

MEMORANDUM

TO: Mayor and City Council

FROM: Steve Rogers, Public Works Director

DATE: September 1, 2004

SUBJECT: Annual Report on Organizational Sustainability Practices

ISSUE

The City Council policy on sustainability requires an annual report that identifies organizational sustainability efforts and provides a preview of sustainability objectives for the 2004/05 fiscal year.

BACKGROUND

The purpose of the sustainability policy is to ensure City department programs and practices are consistent with City Council's commitment to achieving a more sustainable organization through efforts that promote more efficient and environmentally friendly operations; protect clean air and water; reduce energy consumption and the use of natural resources; reduce the use of toxic materials and persistent biotoxins; promote recycling, waste reduction and solid waste management; and encourage conservation of native vegetation and habitat.

DISCUSSION

To meet policy reporting requirements each department documents its sustainable activities on a quarterly basis and reports those efforts to the Public Works Department. Sustainable activities are separated into six major categories:

- Sustainable Purchasing Practices
- Land Use Planning
- Green Building Practices
- Green House Gas Emissions
- Solid Waste Management
- Toxics and Persistent Biotoxins

Also listed is a miscellaneous category to group staff efforts that meet sustainability objectives but don't readily fit within the six major categories in the policy. Listed below is a summary of each department's sustainable efforts achieved over the last fiscal year and each department's objectives for the 2004/05 fiscal year.

Sustainable Purchasing Practices

Public Works:

- Purchased low-sulphur diesel fuel with 20% bio-diesel to minimize pollution.
- Purchased durable street marking materials to reduce waste, labor, and equipment.
- Used life-cycle cost analysis for vehicle purchases.
- Purchased recycled content paper.

- Coordinated the work efforts of two projects so that rip-rap material removed from one project could be used on another.
- Replanted surplus trees from a previous stream restoration project, in a former dump site area north of the CSO lagoons.

Objectives 04/05

- Purchase used pallet racks for use in materials warehouse (cost savings are about 50% of the cost of new shelving).
- Begin use of reused, refilled printer cartridges from local business.
- Explore use of silt/soil removed from the Rock Creek reservoir project as back-fill for future utility repairs eliminating the need to purchase similar material.

Parks and Recreation:

- Purchased paper products instead of styro-foam containers at special events whenever possible.
- Purchased diesel equipment instead of gasoline-powered equipment to reduce maintenance and replacement costs.

Finance Department:

- Purchased recycled content paper.

Objectives 04/05

- Revise purchasing manual with focus on lowest economic cost, taking into account long-term costs associated with replacement/disposal.
- Address recycled content issues for organizational purchasing decisions.
- Expand information in purchasing manual to include disposal of surplus property to address sustainability.

Land Use Planning

Public Works:

- Repaired over 15,000 square feet of sidewalk through the Sidewalk Safety program to ensure safe pedestrian facilities in the community.
- Installed additional bicycle lanes on arterial and collector streets.
- Implemented use of swales for natural water run-off detention in new development.

Objectives 04/05

- Integrate stormwater run-off into landscape/parking lot design.

Community Development:

- Undertook a project to balance the community's interest in protecting significant natural resources with the need to provide sufficient land for development needs including housing, business development, public facilities and infrastructure encouraging compact urbanization and efficient use of resources.

Objectives 04/05

- Complete Land Development Code Phase III Update resulting in a comprehensive program which protects key resources including drainage ways and other naturally functioning systems within the Corvallis Urban Growth Boundary.
- Present the Erosion and Sedimentation Control Ordinance for Council approval.

Green Building Practices

Public Works:

- Constructed new fire station to Leadership in Environmental and Energy Design (LEED) Green Building standards.

Objectives 04/05

- Examine green building practices in renovation of existing structures and the LEED rating system for sustainable operation of existing structures.

Parks and Recreation:

- Incorporated LEED silver design standard in Senior Center renovation project.
- Promoted landscape re-vegetation throughout the City.
- Zeroscape landscaping used to reduce water consumption.

