and recycling contract for Metro facilities</u> , to engage the hauler more in helping Metro to meet waste prevention	Procurement	Medium

<sup>10</sup> [http://imet.metro-region.org/index.cfm/go/by.web/id/3688&type\\_id=3](http://imet.metro-region.org/index.cfm/go/by.web/id/3688&type_id=3)

<sup>11</sup> Metro Business Recycling Requirements, adopted in 2008. <http://www.recycleatwork.com/whatsrequired>.

<sup>12</sup> EPA website, *What is Resource Management?* <http://www.epa.gov/wastes/partnerships/wastewise/wrr/rm.htm>

	and recycling goals, and to clarify tracking and reporting requirements. Include preference for increased local processing of recovered materials.		
	3.4 <u>Add recycling collection for other materials</u> found in the waste stream not currently recycled (i.e., rigid plastics, other hard-to-recycle materials) where recycling markets are available.	Operations	Medium
	3.5 Identify a “ <u>recycling liaison</u> ” at each Metro park (PES) <u>location</u> to coordinate recycling improvement efforts.	Program	Low
<b>Strategy 4: Educate employees on waste prevention and recycling and provide incentives for improvement.</b>	4.1 <u>Train Metro employees on waste prevention techniques and how to recycle</u> where they work. Post recycling instructions on IntraMet.	Education	Medium
	4.2 Establish <u>gain-sharing agreements for increasing diversion rate</u> or reducing waste at Metro facilities as a way to provide incentive to employees (Example: OCC gain-sharing agreement).	Program	Medium
<b>Strategy 5: Educate visitors, exhibitors and show promoters about waste prevention and recycling options.</b>	5.1 <u>Create clear and recognizable signage on recycling in public areas</u> at all Metro locations. Use coordinated messages/words/colors for recycling program consistent across all Metro locations (build on messages that work for OCC and Zoo or other public facilities such as Portland airport) and tailor to each site’s recycling program offered. Signs at public locations should be in multiple languages and tailored to the visitors’ needs at that site.	Operations	Medium
	5.2 Develop and offer waste prevention <u>incentives for show promoters</u> at MERC venues where possible.	Customers	Low
<b>Strategy 6: Identify tools needed to reduce dependency on materials (such as paper) to prevent waste.</b>	6.1 <u>Implement a paper reduction strategy for Metro operations that fosters a transition to a paperless Metro workplace.</u> To include: training for Metro employees on how to use paperless office tools, such as SharePoint and Wikis; options to reduce paper needed for retention of public records.	Operations Policy	High
	6.2 Upgrade AV equipment and meeting rooms to <u>enable paperless and virtual public meetings.</u>	Operations Policy	Medium
	6.4 <u>Prevent paper towel waste in Metro restrooms, especially those with high traffic</u> through use of high-efficiency hand dryers. Unique site needs should be considered (i.e. noise for restrooms near a quiet theater).	Operations	Medium

<p><b>Strategy 7: Improve tracking and reporting on waste generation and recycling from haulers, as well as internal tracking materials use by department.</b></p>	<p>7.1 <u>Track waste generation and recycling data for all Metro locations</u>. Create an electronic reporting system to track waste generation and recycling from all Metro locations. Identify staff time needed to input data into a waste/recycling tracking system. Tracking should include all materials recovered for recycling, compost, reuse or refurbishment.</p>	<p>Tracking</p>	<p>High</p> 
	<p>7.2 <u>Track paper use</u> by department or facility; set a goal for reducing paper consumption and track progress.</p>	<p>Tracking</p>	<p>Medium</p>
	<p>7.3 Make it <u>easy</u> for staff to find reports on tracking waste <u>generation</u> so that they can see their impact in the big picture.</p>	<p>Education</p>	<p>Low</p>

## Strategies and actions: Water conservation

While the Metro region currently has a plentiful supply of fresh water, water conservation is necessary to ensure a sustainable public water supply and healthy habitat for fish and other wildlife that depends on high water quality and quantity. The influx of new residents predicted to come to the Metro area over the coming decades, combined with advancing changes in climate, will make water conservation more important than ever.








Fortunately, Metro's largest water user, the Oregon Zoo, has plans to upgrade many of its exhibits through a bond program, which will greatly increase the water efficiency of Zoo exhibits. However, much work is yet to be done to improve water efficiency and reduce water usage overall at Metro's other facilities and parks.

### Guiding principles for water conservation

- **Prevent water use; eliminate where possible.** Like waste prevention, taking a preventive approach to water use is a good place to start. Examples include eliminating irrigation in areas that do not really need it.
- **Use less water by making use more efficient.** Older facilities like Metro's generally have opportunities for improving water efficiency when making replacements or repairs to building systems. Always specify water-efficient products.
- **Reuse or harvest water when efficiencies have been completed.** Water reuse is a lower priority, due to the fact that water is least available in the form of rainwater when it is most needed for irrigation.

## Water conservation strategies and actions

Water conservation			
Strategy	Actions	Action type	Priority
<b>Strategy 1: Assess and prioritize water conservation opportunities on all Metro properties.</b>	1.1 <u>Audit water usage at all Metro locations</u> that have not had a recent water audit to and develop recommendations for water conservation strategies specific to each site. Irrigation systems should be included in audits.	Assessment	 High
	2.1 Ensure implementation of <u>water conservation projects identified in the Zoo Master Plan</u> (to be completed in 2011).	Operations	 High
<b>Strategy 2: Reduce water usage through improvements to water use prevention and water efficiency, starting with biggest water users.</b>	2.2 Integrate sustainable operations and water conservation requirements into operations contract for <u>Glendoveer Golf Course</u> .	Operations	 High
	2.3 <u>Reduce irrigation and watering needs at Metro properties</u> . Determine how much irrigation is necessary, then create an efficient irrigation schedule and eliminate irrigation in areas where not needed. Upgrade irrigation systems to include “smart” sensors to detect soil moisture or weather to reduce watering. Reduce or eliminate hand watering at Metro properties.	Operations	High
	2.4 <u>Retrofit existing buildings’ water fixtures and equipment to high-efficiency where highest opportunity areas are found in water audits</u> . Actions could include retrofitting commercial kitchen equipment, bathroom fixtures, truck wash sprayers, etc.	Operations	High
	2.5 Create <u>requirement that all water fixture and equipment purchases be water efficient</u> . Water efficiency to be defined by current best practices. Create standards for new construction and renovations that references a standard for water-efficient fixtures.	Policy Procurement	 High
	2.6 Implement <u>water efficiency best management practices (BMP’s) at public wash stations</u> (truck wash at solid waste transfer stations, boat sewage pump station at Chinook Landing boat ramp). Install equipment upgrades to reduce water use. Develop disincentives to overuse of water such as time limits or charge for use.	Operations	Medium
<b>Strategy 3: Reuse water at Metro</b>	3.1 Reduce well water usage at Blue Lake Park by investigating the possibility to <u>redirect water from flushing</u>	Operations Policy	Medium

facilities where feasible and opportunity is significant.	Portland’s Columbia Wellfield away from the Columbia River and to Blue Lake for reuse.		
	3.2 Investigate opportunities for <u>gray water reuse</u> and implement where highest opportunities exist (i.e. cleaning Zoo exhibits).	Operations	Low
	3.3 <u>Reduce and reuse water from building environmental systems</u> when those systems are improved or replaced (i.e. air conditioning condensate, cooling tower water, eliminate “single-pass” cooling in HVAC systems).	Operations	Low
Strategy 4: Establish an ongoing tracking and reporting system for all water usage at Metro properties.	4.1 Create <u>ongoing tracking system for all water uses at Metro locations</u> . Include on-site water sources such as wells. Utilize submeters to track detailed water usage; create a regular reading and recording schedule.	Tracking	High 
	4.2 <u>Connect water billing with maintenance staff</u> to close the loop with information and educate water users about consumption.	Tracking Education	Medium
Strategy 5: Educate and train Metro employees, facility managers and public visitors on water conservation.	5.1 Create <u>water conservation training for employees responsible for most water use</u> , including parks operations, animal keepers, transfer station operations and building maintenance.	Education	High
	5.2 <u>Educate truck wash users</u> at waste transfer stations on water conservation. Install signage.	Education	Low
	5.3 Integrate <u>rainwater harvesting where possible as a demonstration</u> in new construction at Metro parks.	Education	Low
Strategy 6: Create a funding strategy for water conservation projects.	6.1 Create <u>funding mechanisms for water conservation projects, including new and existing capital</u> . <u>Evaluate water-related projects in advance of Renewal and Replacement schedule</u> and leverage R&R funds to implement. Establish return on investment (ROI) standards for water conservation projects that would enable them to be prioritized and selected for funding.	Funding	High

## Strategies and actions: Habitat enhancement

Metro recognizes that protecting and improving fish and wildlife habitat and ecosystem health are critical elements of an effective, sustainable business model and internal operations plan. This portion of the plan provides guidance and recommendations for integrating habitat-friendly principles, approaches and practices into the development, management and maintenance of Metro's spectrum of built and natural properties. As these habitat strategies and actions are implemented over time, Metro's properties will contribute to restoration and enhancement of vital



<sup>13</sup>Landscape plants that produce berries provide an important food source for birds.


ecosystem services, water quality improvements, protection and improvement of wildlife habitat and enhancement of human health and well-being.

Metro's Habitat sustainability strategies address two key areas: increasing habitat quality and ecological function on Metro-owned and operated properties (healthy habitat) and minimizing the negative development footprint on these properties via use of habitat-friendly and low impact development practices (walking the talk).

### Guiding principles for habitat enhancement on developed properties


- **Model use of habitat-friendly development practices.** Lead in implementing and modeling innovative, sustainable, habitat-friendly planning, design, building, operations and maintenance practices across a spectrum of natural and built properties.
- **Prioritize design and development practices that provide multiple benefits.** Implement solutions that serve multiple functions and provide multiple benefits. For example, when completing a project such as a roof replacement, installing an ecoroof will extend the life of the roof, provide pollinator and wildlife habitat, reduce stormwater runoff and help regulate building temperature.
- **Balance development, human needs and the health of natural systems.** Protecting, restoring, and managing habitat and ecosystem function at all scales is a priority. This means Metro's operation, maintenance, and development activities should always seek to improve ecosystem functions and avoid impacts to wildlife habitat. If impacts do occur, they should be minimized to the greatest extent possible.

## Habitat enhancement strategies and actions

Habitat enhancement			
Strategy	Actions	Action type	Priority
<b>Strategy 1: Assess and prioritize habitat and stormwater improvement opportunities on all Metro properties.</b>	1.1 Conduct <u>habitat and stormwater site assessments at all Metro properties</u> , especially developed properties. Use assessments to develop habitat and stormwater improvement site plans. Stormwater improvement plans should complement Metro's Total Maximum Daily Load (TMDL) plan and connect to other stormwater program efforts (i.e. City of Portland's Grey to Green Program).	Assessment	High 
	<b>Strategy 2: Take action to improve habitat value, ecological function and reduce stormwater runoff from all Metro properties.</b>	2.1 <u>Implement habitat improvement site plans for Metro properties</u> , including developed sites.	Operations
	2.2 <u>Implement stormwater improvement site plans for all properties</u> , using low-impact development (LID) strategies that reduce runoff and then treat stormwater on-site.	Operations	High
	2.3 Reduce use of <u>herbicides and pesticides</u> in all Metro operations. Create and implement an <u>IPM (Integrated Pest Management) policy</u> to reduce use of herbicides and pesticides on all Metro properties. Policy should address the unique needs of different property types, including developed property landscapes and natural area restoration needs. Program should phase out high risk pesticides as indicated by Salmon Safe. Begin tracking and of all herbicides and pesticides used by Metro staff and contractors.	Policy	Medium <sup>13</sup>
<b>Strategy 3: Create requirements for using habitat-friendly development practices in construction projects for new and/or existing buildings and properties</b>	3.1 <u>Create habitat and stormwater requirements for all projects (new and existing capital)</u> . Establish opportunity review as a pre-planning requirement. Require use of habitat project checklist and multi-disciplinary teams to evaluate habitat impact and opportunities.	Program Policy Funding	High
	3.2 Develop and implement <u>funding mechanism for projects that reduce GHG emissions, including new and existing capital. Include <u>funding for maintenance of habitat-friendly development projects and monitoring habitat improvements over time.</u></u>	Funding	Medium

<sup>13</sup> The creation of an IPM policy is ranked as a high-priority action for toxics reduction, but didn't rank as high as a habitat protection action. However, since there are multiple benefits to reducing pesticides, the action appears in both sections.



