

City of Corvallis

Sustainability Annual Report

2011



In 2004, the Corvallis City Council adopted a Sustainability Policy to ensure that City departments achieve a more sustainable workplace through plans and programs that promote a balance of environmental, economic and social equity values in the expenditure of public funds. The policy requires an annual report that identifies the progress achieved and sustainability objectives for the next reporting period.



<http://www.ci.corvallis.or.us>

Sustainability means using natural, financial and human resources in a responsible manner that meets existing needs without compromising the ability of future generations to meet their own needs.

— City Council Policy on Sustainability

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The Sustainability Program in 2011

The City of Corvallis has been a leader in sustainability since before the word became mainstream. In the 1990s, staff began tracking energy consumption, perhaps more out of an interest in cost savings than environmental protection. However, around 2002 the City began tracking operational improvements in terms of sustainability impact. While it seems surprising today, such actions were way before their time.

The City Council's adoption of a Sustainability Policy in 2004 was also ahead of most US cities, and a key goal of the policy was to demonstrate leadership as an organization before rolling out sustainability initiatives in the community. Over the years, City staff not only have moved the organization toward sustainability, but have taken their commitment and knowledge into the community. For some milestones on the City's path to sustainability leadership, see Table 1.

Table 1

The Path to Leadership	
2000	Corvallis joins Cities for Climate Protection campaign
2001	City signs up for renewable energy through Pacific Power Blue Sky program
2004	City Council adopts Sustainability Policy for municipal operations
2005	City Council passes resolution urging residents and businesses to purchase renewable energy
	Environmental Protection Agency (EPA) designates Corvallis a “Green Power Community”
	Sustainability Steering Committee formed (City Manager, Department Directors)
2006	Sustainability Supervisor hired to develop comprehensive sustainability program
2007	Development of ISO 14001-based Sustainability Management System begins
	City becomes founding member of Corvallis Sustainability Coalition
	City becomes founding member of International Society of Sustainability Professionals (ISSP)
2008	City-wide Sustainability Core Team established
	Sustainability fund created to allow departments to explore innovative in-house projects
	Energy Trust of Oregon chooses Corvallis for Oregon’s first community energy challenge
	Organization develops five overarching organizational sustainability goals
	City partners with Corvallis Sustainability Coalition on Community Sustainability Action Plan
	Corvallis joins ICLEI — Local Governments for Sustainability
	City earns Julian Award for Sustainability from Oregon Chapter of American Public Works Association
	City earns League of Oregon Cities Award of Excellence for sustainability planning
2009	City Council sub-committee develops <i>Community Energy Strategy</i>
	Staff complete City’s first greenhouse gas inventory for municipal operations
	City uses its \$511,600 federal Energy Efficiency and Conservation Block Grant (EECBG) to fund community programs (not infrastructure like most other cities)
	City awarded \$78,750 from Pacific Power’s Blue Sky program for Fire Station #4 solar project
	Sustainability Program Specialist position created
2010	Council adopts Community Sustainability Policy
	Council passes Sustainability Initiatives Fees for transit, urban forests, and sidewalk maintenance
	EPA chooses Corvallis for its first Green Power Community of the Year award
	EPA awards Corvallis a Climate Showcase Communities grant for \$491,762
2011	City awarded \$144,000 from Pacific Power’s Blue Sky program for Fire Station #1 solar project

Today, the City’s sustainability program is at a crossroads. In 2011, it passed its a five-year anniversary, marking much progress toward incorporating sustainability into City operations. At the same time, however, the program shares with every other City department and function the challenges of an unprecedented budget shortfall. Because sustainability is, by definition, forward looking, it can be difficult to execute a long-term sustainability plan when faced with an immediate crisis that threatens the program’s existence.



Many public-sector sustainability programs are facing the same problem—so much so that in February 2012, *Sustainability: The Journal of Record* published an article entitled, “Budget Cuts and Sustainability: Turning Crisis into Opportunity.” The author states that, “budget cuts can provide a unique and temporary opportunity to advance sustainability in a way that would not be possible during good times, when the status quo is harder to change.”¹ In short, when budget cuts are a high priority, sustainability programs can help because they are specifically focused on consuming fewer resources.

The following are some of the budget-related benefits the City of Corvallis has derived from focusing resources on developing and implementing sustainability initiatives:

- **Cost Savings.** A strategic approach to sustainability reduces operational costs by encouraging staff to evaluate expenditures in a way that considers the entire life cycle of a product and to find innovative ways to conduct their work. Quantifiable savings have come from reducing energy, solid waste and materials; identifying and purchasing new technologies; and finding ways to complete projects in house that might otherwise have been outsourced. By reducing energy use in 2011, the City saved \$28,000 and collected more than \$60,000 in state energy conservation incentives.
- **Funding for projects.** Sustainability program staff look for potential external funding sources and for financial incentives to implement projects. Successes include:
 - Facilitating the creation of the year-long Corvallis Energy Challenge, during which the Energy Trust spent more than \$128,000 in the community.
 - Securing an Environmental Protection Agency (EPA) Climate Showcase Communities grant of \$491,762 to fund community energy conservation programs.
 - Securing \$224,785 in state energy conservation incentives since 2007.
 - Securing \$253,000 in grants for solar projects from Pacific Power’s Blue Sky program.
- **Economic Development/Job Generation.** Programs initiated by City staff have resulted in the employment of community members and generated work for local businesses. The 2008 Corvallis Energy Challenge created four jobs through the Corvallis Environmental Center’s (CEC) Resource Efficiency Program, and the Climate Showcase Communities grant supports the equivalent of 4.25 positions (15 people) at four organizations, including support for the City’s Sustainability Program Specialist position for fiscal years 10/11 and 11/12.

Devoting staff to sustainability has enabled the organization to carry out Council directives and to exercise leadership at the local, regional, and even national level. Recognition awards from the EPA Green Power Program (2010), the League of Oregon Cities (2008) and the American Public Works Association (2008) set the stage for the City to be awarded subsequent revenue grants (Energy Trust, Pacific Power, EPA) because they underscored the commitment to sustainability. In 2011 the EPA asked the City’s Sustainability Supervisor to present a case study on Corvallis as a Green Power Partner and Climate Showcase Community for its “Making an Impact on Energy Use in Your Community” webinar. Commenting on the lesson he took away from the presentation, one participant said, “Leadership pays.”

