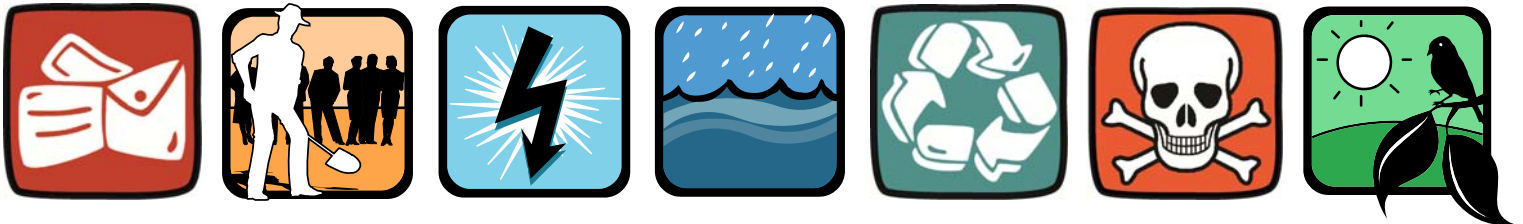




Sustainability Action Plan for City Operations 2014 Update

March 11, 2014

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For additional information about City sustainability projects and plans, resources for businesses and households, and the work of the Sustainability Advisory Board visit www.ci.oswego.or.us/sustainability.

EXECUTIVE SUMMARY

Focused on improving the sustainability of municipal operations, the Sustainability Action Plan for City Operations (Plan) provides a framework and set of strategies and prioritized actions that support the continued provision of quality services to Lake Oswego citizens in a fiscally prudent, socially responsible, and environmentally sound way, ensuring that current needs are met without compromising the ability of future generations to meet their own needs.

Incorporating sustainability into the City's strategic decision making:

- Results in efficiencies that can save time and money,
- Contributes to a healthy and supportive workplace and community,
- Helps to protect and enhance the natural environment, and
- Prioritizes opportunities that increase revenue, reduce costs, mitigate economic, social, and environmental risks, and improve the City's brand image.

This Plan, an update of the Sustainability Plan for City Operations adopted in 2007, was prepared with the input of a staff steering committee. It includes an overarching vision, a set of guiding principles, and long-term aspirational goals to create a common understanding and inform efforts. The Plan's seven action areas, identified as the highest impact areas of City operations with the most opportunity for improvement, include:

- Fiscal Responsibility and Organizational Stability
- Quality Services
- Greenhouse Gas Emissions
- Water Conservation
- Waste Prevention
- Toxics Reduction
- Habitat Enhancement and Stormwater Management

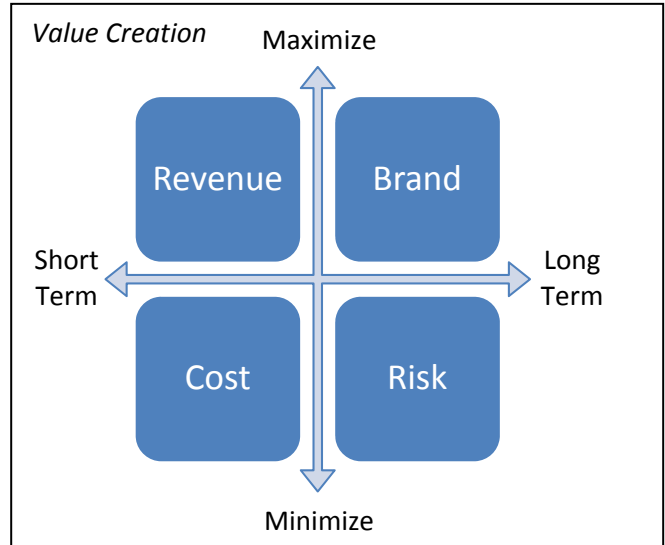
The core of the Plan is an updated set of strategies and actions prioritized for implementation in the next five years, informed by the results of past efforts as summarized in the Progress Report prepared in 2013. Organized by the action areas, the strategies and prioritized actions outline the work needed to move toward the Plan's goals (see Section VI for details).

To prioritize actions, three factors were considered:

- The **effectiveness** of a proposed action to move City operations toward identified goals, in keeping with the Plan's vision and guiding principles,
- The **value** of the action based on a set of "value creation" criteria developed by the steering committee to better understand the business case for sustainability, and
- The **difficulty**, or feasibility, of implementing the action.

The “value creation” graphic, to the right, helps to illustrate the business case for sustainability actions by identifying the many ways projects can add or create value. This value is in addition to benefits to human health and the natural environment, with the aim of maximizing revenue and brand and minimizing cost and risk, with consideration of short-term and long-term implications.

Updated targets and indicators used to monitor progress toward the Plan’s goals are also discussed. Additionally, several implementation and maintenance strategies have been identified to ensure continued management of the effort over time.

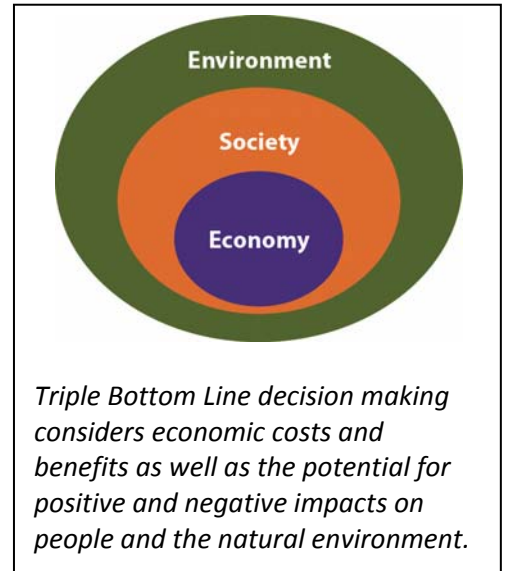


I. PURPOSE

Focused on City operations, this Plan provides a framework and set of strategies and prioritized actions that support the continued provision of quality services to Lake Oswego citizens in a fiscally prudent, socially responsible, and environmentally sound way, ensuring that current needs are met without compromising the ability of future generations to meet their own needs.