<b>Strategy 4: Educate Metro employees on habitat-friendly development practices, especially property and project managers.</b>	4.1 Create a list of <u>habitat-friendly development practices and sustainable stormwater BMP's (best management practices)</u> for property managers, and train them on how to use it.	Education	High
	4.2 Implement <u>green building and nature-friendly projects in high traffic and/or highly visible areas to serve as demonstration projects</u> for visitors and employees (i.e. MRC plazas). Projects should showcase innovative features, provide active and/or passive learning opportunities and highlight partnerships.	Education	Medium
	4.3 Identify a " <u>habitat site steward</u> " at each site.	Program	Low
<b>Strategy 5: Track habitat and stormwater improvements on Metro properties.</b>	5.1 <u>Establish effective reporting and monitoring system for improvements to habitat and stormwater at Metro locations.</u> Include reductions in impervious surface area, number of low impact developments installed and natural area metric updates as developed by Natural Areas Program.	Tracking	High 

## Strategies and actions: Sustainability management




To successfully implement this plan, several program elements are needed to manage the effort over time. Sustainability management generally refers to the process required to implement an organizational sustainability effort over time. Typical elements of a sustainability management system include:

- Plan: Identify and prioritize projects
- Implement: Implement projects and support systems needed
- Monitor: Check progress of the projects
- Review: Evaluate project effectiveness and overall initiative to inform future efforts<sup>14</sup>






The following strategies and actions cut across all five of Metro’s sustainability goals and are necessary to implement this plan.

These actions are all high priority.

### Sustainability management strategies and actions

Sustainability management			
Strategy	Actions	Action type	Priority
Strategy 1: Integrate accountability into implementation of sustainability plan.	1.1 Create and adopt an <u>implementation process for the Sustainability Plan</u> . Include method to identify, prioritize and develop plans for projects in the Sustainability Plan. Identify roles and responsibilities of those tasked with implementation of the sustainability plan. Create site-specific work plans for implementation. Update annually.	Program	High 
	1.2 Integrate sustainability goals and desired outcomes into <u>PACe and other performance measures</u> for Metro employees, starting with managers. Not intended to measure performance on absolute numbers, but qualitative effort.	Program	High
	1.3 Conduct <u>annual program evaluation</u> with program stakeholders to evaluate what works well and what needs to be improved. Include check in on barriers and opportunities.	Program	High 
Strategy 2: Create a comprehensive	2.1 Provide <u>basic sustainability training to all Metro employees</u> . See Clackamas County training course “Going Beyond Green: Advancing Sustainability at Clackamas County” for example. Encourage peer-to-peer learning on	Education	High 

<sup>14</sup> The Step-by-Step Guide to Sustainability Planning: How to Create and Implement Sustainability Plans in any Business or Organization. Hitchcock, Willard, 2008.

sustainability training program for Metro employees.	Sustainability through discussion such as “Sustainable Systems at Work” course from the Northwest Earth Institute.		
	2.2 <u>Coordinate provision of subject-specific trainings</u> identified throughout sustainability plan. Partner with Metro Learning Center.	Education	High
Strategy 3: Build funding and staff capacity to implement sustainability plan.	3.1 Create <u>comprehensive funding strategy</u> for sustainability projects. To include: <ul style="list-style-type: none"> <li>• Sustainability requirements for new capital assets;</li> <li>• Establish opportunity review as a pre-planning requirement and leverage replacement funding to implement;</li> <li>• Develop new fund for sustainability projects that require additional funding beyond existing budgets.</li> </ul>	Operations Policy	High 
	3.2 Identify and <u>address staff capacity needed to coordinate site-specific sustainability activities</u> . Build capacity where needs have been identified.	Program	High 
Strategy 4: Create policies and procedures to support sustainability plan and goals.	4.1 Develop and adopt a <u>sustainable procurement policy</u> as directed in Metro Code, “Sustainable Procurement Program”.	Procurement Policy	High 
	4.2 Adopt a Metro-wide <u>green building policy</u> to set standards based on the LEED standard for new construction and operations of existing buildings. Include <u>sustainable site management standards</u> for Metro’s developed parks and green spaces (i.e. Salmon Safe certification).	Policy	High 
Strategy 5: Update sustainability goals and interim targets on a regular basis.	5.1 <u>Update sustainability goals</u> , including interim targets. Recalibrate goals in 2015 after audits and site plans have been completed.	Program	High
	5.2 Create <u>new sustainability goals to address sustainability gaps</u> of social equity and economic aspects of Metro’s operations.	Program	High
Strategy 6: Track progress of sustainability plan implementation and impact on goal areas.	6.1 Develop an <u>ongoing tracking and monitoring system for all five goal areas</u> . System to be electronic or web-based and include data from all Metro locations. Identify and train “knowledge workers” who will input data to the system.	Tracking Program	High 
	6.2 <u>Report annually on performance and progress</u> in five goal areas, and on sustainability projects completed each year.	Tracking Program	High

## PART 4: IMPLEMENTATION PROCESS

Creating an implementation process for this Sustainability Plan is critical to the success of the plan. This section provides additional detail on the Sustainability Management action 1.1.

### Roles and responsibilities

Since Metro has decentralized operations management, clarification of roles and responsibilities of those involved with implementing this plan is an important first step. The following groups all have a role to play, and their responsibilities need to be clearly identified.

Direct role	Indirect role
Metro-wide Sustainability Committee	Directors
Green Teams at Convention Center, Metro Regional Center, Zoo and Solid Waste Operations and property managers	COO, Deputy COO and General Manager of Venues
Project managers	Metro Council
Sustainability Program	Metro Learning Center
Sustainable Procurement Program (Procurement Services)	Finance and Regulatory Services
Data collectors	Metro Employees
	Employee unions
	Human Resources

### Development of site-specific work plans

Since this plan is intended to be broadly applicable across Metro's diverse operational portfolio, site-specific work plans need to be developed for how this Sustainability Plan will be implemented at each location. These work plans are intended to be tailored to a location's unique needs, services, opportunities and barriers. Work plans should be updated on an annual basis, in concert with the budget process.

### Prioritizing projects for funding proposals

In a constrained fiscal environment, Metro will have to make decisions annually about which projects to fund. The following prioritization criteria to be used for project selection.

Prioritization criteria for project selection
Strong impacts on Metro's sustainability goals
Provides a strong foundation for future sustainable operations work.
Leverages dollars elsewhere (outside Metro) or dollars already allocated (such as CIP)
Presents a strong return on investment (financial payback)
Reduce maintenance costs over time
Strong public visibility and/or public education opportunity.
Supports region's economy (i.e. creates local jobs, support local businesses)

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### Sustainability plan project team

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Toxics Team: Jim Quinn (Facilitator) Lisa Heigh, Ivan Ratcliff, Mike Amodeo, Seth Miller, Ryan Thorpe, Clyde Keebaugh, Jim Benson and Andrew Judkins.

Waste Team: Will Elder (Facilitator) Michael Weatherman, Abby Stevens, Jim Caldwell, Scott Paskill and Rosalynn Greene (Clackamas County).

Water Team: Kathryn Sofich (Facilitator) Lee Campbell, Lydia Neill, Penny Erickson, Thomas Thornton and Rich Barrows (City of Portland Water Bureau)

Habitat Team: Corie Harlan (Facilitator) Gail Shaloum, Rod Wojtanik, Katy Weil, Hillary Wilton, Matt Uchtman, Linda Richardson and Henry Stevens (Portland Bureau of Environmental Services).

### Greenhouse gas emission inventory

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### Metro Chemicals Inventory Hazard Evaluation and Management Tool

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Greg Higgins, Ph.D. Director, Chemical Risk Information Service, Center for Research on Occupational and Environmental Toxicology at OHSU

### Consulting team:

Brightworks: Assistance with sustainability impacts assessment and baseline analysis for water, waste and habitat.

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### Project manager:

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## APPENDICES

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- Appendix A Metro operations Included in Sustainability Plan
- Appendix B Summary of impacts: Inputs and outputs, major and minor impacts
- Appendix C Greenhouse gas emissions from Metro's supply chain
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- Appendix H Glossary of terms

## Appendix A

### Metro operations Included in Sustainability Plan

#### Parks and Environmental Services

- Metro Regional Center (including operation of Metro departments based there)
- Solid Waste Operations
  - Metro Central Transfer Station
  - Metro South Transfer Station
  - Metro Central and South Household Hazardous Waste Facilities
  - St. Johns Landfill
  - MetroPaint
- Regional parks (including Blue Lake, Oxbow and Smith and Bybee Lakes)
- Glendoveer Golf Course
- Pioneer Cemeteries

#### Visitor Venues

- Oregon Zoo
- Oregon Convention Center
- Portland Center for the Performing Arts
  - Keller Auditorium
  - Arlene Schnitzer Concert Hall
  - Antoinette Hatfield Hall
- Expo Center

#### Sustainability Center

- Parks Planning
- Land Conservation
- Boreland Field Station and Native Plant Center

## Appendix B

### Summary of impacts: Inputs and outputs, major and minor impacts



INPUTS		Energy	Materials	Contractors	Stakeholders	Community	
Parks & Natural Areas	MAJOR	Visitor transit, maintenance vehicles	Herbicides, garbage bags, promotional materials, gloves/gear, building materials	Herbicide application	Visitors, neighbors	Lack of mass transit, unequal access to sites	
	MINOR	Residential rentals	Soil amendment materials, paint, gravel, asphalt	Timber management	Renters	Vandalism	
	OUTPUTS		Products/Services			Waste	
	MAJOR	Land conversion			Food waste, visitor waste, invasive plants, oil/water pollution from marine facilities		
	MINOR	Agricultural leases, fertilizer runoff			Stormwater runoff, building construction debris, remnant restoration materials		

INPUTS		Energy	Materials	Contractors	Stakeholders	Community	
MERC Venues	MAJOR	Building energy use, event energy use, visitor transportation, parking	Food service supplies, cleaning materials, office supplies, building supplies	Food service, janitorial	Staff, general public, presenters, promoters, ticket buyers	Transit	
	MINOR	Energy use from equipment, fleet, machinery	Equipment, fleet, machinery, air filters	Security, herbicide and landscape management	Public agencies	Moving events city to city	
	OUTPUTS		Products/Services			Waste	
	MAJOR	Nature of events (promote unsustainable lifestyles) facility land usage (largely developed)			Food waste, materials brought to venues by presenters, paper towels, wastewater, solid waste, greenhouse gases, stormwater runoff		
	MINOR	Greenhouse gases			Air filters		

INPUTS		Energy	Materials	Contractors	Stakeholders	Community	
Solid Waste Facilities	MAJOR	Electricity, HVAC	Uniforms/personal protection equipment (PPE) packaging (i.e. drums) paint cans/ingredients, absorbents	Waste transport	Customers, regional private solid waste facilities	Neighborhoods around facilities	
	MINOR	Space heating, lighting	Lubricants, solvents, cleaners, office paper and products, computers, vehicles (rolling stock) light bulbs, herbicides. landfill equipment	Transfer station operator, hazardous waste disposal, landscaping	Manufacturers (product stewardship) paint users	Air pollution from vehicles, traffic, dust from transfer sites, noise	
	OUTPUTS		Products/Services			Waste	
	MAJOR	Greenhouse gas release (methane flaring) waste transfer, large facility footprint			Hazardous waste from public disposal, solid waste from public, air pollution, stormwater		
	MINOR	Paint use by customers			Empty paint cans, used PPE, cleanup water, truck water discharge		

INPUTS		Energy	Materials	Contractors	Stakeholders	Community	
Oregon Zoo	MAJOR	Exhibits, buildings, lighting, general equipment	Food, water, janitorial supplies, building materials	Construction, food concessions	Guests, staff	Neighborhood congestion from traffic	
	MINOR	Pumps, vehicles, train	Paper products		Contractors	Parking issues	
	OUTPUTS		Products/Services			Waste	
	MAJOR	Visitor transportation, greenhouse gases, congestion on Highway 26, neighborhood congestion from overflow parking			Animal [carnivore] waste, food waste, landscape debris, trash, wastewater, sewage, stormwater, packaging, methane from animals		
	MINOR	Additional waste production, car accidents			Recycling		



## Appendix C

### Greenhouse gas emissions from Metro's supply chain: Future development of targets and metrics for measuring improvements

By including all Scope 1, 2 and 3 emission sources in the agency baseline Metro integrated a holistic and more accurate approach to accounting for the total emissions associated with Metro's mission-critical business activities. The use of additional high-quality public-domain tools to estimate Scope 3 emissions puts Metro at the forefront of GHG accounting by moving beyond the mandatory reporting, or bare-minimum, boundaries that define the typical GHG inventory. However, this new approach also presents a number of challenges regarding the ongoing tracking and monitoring of Scope 3 reductions. In order to address these challenges without compromising the accuracy or approach of the inventory process, the GHG reduction goal and interim targets are organized under a different framework than the other four sustainability plan goal areas.