¹ “Budget Cuts and Sustainability: Turning Crisis into Opportunity,” *Sustainability: The Journal of Record*. February 2012. St. Clair, Matt.

2011 Program Accomplishments

The City's sustainability program staff are tasked with leading the organization to take a systematic approach to enhancing the sustainability of operations and sharing lessons learned with the community. The Sustainability Supervisor is responsible for developing and implementing a comprehensive City-wide program that integrates with existing planning processes and business goals. The part-time Sustainability Program Specialist conducts external outreach and develops metrics for the City's organizational and community-focused sustainability program and goals. The Franchise Utilities Specialist tracks the City's electricity and natural gas consumption and solid waste, promotes conservation practices, and documents cost savings. Given the interdisciplinary nature of the program, a City-wide team consisting of staff from all departments meets regularly to develop ideas and accelerate implementation.

Key accomplishments of the sustainability program in 2011 include:

Administering and implementing grants. The Franchise Utilities Specialist has administered the City's Energy Efficiency and Conservation Block Grant (EECBG) allocation since 2009, as well as researching and helping to implement funded projects (see page 24). In 2011 staff began administration of the three-year Environmental Protection Agency Climate Showcase Communities grant. "Energize Corvallis" is a joint project with the Corvallis Environmental Center, OSU-Benton County Extension Service, and The Resource Innovation Group, a non profit climate change research organization based in Eugene. The project will result in a measurable reduction in energy use and carbon emissions from homes and businesses throughout the community, while creating new work for energy conservation businesses.

- Staff submit quarterly reports to the EPA describing how the programs associated with "Energize Corvallis" are performing against stated timelines and metrics.
- The Sustainability Supervisor attended a three-day workshop in Denver, funded through the grant, that covered strategic planning, training on tools and resources, managing cooperative agreements, and reporting requirements.
- Staff assisted with forming an advisory committee for Green Shares, which teaches employees in the fields of residential energy and water use to encourage climate-wise behaviors from their customers. The committee discussed audiences, actions, outreach, and reporting strategies.
- Staff convened a meeting with representatives from Corvallis School District 509J and the Corvallis Environmental Center (CEC) to explore opportunities to get high school students involved in Energize Corvallis. Both high schools are now working with the CEC to develop a program through which high school students can volunteer and/or earn academic credit by working with Corvallis residents to reduce energy consumption.



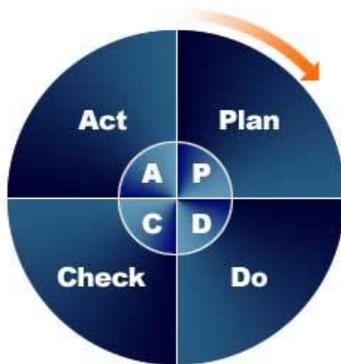
Energize CORVALLIS

<http://energizecorvallis.org/>

Identifying organizational sustainability impacts. Staff facilitated meetings in six City departments to identify what sustainable operations would look like within their service responsibilities. The City's Sustainability Management System outlines procedures by which the organization will identify significant impacts and their associated activities, prioritize those impacts, and select improvement projects (see Table 2). The organization has committed to mapping its impacts every three years; the first time was in 2007-08. Public Works completed this brainstorming process in 2010 through work group meetings, identifying more than 40 improvement projects that it is now implementing, and the Police Department will pilot an online version in 2012. The projects that are implemented as a result of the brainstorming sessions help the organization to be more efficient and effective with human, financial and environmental resources, which is particularly important as budgets tighten.

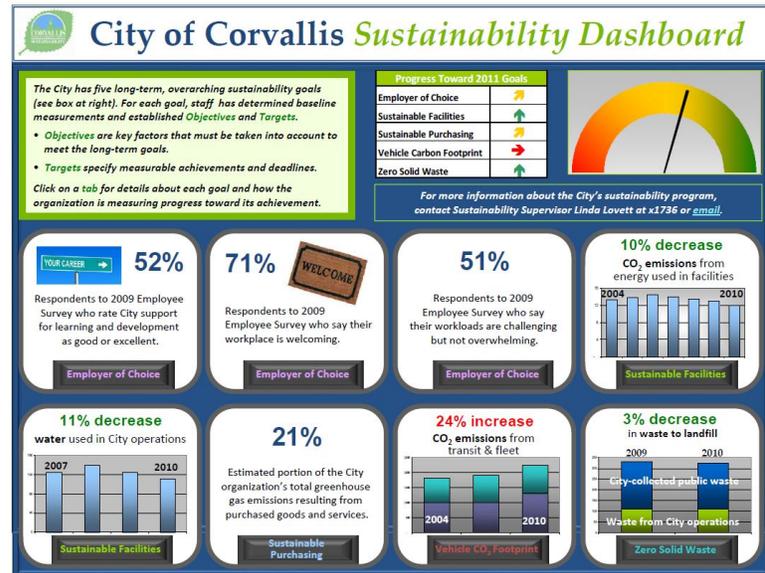
Table 2

Departmental Impacts and Projects		
City Department	Significant Impact	Project Example
City Manager's Office	Customer service—internal and external	Increase communication throughout organization
	Communication and outreach	Educate young people about City government
Community Development	Paper consumption	Streamline reports for Commissions, Council, etc.
	Increase efficiency	Review plans for new developments electronically
Finance	Electricity consumption	Low-voltage computer hardware at desktop
	Paper consumption	Use more electronic files instead of paper backups
Fire	Building energy consumption	Upgrade energy management system at Station #1
	Water consumption	Plant drought-tolerant landscapes at stations
Library	Energy consumption	Window coverings to reduce heat gain in summer
	Solid waste	Electric hand dryers to reduce paper towels
Parks & Recreation	Water consumption	Expand water-wise/pesticide free landscapes
	Solid waste	Create rental guidelines for recycling/composting
Police	NA – brainstorming not yet completed	
Public Works	Energy consumption	Solar lighting for bus shelters
	Purchasing	Increase use of sustainable office products



A Sustainability Management System or SMS is a set of processes and practices that enables an organization to integrate its sustainability efforts with existing planning processes and business goals. The City of Corvallis SMS is built on the ISO 14001 International Standard, which follows the Plan, Do, Check, Act model to foster continuous improvement of the system.

Creating a “Sustainability Dashboard.” Hosted on the Sustainability section of the City’s Web site, the Dashboard provides an at-a-glance view of the organization’s progress toward meeting its five overarching sustainability goals. The Dashboard grew out of staff’s work to develop metrics. It provides information on how the City defines and measures each goal, trends since baseline years, actions to be taken, and targets for milestones and deadlines. The Dashboard is updated regularly as the relevant data changes.