Community Development:

- Worked with developers to prevent erosion and control sediment at construction sites.

Green House Gas Emissions

Public Works:

- Continued participation in Go Green renewable power program (wind power purchase).
- Used 4,138,775 cubic feet of bio-gas for heating purposes to offset natural gas consumption.
- Used bio-gas to power a 25 KW Stirling engine that produced 19,505 kwh of electricity.
- Continued to lead and coordinate the Corvallis Employer Transportation Coordinators (ETC) program to increase alternative transportation modes including van/car-pooling, telecommuting, flex-schedules (reducing congestion, air pollution, etc.), walking, biking and transit use.
- Continued to actively promote transit use in the community as well as commuter service between Philomath, Albany, and Corvallis.
- Optimized traffic signal timing to reduce congestion, air and noise pollution, and fuel consumption, etc.
- Retrofitted additional traffic signals (red and green) with light emitting diode (LED) bulbs to save energy and reduce electrical cost for traffic signals by 11.5% (includes new signals at 53rd & Harrison, 26th & Hwy 20/34 and 15th & Hwy 20/34).
- Used inverters in service vehicles to run power tools instead of separate gas powered generators.
- Chipped brush removed from drainage area on-site, instead of removing and hauling to shop area for disposal.
- Installed variable speed pumps on the intake structure at the Taylor Water Treatment Plant to reduce energy costs and even out pressure in water distribution system.
- Completed lighting upgrade at Taylor Water Plant and Wastewater Reclamation Plant.

Objectives 04/05

- Purchase two hybrid motor vehicles.
- Complete facility upgrade at disinfection building to reduce natural gas consumption.
- Use waste bio-gas to power a new 65 KW Stirling engine to offset plant electrical needs.
- Examine use of waste hot water from Stirling engine project to heat and cool Public Works administrative and equipment repair facilities to offset natural gas needs.

- Complete lighting upgrade for Public Works administrative and equipment repair facilities.
- Promote the benefits of biodiesel blended fuel.

Parks and Recreation:

- Posted signage to encourage employees to turn off lights when leaving rooms.
- Used light timers in picnic facilities (4 shelters, 3 restrooms, and 5 other park locations) to shut off lights automatically.
- Managed thermostat controls for maximum efficiency.
- Reduced lighting requirements in the Aquatic Center during normal operations by disabling eight, 1,000 watt, metal halide, overhead lights.
- Used low-wattage fluorescent lights for indoor pool security lighting.
- Cycled-off the Aquatic Center air circulation fans at night.
- Installed blinds on south facing, Aquatic Center windows for energy efficiency.
- Initiated program to replace outdoor metal halide lighting to high pressure sodium lighting in the parks system.
- Installed a liquid pool cover system on Aquatic Center pools to reduce evaporation and heat loss.

Objectives 04/05

- Establish a lights-off policy to turn off lights in all non-essential, unused work areas.
- Apply slightly tinted windows in the office areas to assist in temperature control.
- Purchase insulated pool blanket for small indoor pool to further reduce heat loss.
- Evaluate effectiveness of liquid pool cover system, purchase insulated pool cover for large pool if necessary.

Finance Department:

- Leased an Energy Star compliant copier.

Solid Waste Management

Public Works:

- Recycled paper products, co-mingled materials, and cardboard.
- Reused one-sided paper and print on both sides when possible.
- Collected office paper ream wrappers for reuse as children’s book covers or paint murals.
- Collected used printer cartridges and donated to 509J for reuse.
- Used 230,688,730 million gallons of reclaimed water for irrigation and other routine uses where potable water is not required and use of reclaimed water is allowed by federal and state law.
- Screened and recycled street cleaning debris collected by sweepers.
- Installed lap top computers in vehicles to replace field use of paper maps.
- Implemented a paperless tap card (meter registration) program which digitally transmits orders between departments for new water services from origination to installation.
- Reduced waste and consumption of construction/paving materials and extended street life with slurry, crack seal and grind-inlay programs.
- City of Corvallis Standard Construction specifications made available on the City's Website to reduce the number of paper copies produced.
- Used screened sweeper compost as a soil additive for tree planting.