In order to clearly understand the current monitoring and tracking limitations associated with Scope 3 emissions, specifically regarding the embodied emissions in purchased goods and services (hereinafter referred to as Supply Chain) it is important to first understand Economic Input-Output-Life-Cycle Assessment (EIO-LCA) and second to understand the limitations of the available EIO-LCA tools and datasets. Current EIO-LCA tools provide GHG emissions data per dollar of product purchased for all sectors of the U.S. economy. The models are based on averages of the U.S. economy as a whole and do not differentiate between types of purchases such as virgin paper vs. 100 percent post consumer recycled content. Therefore, the models do not provide accounting options for product substitution emissions reduction strategies, which is most likely where the majority of Metro's Supply Chain GHG reductions would come from.

The current EIO-LCA models do however capture two Supply Chain GHG reduction strategies; first, emissions reductions associated with shifting procurement from a high emissions intensive category to a less emissions intensive category are captured. For example, shifting food procurement from meat to fruits and vegetables will lead to a demonstrable GHG reduction in Scope 3 emissions. However, there are very few options where Metro can shift procurement of goods in this way given the nature of Metro's responsibilities. The second type of emissions that are captured with the current EIO-LCA models are changes in national emissions intensities associated with the production of goods and services that may result from climate change legislature (e.g. cap and trade legislature). However, Metro has no direct control over these potential emissions reductions and cannot rely solely on this strategy for reducing GHG emissions from its mission-critical business activities.

Given the current limitations with quantifying Supply Chain emissions the following goal and interim targets that address "sub-goal" separately have been developed. Metro's overarching, long-term greenhouse gas emissions reduction goal in-line with existing Metro resolutions, current climate science findings and state and regional GHG reduction efforts. What distinguishes the GHG reduction goal from the other Sustainability Plan areas are the two separate scope goals; a quantitative reduction goal for Scopes 1 and 2 and a second qualitative reduction goal for scope 3.

Based on the current climate science it is evident that we cannot mitigate our current climate impacts without an aggressive greenhouse gas emissions-reduction strategy. Therefore, the current goal, which only calls for arresting operations emissions, is not meaningful enough and could be confusing when compared with the statewide climate goals recognized in Metro Resolution 08-3981.15. The current goal is also at odds with Metro Resolution 09-4080, which recognizes the 350 parts per million (ppm) goal to be in accordance with Metro's agency mission.<sup>16</sup> Reaching the 350 ppm goal requires a reduction in total gross emissions, not just arresting current emission levels. Metro's operations emissions reductions goal should specifically be aligned with State-wide and internal resolution goals.

The other issue to take into consideration regarding the current greenhouse gas emissions goal is that the current goal language implies that Metro will measure both sources and sinks of emissions ("net" emissions). However, established tools and methodologies for calculating sequestered emissions are not currently available and in some cases are cautioned for finer scales than the national or international level, due to complex double counting issues. In addition, there is the potential that framing the agency's GHG reduction goal with a net emissions lens will lead to less aggressive reduction approach; therefore the revised goal and baseline inventory only consider gross emissions. It should be noted however, this goal language does not preclude further analysis or consideration of the climate benefits of Metro's open and natural spaces and habitat restoration programs, but focuses the emissions reduction strategy on gross emissions only. Consistent with this approach, Metro's guiding GHG reduction strategy will place first priority on efficiency projects that reduce energy demand and greenhouse gas emissions, then renewable energy purchase and on-site generation, and last, the purchasing of carbon offsets.

The emissions reduction goal includes both direct and indirect emissions and therefore directs Metro to take responsibility for those emissions that we have indirect, but tangible responsibility over – specifically those emissions resulting from the materials and services Metro consumes and contracts. Metro is using recent Environmental Protection Agency (EPA) research to inform this facet of our baseline analysis and will continue to improve our methodology as new tools and protocols become available. Metro recognizes that there are not currently tools or protocols available that can provide precise and universally accepted estimates of all indirect emissions (Scope 3) however Metro as a public agency has an opportunity to lead by example and take responsibility for the emissions resulting from all aspects of internal operations.

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<sup>15</sup> The State of Oregon's 2007 greenhouse gas reductions targets call for arresting the growth of greenhouse gas emissions by 2010, reducing emissions to at least 10 percent below 1990 levels by 2020, and reducing emissions to at least 75 percent below 1990 levels by 2050.

<sup>16</sup> The current level of carbon dioxide in our atmosphere stands at 389 parts per million and rising however, 350 represents the carbon concentration level climate scientists have determined as the minimum GHG reduction goal needed to reach climate stabilization at a roughly 2° Celsius increase.

## Appendix D

### Toxics baseline: Product health, environmental and physical hazard ratings

The individual chemical constituent ratings are based on well accepted, peer-reviewed data from the reference sources noted below. These ratings describe the relative hazard level of the constituents on a scale from 1 to 3, with 1 representing lower hazard, 2 representing intermediate hazard and 3 representing a higher hazard level. Health ratings are based on criteria including the constituent's acute toxicity, irritant properties and potential to cause cancer or produce developmental or reproductive toxicity. Environmental ratings are based on the constituent's toxicity to aquatic organisms and other indicator species, persistence and tendency to accumulate in the environment and potential to damage the ozone layer. Physical hazard ratings consider the constituent's flammability risk level and potential for reactivity. The procedures used to develop ratings from these data are described in the Scoring Criteria Tables developed for this program at <http://www.ohsu.edu/cris/documents/criteria.pdf>.

Since queries made to these data sources use the Chemical Abstract Service (CAS) number, only those constituents that have CAS numbers displayed on the MSDS are assigned a rating. The following ratings and entries can appear in the search results for each individual constituent.

#### Rating definition

<b>1</b>	Lower rating for health, environmental or physical hazard
<b>2</b>	Intermediate rating for health, environmental or physical hazard
<b>3</b>	Higher rating for health, environmental or physical hazard
<b>No CAS#s</b>	No Chemical Abstracts Service number is available for the constituent in question, so it cannot be accessed in the various database sources to generate a rating
<b>ND No Data</b>	Indicates that the specific CAS# in question is not included in the database(s) searched and the constituent cannot be rated
<b>NR Not Rated</b>	Indicates that the CAS# in question is included in the database(s) searched, but does not bring up any data upon which to base a rating

The ratings are based primarily on data from the European Union list of harmonized chemical classifications (referred to as the Annex I list). This list, which uses a series of risk phrases to classify relative hazard levels, was accessed on December 2008 and can be found at: <http://www.ohsu.edu/cris/documents/annex.pdf>.

## Appendix E

### Toxics inventory product categories

ACID	Acids
ART	Art supplies
AUTO	Automotive, auto-specific chemicals, cleaners, waxes, body fillers, etc.
BAT	Batteries
CEM	Cements, adhesives, glues and resins
CHEMO	Chemicals, other
CHEMP	Chemicals, photographic
COMP	Compressed gases
DIS	Disinfectants
FERT	Fertilizers and landscaping products
FLOOR	Floor cleaning products and finishes
FUEL	Fuels
GREASE	Grease
HSOAP	Hand soaps and lotions
ICLEAN	Industrial cleaners and soaps
LUBE	Lubricants
OFF	Office supplies
OIL	Oils
OTHER	Other, "inert" materials including grinding wheels, saw blades, etc.
PEST	Pesticides and herbicides
PLIQ	Paints and coatings, liquid
PLUMB	Plumbing supplies
PSPRAY	Paints and coatings, spray
SAFE	Safety supplies
SEALER	Sealers, caulking, silicone sealers
SOLV	Solvents
VET	Veterinary products
WATER	Water testing chemicals
WELD	Welding supplies and metals

<http://www.ohsu.edu/cris/documents/search.pdf>

## Appendix F

### Habitat-friendly development practices, Metro Nature In Neighborhoods Program

<http://www.metro-region.org/index.cfm/go/by.web/id=13745>

#### Part (a): Design and construction practices to minimize hydrologic impacts

1. Amend disturbed soils to original or higher level of porosity to regain infiltration and stormwater storage capacity.
2. Use pervious paving materials for residential driveways, parking lots, walkways, and within centers of cul-de-sacs.
3. Incorporate stormwater management in road right-of-ways.
4. Landscape with rain gardens to provide on-lot detention, filtering of rainwater, and groundwater recharge.
5. Use green roofs for runoff reduction, energy savings, improved air quality, and enhanced aesthetics.
6. Disconnect downspouts from roofs and direct the flow to vegetated infiltration/filtration areas such as rain gardens.
7. Retain rooftop runoff in a rain barrel for later on-lot use in lawn and garden watering.
8. Use multi-functional open drainage systems in lieu of more conventional curb-and-gutter systems.
9. Use bioretention cells as rain gardens in landscaped parking lot islands to reduce runoff volume and filter pollutants.
10. Apply a treatment train approach to provide multiple opportunities for storm water treatment and reduce the possibility of system failure.
11. Reduce sidewalk width and grade them such that they drain to the front yard of a residential lot or retention area.
12. Reduce impervious impacts of residential driveways by narrowing widths and moving access to the rear of the site.
13. Use shared driveways.
14. Reduce width of residential streets, depending on traffic and parking needs.
15. Reduce street length, primarily in residential areas, by encouraging clustering and using curvilinear designs.
16. Reduce cul-de-sac radii and use pervious vegetated islands in center to minimize impervious effects, and allow them to be utilized for truck maneuvering/loading to reduce need for wide loading areas on site.
17. Eliminate redundant non-ADA sidewalks within a site (i.e., sidewalk to all entryways and/or to truck loading areas may be unnecessary for industrial developments).
18. Minimize car spaces and stall dimensions, reduce parking ratios, and use shared parking facilities and structured parking.
19. Minimize the number of stream crossings and place crossing perpendicular to stream channel if possible.
20. Allow narrow street right-of-ways through stream corridors whenever possible to reduce adverse impacts of transportation corridors.

#### Part (b): Design and construction practices to minimize impacts on wildlife corridors and fish passage

1. Carefully integrate fencing into the landscape to guide animals toward animal crossings under, over, or around transportation corridors.
2. Use bridge crossings rather than culverts wherever possible.
3. If culverts are utilized, install slab, arch or box type culverts, preferably using bottomless designs that more closely mimic stream bottom habitat.
4. Design stream crossings for fish passage with shelves and other design features to facilitate terrestrial wildlife passage.
5. Extend vegetative cover through the wildlife crossing in the migratory route, along with sheltering areas.

#### Part (c): Miscellaneous other habitat-friendly design and construction practices

1. Use native plants throughout the development (not just in HCA).
2. Locate landscaping (required by other sections of the code) adjacent to HCA.
3. Reduce light-spill off into HCAs from development.
4. Preserve and maintain existing trees and tree canopy coverage, and plant trees, where appropriate, to maximize future tree canopy coverage.



## Appendix G

### Essential actions for years 1-3 (2011-2014)

#### Resources needed

\$	Low cost
\$\$	Moderate cost
\$\$\$	Significant cost

#### GREENHOUSE GAS REDUCTION

1.1	Audit buildings for energy efficiency opportunities and develop recommendations for an energy efficiency plan specific to each site. Audit type should be appropriate to the building type (i.e. ASHRAE <sup>17</sup> Level 2 audit for buildings over 10,000 square feet.)	\$
1.2	Implement energy efficiency plans and develop supporting policies for each site audited.	\$\$\$
4.1	Establish process for ongoing tracking of all GHG-related data sources in Metro's internal operations for tracking of GHG emissions.	\$

#### TOXICS REDUCTION

1.1	Establish process for ongoing tracking and inventory of chemicals and products that contain toxics in use at Metro.	\$
2.1	Identify the most toxic products in Metro's inventory and target them for replacement with less-toxic alternatives.	\$
2.2	Reduce use of herbicides and pesticides in all Metro operations. Create and implement an IPM (Integrated Pest Management) policy to reduce use of herbicides and pesticides on all Metro properties.	\$
3.1	Reduce purchase of toxic products by requiring or requesting least-toxic options from contractors and suppliers in bids and RFP's.	\$\$

#### WASTE REDUCTION

1.1	Create procurement policies and procedures that support waste prevention and reduction.	\$
3.1	Meet Business Recycling Requirements at all Metro facilities. <sup>18</sup>	\$
7.1	Track waste generation and recycling data for all Metro locations with an electronic reporting system to track waste generation and recycling from all Metro locations.	\$

<sup>18</sup> Metro Business Recycling Requirements, adopted in 2008. <http://www.recycleatwork.com/whatsrequired>.