Challenges

Uncertainties related to the City’s budget pose the biggest challenge to the sustainability program. In the second year of the program (2008)—prior to the addition of the Sustainability Program Specialist position—the annual report noted that the heavy workload would be difficult to meet with existing staffing: the Sustainability Supervisor orchestrated all of the organization-wide efforts, led the City-wide Core Team and departmental sustainability teams, facilitated the Sustainability Steering Committee, and served on the board of the Corvallis Sustainability Coalition. Since 2008, the program has taken on even greater responsibilities with the EECBG and EPA grant administration and increasing demands from the community. Program staff will be challenged to provide the coordination, effort, and energy needed to drive an organization-wide effort — not to mention facilitate community-generated initiatives such as the plastic bag process — if staffing is reduced.

That said, staff will work to develop and implement a strategic plan for the future of the sustainability program when the budget outcome is clear. There are a variety of opportunities for the program to provide support to employees and to build capacity within resource-constrained departments in ways that fall within sustainability program responsibilities. Some ideas include:

- Grant identification and writing assistance—sustainability program staff frequently receive information about grants that could help departments with various projects, but staff in those departments do not have time to follow through on them.
- Life-cycle analyses (e.g., electric hand dryers vs. paper or cloth towels, plastic vs. paper bags)
- Communication—internal and external (e.g., highlighting department and organization accomplishments, responding to public requests for sustainability information)
- Research (e.g., best practices, new technologies, policies, grants, request for proposal language)
- Targeted training (e.g., recycling, life-cycle analysis, purchasing)

Sustainable City Report Card

During 2011, the organization made progress on all five of its overarching sustainability goals, making some progress on most of the key objectives itemized in the 2010 sustainability report. Out of the 13 projects on the scorecard, all but two showed progress.

Meets/exceeds goal 

Some progress toward goal 

No progress toward goal 

2011 Objective	Status	Comment
Goal: Employer of Choice		
Improve content and increase awareness of resources available on intranet for in-house training and education opportunities.		The training library index is posted on the intranet. An employee newsletter article was published to increase awareness.
Investigate applicability of existing and planned software solutions for designing and creating a calendar for in-house training and continuing education opportunities.		Investigation completed. Training calendar will be created in SharePoint in 2012.
Complete the pilot project in the Fire Department to improve performance management practices by making the employee evaluation process more understandable and relevant to positions and job duties. Determine next phase of project.		Focus groups and a management survey are done. A draft performance review form has been submitted for management review. Pilot will be completed with one shift of the Fire Department in 2012.
Goal: Sustainable Facilities		
Document requirements and costs to benchmark and possibly register the P&R Administration Building for LEED for Existing Buildings (LEED-EB).		Research on LEED requirements and examples was completed and reported to the Steering Committee in September.
Develop green cleaning policy to align with LEED-EB requirement.		Draft of administrative policy is under review. Expect to adopt in early 2012 and to educate employees and vendors over the year.
Using funds from the Sustainability Initiatives Funding (SIF), implement the Urban Forestry Management Plan's goals for structural pruning, hazard tree removal, and public education.		Using the current tree inventory, roughly 25% of public trees were identified as being dead or in poor or very poor condition. Trees were prioritized for removal by site history, follow-up inspections and hazard tree condition ratings. Removals were carried out using budgeted funds and SIF funds. Structural pruning will begin in spring of 2012.
Evaluate Sunset Park using Sustainable Sites Initiative performance benchmarks.		Staffing was insufficient to make progress on this project.
Complete audits of irrigation systems under City control. Goal is at least 80% efficient.		Interns audited about half of the City's parks in 2010. No interns were available in 2011 so irrigation audits were not conducted.

Goal: Sustainable Purchasing		
Provide green purchasing training to procurement staff and supervisors.	➔	Staff is working with external sustainability consultants to customize training for Corvallis to take place in May, 2012.
Require least economic cost analysis on purchases over \$2,500.	➔	This has been implemented for bid projects, but state procurement law requiring lowest cost makes it difficult to implement for purchases.
Goal: Vehicle Carbon Footprint		
Document departmental procedures for reviewing vehicle budgets for Sustainability Steering Committee review.	➔	Information was collected from several departments and reported to the Steering Committee. The determination was made that policies and procedures require overhauling. Research and revisions will take place in 2012.
Goal: Zero Solid Waste		
Complete department-specific waste management plans.	➔	Plan for Public Works has been drafted and is under review. Once approved, it will serve as a template for other departments.
Develop plan to improve recycling in public areas of City buildings.	➔	Parks and Recreation Osborn Aquatic Center has started recycling paper towels from public restrooms, but there has been no progress toward an organization-wide approach.



The Osborn Aquatic Center became the first City facility to recycle paper towels from public areas (see page 19 for details). In 2012, staff will begin developing an organization-wide plan to improve recycling of waste that the City collects from the public.



Progress Toward Organizational Goals

The organization has adopted five core sustainability goals, described in detail below. In 2010, staff worked to define how to monitor and measure progress by determining baseline performance indicators and setting targets. This 2011 report marks the first year of evaluating progress against those performance indicators. The next few pages describe each goal, highlight staff involvement in various projects, and outline some next steps for 2012.

2011 Progress				
Goal	Indicator	Improving	Declining	Inconclusive
Employer of Choice	Employee survey respondents who say their workplace is welcoming to them		3% decrease since base year	
	Employee survey rating of career development opportunity	24% increase since base year 2010		
	Employee survey respondents who say their workload is manageable			Changes to survey wording prevent year to year comparison
Sustainable Facilities	Reduction in greenhouse gas emissions from energy used in City operations	13.8% reduction since base year 2004		
	Reduction in water used in City operations	17.5% reduction since base year 2007		
Sustainable Purchasing	Reduction in impacts from purchases (i.e., emissions, waste, toxicity)			Sufficient metrics not in place
Vehicle Carbon Footprint	Reduction in greenhouse gas emissions from City vehicles (fleet, transit)		22.2% increase since base year 2004	
Zero Solid Waste	Reduction in waste to landfill from City operations	29% reduction since base year 2009		

Employer of Choice

An Employer of Choice is one whose practices, policies, benefits and overall work conditions enable it to successfully attract and retain talent. Employee Development, Diversity, and Workload are the related social sustainability issues the organization is focusing on. To assess progress, City sustainability teams track responses in the annual employee survey. Targets were set for 2012 to allow adequate time for progress.

