

REPORT TO COUNCIL



Date: December 1, 2011
File: 0710-70
To: City Manager
From: Tracy Guidi, Sustainability Coordinator
Subject: Climate Action Revenue Incentive Program Reporting Requirement

Recommendation:

THAT Council receives, for information, the December 1, 2011 report from the Sustainability Coordinator with respect to the Climate Action Revenue Incentive Program reporting requirements.

Purpose:

As the City of Kelowna signed the Provincial Climate Action Charter, it is eligible to apply to receive a grant equal to 100 percent of the carbon tax paid directly by the corporation through the Climate Action Revenue Incentive Program (CARIP). To qualify for these funds, the City must report publicly on progress made in 2011 and plans for 2012 to meet our climate action goals.

Background:

On September 21, 2007 the City of Kelowna signed the BC Climate Action Charter. By doing so, the City voluntarily committed to take actions and develop strategies to try and achieve the following goals:

- Being carbon neutral in our corporate operations by 2012
- Measuring and reporting on our community's GHG emissions profile; and
- Creating complete, compact, more energy efficient rural and urban communities

The Climate Action Revenue Incentive Program (CARIP) is a conditional grant equal to 100 percent of the carbon tax paid as a direct expenditure available to local governments who have signed the BC Climate Action Charter. To be eligible for the grant, local governments are required to report publicly by December 31st, 2011 on their plan and progress toward meeting their climate action goals. The City of Kelowna received a grant for \$132,955 earlier this year, based on the 2010 reporting year.

In 2011, the City completed a variety of projects, both at the community and corporate level, consistent with a 33% community greenhouse gas reduction target. From multi-use active transportation pathways to plans for district energy, to the adoption of a new Official Community Plan, the City is moving forward and providing tools to help its citizens adopt a low carbon lifestyle. A few of the 2011 initiatives are highlighted below and a comprehensive list is provided in the attachment: *CARIP Reporting Template for 2011*.

2011 Community Highlights

- Adopted 2030 Official Community Plan;
- Updated 2030 DCC Roads and Active Transportation Network Plans which reduces road lengths by 17,898 m (two lane road) and increases off-road active transportation by 39,727 m (two way corridor) as compared to the 2020 plan;
- Partnered with Fortis and Climate Smart to offer Climate Smart training to 15 businesses;
- Adopted Provincial Solar Hot Water Ready Regulation;
- Worked with FortisBC to explore the feasibility of two District Energy systems;
- Engaged in pre-design, design and contract development to build a facility at the Glenmore Landfill to convert landfill gas to pipeline-grade methane (also known as bio-methane) with FortisBC;
- Completed a Sustainable Urban Forestry Strategy and set a goal of 20% canopy cover
- Implemented Google Transit and Bike Routes;
- Adopted landscape and irrigation design and construction standards into the Water Regulation Bylaw, a first of their kind in BC and Canada;
- Constructed 6.1 km of multi-use pathways (on Highway 33, Sutherland, Cawston, Airport);
- Constructed 2.2 km of bike lanes (at Lanfranco, Acland, Edwards);
- Constructed 2.25 km of sidewalks (at Valley, Hunter, Hollywood, Baron and Harvey);
- Painted 700 m of green bike lanes (e.g. along Enterprise way);
- Planted nearly 2000 trees in conjunction with Parks Services planting, and the City's Neighbourhoods program.
- Partnered with UBCO on 3 Glenmore Living Sustainability Laboratory research projects
- Consulted on the Community Climate Action Discussion Paper with City staff, stakeholders, business and residents.

2011 Corporate Highlights

- Completed the Corporate Energy and GHG Reductions Plan, which identifies a possible 26% reduction in corporate greenhouse gas emissions by 2017 compared to 2007 levels;
- Purchased FAME Asset Management Solutions Software to begin tracking corporate energy consumption and greenhouse gas emissions;
- Automated Vehicle Locators (AVL) RFP for phase one of three year implementation to be completed by December 2011, which will provide info on routes, idle time and vehicle function which will assist with better management and fuel use;
- Conducted feasibility assessment for 2 stage acid digestion at Wastewater Treatment Facility. The proposed changes in biosolid management will allow for energy recovery through methane gas extraction to supply heating for plant facilities as well as reduce methane discharge to atmosphere;
- Developed internal bike share pilot program and purchased 10 bikes for corporate bike fleet;
- Experimenting with extending higher percentage biofuel use longer into winter months and start using earlier in the spring;
- Started construction on new Parkinson Activity Centre to replace old inefficient Water Street Seniors Centre with state-of-art energy efficient building;

- After three years of construction, the Waste Water Treatment Facility upgrade is almost complete. Energy efficiency and reducing GHG emissions were key design criteria including the following sustainable design features:
 1. energy efficient pumps, mixers and mechanical equipment;
 2. LEED Gold (pending) Maintenance building;
 3. retrofit of existing mechanical systems with more energy efficient systems (i.e. fine bubble aeration system replaced inefficient mechanical mixer);
 4. reuse of treated effluent for irrigation and non-potable uses (i.e. toilets and irrigation);
 5. use of treated effluent as a source of heating and cooling in heat pump application for New Maintenance Building.