**WATER CONSERVATION**

<b>1.1</b>	Audit water usage at all Metro locations that have not had a recent water audit to and develop recommendations for water conservation strategies specific to each site.	\$
<b>2.1</b>	Ensure implementation of water conservation projects identified in the Zoo Master Plan (to be completed in 2011).	\$\$\$
<b>2.4</b>	Create requirement that all water fixture and equipment purchases be water efficient.	\$\$
<b>4.1</b>	Create ongoing tracking system for all water uses at Metro locations. Include on-site water sources such as wells. Utilize submeters to track detailed water usage; create a regular reading and recording schedule.	\$

**HABITAT ENHANCEMENT**

<b>1.1</b>	Conduct habitat and stormwater site assessments at all Metro properties, especially developed properties. Use assessments to develop habitat and stormwater improvement site plans.	\$
<b>5.1</b>	Establish effective reporting and monitoring system for improvements to habitat and stormwater at Metro locations.	\$

**SUSTAINABILITY MANAGEMENT**

<b>1.1</b>	Create and adopt an implementation process for the Sustainability Plan.	–
<b>1.3</b>	Conduct annual program evaluation with program stakeholders to evaluate what works well and what needs to be improved.	–
<b>2.1</b>	Provide basic sustainability training to all Metro employees.	\$
<b>3.1</b>	Create comprehensive funding strategy for sustainability projects.	–
<b>3.2</b>	Identify and address staff capacity needed to coordinate site-specific sustainability activities. Build capacity where needs have been identified.	\$\$
<b>4.1</b>	Develop and adopt a sustainable procurement policy as directed in Metro Code, “Sustainable Procurement Program”.	\$
<b>4.2</b>	Adopt a Metro-wide green building policy to set standards based on the LEED standard for new construction and operations of existing buildings. Include sustainable site management standards for Metro’s developed parks and green spaces.	–
<b>6.1</b>	Develop an ongoing tracking and monitoring system for all five goal areas.	\$\$

## Appendix H

### Glossary of terms

ASHRAE: American Society of Heating, refrigerating and Air-Conditioning Engineers. ASHRAE writes voluntary consensus-based standards including energy auditing standards for commercial building systems.

Ecosystem services: Essential goods and services of direct or indirect benefit to humans that are produced by ecosystem processes involving the interaction of living elements, such as vegetation and soil organisms and non-living elements, such as bedrock, water and air. (Sustainable Sites, 2009)

EPA Tier system: EPA's federal Clean Air Nonroad Diesel Rule is part of a national program to reduce emissions from nonroad diesel engines, with the goal to decrease pollution from diesel engines by more than 90 percent. <http://www.epa.gov/nonroad-diesel>.

Greenhouse gas: Six gasses recognized as contributors to global climate change, including carbon dioxide (CO<sub>2</sub>) methane (CH<sub>4</sub>) nitrous oxide (N<sub>2</sub>O) sulfur hexafluoride (SF<sub>6</sub>) perfluorocarbons (PFC's) and hydrofluorocarbons (HCFC's).

Habitat-friendly development: Also known as low impact development, is an ecologically friendly approach to building and site development and stormwater management where a developed site mimics natural systems and their functions in order to remain a functioning part of an ecosystem.

PBT: Persistent, Bioaccumulative and Toxic Chemical

Precautionary principle: When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.

Salmon Safe: An independent 501(c)3 nonprofit based in Portland Oregon with a mission to transform land management practices so Pacific salmon can thrive in West Coast watersheds.

Sustainability: "Sustainability" means using, developing and protecting resources in a manner that enables people to meet current needs and provides that future generations can also meet future needs, from the joint perspective of environmental, economic and community objectives. Definition adopted by Metro Council 2008.



## Contact information

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Metro

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## STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO. 10-4198, FOR THE PURPOSE OF ADOPTING METRO'S SUSTAINABILITY PLAN AND AUTHORIZING THE METRO CHIEF OPERATING OFFICER TO IMPLEMENT THE PLAN.

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Date: October 7, 2010

Prepared by: Molly Chidsey  
503-797-1690

### BACKGROUND

In 2003, the Metro Council adopted Resolution No. 03-3338 that called for development of a sustainable business model for internal operations of the agency. This resolution included five environmental goals to be met by 2025 regarding greenhouse gas emissions, toxics, waste, water and habitat.

A 2009 report by the Metro Auditor on Sustainability Management concluded that Metro should: 1) set clear policies and goals for sustainability; 2) reduce organizational barriers to sustainability by clarifying responsibilities and roles internally for implementation and creating a funding structure to support sustainable operations; 3) create tools needed to implement a sustainable business model, including data management systems; 4) formalize the protocols used to estimate greenhouse gas emission; 5) measure progress towards meeting the objectives; and 6) disseminate the results of efforts.<sup>1</sup> The proposed sustainability plan addresses all four of these recommendations.

This plan is intended to identify and guide the practices and projects needed to improve the sustainability of Metro's operations. The plan was developed by cross-departmental teams that identified the environmental impacts of Metro's operations, set a baseline from which progress can be measured over time, and created a framework of the specific strategies and actions that need to be completed to meet the goals.

The scope of this plan includes all of Metro's internal operations. Metro oversees five very different types of operations: public event venues, the zoo, solid waste facilities, parks and natural areas and one office facility. Because of the diverse portfolio of operations, the sustainability plan was developed to be applicable to all operations, regardless of type. While implementation of the plan will vary from one facility to the next, the plan identifies the actions common to all.

### ANALYSIS/INFORMATION

#### 1. Known Opposition

None.

#### 2. Legal Antecedents

Metro Council Resolution 03-3338, For the purpose of directing the Metro Chief Operating Officer to establish a sustainable business model for Metro departments and facilities and to undertake related duties.

Metro Council Resolution 08-3931, For the purpose of adopting a definition of sustainability to direct Metro's internal operations, planning efforts, and role as a regional convener.

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<sup>1</sup> "Sustainability Management: focus efforts and evaluate progress", 2009. Suzanne Flynn, Metro Auditor.  
<http://www.oregonmetro.gov/index.cfm/go/by.web/id=32285/level=4>.

### **3. Anticipated Effects**

With this resolution, Metro formally adopts the Sustainability Plan for Metro internal and business operations as a framework for meeting five environmental sustainability goals by 2025. Departments will be able to use the plan as a framework for integrating sustainable operations into their normal business and facility operations. Council will see budget proposals from departments that are aimed at meeting the sustainability goals set forth by Council and expounded upon in this plan.

### **4. Budget Impacts**

Some of the actions of this plan are able to be implemented within current budget appropriations. However, additional investments in Metro's facilities and operations will be required to meet the sustainability goals set forth by Council. Such capital investments are likely to be built into departments' budgets and will be prioritized according to criteria in the Sustainability Plan (see page 50).

### **RECOMMENDED ACTION**

It is recommended that Metro Council adopt the Sustainability Plan for Internal Operations by adopting the attached resolution.

**Resolution No. 10-4185**, For the Purpose For the Purpose of Approving a Supplemental Multi-year Commitment of Regional Flexible Funding for the Years 2015-2027, Funding the Portland – Milwaukie Light Rail Transit Project, and Project Development for the Portland – Lake Oswego Transit Project, and the Southwest Corridor and Authorizing Execution of an Amendment to the Existing Intergovernmental Agreement with TriMet Regarding the Multi-year Commitment of Regional Flexible Funds.

Metro Council Meeting  
Thursday, Oct. 7, 2010  
Metro Council Chambers

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF APPROVING A ) RESOLUTION NO. 10-4185  
SUPPLEMENTAL MULTI-YEAR )  
COMMITMENT OF REGIONAL FLEXIBLE ) Introduced by Councilor Carlotta Collette  
FUNDING FOR THE YEARS 2015-2027, )  
FUNDING THE PORTLAND – MILWAUKIE )  
LIGHT RAIL TRANSIT PROJECT, AND )  
PROJECT DEVELOPMENT FOR THE )  
PORTLAND – LAKE OSWEGO TRANSIT )  
PROJECT, AND THE SOUTHWEST CORRIDOR )  
AND AUTHORIZING EXECUTION OF AN )  
AMENDMENT TO THE EXISTING )  
INTERGOVERNMENTAL AGREEMENT WITH )  
TRIMET REGARDING THE MULTI-YEAR )  
COMMITMENT OF REGIONAL FLEXIBLE )  
FUNDS )

WHEREAS, Metro is the Metropolitan Planning Organization (MPO) for the Portland metropolitan region, and as such is authorized by the U.S. Department of Transportation to program federal transportation funds allocated by federal law to the Portland region in the Metropolitan Transportation Improvement Program (MTIP); and

WHEREAS, Metro is authorized by the Oregon Department of Transportation (ODOT) to program Congestion Mitigation/Air Quality (CMAQ) funds allocated to the Portland metropolitan region by ODOT in the MTIP; and

WHEREAS, TriMet is the duly authorized public transportation provider for the Portland metropolitan region and as such is an eligible recipient of federal transportation funds through the MTIP; and

WHEREAS, at the recommendation of the Joint Policy Advisory Committee on Transportation (JPACT), the Metro Council adopted Resolution No. 08-3942 “For the Purpose of Proposing Allocation of Regional Flexible Funding to Regional Transportation Programs for the Years 2012 and 2013, and to Bond Payments for Contributions to the Milwaukie Light Rail Transit and Wilsonville to Beaverton Commuter Rail Projects for the Years 2012-2025 Pending Public Comment Period and Air Quality Conformity,” which established a multi-year commitment to TriMet of regional flexible funds totaling \$144.8 million for the purpose of providing a net present value contribution of \$72.5 million to the Portland-Milwaukie Light Rail Project and \$13.3 million for the Commuter Rail Project; and

WHEREAS, at the recommendation of JPACT, on March 18, 2010 the Metro Council adopted Resolution No. 10-4133 “For the Purpose of Endorsing a Multi-Year Commitment of Regional Flexible Funds for the Portland-Milwaukie Light Rail Transit Project and Supplemental Commitment to the Beaverton-Wilsonville Commuter Rail Project,” which authorized execution of an intergovernmental agreement between Metro and TriMet that enumerated the obligations of the parties with regard to the multi-year commitment of funds initially endorsed under Resolution No. 08-3942; and

WHEREAS, the Federal Transit Administration (FTA) has advised TriMet that it would provide a maximum 50 percent share, rather than 60 percent share, of the cost of the Portland-Milwaukie Light Rail Transit Project with Section 5309 New Start funds, creating a funding shortfall that is planned to be resolved through a combination of scope reductions and supplemental funding contributions to the project; and

WHEREAS, the 2004 Regional Transportation Plan (RTP) prioritized preparation of a high capacity transit plan for the Lake Oswego-Portland corridor, and JPACT recommended and on December 13, 2007 the Metro Council approved Resolution No. 07-3887A “For the Purpose of Identifying Alternatives to Advance into a Draft Environmental Impact Statement for the Portland to Milwaukie Corridor Transit Project,” which adopted the Lake Oswego-Portland corridor high capacity transit alternatives to be evaluated in a Draft Environmental Impact Statement, and the current project development schedule calls for selection of a locally preferred alternative and advancement into the preliminary engineering/final environmental impact stage during FY 2011; and

WHEREAS, JPACT recommended and on August 12, 2010 the Metro Council approved Resolution No. 10-4179 “For the Purpose of Amending the FY 2010 Unified Planning Work Program (UPWP) to Modify Funding Allocations for the Southwest Corridor and East Metro Corridor Refinement Plans” and Resolution No. 10-4177 “For the Purpose of Amending the January 2008 MTIP (FY 2008 – 2011) to Modify Funding Allocations for Southwest Corridor and East Metro Corridor Refinement Plans.” which funded the Southwest Corridor Refinement Plan as part of a larger study that includes the preparation of Alternatives Analysis, Preliminary Engineering and Environmental Impact studies for high capacity transit in the Southwest Corridor, and

WHEREAS, on Sept. 2, 2010 JPACT recommended approval of Resolution No. 10-4185 as shown in Exhibit A for a supplemental commitment of \$66 million of regional flexible fund to allow the contribution to the design and construction of the Portland-Milwaukie Light Rail Project to be increased by \$27.4 million (making the total contribution \$99.9 million) and, in addition, to allow a \$6 million contribution for activities related to the preparation of preliminary engineering and environmental impact studies for the Lake Oswego-Portland Transit Project and a \$6 million contribution for activities related to the preparation of Alternatives Analysis, preliminary engineering, and environmental impact studies for the Southwest Corridor; and

WHEREAS, the schedule for design and development of the Portland-Milwaukie Light Rail Transit Project currently anticipates issuing bonds secured in part by the supplemental regional flexible fund commitment described in Exhibit A to this resolution by or about May 2011; and

WHEREAS, JPACT recommended and the Metro Council approved Resolution No. 10-4160, the 2014-2015 Regional Flexible Fund Allocation Report, which described targets to be used in allocating regional flexible funds in the upcoming cycle of programming funds in the MTIP; now therefore

BE IT RESOLVED, that the Metro Council hereby:

- Approves the proposed supplemental commitment of regional flexible funds recommended by JPACT and shown in Table 1 of Exhibit A; and
- Authorizes the execution of an amendment to the intergovernmental agreement between Metro and TriMet approved under Resolution No. 10-4133, in a form approved by the Office of the Metro Attorney and consistent with this Resolution, that incorporates the supplemental multi-year commitment of regional flexible funds shown in Table 1 of Exhibit A for the uses set forth in Table 2 of Exhibit A; and

- Directs staff to employ the targeted amount of funding for the “Regional Program HCT Development” shown in the “2014-15 Regional Flexible Fund Allocation –Policy Framework” enacted in Resolution No. 10-4160 to fulfill the supplemental commitment of regional flexible funds shown in Exhibit A for fiscal years 2014 and 2015.