Increase and Accept Diversity

Goal Progress: The City slightly reversed progress toward its 2012 target of 75% of respondents to the Employee Survey saying their workplace is welcoming for them.

- Baseline: 2009/10: 71.1% agree
- 2011: 68.1 agree
- **Decrease = 3% below base year**

The City began implementation of its Diversity and Inclusion Plan with a primary focus on employee multicultural skills to improve retention and recruitment. One high-priority action item was the creation of a Mentoring Program to increase employees' comfort and confidence with cultural differences. The City partnered with Oregon State University's PROMISE internship program, which is designed to provide OSU students with professional, managerial, or technical paid work experience in state and local government agencies. The City's intern worked with the Diversity and Inclusion Steering Committee (DISC) to research mentoring programs and develop a pilot program that included implementation steps, program goals, and metrics to measure success.

- The City partnered with the Employer Partnership for Diversity to offer employees training in topics such as difficult conversations, serving people living in poverty, and the future of work in Oregon.

"We envision that in 2020 Corvallis will be... a community that honors diversity and is free of prejudice, bigotry and hate..."

-- Corvallis 2020 Vision Statement

Diversity is one of four overarching values adopted by the City Council (diversity, sustainability, citizen involvement, and cost efficiency).

The Diversity and Inclusion Steering Committee (DISC) was formed in March 2008. In 2010 the Committee completed the Citywide Diversity and Inclusion Plan as a framework for the actions necessary to fulfill the Diversity Initiative. The Plan has three focus areas: the City of Corvallis as an Employer, the City as a Service Provider, and Employees.

Enhance Employee Development

Goal Progress: The City significantly exceeded its 2012 target of 57% of respondents to the Employee Survey who rate the City's support for lifelong learning and development as good or excellent.

- Baseline: 2009/10: 52.3% agree
- 2011: 76.3% agree
- **Increase = 24% above base year (although the survey language change from "good" to "somewhat of a good job" may account for part of the increase)**

Manage Workload

Goal Progress: The City appears to be making progress toward its 2012 target of 55% of respondents to Employee Survey saying they "have a workload that is challenging but not overwhelming." However, a direct comparison cannot be made because of changes to the wording of the survey.

- Baseline: 2009/10: 51% agree
- 2011: 79.1% agree that their workload is challenging; 34.6% agree that their workload is not overwhelming

Next Steps for Employer of Choice Goal:

- Create a calendar in SharePoint for in-house training and continuing education opportunities.
- Complete the pilot project in the Fire Department to improve performance management practices by making the employee evaluation process more understandable and relevant to positions and job duties. Determine the next phase of the project.

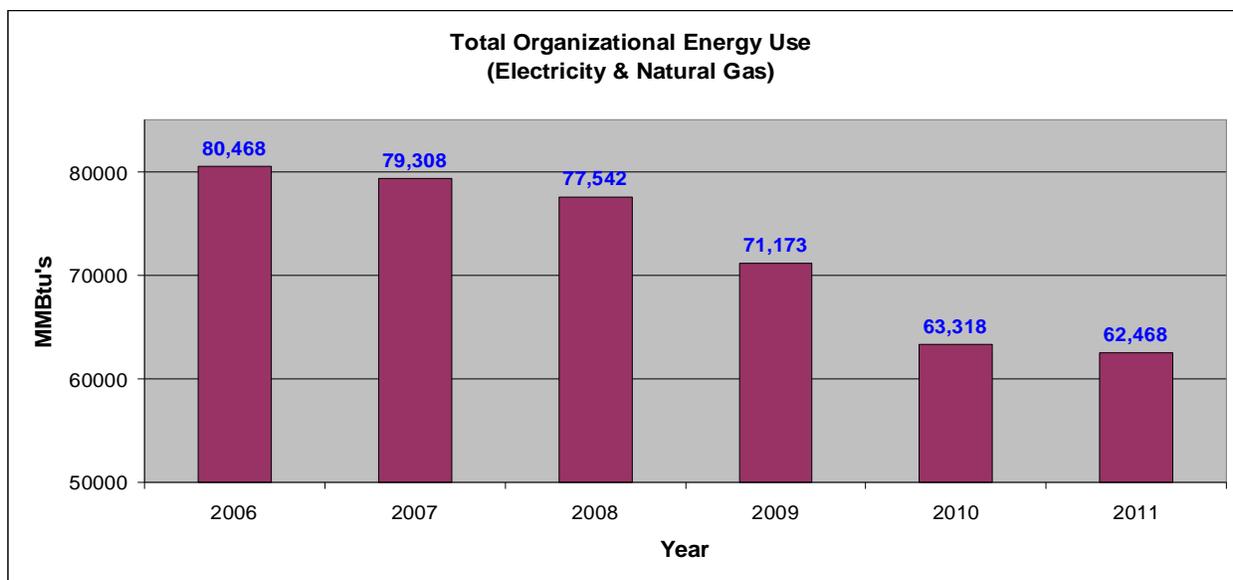
Sustainable Facilities

Sustainable facilities are those built, maintained, and operated in a manner that reduces both consumption of energy, water, and materials and harm to human health and the environment. They include occupied buildings and facilities such as parks and water and wastewater pumping stations.

Energy

Goal Progress: The City significantly exceeded its target to reduce greenhouse gas emissions from energy used in municipal operations to 1.5% below the baseline year.