Triple Bottom Line

The City has long recognized the necessity of providing city services and managing its assets in the most efficient manner possible, with a focus on cost effectiveness. Increasing awareness of how a myriad of economic, social, and environmental challenges and opportunities intersect with and impact the City's ability to deliver key services, the approach has broadened to include the Triple Bottom Line (economic, social, and environmental) principles of sustainability. Cost is and always will be a key factor in the delivery of municipal services, but social and environmental costs and benefits must also be considered.



Asset Management

Another way to think about the City's commitment to sustainability is to expand one's understanding of capital assets to include five capital assets: financial, built, human, relationship/social, and environmental (natural), with an emphasis on managing these assets responsibly for the purpose of delivering long-term well-being to asset owners, the citizens of Lake Oswego. To this end, this Plan outlines strategies to enhance the long-term management and protection of these assets in order to provide key services to Lake Oswego citizens in a way that does not compromise the ability of future generations to meet their own needs. Strategically supporting and investing in these capital assets is a key component in maintaining valuable services for the Lake Oswego community over the long-term.

Fiscal Responsibility and Risk Avoidance

With an emphasis on fiscal responsibility, human health and wellness, long-term operational efficiency, resource conservation, toxics reduction, waste and pollution prevention, and ecosystem health, the Plan identifies strategies and actions the City can take to bolster resilience and increase its effectiveness in light of economic, social, and environmental challenges we face now and anticipate facing in the future. By addressing the sustainability of City operations in a systematic and coordinated way, the organization is better prepared to respond to these challenges in a way that maintains financial stability and has the potential to provide a variety of economic, social, and environmental benefits as well.

For example, practicing sustainability helps identify waste reduction and efficiency opportunities. Thoughtful implementation of these opportunities ensures public resources are

applied where best needed while strengthening the organization's resiliency to inevitable increases in costs due to rising energy, fuel, and water rates. From an economic standpoint, it is the fiscally smart thing to do. The City is small enough for these types of investments to pay off if done in a deliberate fashion. Instead of planning to spend ever increasing amounts of public resources on rising energy costs, strategic investment in resource conservation, waste reduction, and energy efficiency and renewable energy projects will save the City far more than the initial investments. The coordinated implementation of sustainability projects – energy efficiency and fuel efficiency in particular – will continue to result in significant cost avoidance in the coming years.

II. BACKGROUND

In 2006 the City Council authorized the formation of a staff steering committee charged with evaluating the current level of City procedures, programs, and practices and making recommendations to keep the City moving forward in its efforts to operate in a more sustainable way. The committee's work resulted in a Sustainability Plan for City Operations. With an emphasis on efficient use of natural resources, financial savings, and employee and community health, the 2007 Plan guided City operational efforts toward long-term sustainability ideals, with measurable milestones set for five years ending in 2012. Progress toward the Plan's goals has been tracked since its adoption in 2007. The Progress Report prepared in 2013 provides an overview of progress toward the 2012 milestones and highlights accomplishments since 2010, when the last progress report was prepared. (The 2007 Plan, Progress Reports, and related documents are available at www.ci.oswego.or.us/sustainability/sustainability-plan-city-operations.)

With the City Council's support, the City Manager's Office convened an ad-hoc steering committee to review the 2007 Plan and the 2013 Progress Report to identify and prioritize future sustainability efforts for City operations. The committee, comprised of a range of City staff, service provider partner, and a member of the City's Sustainability Advisory Board, met three times during the winter of 2013-2014 to craft the recommendations in this updated Plan.

III. VISION AND GUIDING PRINCIPLES

In developing the 2007 Plan, a vision and set of principles were adopted to guide the City's operational sustainability efforts by providing a common understanding and a long-term vision for the future. The vision and guiding principles have been carried forward in this Plan update with some refinements, as shown below.

Vision

A sustainable Lake Oswego is a community that meets the vital human needs of the present without compromising our ability to meet future needs. This requires consideration of both long-term and short-term economic, social, and environmental effects. Operating sustainably means that we are leaving a legacy for the community of Lake Oswego and the planet.

Guiding Principles

The Sustainability Action Plan for City Operations guides implementation of internal sustainability projects, programs, and procedures development, with prioritization of implementation strategies and actions that:

1. **Support City Council goals and community vision.**
2. **Increase efficiency and cost effectiveness of the delivery of key City services** in order to maintain quality services over the long-term.
3. **Reduce annual and long-term operating costs (or avoid) through demand and supply side approaches.** Approaches may include resource conservation; efficiency improvements and demand management (energy, water, fuel); decreased consumption of materials; prevention of toxic pollution and waste; specification of durable and long-lasting materials and flexible systems and technologies; and operational enhancements.
4. **Have potential to generate revenue.**
5. **Contribute to a healthy and safe environment** for workers and community members.
6. **Protect and restore air, water, and land** to preserve biological diversity, environmental health, and a natural resource base for future generations.
7. **Increase the resilience of the City organization, facilities, and infrastructure** (such as water delivery and treatment and transportation network) to increasing utility costs, regulatory compliance requirements, climate change impacts, and other external factors.
8. **Integrate sustainability principles into existing processes** to increase cross-departmental collaboration and efficiency and to foster continuous improvement and innovation.
9. **Build staff capacity** through engagement and education to engender a common understanding of why sustainability matters in the context of City operations.
10. **Communicate the results of efforts** in an ongoing way to allow adjustment and response, as needed, and most importantly, keep stakeholders (staff, Council, Advisory Boards, and community members) engaged and informed.
11. **Provide an opportunity for the City to demonstrate leadership and receive recognition** for sustainable practices.
12. **Increase the City's ability to attract and retain the best and brightest employees** by exhibiting a strong commitment to sustainability through concrete actions, which is increasingly important to be considered an employer of choice, resulting in reduced employee turnover and associated costs.
13. **Have a co-benefit of increasing community livability** by supporting local business, encouraging employee volunteerism in the community, preventing pollution, enhancing the natural environment, and modeling sustainable behaviors.

IV. ACTION AREA GOALS

While carrying forward the action areas and goals defined in the 2007 Plan, some of the goals and associated targets and indicators have been refined in the process of updating this Plan, based on steering committee input, new information since 2007, and ability to effectively track certain indicators. In some cases the action areas have been reframed or expanded, with

corresponding updated long-term goals that are intended to be ambitious and aspirational, as follow:

Goal 1: Fiscal Responsibility and Organizational Stability – Contribute to the long-term financial stability of the City organization through operational savings, risk avoidance, revenue generation, and brand creation that will continue to attract residents, businesses, and employees.