ADOPTED by the Metro Council this 7<sup>th</sup> day of October, 2010.

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Carlotta Collette, Acting Council President

Approved as to Form:

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Alison Kean Campbell, Deputy Metro Attorney

# Exhibit A

## Exhibit A to Resolution 10-4185 Supplemental Multi-Year Commitment of Regional Flexible Funds for Portland-Milwaukie Light Rail Transit Project, Commuter Rail Project, and Project Development Activities for the Lake Oswego Transit Project and Southwest Corridor

- The multi-year commitment of regional flexible funds for the region’s high capacity transit program was last approved by Resolution No. 08-3942 and implemented by the intergovernmental agreement approved by Resolution No. 10-4133. The amounts previously approved and shown in Column A below are proposed to be supplemented to include the amounts shown in Column B to provide the total amounts shown in Column C:

Table 1: Multi-Year Commitment of Regional Flexible Funds

Fiscal Year	A Regional Flexible Funds Committed to Portland-Milwaukie LRT and Commuter Rail, Projects under Res. Nos. 08-3942 and 10-4133	B Supplemental Commitment of Regional Flexible Funds for Portland-Milwaukie LRT Project and Other HCT Development Activities under Res. No. 10-4185 [this reso]	C Total Amount of Regional Flexible Funds Committed to TriMet for Portland-Milwaukie LRT Project, and Other HCT Development Activities
2012	\$3,700,000		\$3,700,000
2013	\$3,700,000		\$3,700,000
2014	\$3,700,000	\$2,000,000	\$5,700,000
2015	\$3,700,000	\$2,000,000	\$5,700,000
2016	\$13,000,000	\$3,000,000	\$16,000,000
2017	\$13,000,000	\$3,000,000	\$16,000,000
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2024	\$13,000,000	\$3,000,000	\$16,000,000
2025	\$13,000,000	\$3,000,000	\$16,000,000
2026		\$16,000,000	\$16,000,000
2027		\$16,000,000	\$16,000,000
	<b>\$144,800,000</b>	<b>\$66,000,000</b>	<b>\$210,800,000</b>

As used in this resolution, the term “regional flexible funds” includes urban Surface Transportation Program (STP) and Congestion Mitigation Air Quality (CMAQ) funds, or any successor or replacement federal funding programs, allocated by formula or



agreement to the Portland metropolitan region. The MTIP will be amended to program these supplemental regional flexible funds for use by TriMet.

2. Subject to approval of the supplemental contribution of regional flexible funds shown in Column B of Table 1, TriMet will prepare and implement a financing program, in accordance with project development schedule for the Portland-Milwaukie Light Rail Transit Project, to provide through direct federal grants of regional flexible funds from Column C of Table 1 or equivalent amounts of its general funds, or a borrowing strategy employing regional flexible funds shown in Column C of Table 1 or equivalent amounts of general funds, or a combination thereof, the following amounts to the uses stated below:

**Table 2: Contributions to Projects (\$ Millions)**

Project/Activity	Existing Contribution	Additional Contribution under Res. No. 10-4185 [this reso]	Total Contribution
Portland-Milwaukie Light Rail Transit Project	\$72.5	\$27.4	\$99.9
Repayment to TriMet of Amounts Advanced for Commuter Rail Project	\$13.3		\$13.3
Portland-Lake Oswego Corridor Transit Project: for activities related to preparation of Preliminary Engineering and Environmental Impact Studies		\$6.0	\$6.0
Southwest Corridor for activities related to preparation of Alternatives Analysis, Preliminary Engineering, and Environmental Impact Studies		\$6.0	\$6.0
	\$85.8	\$39.4	\$125.2

The amount shown above for the Portland-Milwaukie Light Rail Transit Project may be increased if financing terms allow.

3. A mix of Surface Transportation Program (STP) and Congestion Mitigation and Air Quality (CMAQ) funds that corresponds to the needs of TriMet's financing program will be used to fulfill the multi-year commitment of funds. Representatives of Metro and TriMet will cooperatively determine the appropriate mix of CMAQ and STP funds required by TriMet's financing program that will be used to fulfill the multi-year commitment of regional flexible funds.
4. TriMet intends to issue bonds secured in part by the annual amounts of regional flexible funds shown in Table 1 of this Exhibit A. Accordingly, the annual amounts shown in Column C of Table 1 are fully committed to TriMet in the amounts and during years indicated; subject only to authorization and appropriation of regional flexible funds by the federal government and the terms and conditions of existing intergovernmental agreement between Metro and TriMet approved by Resolution No. 10-4133.

## STAFF REPORT

IN CONSIDERATION OF RESOLUTION NO. 10-4185, FOR THE PURPOSE OF APPROVING A SUPPLEMENTAL MULTI-YEAR COMMITMENT OF REGIONAL FLEXIBLE FUNDING FOR THE YEARS 2015-2027, FUNDING THE PORTLAND-MILWAUKIE LIGHT RAIL TRANSIT PROJECT, AND PROJECT DEVELOPMENT FOR THE PORTLAND – LAKE OSWEGO TRANSIT PROJECT, AND THE SOUTHWEST CORRIDOR AND AUTHORIZING EXECUTION OF AN AMENDMENT TO THE EXISTING INTERGOVERNMENTAL AGREEMENT WITH TRIMET REGARDING THE MULTI-YEAR COMMITMENT OF REGIONAL FLEXIBLE FUNDS

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Date: August 20, 2010

Prepared by: Andy Cotugno  
503-797-1763

### BACKGROUND

Based on a series of actions by JPACT and the Metro Council, TriMet was awarded a multi-year commitment of regional flexible funds for the development of the region's high capacity transit system. Most recently JPACT and Metro approved an intergovernmental agreement that provides TriMet a stream of regional flexible funds that would be bonded to provide a \$72.5 million contribution to the Portland-Milwaukie LRT Project and a \$13.3 million contribution to the Commuter Rail Project (TriMet has already provided these funds to the Commuter Rail Project and would be repaid for that contribution with the bond proceeds).

The proposed resolution expands and extends the multi-year stream of regional flexible funds currently committed to TriMet to support three regional high capacity transit priority projects. Specifically, the supplemental regional flexible funds shown in the proposed resolution would be bonded to provide \$27.4 million in additional funding for the Portland-Milwaukie LRT Project, \$6 million for preliminary engineering, final design, and environmental studies for the Lake Oswego to Portland Transit Project, and \$6 million for alternatives analysis, environmental studies, and preliminary engineering for high capacity transit in the Southwest Corridor.

The current commitments of regional flexible funds result in a 46% share being dedicated to HCT project development, declining by 2025 to 36%. The proposal embodied in this resolution would result in this 46% share declining by 2025 to 43% and extending the commitment two more years to 2027.

The Portland-Milwaukie LRT Project applied for FTA approval to enter Final Design based on a finance plan that proposed a 60 percent share of Section 5309 "New Starts" funds from the Federal Transit Administration (FTA). The project development schedule and finance plan are currently based on commencing in-water construction activities during the approved "fish window" in July 2011, which would only be possible if entry into Final Design is accomplished by or around December of this year. If that approval is not secured in time and the commencement of in-water construction cannot start by July 2011, the start of construction would be delayed until July 2012 and project costs would be anticipated to increase significantly due to inflation and other costs caused by the delay.

FTA recently notified TriMet that it would limit its contribution of New Starts funds for the Portland-Milwaukie LRT Project to a 50 percent share; creating a gap in the financial plan. The size of the gap depends on a complex array of factors including the exact combination of cutbacks and additional revenues that would be used to resolve the gap, the amount and timing of bonding programs employed, the timing of when funds would be available, and other factors. The current plan for filling the gap is predicated on about \$90 million in cost reductions and \$90 million in additional revenue.

In order to secure FTA approval to enter Final Design in time to commence in-water construction in July 2011, TriMet must resubmit a Final Design application and Final Environmental Impact Statement by about October 1<sup>st</sup> of this year that incorporates the scope reductions and specifies a revised finance plan based on the assumed 50 percent FTA New Starts share. Approval of the proposed supplemental contribution of Regional Flexible Funds would significantly assist in the development of a revised finance plan that would be acceptable to FTA by increasing the contributions to the project by \$27.4 million. In order to fully meet the requirement of a balanced financial plan, an agreed upon list of scope reductions and other commitments of additional funds would be required from other participating governmental partners.

The region, through JPACT and the Metro Council, has established high capacity transit in the Lake Oswego-Portland corridor as a regional priority. A regional effort is currently underway to analyze alternatives in the corridor and to prepare a Draft Environmental Impact Statement (DEIS). Selection of a locally preferred alternative (LPA) by JPACT and the Metro Council is scheduled for later this year. The funds provided by this resolution allow \$6 million to advance preliminary engineering, final design, environmental studies, and other FTA requirements for the Portland – Lake Oswego Transit Project. Metro will lead the completion of the alternative analysis and Draft Environmental Impact phase; TriMet will lead the preliminary engineering phase. Additional funding will be required from the participating governments to fund the remaining cost of these activities.

In the recently adopted Regional High Capacity Transit System Plan, the region, through JPACT and the Metro Council, has established the Southwest Corridor as the next priority corridor for high capacity transit development. In August, JPACT and Metro provided initial funding for the Southwest Corridor Refinement Plan. Following the Refinement Plan, JPACT and Metro anticipate initiating an alternatives analysis, environmental studies, and preliminary engineering on project options within the Corridor. The funds provided by this resolution allow \$6 million to be provided for alternatives analysis, preliminary engineering, environmental studies and fulfilling other FTA requirements for high capacity transit options within the Southwest Corridor. Metro will lead the alternatives analysis and Draft Environmental Impact phase; TriMet will lead the preliminary engineering phase. Additional funding will be required from the participating governments to fund the remaining cost of these activities.

Beyond the priority for Portland to Milwaukie, Portland to Lake Oswego and Southwest Corridor established by JPACT and the Metro Council, the recently adopted High Capacity Transit System Plan provides a framework for advancing future corridors. This framework is defined around regional and local actions to increase the competitiveness of individual corridors through commitments of funding and land use actions to increase ridership. This framework could lead to future actions to consider Regional Flexible Funds leveraged with funding commitments by others to assist in advancing these future corridors.