- 2004 baseline: 13,307 metric tons carbon dioxide equivalent (MT CO₂e)
- 2011: 11,471 MT CO₂e
- **Reduction = 13.8% below base year**



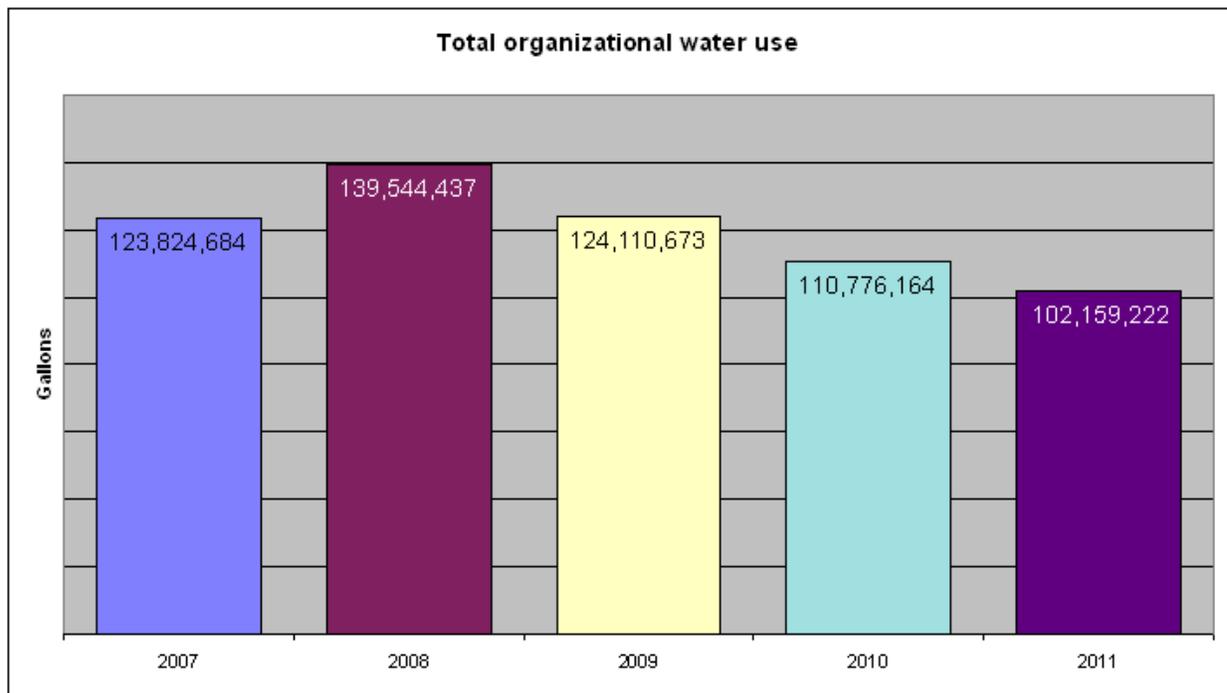
In 2011, the organization reduced electricity consumption by more than 555,000 kWh but used about 10,500 more therms of natural gas than in 2010. The overall reduction in energy consumption saved about \$28,000 over fiscal year 09/10. The City also received more than \$60,000 in energy conservation incentives. Projects included:

- The airport and library garage both upgraded lighting to more energy-efficient inductive fixtures. The new lights are brighter and use 60-70% less energy. Because of the long bulb life, routine maintenance costs also will be reduced.
- The City completed its first solar electric generation project with funding from Pacific Power's Blue Sky program and the Energy Trust of Oregon. The 15kW system on the roof of Fire Station #4 (Tunison) is expected to provide more than half of the station's annual electricity demand.
- Pacific Power awarded another \$144,000 Blue Sky grant for a 25kW solar photovoltaic system at Fire Station #1. The Energy Trust of Oregon will provide an additional \$31,000. Electricity produced by the system is estimated to result in about \$2,000 per year in energy savings.

Water

Goal Progress: The City significantly exceeded its target to reduce water used in municipal operations to 3% below the baseline year (normalized to account for weather conditions).

- 2007 baseline: 123,824,684 gallons
- 2011: 102,159,222 gallons
- **Reduction = 17.5% below base year**



In 2011, the organization's water consumption declined by more than 8.6 million gallons as compared with 2010. It is likely that some of the reduction is due to the cooler and wetter spring and summer.

- Parks and Recreation replaced aging manually operated shower valves in the men's and women's locker rooms at the Osborn Aquatic Center with metered valves that automatically shut off after 45-55 seconds. The total project of \$14,064 was funded through a grant from the Public Works water conservation program. The valves reduced water consumption by an estimated 2 million gallons in the first six months.
- Parks and Recreation installed two more water-wise, pesticide-free landscapes. The first was a 6,850 square foot area at Sunset Park and the second expanded the existing water-wise landscape at Riverfront Commemorative Park to a total of 3,880 square feet.
- Public Works funded the purchase and installation of efficient irrigation technology for the Starker Arts Garden for Education (SAGE) community garden at Bruce Starker Arts Park. The project could save water and provide the opportunity to raise a wider selection of produce.

Ultra-Violet Disinfection Saves Water, Chemicals, Health

Most public pools rely on chlorine to kill algae, mold, and bacteria such as cryptosporidium and E. coli. However, when chlorine reacts with organic material (e.g., perspiration, urine), it creates combined chlorine, or “chloramines.” Chloramines cause the bleach-like odor, eye and skin irritation, and respiratory problems associated with chlorine.



Because of these health hazards, chloramine levels are limited by State law. For years, the Osborn Aquatic Center combated chloramines by diluting the pools with fresh water — an expensive undertaking given the need to produce, heat, and chlorinate the fresh water.

Ultra-violet (UV) light sanitizing systems can reduce the need for chlorine by up to 50 percent, thereby dramatically reducing chloramines and the risk of waterborne illnesses. In June, a UV system was installed on Osborn’s therapy/instructional pool. The \$12,022 project was funded through grants and patron donations.

Feedback from the public and employees has been positive. Staff is currently fundraising for a UV system for the 50-meter pool.

- In addition to reducing water consumption, the City saw the completion of an innovative water quality project with the construction of rain gardens on Northwest Beca Avenue. The four gardens are designed to filter pollutants out of rainwater and slow the water’s entry into storm drains, which empty into local streams. Public Works will evaluate how well the gardens perform and look for opportunities for future projects.



Next Steps for Sustainable Facilities Goal:

- Approve and implement green cleaning policy.
- Using research available from LEED-EB investigation, begin developing “operating manuals” for City buildings.
- Investigate the utility of using Sustainable Sites Initiative performance benchmarks to evaluate City parks, using Sunset Park as the pilot.
- Complete audits of irrigation systems under City control.