Goal 2: Quality Services – Deliver high-quality services at a reasonable cost to citizens by providing a healthy, safe, and supportive workplace that in turn lowers employee turnover and absenteeism and associated costs.

Goal 3: Greenhouse Gas (GHG) Emissions – Reduce direct and indirect greenhouse gas emissions and related consumption of energy, fuel, and other contributing sources.

Goal 4: Water Conservation – Conserve and optimize indoor and outdoor water use through the implementation of Best Management Practices.

Goal 5: Waste Prevention – Reduce overall generation of waste and recycle or compost all remaining waste by 2035.

Goal 6: Toxics Reduction – Eliminate the use or emissions of persistent bio-accumulative toxic (PBT's) chemicals and other priority toxic and hazardous substances by 2035.

Goal 7: Habitat Enhancement and Stormwater Management – All City parks, trails, natural areas, and developed properties positively contribute to healthy, functioning urban ecosystems and watershed health by 2035.

V. IMPLEMENTATION STRATEGIES AND ACTION PRIORITIZATION

To provide a framework for the work that needs to be done to move toward the City's sustainability goals, a set of strategies and prioritized actions have been identified for implementation during the next five years (2014-2019). The steering committee provided input on the implementation strategies and identified appropriate projects based on their role within City operations, technical expertise, and other information. Recommended strategies and prioritized actions are meant to be applicable across the City's operations and are not prescriptive to particular facilities or sites. Additionally, during the five-year Plan time period, additional strategies and actions may also be identified and implemented.

Strategies: The means for moving toward goals.

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

Action Prioritization

The steering committee reviewed and prioritized actions that should be completed to implement each strategy. The prioritization of actions was based on several factors:

- The **effectiveness** of an identified action to move City operations toward identified goals, in keeping with the Plan's purpose, vision, and guiding principles.
- The **value** of the action based on a set of "value creation" criteria developed by the committee to better explore and explain the business case for sustainability.
- The **difficulty**, or feasibility, of implementing the identified action.

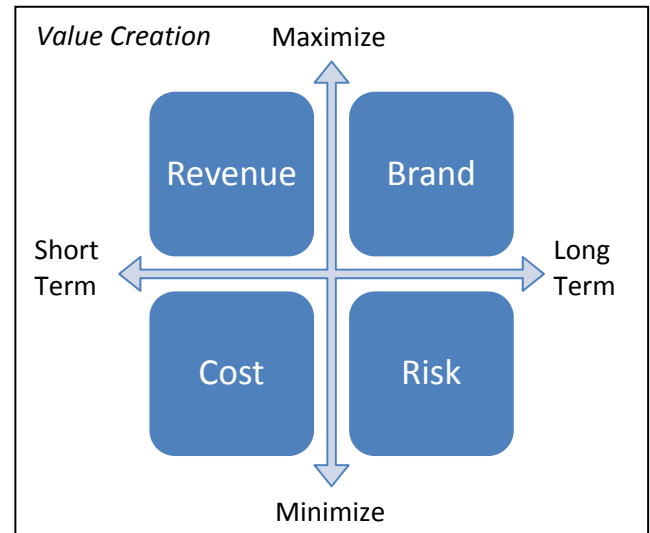
Effectiveness

The effectiveness of an identified strategy or action was assessed based on the potential to reduce the City's impact or increase performance in each goal area. For the goal areas with established baselines and indicators that have been tracked since the adoption of the 2007 Plan, information summarized in the 2013 Progress Report was reviewed to better understand which actions had the potential for the greatest impact.

Value

The "Value Creation" graphic, to the right, helps to illustrate the business case for sustainability actions by identifying the many ways projects can add or create value. This value is in addition to benefits to human health and the natural environment, with the aim of maximizing revenue and brand and minimizing cost and risk, with consideration of short-term and long-term implications.

Some examples the steering committee developed to better define "value" are shown below for illustrative purposes:



Revenue ("increase")

- Turn waste into revenue, such as selling outdated PCs on eBay
- Find and reduce lost revenue, such as lost water through leakage and faulty meters
- Form partnerships, such as selling solar power to electric utility
- Increase "sales" through expanded services offered within existing staffing resources, such as printing services, chipped trees for mulch, etc.
- Explore incentives that may result in increased tax base, such as encouraging investment in homes and business, etc.

Brand ("enhance")

- Excellent customer service; efficient and responsive staff
- Fiscally responsible
- Quality of "source" materials or inputs used in City operations.
- High quality drinking water source, Clackamas River
- Beauty of parks, landscaped medians, facilities
- Healthy natural environment – tree canopy, clean air and water
- Safe and clean community
- Educational support – support for schools, highly educated citizens

Cost ("reduce")

- Reduced or avoided costs through increased efficiency in labor, durability of materials, operating expenses, etc.

- First costs and selection of quality materials, systems, etc. and potential for cost savings through ongoing operations and maintenance
- Workforce stability – recruitment and churn/employee turnover

Risk (“avoid”)

- Employee health and safety threats
- Declining revenue and services
- Regulatory requirements or penalties
- Social concerns – employees, residents, “clientele”
- Impacts from natural hazards to City infrastructure, ability to provide services, etc.

Implementation Difficulty

In addition to considering the value of each action, as described above, the steering committee also considered the difficulty, or feasibility, of implementation. Difficulty considerations included, among others:

- First cost and availability of needed funding
- Return on investment or payback timeframe
- Staff time or capacity to implement and/or manage over time
- Ongoing maintenance concerns or benefits
- Technological readiness
- Timing
- Opportunity to partner or leverage outside resources
- Potential for City Council or community acceptance or support

Prioritization Rankings and Implementation Timeframe

In conjunction with considering the potential effectiveness of identified strategies, steering committee members used a numeric ranking system to assign value and difficulty for each project to assign priority and determine the implementation timeframe. Additionally, review and input from the City’s Sustainability Advisory Board was garnered to arrive at the final action prioritizations.

VI. RECOMMENDED STRATEGIES, ACTIONS, TARGETS, AND INDICATORS BY GOAL AREA

Organized by goal area, the strategies and associated actions are listed with priority, timeframe, action type, and responsibility, with the lead City department or division listed first.