Internal Circulation:

General Manager, Community Sustainability
 Director, Financial Services
 Capital Assets & Investment Manager

In addition, all of the departments cc'd below provided information for this report.

Existing Policy:

OCP Policy 6.2.1 - GHG Reduction Target and Actions. The City of Kelowna will, in partnership with: senior governments; local residents and businesses; NGOs; external agencies; and utility providers, work towards reducing community greenhouse gas emissions by 33% (from 2007 levels) by 2020.

The City of Kelowna's efforts will be focused on creating more mixed use neighbourhoods (as identified on the OCP Future Land Use map) and on ensuring that residents can conveniently and safely travel by bus or by foot, bicycle and other forms of active transportation to get to major community destinations while ensuring the efficient movement of goods and services.

The City will support the reduced use of fossil fuels in buildings by encouraging renewable energy supplies, district energy systems and energy efficient technologies in new and existing buildings. By working with senior government partners, regulated utilities and others, the City will lead through example and strive to meet the BC Climate Action Charter targets for the reduction of GHG emissions from municipal infrastructure.

Financial/Budgetary Considerations:

To be eligible for the Climate Action Revenue Incentive Program (CARIP) grant (\$132,955 was received for 2010 reporting year), a public report to Council must be made by December 31st, 2011. Financial Services will prepare the 2011 CARIP Carbon Tax Calculation Form and submit it to the Province by February 17, 2012 to complete the requirements for the grant.

Considerations not applicable to this report:

Legal/Statutory Authority:

Legal/Statutory Procedural Requirements:

Personnel Implications:

External Agency/Public Comments:

Communications Comments:

Alternate Recommendation:

Submitted by:

Cheryl Guidi

T. Guidi, Sustainability Coordinator

Approved for inclusion:



SB

cc:

General Manager, Community Sustainability
Director, Financial Services
Manager, Strategic Projects
Capital Assets and Investments Manager
Director, Community and Media Relations
Director, Infrastructure Planning

Director, Regional Services
Manager, Regional Programs
Manager, Utility Services
Manager, Parks Services
Manager, Environment and Land Use

Attachment: Climate Action Revenue Incentive Program Report for City of Kelowna





City of Kelowna Climate Action Revenue Incentive (CARIP) Public Report for 2011

November 2011

Policy and Planning
1435 Water Street
Kelowna, BC V1Y 1J4
TEL 250 469-8626
FAX 250 862-3320
tguidi@kelowna.ca

kelowna.ca

Table of Contents

- [General Information](#)
- [Community Wide Actions](#)
 - 1.1 - [Measure](#)
 - 1.2 - [Plan](#)
 - 1.3 - [Reduce](#)
 - [Supportive](#)
 - [Direct](#)
 - 1.4 - [Community Wide Innovation](#)
- [Corporate Actions](#)
 - 2.1 - [Measure](#)
 - 2.2 - [Reduce](#)
 - [Supportive](#)
 - [Direct](#)
 - 2.3 - [Corporate Innovations](#)
- [Carbon Neutral Progress Reporting](#)

General Information

Name of Local Government	City of Kelowna
Member of Regional District (RD)	Regional District of Central Okanagan
Regional Growth Strategy (RGS) in region	In Progress
Population	121,149

Community Wide Actions for 2011

1.1 Measure

Community Wide Measurement Actions

Question	Have you been using the Community Energy and Emissions Inventory (CEEI) to measure progress? What else have you been using instead of/in addition to CEEI?
Answer	<i>No, the 2010 CEEI has not yet been released for tracking progress.</i>
Additional Information	<p><i>The City of Kelowna has used the 2007 CEEI data to help forecast GHG emissions, as well as assist in determining a target for the City of Kelowna.</i></p> <p><i>The City of Kelowna plans to use the CEEI data to measure progress once the new 2010 CEEI data is released.</i></p>

1.2 Plan

Community Wide Targets

Question	Do your OCP(s) have targets, policies and actions to reduce GHG emissions, as per the requirements under the Local Governments Act (LGA)? If yes, please identify the targets set. If no or in progress, please comment.
Answer	<i>Yes - see policy below</i>
Additional Information	<p><i>Kelowna OCP 2030, Policy 6.2.1 GHG Reduction Target and Actions. The City of Kelowna will, in partnership with: senior governments; local residents and businesses; NGOs; external agencies; and utility providers, work towards reducing community greenhouse gas emissions by 33% (from 2007 levels) by 2020.</i></p> <p><i>The City of Kelowna's efforts will be focused on creating more mixed use neighbourhoods (as identified on the OCP Future Land Use map) and on ensuring that residents can conveniently and safely travel by bus or by foot, bicycle and other forms of active transportation to get to major community destinations while ensuring the efficient movement of goods and services.</i></p>