Sustainable Purchasing

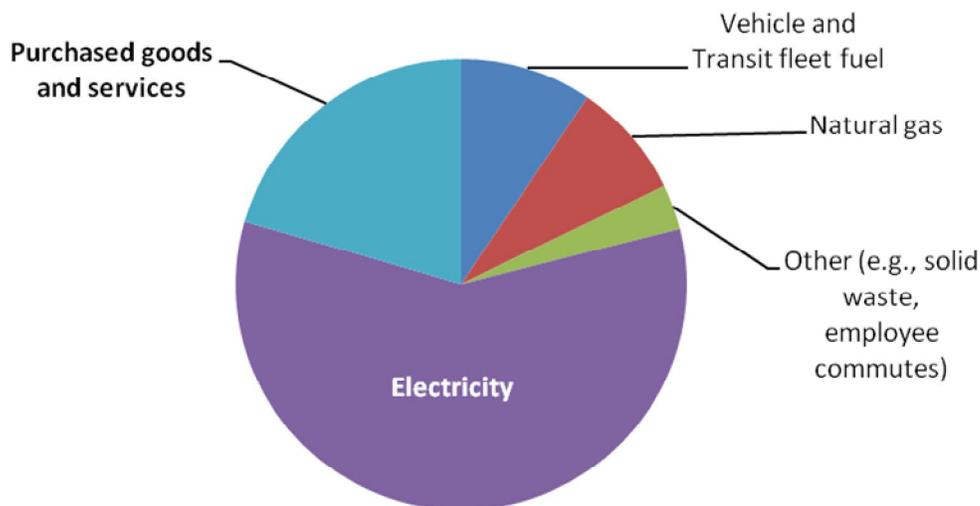
Sustainable purchasing considers the triple bottom line (environmental, economic, and social impact) in purchasing decisions. Useful tools include: life-cycle costing to determine lowest economic cost; specifications that include environmentally preferable characteristics; and third-party certifications (e.g., ENERGY STAR) to identify products.

Goal Progress: The City does not track all of its purchases in a manner sufficient to determine whether negative impacts (e.g., greenhouse gas emissions, waste, toxicity) are being reduced from one year to the next.

Staff continues to struggle with metrics to determine whether the City is making progress on the sustainable purchasing goal. When conducting the organization's greenhouse gas inventory in 2009, staff used 2008 purchasing records and the Economic Input-Output Life-Cycle Analysis (EIO-LCA), a public-domain tool developed by Carnegie-Mellon University, to estimate the emissions associated with producing the goods and services purchased by the City. These emissions were conservatively estimated to be 4,144 metric tons of CO₂ equivalent — second only to electricity in the categories that the City measures.

- When the inventory is updated in 2012, staff will be able to compare 2011 data against the 2008 baseline and get a better idea of whether there has been progress.
- Staff also will continue to work on developing metrics for purchases, such as the amount of recycled content in common items and the quantity of material that the City itself reuses in projects, thereby avoiding the purchase of new materials.

City of Corvallis Greenhouse Gas Emissions (2008)



Another challenge has been determining specific products that are environmentally preferable and finding time to train staff on their procurement. This is challenging due to the decentralized nature of procurement in the City organization, the wide variety of purchases made in City departments, and the shortage of staff time to investigate product options and provide training.

Despite these difficulties, sustainable purchasing is becoming embedded in the organization's operations. For example:

- The City's procurement manual includes life-cycle costing analysis and guidance on how to build sustainability into purchasing decisions.
- Standard contracts ask for recycling or reuse of construction materials and contractors are asked to use materials that meet Leadership in Energy and Environmental Design (LEED) standards where possible.
- The City's energy conservation policy requires new or replaced computers and appliances to be ENERGY STAR or equivalent products, and the new Green Cleaning policy will require that third-party certification be used to identify environmentally preferable products.
- The Finance Department collaborated with Office Max to provide training on sustainable office products and encourages departments to purchase office supplies through the Office Max sustainable office products program.

Because sustainable purchasing is more a process than a project, it is often incorporated into other City sustainability goals and may simply not be as visible and easy to report as, for example, a building project that gets highlighted under Sustainable Facilities. For example, inductive lighting in the Library garage is an example of sustainable purchasing, although for purposes of this report it is categorized under Sustainable Facilities.



Inductive fixture in the Library garage

- An example that clearly falls into the sustainable purchasing category is the City's purchase in 2011 of 900 megawatt hours of renewable energy through Pacific Power's Blue Sky program, which had an environmental benefit equivalent to avoiding 490 metric tons of CO₂ emissions.

Next Steps for Sustainable Purchasing Goal:

- Update municipal greenhouse gas inventory, including embodied emissions from supply chain.
- Provide green purchasing training to procurement staff and supervisors.

Vehicle Carbon Footprint

Vehicle carbon footprint is measured in the organization's greenhouse gas inventory. The City aims to decrease its use of fossil fuels by using more energy-efficient, alternative-fuel, and hybrid vehicles and by changing driving behaviors.

Goal Progress: The City did not meet its target to reduce greenhouse gas emissions from City vehicles (fleet, transit) to 1.5% below the baseline year.

- Baseline: 2004: 1,801 MT CO₂e
- 2011: 2201 MT CO₂e
- **Increase = 22.2% above base year**

In 2011, the organization increased the use of fuel in City vehicles by 1.9% as compared with 2010. City fleet fuel consumption rose by 0.6%, and transit fuel use rose by 3.6%. In 2011, fuel consumption generated approximately 16% of the City's greenhouse gas emissions. The City will continue to pursue efforts and adopt new technologies to reduce emissions, which will have the dual benefit of saving money and reducing the impact on the environment.

The organization did see some positive developments related to fuel savings in 2011:

- In March, the Library took ownership of a new Sprinter van converted for use as a bookmobile. Although smaller than the old Bookmobile, the Sprinter has nearly the same capacity for materials but much better fuel mileage and lower overall operating costs.
- The Fire Department installed equipment for an e-learning initiative, which features two-way, real-time communication between the stations and headquarters. This will enable crews to remain in their districts for most classroom-type trainings and briefings, thereby saving fuel and time.
- City employees participating in Get There Another Way Week in May reduced their personal carbon footprints by avoiding nearly 7,000 miles of travel by single-occupancy vehicles.



Out with the old -- 6 miles per gallon . . .



In with the new -- 16 miles per gallon.

Next Steps for Vehicle Carbon Footprint:

- Separate existing Equipment Management System administrative policy into one policy focused on garage operations and another that addresses sustainability aspects of the vehicle fleet, such as replacement schedules and the types of vehicles and fuel purchased.

Zero Solid Waste

Zero solid waste encourages staff to use resources in a manner that reduces waste to the landfill to zero. It promotes reuse, recycling, and waste prevention from reduced consumption and considers the entire life cycle of a product. Staff conducts waste audits and measures success by the diversion of waste from the landfill, an increase in materials recycled or reused, and financial savings from smaller garbage bins.