Priority and Timeframe

Using the process described above, each action has been assigned a priority (High, Medium, or Low) and associated implementation timeframe as follows:

High Priority – Initiate and / or complete in 2014, or as already defined by project work plan, Capital Improvement Plan, or other approved or adopted City plan.

Medium Priority – Main projects to focus on in the next five years. Further define project parameters in 2014 and present to decision makers, where applicable, with detailed work plan for implementation during 2015 to 2018. Or implement as an ongoing project or program on an already defined schedule.

Low Priority – Do projects as able as resources allow, e.g. staff time, funds, etc., between 2014 and 2018.

Action Type

In addition to priority, the actions are categorized by the type of action. There are seven action types in the 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. **Program:** 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, policies, guidelines, or procedures.
6. **Capital Improvement:** Actions involving significant investment in City facilities or infrastructure.
7. **Funding:** Actions related to funding internal sustainability projects.
8. **Education:** Actions to educate City employees, and in some cases, Lake Oswego citizens and City suppliers and contractors.

Updated targets and indicators used to monitor progress toward the Plan's goals are also discussed below, and may include numerical targets as well as process, or qualitative, targets. Since each City division and facility has different opportunities for improvement, the targets provide a framework for measuring progress City-wide and are not absolute benchmarks.

Refined indicators will continue to be tracked over time to understand if the strategies and actions are helping to move City operations towards the long-term goals, with new indicators being developed as noted. Within each goal area progress toward the goal is listed (*show in italics*), where available, to provide a frame of reference. More details about progress in key benchmark areas and recent accomplishment (2010-2013) can be found in the 2013 Progress Report, available on the City's website listed above.



Goal 1. Fiscal Responsibility and Organizational Stability – Contribute to the long-term financial stability of the City organization through operational savings, risk avoidance, revenue generation, and brand creation that will continue to attract residents, businesses, and employees.

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager's Office)
Strategy 1. Clearly articulate financial and other benefits of City sustainability projects to employees, decision makers, and the community.	1.1 Establish a mechanism to calculate total savings and investments from sustainability-related projects. Determine feasibility of establishing quantitative targets.	M	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Tracking Assessment	Sustainability / CMO, Public Works– Operations, Finance
	1.2 Develop general guidelines on projects that would qualify for funding, such as minimum return on investment (ROI) and maximum payback period, where applicable.	M	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Operational / Policy Assessment	Sustainability / CMO, Public Works– Operations, Finance
Strategy 2. Identify opportunities to meet sustainability goals through City infrastructure and capital improvement projects, programs, and plans.	2.1 Evaluate infrastructure planning and maintenance processes to more holistically incorporate and prioritize strategies in support of sustainability goals, such as Wastewater Master Plan, Transportation System Plan, Capital Improvement Plan, pavement management program, materials and sizing specifications, etc.).	L	1 to 5 years, as resources allow	Operational / Policy Capital Improvement	Public Works, Planning, CMO– Sustainability
	2.2 Evaluate feasibility of overall procedures related to planning and coordination of street, water, wastewater, and stormwater infrastructure maintenance and repair.	L	1 to 5 years, as resources allow	Operational / Policy Capital Improvement	Public Works
Strategy 3. Engage and inform the public about City sustainability efforts.	3.1 Strategically highlight the sustainability elements of City projects through existing communications and outreach channels. For example, promote new Water Treatment Plant energy efficiency, renewable energy, water reuse, and other sustainability features.	H	Initiate or complete in 2014; ongoing	Education	Sustainability / CMO, All
	3.2 Develop demonstration projects that highlight sustainability features and strategies to engage and inform citizens and employees. Focus on City properties and opportunities to leverage existing resources.	L	1 to 5 years, as resources allow	Education	Sustainability / CMO, All

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager's Office)
	3.3 Identify opportunities to evaluate value of sustainability efforts to residents, businesses, and employees through communication channels already in place, such as community survey, Open City Hall, etc.	L	1 to 5 years, as resources allow	Education	Sustainability / CMO, Public Affairs
	3.4 Enhance communication strategies to further inform and engage stakeholders and community members.	L	1 to 5 years, as resources allow	Education	Sustainability / CMO, Public Affairs

Targets (Process / Qualitative)

- Establish a mechanism to calculate and track total savings and investments from implementation of sustainability projects.
- Determine feasibility of establishing quantitative targets and develop indicators (quantitative and qualitative).
- Develop general guidelines on projects that would qualify for funding, such as minimum return on investment (ROI) and maximum payback period, where applicable.
- Identify opportunities to meet sustainability goals through City infrastructure improvement projects, programs, and plans.
- Identify opportunities to evaluate value of sustainability efforts to residents, businesses, and employees.

Indicators – Potential indicators may include:

- Total savings and investments from sustainability-related projects. Requires tracking or quantifying the following:
 - First costs (staff time, materials, services).
 - Short- and long-term cost savings (e.g. from resource conservation, reduced maintenance, increased efficiency, improved processes, etc.).
 - Avoided costs (through risk reduction, reduced regulatory compliance, coordinated asset management and repair, etc.).
 - Revenue generated.
- Community and employee survey results; other outreach and evaluation results.



Goal 2. Quality Services – Deliver high-quality services at a reasonable cost to citizens by providing a healthy, safe, and supportive workplace that in turn lowers employee turnover and absenteeism and associated costs.

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager's Office)
Strategy 1. Engage and inform employees so all staff understand the City's commitment to sustainability and have access to information, tools, training, and other resources needed to accomplish job duties in keeping with City sustainability principles and for overall professional growth.	1.1 Finalize and deliver employee sustainability training to employees. Explore opportunities to tie sustainability topics into required employee health and safety training, where applicable, and enhance communication strategies to further inform and engage staff.	H	Initiate or complete in 2014; ongoing	Education	Sustainability / CMO, HR
	1.2 Continue to provide <i>Employee Sustainability Guide</i> to new hires; Update and revise as needed.	H	Ongoing	Education	Sustainability / CMO, HR
	1.3 Continue to offer informal brown bag and other learning opportunities related to sustainability, health and wellness, safety, organizational management, etc., as resources and staff interest allow.	M	Ongoing	Education	Sustainability / CMO, HR
Strategy 2. Provide a workplace where diversity, innovation, and volunteerism are respected and encouraged.	2.1 Continue to provide employee recognition opportunities, for example Employee Excellence Awards. Explore additional opportunities to promote diversity awareness, innovation, and volunteerism among City staff.	M	Ongoing	Education	Sustainability / CMO, HR

Targets (Process / Qualitative)

- Review data and other information tracked by Human Resources and other departments to determine feasibility of establishing targets and develop associated indicators (quantitative and qualitative).