By Resolution No. 10-4160, JPACT and the Metro Council established a policy framework for the 2014-2015 update to the Regional Flexible Funds. The framework targets \$2 million in each of FY 2014 and FY 2015 for high capacity transit development. The supplemental commitment of funds proposed by this resolution would use this \$2 million in Regional Flexible Funds in FY 2014 and 2015, increase it by \$1 million per year to a total of \$3 million per year in 2016 and extend the overall funding commitment two more years to 2026 and 2027 as follows:

<b>Fiscal Year</b>	<b>Regional Flexible Funds Committed to Milwaukie LRT and Commuter Rail, Projects under Res. Nos. 08-3942 and 10-4133</b>	<b>Supplemental Commitment of Regional Flexible Funds for Milwaukie LRT Project, and Other HCT Development Activities</b>
<b>2012</b>	\$3,700,000	
<b>2013</b>	\$3,700,000	
<b>2014</b>	\$3,700,000	\$2,000,000
<b>2015</b>	\$3,700,000	\$2,000,000
<b>2016</b>	\$13,000,000	\$3,000,000
<b>2017</b>	\$13,000,000	\$3,000,000
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<b>2021</b>	\$13,000,000	\$3,000,000
<b>2022</b>	\$13,000,000	\$3,000,000
<b>2023</b>	\$13,000,000	\$3,000,000
<b>2024</b>	\$13,000,000	\$3,000,000
<b>2025</b>	\$13,000,000	\$3,000,000
<b>2026</b>		\$16,000,000
<b>2027</b>		\$16,000,000

TriMet seeks JPACT and Metro Council approval of the supplemental multi-year commitment of regional flexible funds, as shown in the proposed resolution, and for an amendment to the existing intergovernmental agreement between TriMet and Metro in order to implement the supplemented commitment.

At the August 27, 2010 meeting of the Transportation Policy Alternatives Committee, adoption of this resolution was recommended with a 13-yes, 4-no, 1-abstain vote. During deliberation, an amendment to the proposal to limit the MTIP commitment to the portion related to funding the Portland to Milwaukie LRT project. The amendment was proposed based upon concern about using borrowing for project development and the aggressive implementation schedule for high capacity transit and for concern over committing funds for project development concurrent with service cuts and fare increases. The amendment failed on a 9-no, 8-yes, 1-abstain vote. At the Sept. 2, 2010 meeting of the Joint Policy Advisory Committee on Transportation (JPACT) adoption of this resolution was recommended on a 15 – yes, 0 – no, 1 – abstain vote. A public comment period for this legislation was held from September 6, 2010 through October 5, 2010. A summary of public comments received will be provided to the Metro Council prior to consideration of this legislation on October 7, 2010.

#### **ANALYSIS/INFORMATION**

1. **Known Opposition:** TPAC considered but did not recommend deferring the elements of this proposal relating to funding project development for the Portland to Lake Oswego and Southwest Corridor projects.

2. **Legal Antecedents:** Resolution No. 08-3942 established a multi-year commitment to TriMet of regional flexible funds for the purpose of providing a \$72.5 million to the Portland-Milwaukie Light Rail Project (“PMLRT”) and \$13.3 million for the Commuter Rail Project. Resolution No. 10-4133 authorized execution of an intergovernmental agreement between Metro and TriMet regarding the multi-year commitment of funds approved by Resolution No. 08-3942. The 2004 Regional Transportation Plan (RTP) prioritized preparation of a high capacity transit plan for the Lake Oswego-Portland corridor and Resolution No. 07-3887A adopted the Lake Oswego-Portland corridor high capacity transit alternatives to be evaluated in a Draft Environmental Impact Statement. Resolution No. 10-4179 funded the Southwest Corridor Refinement Plan as part of a larger Southwest Corridor Plan that includes the preparation of Alternatives Analysis, Preliminary Engineering, and Environmental Impact studies for the Southwest Corridor. Resolution No. 10-4160 established a policy framework for the 2014-2015 allocation of regional flexible funds. Further, Resolution No. 04-3498 endorsed the supplemental multi-year funding commitment of MTIP funds for the I-205/Mall project is an earlier example of reserving a portion for future flexible funding for specific high capacity transit projects.
3. **Anticipated Effects:** Adoption of this resolution will help rebalance the financial plan for the Portland-Milwaukie LRT Project and allow TriMet to resubmit its application for entry into Final Design. Further it will assist in funding project development activities related to two other regional priority high capacity transit corridors.
4. **Budget Impacts:** No Metro funds are obligation by this resolution.

#### **RECOMMENDED ACTION**

Adoption of Resolution No. 10-4185 by the Metro Council is recommended.

Materials following this page were distributed at the meeting.



## **METRO COUNCIL MEETING**

Sept. 30, 2010

Metro Regional Center, Council Chamber

**Councilors Present:** Acting Council President Carlotta Collette and Councilors Kathryn Harrington, Robert Liberty, Rod Park, Carl Hosticka

**Councilors Absent:** Councilor Rex Burkholder

Councilor Kathryn Harrington convened the regular Council meeting at 2:03 p.m. Acting Council President Carlotta Collette was unable to speak due to laryngitis.

### **1. INTRODUCTIONS**

There were none.

### **2. CITIZEN COMMUNICATIONS**

Mr. Arthur Lewellan, 1020 NW 9<sup>th</sup> Ave., #604, Portland: Mr. Lewellan addressed Council on the Columbia River Crossing project's proposed "IPS Concept #1, Off-Island Access." He distributed renderings of the proposed concept and correspondence between him and CRC staff regarding the project. He asked for the council to review the proposed concept and provide a written response.

Council discussion included the source of the proposed concept and the need for a CRC update at an upcoming work session.

### **3. GREENHOUSE GAS ANALYSIS TOOLKIT**

Mr. Mike Hogle of Metro provided a presentation on the greenhouse gas emissions analysis toolkit which responds to a directive from the Council to staff to provide consistent analytical information and measurements around climate change as part of the agency's ongoing planning, programming, project and venue activities at Metro. His presentation included information on:

- The toolkit purpose including project objectives, process, and results;
- A toolkit review including how to select the appropriate tool, tools' descriptions and gap analysis; and
- Project next steps.

Council discussion included habitat sequestration and the benefits of an urban canopy, the need to develop a toolkit best practices, tools' capacity for monitoring projects on an ongoing basis, and the tools' ability to measure differences in GHG emissions between Bus Rapid Transit and streetcar alternatives for the Lake Oswego to Portland Transit project.

**4. CONSIDERATION OF THE MINUTES FOR SEPTEMBER 16, 2010**

Motion:	Councilor Liberty moved to adopt the meeting minutes of the September 16, 2010 Regular Metro Council meeting.
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Vote:	Acting Council President Colette and Councilors Liberty, Harrington, Hosticka and Park voted in support of the motion. The vote was 5 aye, the motion passed.
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**5. RESOLUTIONS**

**5.1 Resolution No. 10-4188, For the Purpose of the Metro Council Formally Adopting Stated Metro Values.**

Councilor Harrington turned the gavel over to Councilor Hosticka for Resolution No. 10-4188.

Motion:	Councilor Harrington moved to adopt Resolution No. 10-4188.
Seconded:	Acting Council President Collette seconded the motion.

Councilor Harrington overviewed Resolution No. 10-4188 which would memorialize Metro's 6 values on public service, excellence, teamwork, respect, innovation and sustainability. Council adoption of the 6 values will formally set the tone of the agency for current and new employees as well as provide performance and career management tools for the agency.

Vote:	Acting Council President Collette and Councilors Harrington, Park, Liberty and Hosticka voted in support of the motion. The vote was 5 aye, the motion passed.
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**7. CHIEF OPERATING OFFICER COMMUNICATION**

Mr. Michael Jordan provided updates on the Community Investment Strategy (CIS) open houses and briefings, Oct. 6 MERC meeting, Oregon Zoo Foundation Red Ape exhibit celebration, and Oct. 14 council budget discussion.

**8. COUNCILOR COMMUNICATION**

Councilor communications include the Oregon Zoo's veterinarian hospital groundbreaking, the Oct. 19-22 Department of Land Conservation and Development Commission's consideration of the region's submission of urban and rural reserves, and a reminder to attendees to complete and return the COO CIS questionnaire by Oct. 1.

**9. ADJOURN**

There being no further business, Councilor Harrington adjourned the meeting at 2:58 p.m. The Metro Council will reconvene on Oct. 7, 2010 at 2 p.m.

Prepared by,



Kelsey Newell, Regional Engagement Coordinator



**ATTACHMENTS TO THE PUBLIC RECORD FOR THE MEETING OF SEPTEMBER 30, 2010**

<b>Item</b>	<b>Topic</b>	<b>Doc. Date</b>	<b>Document Description</b>	<b>Doc. Number</b>
2.0	Renderings/Letter	N/A	CRC Concept #1 provided by citizen Arthur Lewellan	093010c-1
3.0	PowerPoint	9/30/10	<i>Greenhouse Gas Emissions Analysis Toolkit</i> provided by Mike Hogle	093010c-02

## STAFF REPORT

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Date: August 20, 2010

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By Resolution No. 10-4160, JPACT and the Metro Council established a policy framework for the 2014-2015 update to the Regional Flexible Funds. The framework targets \$2 million in each of FY 2014 and FY 2015 for high capacity transit development. The supplemental commitment of funds proposed by this resolution would use this \$2 million in Regional Flexible Funds in FY 2014 and 2015, increase it by \$1 million per year to a total of \$3 million per year in 2016 and extend the overall funding commitment two more years to 2026 and 2027 as follows:

<b>Fiscal Year</b>	<b>Regional Flexible Funds Committed to Milwaukie LRT and Commuter Rail, Projects under Res. Nos. 08-3942 and 10-4133</b>	<b>Supplemental Commitment of Regional Flexible Funds for Milwaukie LRT Project, and Other HCT Development Activities</b>
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<b>2027</b>		\$16,000,000

TriMet seeks JPACT and Metro Council approval of the supplemental multi-year commitment of regional flexible funds, as shown in the proposed resolution, and for an amendment to the existing intergovernmental agreement between TriMet and Metro in order to implement the supplemented commitment.

At the August 27, 2010 meeting of the Transportation Policy Alternatives Committee, adoption of this resolution was recommended with a 13-yes, 4-no, 1-abstain vote. During deliberation, an amendment to the proposal to limit the MTIP commitment to the portion related to funding the Portland to Milwaukie LRT project. The amendment was proposed based upon concern about using borrowing for project development and the aggressive implementation schedule for high capacity transit and for concern over committing funds for project development concurrent with service cuts and fare increases. The amendment failed on a 9-no, 8-yes, 1-abstain vote. At the Sept. 2, 2010 meeting of the Joint Policy Advisory Committee on Transportation (JPACT) adoption of this resolution was recommended on a 15 – yes, 0 – no, 1 – abstain vote. A public comment period for this legislation was held from September 6, 2010 through October 5, 2010. No comments were received.

#### **ANALYSIS/INFORMATION**

- Known Opposition:** TPAC considered but did not recommend deferring the elements of this proposal relating to funding project development for the Portland to Lake Oswego and Southwest Corridor projects.
- Legal Antecedents:** Resolution No. 08-3942 established a multi-year commitment to TriMet of regional flexible funds for the purpose of providing a \$72.5 million to the Portland-Milwaukie

Light Rail Project (“PMLRT”) and \$13.3 million for the Commuter Rail Project. Resolution No. 10-4133 authorized execution of an intergovernmental agreement between Metro and TriMet regarding the multi-year commitment of funds approved by Resolution No. 08-3942. The 2004 Regional Transportation Plan (RTP) prioritized preparation of a high capacity transit plan for the Lake Oswego-Portland corridor and Resolution No. 07-3887A adopted the Lake Oswego-Portland corridor high capacity transit alternatives to be evaluated in a Draft Environmental Impact Statement. Resolution No. 10-4179 funded the Southwest Corridor Refinement Plan as part of a larger Southwest Corridor Plan that includes the preparation of Alternatives Analysis, Preliminary Engineering, and Environmental Impact studies for the Southwest Corridor. Resolution No. 10-4160 established a policy framework for the 2014-2015 allocation of regional flexible funds. Further, Resolution No. 04-3498 endorsed the supplemental multi-year funding commitment of MTIP funds for the I-205/Mall project is an earlier example of reserving a portion for future flexible funding for specific high capacity transit projects.

3. **Anticipated Effects:** Adoption of this resolution will help rebalance the financial plan for the Portland-Milwaukie LRT Project and allow TriMet to resubmit its application for entry into Final Design. Further it will assist in funding project development activities related to two other regional priority high capacity transit corridors.
4. **Budget Impacts:** No Metro funds are obligation by this resolution.

#### **RECOMMENDED ACTION**

Adoption of Resolution No. 10-4185 by the Metro Council is recommended.

The Streetcar Extension's Fraudulent Foundation  
R A Fontes [rfontes@q.com](mailto:rfontes@q.com) 10/7/10

For the record my name is R A Fontes and my address is 310 2nd, Lake Oswego  
Council President and members of council:

Twice before of Council and once of Auditor Flynn, I've requested a performance audit of ridership and bus trip time projections of the Lake Oswego to Portland Transit Project. The project is entering a new phase, and with it, the possibility of violation of another section of the federal criminal code. So I'm asking one last time.