Goal Progress: The City met its target to reduce waste to the landfill from City operations to 25% below the baseline year.

- Baseline: 2009: Waste to landfill from City operations roughly 113 tons.
- 2011 Result: Roughly 80 tons sent to the landfill.
- **Reduction = 29% below base year**

In 2011, the City reduced its waste to the landfill by about 20 tons as compared to 2010. Waste audits conducted in staff areas of all facilities revealed very little material in the garbage that could be recycled. Public garbage containers, however, contained much recyclable material.

Staff has initiated a variety of innovative material reduction and recycling solutions:

Reduce

- By reformatting the City services bill into a tri-fold statement, the Finance Department eliminated the need for 180,000 envelopes, saving \$4,000 per year. The Department also replaced shut-off notification letters printed on letterhead with postcards to reduce postage and paper.
- Twenty-five percent of registrations for Parks and Recreation programs are now being done online, which reduces paper waste and staff time.
- Parks and Recreation began publishing its Activity Guide in a new size and format to facilitate mailing along with “the City” newsletter. Bundling the two publications has reduced paper use and mailing expenses and increased distribution of the Activity Guide.

Reuse

- Public Works delivered surplus traffic signal poles and cabinets to Benton County for reuse at a new traffic signal at 53rd Street and Reservoir Road.
- Public Works used 100 cubic yards of sweeper debris in the construction of the Police evidence compound, saving about \$750 in waste disposal costs and another \$1,000 in material costs.
- Parks and Recreation donated more than 12,000 square feet of pavers from the Central Park plaza reconstruction to the Habitat for Humanity Re-Store.



Recycle

- Public Works gave 600 gallons of used oil to Oregon HEAT, an organization that helps low-income families pay for utilities. The Department also partnered with the local gleaners to re-purpose wood waste from a project into firewood for low-income residents.

Paper Towel Recycling Expands to Public Areas

In 2010, Allied Waste began offering organics collection in yard carts, which provided the City the opportunity to dispose of paper towel waste in yard carts. Staff began collecting paper towels from non-public areas along with food waste from lunch rooms for this organics collection. By the end of the year, paper towel recycling had been implemented in staff areas at most City buildings. During 2011, three facilities (Library, Fire Station #1 and the airport) reduced their garbage enough to downsize their containers or to purchase (versus rent) their own dumpsters and/or decrease collection frequency. The combined savings to the City was approximately \$2,600. For all containers purchased in the past two years, the annual savings will be \$5,000.

Concerns about contamination prevented implementation in public restrooms, but in 2011 Parks and Recreation began working with Allied Waste on a pilot program to collect paper towels from selected public areas at the Osborn

Aquatic Center. City staff, volunteers, and non-profits using the facility receive recycling training.

Because of the successful test, Osborn sends about one-half cubic yard less waste to the landfill every week and plans to purchase a smaller dumpster instead of renting one. Parks and Recreation plans to roll out the program at the Senior Center as well.



City-owned dumpsters are labeled with, "STOP: Items placed in this container are going to the landfill. Are you sure they're not recyclable?"

Next Steps for Zero Solid Waste:

- Complete department-specific waste management plans.
- Develop plan to improve recycling in public areas of City buildings.

Community Capacity Building

As directed by the City Council Organizational Sustainability policy, this report focuses on progress achieved by the City's internal sustainability program and objectives for the next reporting period. However, City staff play a large role—often as volunteers—in community sustainability as well.

City employees sponsor or participate in many community education and outreach events each year:

- Police and Public Works Department employees participated in two "National Take Back Initiative" events hosted by the federal Drug Enforcement Agency, collecting a total of 1486 pounds of unwanted medications. The medications were destroyed in a waste-to-energy incinerator, avoiding the possibility of their being abused or contaminating the water supply.



National Take Back event encourages safe disposal of unwanted medications.

- Fire Department Prevention Officers worked with volunteer firefighters and sorority volunteers to check smoke alarms in neighborhoods surrounding Oregon State University. Teams visited 550 homes and tested 300 alarms, restoring 20 with new batteries and installing 15 more.
- For a second year, the Library collaborated with Linn-Benton Community College's Benton Center to host a four-week Renewable Energy lecture series. Lectures covered geothermal energy, hybrid and electric vehicles, wind power, wave power, and residential solar systems.
- The Library also acquired the GREENR: Global Reference on the Environment, Energy and Natural Resources database, which offers content focused on environment and sustainability topics. It includes news, commentary, audio, video, primary source documents, case study statistics, and links to major environmental associations (from Greenpeace to the World Wildlife Fund).
- Staff conducted outreach for City water conservation and transportation programs by participating in Kids Day for Conservation, da Vinci Days Green Town, the Corvallis Environmental Center's Earth Faire, and Oregon State University's Earth Week Vendor Fair.
- City staff provided lectures on water and water conservation at the Institute for Lifelong Learning, Gearing Up For Gardening, and the OSU-Benton County Extension's Neighborhood Sustainability Stewards training workshop.

City staff look for opportunities within their service areas to benefit those in need in the community:

- The Library serves at-risk families through its Early Literacy Coordinator, who works closely with the Benton County Relief Nursery and other organizations.
- For a week in December, the Library accepted non-perishable food items in lieu of fines on over-due items. A total of 1,875 pounds of food was collected for the Linn-Benton Food Share.
- The City collected 53 pints of blood at its annual American Red Cross Blood Drive. In the past three years, the drive has collected a total of 152 units for a potential impact on 456 lives.
- Corvallis Police officers participate in the annual "Shop with a Cop" event each December. Sponsored mainly through donations from police officer associations, individuals, and local stores, officers help a local child pick out gifts for themselves and their family members.
- The volunteers of the Corvallis Police Auxiliary provide crime prevention presentations, home and business security surveys, and personal safety education at no cost to the community. They also coordinate the Business and Neighborhood Watch programs.
- The Parks and Recreation Youth Volunteer Corps' "Say Cheese" event sold 200 grilled cheese sandwiches and raised \$650 to support the Jackson Street Shelter.



Food for fines benefits Food Share

In the most recent employee survey, 71.5% of respondents said they volunteered time in their communities in the past year.