Indicators – Potential indicators may include:

- Results of employee surveys and other leading indicators.
- Educational offerings; Diversity initiatives; Recognition programs; Opportunities to volunteer in the community.
- Employee absenteeism, retention, and turnover.



Goal 3. Greenhouse Gas (GHG) Emissions – Reduce direct and indirect greenhouse gas emissions and related consumption of energy, fuel, and other contributing sources.

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager’s Office)
Strategy 1: Reduce energy consumption and associated GHG emissions from City facility and infrastructure operations, maintenance, and siting through energy efficiency and resource conservation.	1.1 Develop energy use / plug load procedures for City facilities and engage employees in implementation. For example, computer shut down, use of task lighting and space heaters. <ul style="list-style-type: none"> • Conduct a pilot test project to determine effectiveness (use before and after data from Portfolio Manager and Energy Expert at City Hall and Library). • Evaluate participation in State Electronics Challenge (related to energy, procurement and waste prevention of office electronics, PCs, printers, copiers, etc.). 	M	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Operational / Policy Education	Sustainability / CMO, Public Works – Facilities, IT
	1.2 Evaluate feasibility of day light cleaning in City buildings for improved cleanliness, energy savings, and relationships.	L	1 to 5 years, as resources allow	Operational / Policy	Public Works – Facilities
	1.3 Develop high performance building guidelines and procedures for City facilities, including new building projects and major remodels, with the following elements: <ul style="list-style-type: none"> • Full life cycle cost analysis to evaluate expenditures (e.g. long-term operations and maintenance cost savings in addition to first cost). Prioritize energy, water, and waste savings. • Prioritize components that meet or exceed payback of 20 years through energy savings. • Endeavor to meet the highest achievable green building standards inspired by the Living Building Challenge, striving to achieve zero net energy and water consumption in a building that produces no wastes or toxics and is built for passive survivability. • Use Operations or Police project as pilot test case, depending on timing. 	H	Initiate or complete in 2014; ongoing	Operational / Policy	Sustainability / CMO, Public Works – Facilities & Operations, LORA

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager's Office)
	<p>1.4 Continue to make energy efficiency improvements at facilities (building, parks, infrastructure), evaluate facilities not yet audited, and identify funding sources to implement, which may include:</p> <ul style="list-style-type: none"> • Effectiveness of existing systems to automate energy use, such as automatic shutdown of HVAC systems, additional room lighting sensors, etc. • Additional lighting retrofits and upgrades (indoor and outdoor; parking lots). • Ballfield lighting program to reduce incidence of lighted fields with no use. • Building retro-commissioning (to test effectiveness of building systems), where appropriate. • Building weatherization (insulation, air sealing, etc.). • Equipment upgrades (boilers, HVAC, hot water heaters, refrigerators, etc.). <p>Evaluate value of Performance Contracting review of City facility and infrastructure operations.</p>	M	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Operational / Policy Capital Improvement	Public Works – Facilities & Operations, Parks, Sustainability / CMO
	<p>1.5 Retrofit streetlights with LEDs for energy efficiency and reduced maintenance:</p> <ul style="list-style-type: none"> • Phase 1—\$470,000 with an annual payback of \$110,000 for a payback of about 4 years with lights that are under warranty for 10 years. Funding secured. • Phase 2—\$1.25 million with an annual payback of \$120,000 for a payback of about 10 years. Identify funding. 	H	Phase 1 to be completed 12/2014 Phase 2 – TBD	Capital Improvement	Public Works – Operations
	<p>1.6 Consider City-wide outdoor dark skies lighting ordinance, including evaluation of street light decommissioning/new spacing standards, to reduce light pollution and energy consumption. (Dark skies requirements already in place for City public facilities.)</p>	L	1 to 5 years, as resources allow	Operational / Policy Capital Improvement	Public Works – Engineering & Operations
	<p>1.7 Evaluate options/develop proposal to purchase renewable power for City facilities, including utility and other REC (Renewable Energy Certificate) provider options.</p>	L	1 to 5 years, as resources allow	Operational / Policy Procurement	Sustainability / CMO, Public Works

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager's Office)
	<p>1.8 Identify opportunities for on-site renewable energy generation at City facilities/properties. Assess locations for opportunities in partnership with Energy Trust.</p> <p>Incorporate solar or other required renewable energy systems, as required by State of Oregon law (1.5% for Green Energy Technology in Public Buildings), in new public buildings and major remodels.</p>	M	<p>1 to 5 years: - 2014 work plan/approval - 2015-2018 implement</p> <p>As required by State law</p>	Operational / Policy Procurement	Public Works– Operations, Facilities & Water, Police, Fire, LORA, Sustainability / CMO
<p>Strategy 2: Reduce consumption of carbon-intensive fuels, including emissions related to business travel, fleet vehicles, and other fuel-consuming equipment.</p>	<p>2.1 Implement a green fleet program to reduce fuel usage, improve overall maintenance efficiency and vehicle longevity, and systematic roll-down. Program elements may include:</p> <ul style="list-style-type: none"> • Decrease overall number of fleet vehicles. • Improve fleet fuel and usage tracking system. • Fleet purchasing hierarchy to increase use of alternative fuel / technology vehicles (such as electric vehicles, hybrids, etc.) when the more sustainable option would yield a Return on Investment of greater than 10 years, with an emphasis on sedans. • Installation of alternative fueling infrastructure if needed. • Employee education on fuel saving driving habits, such as idle reduction, proper tire inflation, and trip chaining. 	M	<p>1 to 5 years: - 2014 work plan/approval - 2015-2018 implement</p>	Operational / Policy Program	Public Works – Operations, Sustainability / CMO
<p>Strategy 3: Reduce GHG emissions related to Scope 3 emissions, including employee commute and supply chain contracts and procurement.</p>	<p>3.1 Develop an environmentally preferable procurement guidelines and tools to implement. Combine with Waste Action 1.1 and explore criteria such as product carbon intensity, preference for local vendors/products, sweatshop-free, toxin-free, other environmental/social attributes, and use of third-party certification standards.</p> <p>3.2 Continue to provide resources to encourage use of employee commute options, such as transit, carpool, vanpool, biking, walking, and telework and compressed workweek where practical.</p>	M	<p>1 to 5 years: - 2014 work plan/approval - 2015-2018 implement</p>	Operational / Policy	Sustainability / CMO, Finance, in consultation with other departments
		M	Ongoing	Program Education	Sustainability / CMO, HR