We have a lot of honest, dedicated, intelligent, and hard working people at Metro, many of whom have been completely forthcoming and helpful to me over the last three years. But sometime years ago, somebody did something which distorted project estimates and continues to do so even now.

The tables and charts on the first three pages show that the real world argues for corridor stability, not rapid growth. While hard data from government sources at all levels consistently backs up low traffic growth scenarios, project documentation offers very little actual evidence to support Metro's projections; only more projections, assumptions, and conclusions.

There is evidence which gives insight as to how we got these faulty projections. Please go to the traffic shed map on the back. You've seen it before. It is a false and misleading description of corridor traffic. About 70% of all corridor trips cross the Sellwood Bridge. Yet the map all but ignores the east side of the Willamette. About half the traffic shed shown is south of the Tualatin River and has almost nothing to do with the corridor. Since the excised east side area is growing much more slowly than that south of the Tualatin, the map would lead to goosed up ridership and bus trip times.

This map is a smoking gun. Being a false and deceptive description of corridor traffic, it has no legitimate purpose in this project. It is prima facie evidence of fraud.

Council is about to vote on spending more money on the project. Even if there were no fraud, the project still has problems. Both enhanced bus, and especially streetcar, present real degradation in service to current riders. Round trips using streetcar will cost the average rider about a half hour extra travel time including longer walking distances and forced transfers at both ends of our trips in addition to generally longer in-vehicle times required by streetcar. The salt in the wound is that either alternative would cost TriMet riders millions of dollars in additional operating expense. TriMet will have no choice but to cut service elsewhere or raise fares. The project is a reverse Robin Hood wealth transfer from people who need and use transit to those who don't.

# The Streetcar Extension's Fraudulent Foundation

October 7, 2010

R A Fontes rfontes@q.com

## Reality does not support fundamental projections critical in establishing a need for the extension

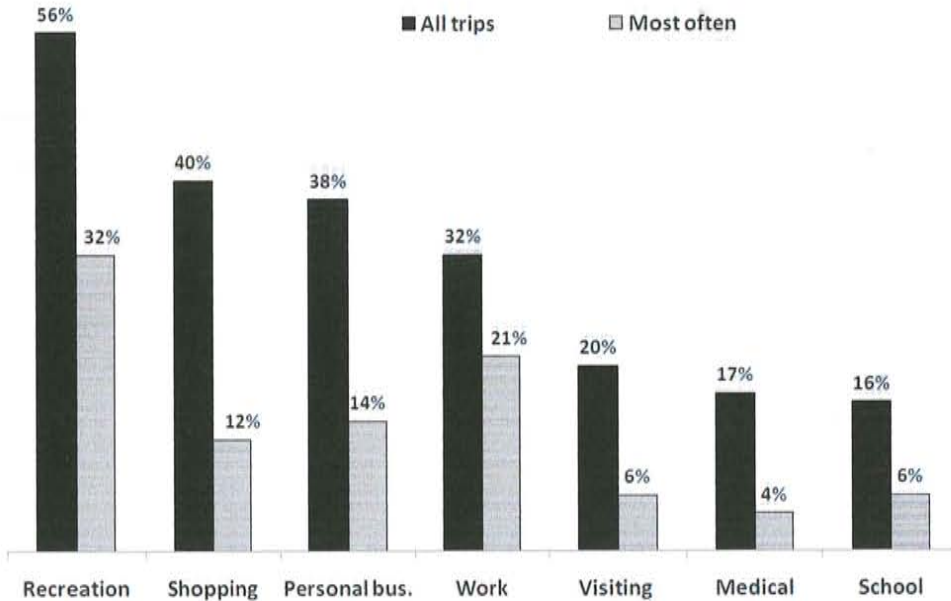
**Table 1:** As Lake Oswego goes, so goes West Linn:

Among metro area cities with over 20,000 residents, Lake Oswego and West Linn rank 1st & 2nd in per capita income, average home value, and average age. From the Census Bureau's American Community Survey:

	Lake Oswego	West Linn
Per capita income (in 2008 inflation-adjusted dollars):	\$48,313	\$45,889
Owner occupied homes - Median value (dollars)	\$540,000	\$452,000
Median Age	42.1	41.5
{Median Age - 2000 Census	41.2	38.1}
Population	38,835	24,378
{Population - 2000 Census	35,278	22,261}

**Chart 1:** Transit Use Patterns:

A slide presented to the CAC by Metro shows reasons people use transit:



(Base = All riders)

According to TriMet, about 11% of all trips are during the evening peak hour, and 31% during the two peak evening and two peak morning hours. So about seven out of ten rides occur during non-commute hours. As LO & WL populations age, corridor commute hour trips should decrease further relative to other trips. This is important because project trip time estimates are for the slowest peak commute hour trips only.

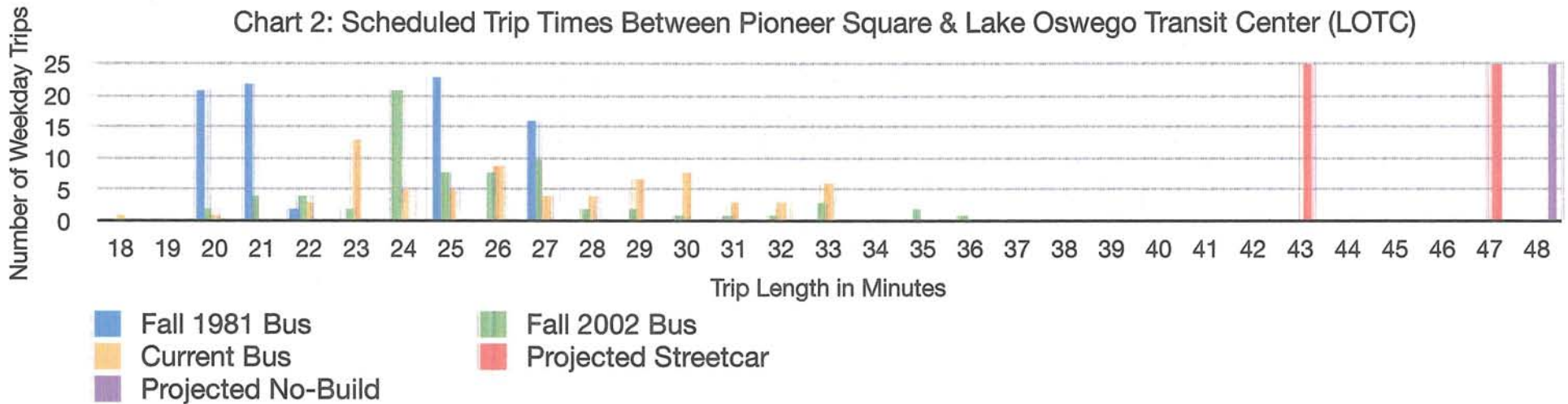
**Table 2:** While traffic on other roads has been increasing, highway 43 counts have been going down:

ODOT's website shows state highway data for 1993 through 2009. Some examples:

	1993	2009
43, .01(1993)/.02(2009) mile south of Julia	28,000	24,800
43, .05 mile south of Terwilliger	28,000	24,400
I-5, .30 mile south of Haines	92,000	107,300
99W, .05 mile south of Multnomah Blvd	22,000	23,500

[note: counts show inconsistency and some stations showed gains on 43, including an apparent outlier north of Taylors Ferry.]

Chart 2: Scheduled Trip Times Between Pioneer Square & Lake Oswego Transit Center (LOTC)



Notes:

- The chart shows currently scheduled times between the LOTC and SW Washington northbound/SW Alder southbound. Older schedules and streetcar use different stops. To allow more accurate comparisons, trip times for those services were adjusted as follows:  
 1981 - Northbound - 1st & A instead of LOTC - added one minute; SW Salmon instead of SW Washington - added one minute; net addition - two minutes.  
 Southbound - SW Oak instead of SW Alder - subtracted one minute; 1st & A instead of LOTC - added one minute; net - no difference.  
 2002 - Northbound - SW Main instead of SW Washington - added two minutes. Southbound - SW Oak instead of SW Alder - subtracted one minute.  
 Streetcar - Foothills at foot of B Avenue instead of LOTC - added six minutes walking - subtracted two minutes in-vehicle; added four minutes net.
- Since streetcar will travel mostly on its own right-of-way, trip times are uniform and the trip numbers would extend well beyond the chart's upper boundary.
- Projected 48 minute no-build is shown at the chart limit of 25 because official projections give only that trip time. Almost all trips should be significantly shorter.

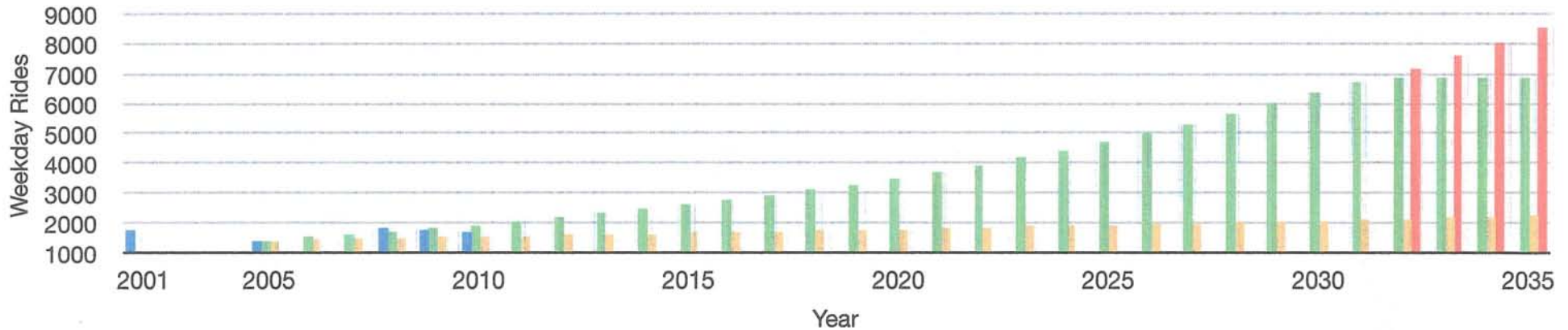
Comments:

Doug Oblatz showed a slide to the CAC projecting trip times to Pioneer Square. ["enhanced bus" at 49 minutes, not included above.] TriMet's passenger census suggests that more people take the LOTC to Pioneer Square trip than any other corridor trip. Official projections consistently show only a single trip time, the slowest weekday run, for each option. This makes sense for transit running on exclusive right-of-way since times are consistent regardless of traffic. However, it's highly misleading for transit in traffic since the most trips take much less time than peak trips.

TriMet data shows that the quickest bus trips in the years studied only varied by two minutes; the slowest by nine. We would expect a much greater range if the slowest bus trips get anywhere near projections. In May 2009, TriMet realigned the southbound 35 & 36 through the South Waterfront, adding about three minutes per trip. It plans the same for northbound buses when conditions permit, adding about four to five minutes per trip. Northbound trips now take 18 to 27 minutes and southbound 27 to 33 minutes. On September 5, TriMet adjusted route times, shortening by three minutes northbound trips between LOTC and SW Washington and by one minute southbound trips between SW Alder and LOTC. The slowest trip lost two minutes and is now tied with five others at 33 minutes. This reflects the continuing long term drop in Highway 43 traffic reported by ODOT.



Chart 3: Route 35 & 36 Combined Ridership - Lake Oswego Transit Center Through Bancroft



- TriMet Spring Passenger Census data
- 6.0973017% growth rate required after 2005 to meet projected no-build demand of 8,590
- TriMet's 1.5% background growth rate
- Projected demand after 6,920 no-build limit reached

Notes:

1. Actual counts are 1785 in 2001, 1455 in 2005, 1831 in 2008, 1794 in 2009, and 1754 in 2010.
2. Not shown on the chart (since it was from a fall census) was the 2008 peak of 2003 rides, coinciding with \$4 to \$5 gasoline.
3. Passenger Census data was not available for years prior to 2001.