- The Police Department sponsored the second annual Polar Plunge Corvallis, raising more than \$55,000 for Special Olympics Oregon.
- Employees bring cans and bottles from home and collect them from public recycling bins in City buildings, such as the Osborn Aquatic Center. Staff volunteers return them for deposit, donating the proceeds to the Linn Benton Food Share. The pull tabs go to Good Samaritan Regional Medical Center, which sells them to a recycler and uses the proceeds for services and supplies not covered by insurance. In 2011 the project netted \$597 in deposits — equivalent to about 3,400 meals—and 105 pounds of pull tabs.
- City employees volunteered with United Way Day of Caring, the Corvallis Bicycle Collective, the Sustainable Building Network, and a Sustainable Landscape Peer Group.



Police plunge into the Willamette River



The City is a founding member of the Corvallis Sustainability Coalition and works with the Coalition and other organizations on sustainability projects:

- Stormwater pollution prevention staff collaborated with the Coalition's Water Action Team on a project to educate property owners along urban streams about invasive plant removal, erosion control, plant maintenance, and testing water quality.
- Community Development's Housing Division worked with the Energy Action Team and the Corvallis Environmental Center on low-interest loans for residential energy efficiency projects through a revolving loan fund using federal stimulus funds (See EECBG update below).
- The Sustainability Supervisor serves on the Coalition Steering Committee and Communications Committee.

Corvallis Residents Take the Car-Free Challenge

Public Works Transportation Division staff partnered with the Corvallis Sustainability Coalition's Transportation Action Team in hosting Corvallis's second World Car Free Day event in September. The day began with participants registering at 10 check-in stations located near major commute trip origins/destinations throughout the community. Volunteers at the stations gathered trip data, provided snacks, and distributed bike and transit maps and information on commute trip options (bike, walk, van/carpool, transit, telecommute) and bicycle and pedestrian safety.

- With 419 registered participants, the reduction of vehicle miles traveled was between 1,515 and 2,745 miles, a CO₂ reduction of between 1,800 and 3,300 pounds.
- Trips by those whose normal commute involves driving alone decreased by 87.5%.
- More than 340 people pledged to travel car free in the next year on a specific number of days per week, month, or year. The average person pledged to forgo driving one out of two days.



Mayor Julie Manning kicks off the World Car Free Day Festival by reading the City Council's proclamation of September 22nd as Car Free Day in Corvallis.

In 2011, sustainability program staff worked closely with community groups to develop several energy conservation projects under “Energize Corvallis,” the program funded through the Environmental Protection Agency’s Climate Showcase Communities grant. The projects got underway in the spring of 2011, and their progress has been impressive:



- The Corvallis Environmental Center expanded its energy-efficiency programs to include Communities Take Charge, a neighborhood outreach program that encourages residents to reduce energy use through no-cost and low-cost actions. Communities Take Charge is being expanded to include the Campuses Take Charge program at Oregon State University. Another program known as Energizers is working to create networks for disseminating energy-related information throughout Corvallis.
- The OSU-Benton County Extension Service conducted its first training session in the Neighborhood Sustainability Stewards program. The 12 graduates will perform 60 hours of service educating and supporting community members about reducing their personal energy use.
- The Resource Innovation Group, a non-profit climate change research organization based in Eugene, kicked off a new and unique program called Green Shares, which trains Corvallis employees in eight commercial sectors to work with customers to reduce residential greenhouse gas emissions. In 2011, eleven businesses with a total of 79 employees were enrolled as Green Shares participants. These businesses are seeking information on loans and incentives that they can pass on to their customers as well as techniques to market energy efficiency.
- In 2012, the City will conduct Corvallis’s first community greenhouse gas inventory, which will help track and measure progress not only toward the goals of the EPA Climate Showcase Communities grant, but toward those of the City Council Energy Strategy and the Corvallis Sustainability Coalition’s Action Plan.



Communities Take Charge is committed to reducing energy use in Corvallis. The program focuses on more than 70 no-cost and low-cost actions to help residents save energy and money. The program’s goal is for 5,500 residents to try three energy-saving actions for one month.

Energy Efficiency and Conservation Block Grant (EECBG) Update

As of December 30, 2011, the City had expended approximately 52% or \$267,400 of its \$511,600 EECBG allocation.

Majestic Theatre Lighting Upgrade – The City upgraded incandescent and fluorescent lights to more energy-efficient fixtures. The project was completed in June 2010. Project budget = \$16,000; project cost = \$14,755

Energy Efficiency Volunteer Coordinator – Through a subgrant to the Corvallis Environmental Center (CEC), a Volunteer Coordinator was hired in January 2010 for one year to train volunteers to educate residents on energy-reduction techniques and financial incentives. The project, completed in January 2011, trained 82 volunteers, contacted 1,080 households, and assisted 58 households to complete 183 energy conservation measures. Project budget = \$50,000; expenditures = \$49,993

Corvallis Weatherization Incentive Program (CWIP) - Through a subgrant to the CEC, the program offered incentives of up to \$500 to households for weatherization projects. As of the project's completion in December 2011, 115 incentives had been disbursed for a total of \$50,083. The estimated annual energy savings from these projects are 23,413 kilowatt hours and 15,627 therms. Project budget = \$79,600; expenditures = \$79,566

Saving Energy Loan Fund (SELF) – As of December 30, 2011, the Housing Division had issued 11 loans for energy conservation projects. The remaining grant funds were transferred to alternate projects. Revised project budget = \$188,702; expenditures = \$126,000

Senior Center Geothermal Heating – This project was cancelled after a design review revealed that there was inadequate budget to complete the project as proposed. Revised project budget = \$2,078; expenditures through December 30, 2011 = \$2,078

Corvallis Library Chiller Replacement – An obsolete air conditioning chiller is scheduled to be replaced with a smaller, more efficient unit in May 2012. To complete the project, grant funds were transferred from the Senior Center geothermal project and the SELF program. Project budget = \$180,000; expenditures through December 30, 2011 = \$0

Fire Station #1 HVAC Commissioning – This project involves the installation of new sensors, control hardware and software, and system tuning to achieve a more comfortable building while using less energy. This project is expected to save up to \$5,000 a year in energy expenses. Project budget = \$25,000; expenditures through December 30, 2011 = \$0

Lighting Upgrades – Outdoor lights at the Wastewater Plant will be upgraded because they are inefficient and are dangerous to work on. The number retrofitted will depend on the price per fixture. Project budget = \$16,100; expenditures through December 30, 2011 = \$0

If you have questions or comments about the City's sustainability program, please contact the Sustainability Supervisor at 541-754-1736 or visit <http://www.ci.corvallis.or.us/sustainability>