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager's Office)
	3.2 Evaluate options related to compressed workweek and flexible schedules to minimize employee commuting, encourage use of transportation options and allow shifts that minimize on-peak travel, where feasible. Consider opportunities related to closing buildings to save energy and associated operations and facilities maintenance costs.	L	1 to 5 years, as resources allow	Operational / Policy	Sustainability / CMO, HR
Strategy 4: Maintain and improve internal business practices to support ongoing monitoring and tracking of GHG emissions sources.	4.1 Maintain energy (gas, electric) and water tracking systems for City buildings. • Train Public Works staff on Portfolio Manager (2014).	M	Ongoing	Tracking Assessment	Sustainability / CMO, Public Works – Facilities
	4.2 Conduct GHG emissions inventory every 2 to 3 years, including Scope 3 Materials and Services every 5 years.	L	1 to 5 years, as resources allow	Tracking Assessment	Sustainability / CMO, Finance
	4.3 Conduct employee commute survey every two years for all City work sites. Oregon DEQ requires for City Hall work site; survey has been expanded to include City staff at all work sites to provide data for GHG inventory and feedback on transportation options programs/incentives.	M	1 to 5 years on schedule required by DEQ (due summer 2014)	Tracking Assessment	Sustainability / CMO
Strategy 5: Create a funding strategy and appropriate staffing for greenhouse gas reduction efforts.	5.1 Develop and implement funding mechanisms for projects that reduce energy and fuel use and associated GHG emissions, including new and existing capital projects. Explore ways to generate funding, such as: • Set aside avoided costs/savings from energy efficiency investments to pay for future projects. • Build relationships with outside funders like Energy Trust of Oregon and other cash incentive programs. • Develop return on investment (ROI) criteria for energy-efficiency projects and integrate into project proposals.	M	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Funding Tracking	Sustainability / CMO, Public Works – Operations & Facilities, Finance

Progress: Overall GHG emissions (Scopes 1, 2, & 3 excluding materials and services) associated with City operations reduced by 2% from 2000 to 2011; energy consumption from City operations decreased by 11% from 2006 to 2012.

Targets (Quantitative) [Note: These targets are consistent with State of Oregon GHG emissions reduction goals.]

- By 2020, reduce GHG emissions 10 percent below 2000 levels.
- By 2035, reduce GHG emissions 40 percent below 2000 levels.
- By 2050, reduce GHG emissions 75 percent below 2000 levels.

Targets (Process / Qualitative)

- Advance efforts to quantify and reduce Scope 3 emissions based on current best practices and available tools and data.

Indicators

- GHG emissions for Scopes 1, 2 and 3, reported in metric tons of carbon dioxide equivalent (MT CO₂e – total, per FTE, per sq. ft. of facilities).
To calculate, track:
 - Facility and infrastructure energy use (electricity and natural gas; refrigerants)
 - Fleet fuel use (and stationary fuel use)
 - Employee commute data; waste tonnage to landfill



Goal 4. Water Conservation – Conserve and optimize indoor and outdoor water use through the implementation of Best Management Practices.

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager’s Office)
Strategy 1: Assess and prioritize water conservation opportunities on all City properties.	1.1 Perform water efficiency audits at all outdoor City facilities and exterior landscaped areas at City buildings. Develop a budget and identify funding source. Continue to replace leaking irrigations valves at identified Parks properties and City buildings. Develop a strategy to upgrade outdated irrigation system at Golf Course.	H	Initiate or complete in 2014; ongoing	Assessment	Public Works – Water & Facilities, Parks
	1.2 Identify additional opportunities to incorporate drought-tolerant, native landscaping into City facility and parks grounds.	H	Initiate or complete in 2014; ongoing	Assessment	Public Works – Water, Parks
Strategy 2: Improve leak detection and water infrastructure to reduce water loss and maximize revenue.	2.1 Continue to conduct pipeline leak detection and missing meter location program, and meter replacements projects, including master meters. Reduce water leakage at Water Treatment Plant as part of approved Plant upgrade.	H	Initiate or complete annually, on existing schedule, or w/in approved project	Assessment Capital Improvement	Public Works – Operations & Water, Finance
	2.2 Evaluate conversion to Automatic Meter Reading (AMR) for water system to increase accuracy of billing/revenue collection and real-time monitoring to support leak detection. Determine initial costs to conduct study.	M	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Assessment Capital Improvement	Public Works – Water & Operations, Finance

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager's Office)
Strategy 3: Increase use of reclaimed water / water reuse at City facilities and for use on City properties and parks.	3.1 Advocate for evaluation of water reclamation from Tryon Creek Wastewater Treatment Plant (TCWTP) for irrigation in the Foothills area, including City parks, as part of TCWTP Facilities Plan update. Identify potential funding source. Consider co-benefits such as reduction of wastewater entering Willamette River.	M	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Assessment Capital Improvement	Public Works, LORA
Strategy 4: Create a funding strategy for water conservation projects.	4.1 Develop and implement funding mechanisms for water conservation projects, including new and existing capital projects. For example: <ul style="list-style-type: none"> • Evaluate water-related projects in advance of Renewal and Replacement (R&R) schedule and leverage R&R funds to implement. • Build relationships with outside funders like Energy Trust of Oregon and other cash incentive programs. • Establish return on investment (ROI) standards for water conservation projects that would enable them to be prioritized and selected for funding. 	M	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Funding Tracking	Public Works – Water & Operations, Parks, Finance, Sustainability / CMO

Progress: Annual water use for City operations reduced 2% between 2006 and 2012.

Targets (Process / Qualitative)

- Target irrigation and golf course water consumption through repairs, retrofits, and discontinuation, where feasible.
- Establish quantitative targets and long-term conservation and optimization goals based on “addressable whole” baseline.