Objectives 04/05

- Continue to research new methods for waste reduction, separation, and reuse.

- Reuse waste building materials through used building material store owned and operated by Benton Habitat for Humanity, materials will be sold for reuse with the proceeds used to build housing for low-income families.

Parks and Recreation:

- Recycled office paper, magazines, and cardboard.
- Re-used paper that was printed on one side.
- Recycled ink cartridges.
- Recycled fluorescent light tubes, and other operational materials at Aquatic Center.
- Encouraged duplex printing whenever possible.
- Encouraged use of electronic files.
- Increased information on web site to reduce use of paper copies.
- Distributed over 150 cubic yards of wood chips to the public.
- Sold used chlorine tablet buckets to the public for reuse.
- Installed a composting garbage container at Riverbend Park.

Objectives 04/05

- Require renters of park buildings (Senior Center, Aquatic Center, Tunison Community Center, Corl House and Walnut Park facility) to recycle waste.
- Use recycled paper products in park buildings including paper towels and toilet paper.
- E-mail staff regarding dates for Corvallis Disposal household hazardous waste collection events.
- Use recycled materials & supplies in recreation and teach-in programs.

Finance Department:

- Recycled all paper and co-mingled materials.
- Printed on both sides of paper for most tasks, reducing the amount of paper used.
- Reused single sided paper.
- Made note pads from reused paper.

Toxics and Persistent Biotoxins

Public Works:

- Beneficially reused 3,046,400 million gallons of bio-solids in 03/04 to offset commercial fertilizer requirements on local crop lands.
- Extracted more than 31.1 million gallons of contaminated groundwater containing 31,943 pounds of chromium from the United Chrome Superfund site.
- Switched from sodium thiosulfate to ascorbic acid as a de-chlorinating agent in water line flushing to eliminate lower dissolved oxygen content in drinking water.
- Reclaimed and recycled used asphalt oils and solvents.
- Waste oil accumulated at City shops is collected and recycled by outside vendor.
- Used citrus based cleansers and soy bean oils to minimize use of diesel fuel for cleaning equipment.
- Recovered and refined used antifreeze for reuse.
- Accepted 13,618,900 gallons of Valley Landfill leachate for full treatment at the Wastewater Reclamation Plant.

Objectives 04/05

- Examine environmentally friendly chemicals for use in operations.

Parks and Recreation:

- Used bio-hazard bags and containers at the Senior Center and Aquatic Center to properly dispose of waste.

Community Development:

- Provided funding for housing rehabilitation projects, a component of which was the interim control and/or abatement of lead paint hazards and removal of asbestos-containing materials.

Finance Department:

- Hand trimmed around water meters to minimized use of chemicals for weed abatement.
- Used chemicals in compliance with the City's IVPM policies.

Miscellaneous

Public Works:

- In cooperation with the Energy Trust of Oregon and BacGen Technologies, performed (free of charge) complete systems operations analysis at Wastewater Reclamation Plant and Taylor Water Plant to identify operational inefficiencies.
- Completed a leak detection survey of 80 miles of pipe in the water distribution system to repair leaks and reduce energy and chemical costs.
- Conducted department-wide meeting to discuss sustainability policy and future sustainability efforts.

CONCLUSION

As illustrated by the information submitted by each department, staff is making considerable effort to incorporate sustainable practices into ongoing organizational operations. However, with no formal tracking procedures in place prior to adoption of the policy, a number of sustainable activities may not be included in this report. As a result, staff will implement a quarterly tracking and reporting process to ensure better documentation of organizational activities through the next reporting period.

RECOMMENDATION

This report is for information only, no Council action is necessary.

Review and Concur:

Jon S. Nelson, City Manager