Comments:

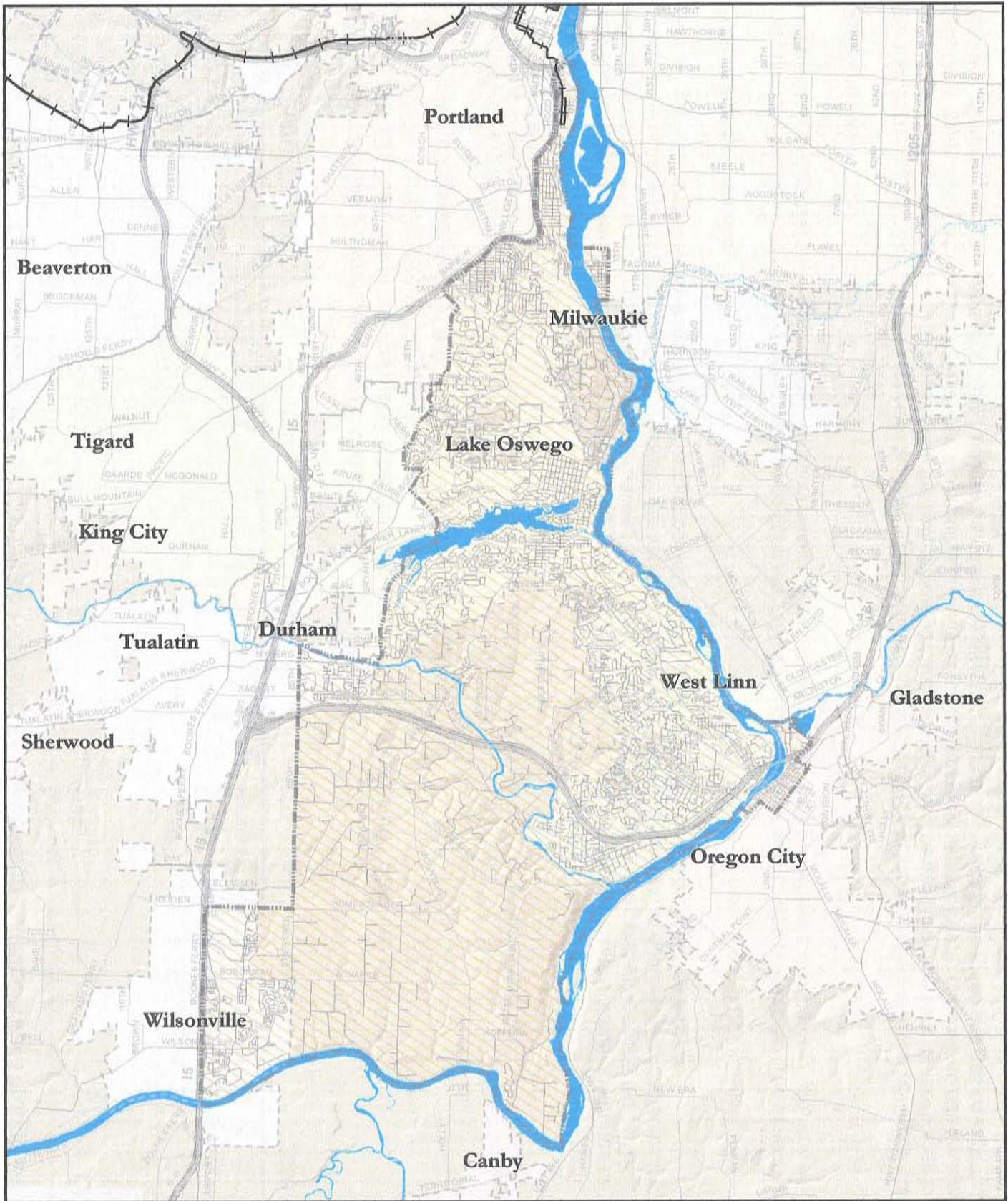
Ridership fell slightly between 2001 and 2010. While the gasoline price spike in 2008 pushed ridership above the growth rate necessary to reach official projections, it has now dropped below that required 6%+ rate. This flat to declining ridership pattern is supported by basic underlying trends including the aging and wealth of LO & WL residents, the migration of jobs from Portland to suburbs, and the impact of technology. We have yet to see hard evidence showing why transit in this particular corridor should grow four times as fast as TriMet as a whole.

**Summary and conclusion**

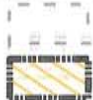
Long term transportation and demographic patterns do not support Metro's ridership and bus trip time projections. The project has not presented hard evidence supporting those projections. Since streetcar will be both slower and less convenient than what we have now, we need to keep bus.

**Study area map**

The traffic shed map on the back is evidence of faulty analysis. It all but ignores the area to the east of the Sellwood Bridge which accounts for about 70% of all corridor traffic. At the same time, the half of the study area south of the Tualatin River has very little relevance to the project. Since the latter is much faster growing than the former, the result is an artificial boosting of projections for traffic congestion, bus trip times, and transit ridership. Streetcar trip times were calculated differently and are not affected. The map is false & deceptive and has no legitimate use.



Lake Oswego to Portland Transit & Trail Study

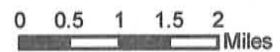


City boundaries

Study Corridor

Highways

Major Roads



assets. When there are significant unspent bond proceeds, the proceeds are an offset to the related indebtedness. The amount restricted for capital projects represents the amount that will be used to finance construction projects. Net assets restricted for debt service represents amounts restricted for principal and interest payments of amounts due related to outstanding revenue and general obligation bonds (discussed in Note 9), as well as restricted deposits related to the lease transactions (discussed in Note 12).

Unrestricted net assets have negative balances for both fiscal years 2010 and 2009. This change resulted primarily from the adoption of GASB Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pension*. This statement established standards for the measurement, recognition, and presentation of other postemployment benefits in the District's financial statements. Prior to implementation of this statement in fiscal year 2008, the District recorded costs associated with Other postemployment benefits on a pay-as-you-go basis. Other postemployment benefit liabilities recorded on the balance sheet in accordance with this statement totaled \$152,581 and \$91,263 for the years ended June 30, 2010 and 2009, respectively.

**CHANGES IN NET ASSETS**

The District's total revenues increased \$26,611, or 6.5 percent, during fiscal year 2010 (see Table 2). Passenger revenue increased \$3,712, or 4.1 percent, and grant revenue increased \$20,618, or 32.4 percent.

Total revenues increased \$2,517, or 0.6 percent, during fiscal year 2009. Passenger revenue increased \$9,202, or 11.4 percent, and operating grant revenue increased \$3,159, or 5.2 percent.

**Table 2**

**Changes in Net Assets  
For the Years Ended June 30**  
(dollars in thousands)

	2010	2009	2008	Increase (decrease) 2010 - 2009	Percentage change 2010 - 2009	Increase (decrease) 2009 - 2008	Percentage change 2009 - 2008
<b>Revenues</b>							
Operating revenues							
Passenger revenue	\$ 93,729	\$ 90,017	\$ 80,815	\$ 3,712	4.1%	\$ 9,202	11.4%
Auxiliary transportation and other revenue	35,872	32,770	31,803	3,102	9.5%	967	3.0%
Nonoperating revenues							
Payroll and other tax revenue	208,933	209,937	215,133	(1,004)	(0.5)%	(5,196)	(2.4)%
Property tax revenue	10,132	8,908	9,416	1,224	13.7%	(508)	(5.4)%
Grant revenue	84,217	63,599	60,440	20,618	32.4%	3,159	5.2%
Interest revenue	726	1,767	6,874	(1,041)	(58.9)%	(5,107)	(74.3)%
Total operating and nonoperating revenues	433,609	406,998	404,481	26,611	6.5%	2,517	0.6%
<b>Expenses</b>							
Labor	125,688	127,309	121,227	(1,621)	(1.3)%	6,082	5.0%
Fringe benefits	191,263	163,588	157,836	27,675	16.9%	5,752	3.6%
Materials and services	90,358	85,143	72,928	5,215	6.1%	12,215	16.7%
Utilities	7,682	6,858	6,152	824	12.0%	706	11.5%
Purchased transportation	36,359	35,430	33,010	929	2.6%	2,420	7.3%
Depreciation expense	82,452	65,013	63,960	17,439	26.8%	1,053	1.6%
Other operating expense	11,358	8,391	7,854	2,967	35.4%	537	6.8%
Net leveraged lease (income) expense	85	(2,464)	765	2,549	(103.4)%	(3,229)	(422.1)%
Interest and other expense	12,999	4,068	7,401	8,931	219.5%	(3,333)	(45.0)%
Total expenses	558,244	493,336	471,133	64,908	13.2%	22,203	4.7%
Loss before contributions	(124,635)	(86,338)	(66,652)	(38,297)	44.4%	(19,686)	29.5%
Capital contributions	110,620	127,349	151,522	(16,729)	(13.1)%	(24,173)	(16.0)%
Special items	-	5,374	(621)	(5,374)	(100.0)%	5,995	100.0%
Increase (decrease) in net assets	(14,015)	46,385	84,249	(60,400)	(130.2)%	(37,864)	(44.9)%
Total net assets - beginning	1,806,863	1,760,478	1,676,229	46,385	2.6%	84,249	5.0%
Total net assets - ending	\$ 1,792,848	\$ 1,806,863	\$ 1,760,478	\$ (14,015)	(0.8)%	\$ 46,385	2.6%

The Oregon economy began slowing in fiscal year 2008, after experiencing strong growth from 2004 to 2007. In fiscal year 2009, the economic recession began to impact the District's revenues, due to declining regional employment. This impact on revenues continued through fiscal year 2010. After six consecutive years of increases, the District's main source of revenue – payroll taxes – decreased for two consecutive years. Payroll and other tax revenues decreased \$1,004, or 0.5 percent in fiscal year 2010, while they decreased \$5,196, or 2.4 percent, in fiscal year 2009.

Total expenses increased \$64,908, or 13.2 percent, during fiscal year 2010. Labor costs decreased \$1,621, or 1.3 percent, primarily due to service cuts and decreases in staffing. Fringe benefits increased \$27,675, or 16.9 percent, due to

**SCHEDULES OF FUNDING PROGRESS**  
(dollars in thousands)

<b>Other postemployment benefits</b>						
Actuarial valuation date	Actuarial value of assets	Actuarial accrued liability (AAL)	Unfunded AAL (UAAL)	Funded ratio	Covered payroll	UAAL as a percentage of covered payroll
January 1, 2010	\$ -	\$ 816,544	\$ 816,544	0%	\$ 137,869	592%
January 1, 2008	-	632,204	632,204	0%	130,726	484%

<b>Management DB Plan</b>						
Actuarial valuation date	Actuarial value of assets	Actuarial accrued liability (AAL)	Unfunded AAL (UAAL)	Funded ratio	Covered payroll	UAAL as a percentage of covered payroll
June 30, 2010	\$ 67,689	\$ 98,834	\$ 31,145	68%	\$ 15,626	199%
June 30, 2009	65,202	96,749	31,547	67%	17,130	184%
June 30, 2008	59,066	84,974	25,908	70%	17,842	145%
June 30, 2007	61,016	75,616	14,600	81%	19,644	74%
June 30, 2006	50,212	69,383	19,171	72%	19,920	96%
June 30, 2005	46,241	60,325	14,084	77%	19,355	73%
June 30, 2004	41,734	50,639	8,905	82%	19,642	45%

<b>Bargaining Unit DB Plan</b>						
Actuarial valuation date	Actuarial value of assets	Actuarial accrued liability (AAL)	Unfunded AAL (UAAL)	Funded ratio	Covered payroll	UAAL as a percentage of covered payroll
June 30, 2010	\$ 255,279	\$ 491,495	\$ 236,216	52%	\$ 121,124	195%
June 30, 2009	217,113	460,333	243,220	47%	123,784	196%
June 30, 2008	238,883	427,305	188,422	56%	116,418	162%
June 30, 2007	209,392	399,237	189,845	52%	111,877	170%
June 30, 2006	178,157	370,711	192,554	48%	106,705	180%
June 30, 2005	155,828	345,396	189,568	45%	106,578	178%
June 30, 2004	143,184	319,829	176,645	45%	104,778	169%

## Kelsey Newell

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**Subject:** RE: trimet lite rail

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**From:** Ed & Iniece [mailto:e.grover@frontier.com]

**Sent:** Sunday, October 03, 2010 12:03 PM

**To:** Kathryn Harrington

**Subject:** Fw: trimet lite rail

Kathryn,

I know we are fighting "against the tide" but we are not enthused about Metro adding additional funding. I am not impressed with how TriMet has managed in the past.. in many cases buses are cheaper and just as good... every park and ride has had problems with cars stolen or broken into.. it has allowed "undesireables" to reach places they have not gone before riding free (thats another issues we have with TriMet). We feel there are alot of issues that are entirely ignored and before those have been addressed no money for Milwaukie Max Line. Money is so limited now and we have better places to put it.

Sincerely,

Ed and Iniece Grover

Sincerely