Indicators

- Number of irrigation system upgraded or shut down
- Number of water meters replaced
- Gallons of water loss identified and corrected through leak detection and associated increased revenue
- Hundred cubic feet (CCF) of water – total, per sq. ft. of City facilities, per acres of irrigated areas (parks/fields), at golf course
 - Dollar value and types of goods and services procured



Goal 5. Waste Prevention – Reduce overall generation of waste, and recycle or compost all remaining waste by 2035.

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager’s Office)
Strategy 1: Use procurement processes to prevent generation of waste.	1.1 Create procurement guidelines and procedures that support waste prevention and reduction. Combine with GHG Action 3.1. Example areas include: <ul style="list-style-type: none"> • Producer take-back, i.e. require suppliers/vendors to take back packaging. • Request that products be packaged in recyclable packaging, or no packaging at all. • Preference for durable, reusable, repairable products in procurement procedures. • Ban bottled water purchase for use within City organization (except in pre-defined situations). • Evaluate use of hand-dryers rather than paper towels in City facilities. 	M	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Operational / Policy	Sustainability / CMO, Finance, in consultation with other departments
	1.2 Provide training for buyers on how to use procurement tools to reduce and prevent waste from materials and services. Conduct supplier outreach, where needed.	M	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Education	Sustainability / CMO
	1.3 Evaluate centralized purchasing to streamline purchase of goods and services that meet sustainability goals.	L	1–5 years, as resources allow	Operational / Policy	Sustainability / CMO, consult with other departments
Strategy 2: Identify tools needed to reduce dependency on materials to prevent waste (such as paper and toner).	2.1 Implement a paper reduction and records management strategy that fosters a transition to a paperless workplace. Continue to evaluate and implement business practices which may include: <ul style="list-style-type: none"> • Evaluate City records management needs and electronic records management systems or solutions, with an initial focus on records managed by the City Manager’s Office. 	H	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Operational / Policy Education	CMO, IT, Finance, all other departments

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager's Office)
	<p>One goal and outcome will be increased availability of public records on the City web site.</p> <ul style="list-style-type: none"> • Increase paperless processes in Finance Department, such as vendor invoices, utility documents, move ins/move outs, and General Ledger journal entries. • Evaluate opportunities to move to paperless packets for all City Commissions and Boards. • Convert most City documents and required submittals (such as plans, budgets, municipal code, notices) to web only and electronic distribution, where allowed. Make printed copies available through print-on-demand publishing (e.g., Amazon's CreateSpace) at retail cost and provide printed copies for public viewing at City Hall and Library, when applicable. • Consider use of built-in solutions for printers/copiers, such as requiring default double-sided printing and use of pin to trigger printing. 				
Strategy 3: Expand materials reuse opportunities.	3.1 Create centralized surplus and material reuse process for supplies, furniture and equipment. Ensure appropriate resources for reuse are in place.	L	1–5 years, as resources allow	Operational / Policy Program	Sustainability / CMO, Public Works – Facilities
Strategy 4: Improve and expand recycling programs at City facilities and properties.	<p>4.1 Ensure Business Recycling Requirements are met at all City facilities. Follow best practices, i.e. pairing waste bins with recycling bins and using two-sort systems in public areas of all City locations, and provide consistent signage.</p> <p>Opportunities in parks may include:</p> <ul style="list-style-type: none"> • Add more in-ground self composting garbage cans based on positive evaluation of full set-up. • Purchase Big Belly solar self compacting garbage cans. 	H	Initiate or complete in 2014; ongoing	Operational / Policy	Sustainability / CMO, Public Works – Facilities & Operations, Parks, Library, Republic
	4.2 Increase number of City facilities participating in Republic's commercial organics collection program based on evaluation of food generated at each site and staff support.	L	1 to 5 years, as resources allow	Operational / Policy	Sustainability / CMO, Republic

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager's Office)
	4.3 Continue to educate employees on waste prevention and recycling and provide incentives for improvement. Include information on use of conflict minerals in electronic products and availability of electronics recycling through Oregon E-Cycles. Encourage waste-free employee and public events.	H	Ongoing (as part of employee education)	Education Operational / Policy	Sustainability / CMO
	4.4 Continue to conduct waste audits every two years and evaluate results to make changes to procedures, training, and practices. Look for opportunities to prevent waste upstream to look at alternatives or implement as part of purchasing procedures, such as recyclability of items received from vendors.	H	Initiate or complete on established schedule. Next audits due summer 2014.	Operational / Policy Education Assessment	Sustainability / CMO, Republic
	4.5 Identify opportunities to improve tracking of waste and recycling diversion from City facilities.	L	1 to 5 years, as resources allow	Tracking Assessment	Sustainability / CMO, Public Works–Facilities & Operations, Republic

Progress: Overall solid waste stream reduced 1% between 2008 and 2011. Recycling recovery rate estimated to be 60%.

Targets (Process / Qualitative)

- Advance efforts to reduce overall waste generation.
- Develop interim quantitative targets.

Indicators

- Overall waste generated by weight (garbage plus recycling).
- Percent of waste recovered for recycling or compost (recycling recovery rate).
- Sheets of paper purchased per staff full-time equivalent (FTE), as a measure of effectiveness of waste reduction activities.



Goal 6. Toxics Reduction – Eliminate the use or emissions of persistent bio-accumulative toxic (PBT’s) chemicals and other priority toxic and hazardous substances by 2035.

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager’s Office)
Strategy 1: Evaluate work site health and safety and provide opportunities for related employee training to increase worksite safety and reduce employee exposure to health hazards.	1.1 Continue to conduct regular work site safety inspections. Identify additional opportunities to review use and management of toxics in industrial work sites, such as the Water Treatment Plant. May include internal audits and recommended actions on a regular basis, e.g. every two years.	H	Initiate or complete in 2014; ongoing	Education Operational / Policy	HR (and Safety Committee), Public Works
	1.2 Continue to provide training opportunities on OSHA’s recently revised Hazard Communication Standard. Identify opportunities for additional employee health and safety trainings, particularly in relation to industrial health and safety.	H	Initiate or complete in 2014; ongoing	Education Operational / Policy	HR (and Safety Committee), Public Works
Strategy 2: Inventory and assess chemical product and materials, including consumable and durable products, as well as other toxics.	2.1 Form toxics team with initial focus on mercury minimization (in conjunction with Municipal Storm Water Permit) to develop work plan and implement identified projects.	M	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Operational / Policy	Public Works – Engineering, Operations, Facilities, Parks, HR
	2.2 Evaluate Safety Data Sheets (SDS) inventory and management tools and make recommendation.	H	Initiate or complete in 2014	Assessment Operational / Policy	Public Works – Engineering, Operations, Facilities, Parks, HR
	2.3 Determine how to rate and conduct inventory of all chemical products in use, including quantity used. Include products, such as pesticides and fertilizers, used by contractors to maintain City property.	L	1 to 5 years, as resources allow	Assessment Operational / Policy	Public Works – Engineering, Operations, Facilities, Parks, HR

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager's Office)
Strategy 3: Take action to reduce and/or eliminate the most toxic products and materials first.	3.1 Continue to implement Integrated Pest Management Plan strategies and invasive species plant removal at City parks and open space properties.	H	Ongoing	Operational / Policy	Parks, Public Works – Operations
	3.2 Develop process to quantify use of less-toxic preferable products, including products used by City contractors.	L	1 to 5 years, as resources allow	Assessment Operational / Policy	Public Works – Engineering, Operations, Facilities, Parks, HR

Targets (Process / Qualitative)

- Form team to evaluate toxics reduction approach.
- Develop interim targets and indicators in accord with accepted environmental and health safety standards.

Indicators – Potential indicators may include:

- Work-place injuries/workers' compensation claims; Safety violations.
- Percentage of chemical products used that have ingredients with “worst” rating for health, environmental, or physical hazard using an industry-standard scale.



Goal 7. Habitat Enhancement and Stormwater Management – All City parks, trails, natural areas, and developed properties positively contribute to healthy, functioning urban ecosystems and watershed health by 2035.

Strategy	Action	Priority (High Medium Low)	Timeframe	Action Type	Responsibility (CMO = City Manager's Office)
Strategy 1: Assess and prioritize habitat and stormwater improvement opportunities on all City properties.	1.1 Identify an approach to assess and prioritize habitat improvements on City-owned properties, in conjunction with implementation of ongoing regulatory and non-regulatory efforts, such as Municipal Stormwater Permit, Wastewater Master Plan, Parks Plan 2025, Comprehensive Plan, Urban and Community Forestry Plan, Community Development Code, and sensitive lands program.	L	1 to 5 years, as resources allow	Assessment Operational / Policy	Public Works – Engineering, Operations, Parks, Planning
	1.2 Develop inspection strategy and conduct inventory of stormwater management facilities located at City buildings and parks, as required in Municipal Stormwater Permit.	M	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Assessment	Public Works – Engineering, Operations, Parks
	1.3 Evaluate and obtain EcoBiz certification for Motor Pool and Parks Maintenance facilities and operations. (EcoBiz is a free and voluntary certification program recognizing businesses that reach high standards in environmental protection, designed to prevent and minimize solid waste, air, and water pollution.)	M	1 to 5 years: - 2014 work plan/approval - 2015-2018 implement	Assessment Operational / Policy	Public Works – Engineering, Operations, Parks, Sustainability / CMO

Targets (Process / Qualitative)

- Form team to develop approach for assessing and prioritizing habitat enhancement and stormwater management improvements.
- Develop interim targets and additional indicators in accord with ongoing efforts.

Indicators

- Number of stormwater management facilities on City property inventoried and assessed.

VII. PLAN IMPLEMENTATION AND MAINTENANCE

To successfully implement this Plan, several program elements are needed to be in place to continue to manage the effort. Sustainability management generally refers to the process required to implement an organizational sustainability effort over time. Typical elements of a sustainability management system, or continuous improvement process, include:

- **Plan:** Identify and prioritize projects.
- **Do:** Implement projects and support systems needed.
- **Check:** Check progress of the projects.
- **Act:** Evaluate project effectiveness and overall initiative to inform future efforts.



A management system provides many benefits at all stages of implementing sustainability, from supporting individual projects and providing elements to manage the overall process, to integrating the process into core business systems.
(Graphic courtesy of Dorothy Atwood)

Following the above described process, this Plan is being updated and projects are being prioritized (**Plan**). In terms of **Do**, past projects have been completed, some projects are ongoing, and others will be implemented, with staff members in identified departments responsible for developing more detailed work plans or processes to implement identified actions. The **Check** step is ongoing through work toward targets and measurement of associated indicators. This information also provides an opportunity to evaluate project effectiveness (**Act**). This overall process is iterative and ongoing, sometimes on different timeframes as actions are completed and new actions are identified.

Implementation and Maintenance Strategies

Additional implementation and maintenance strategies are recommended to ensure actions are completed within the identified timeframes. The following actions, which cut across all of the City's sustainability goals, are necessary to implement this Plan and are all **High** priority:

- Integrate accountability into the implementation of the Plan through regular review of progress on identified projects. It is recommended that the Steering Committee meet at least every six months to report on progress of actions, as convened by the City Manager's Office.
 - Ensure cross-department involvement to promote smooth execution and proactive resolution of bottlenecks. To this end, identify any additional staff members that are needed to serve on the Steering Committee.
 - For actions that involve procurement, involve key buyers / category managers in developing and implementing sustainability initiatives.
- Establish regular meeting times for identified project teams and process by which responsible parties report back to the Steering Committee on progress.
 - Project teams / responsible parties should refine prioritization of actions identified as Medium and Low to ensure timely implementation.
- Conduct annual program evaluation with program stakeholders to evaluate what works well and what needs to be improved. Include check in on barriers and opportunities.

- Review and update sustainability goals, including interim targets, on a regular basis as needed based on results of assessment projects in particular. Create new goals, strategies, and actions as gaps are identified, including augmentation of economic and social equity aspects of the City's operations.
- Continue to track progress of Plan implementation and impact on goal areas.
- Report regularly (every two years) on performance and progress in the action goal areas and on sustainability projects completed each year.
- Identify opportunities to integrate sustainability goals and desired outcomes into performance measures for City employees, starting with directors and managers. This is not intended to measure performance on absolute numbers, but is rather a qualitative effort.