	<p><i>The City will support the reduced use of fossil fuels in buildings by encouraging renewable energy supplies, district energy systems and energy efficient technologies in new and existing buildings. By working with senior government partners, regulated utilities and others, the City will lead through example and strive to meet the BC Climate Action Charter targets for the reduction of GHG emissions from municipal infrastructure.</i></p>
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1.3 Reduce

SUPPORTIVE Community Wide Actions

Action Type: **Broad Planning** (e.g. creation/revision of OCPs, CEPs, transportation plans)

<p>Actions Taken this Year</p>	<ul style="list-style-type: none"> -Adopted the 2030 Official Community Plan which includes DP Guidelines. The Plan's emphasis is on sustainability. -Continued to work on Community Climate Action Plan and consulted with stakeholders, business and the public on reduction initiatives -Initiated development of OCP Indicators -Partnered with Fortis and Climate Smart to offer Climate Smart training to 15 businesses. -Hosted Youth Forum on City Infrastructure which examined where will they live, how will they get around, what kind of home will they choose, where or what kind of recreation facilities would they construct -Continued to develop a Sustainability Checklist -Updated 2030 DCC Roads and Active Transportation Network Plans - that reduces road lengths by 17,898 m (two lane road) and increases off-road active transportation by 39,727 m two way corridor) as compared to the 2020 plan
<p>Proposed Actions for Next Year</p>	<ul style="list-style-type: none"> -Working on OCP implementation -Refine the sustainability checklist and have it endorsed by Council -Update of Development, Servicing and Subdivision Bylaw to bring into line with OCP policies

Action Type: **Building and Lighting** (e.g. developed green building policy, increased density in the downtown)

<p>Actions Taken this Year</p>	<ul style="list-style-type: none"> -As a member of the Kelowna Energy Committee, hosted 2 community energy awareness events providing information on energy efficiencies -Partnered with FortisBC for laundry line give away and Earth Hour
<p>Proposed Actions for Next Year</p>	<ul style="list-style-type: none"> -Provide additional community energy awareness events

Action Type: **Energy Generation** (e.g. signed on to provincial 'solar ready' regulation, explored options for bioheating for buildings)

<p>Actions Taken this Year</p>	<ul style="list-style-type: none"> -Adopted Provincial Solar Hot Water Ready Regulation -Working with Fortis BC explored the feasibility of two district energy systems in Kelowna -began investigating possible district energy ready policies in partnership with the Community Energy Association -The City and FortisBC are engaged in pre-design, design and contract development to build a facility at the Glenmore Landfill to convert landfill gas to pipeline-grade methane
<p>Proposed Actions for Next Year</p>	<ul style="list-style-type: none"> -Complete feasibility for Downtown district energy system and then progress to design, pending regulatory and Council approval. -Complete design for landfill gas to pipeline project with expected contract and implementation in late 2012.

Action Type: **Green Space** (e.g. developed urban forestry policy, adopted park acquisition policy)

<p>Actions Taken this Year</p>	<ul style="list-style-type: none"> -Completed a Sustainable Urban Forestry Strategy and set City-wide goal of 20% canopy cover -Undertook Sensitive Habitat Inventory Mapping (SHIM) for approximately 30 km of watercourses and 23 springs -Installed interpretive signage at a variety of parks -Parkland Acquisition Guidelines endorsed by Council, for details visit www.kelowna.ca/CM/page3172.aspx -Knox Mountain Park Management Plan update completed for more details visit www.kelowna.ca/CM/page2063.aspx -Acquired 5 acres of land to add to future community park on Hwy 33 E -Completed conceptual planning for relocation of multi-use trail further back from Okanagan Lake high water mark at Hot Sands Beach -Initiated Mill Creek Infrastructure Impact Management Strategy to estimate future compensation needs for no net loss of Mill Creek habitat
<p>Proposed Actions for Next Year</p>	<ul style="list-style-type: none"> -Establish a Sustainable Urban Forestry Strategy Implementation Team -Continue to seek riparian restoration, where applicable alongside new development -Distribute the results of the SHIM work and bring forward into OCP to ensure the protection of these sensitive areas. -Complete Mill Creek Infrastructure Impact Management Strategy

Action Type: **Transportation** (e.g. developed sustainable transportation plan, completed bicycle master plan)

<p>Actions Taken this Year</p>	<ul style="list-style-type: none"> -Began development of End of Trip facility requirements for active mode users -Examined the possibility of instituting zoning regulations to encourage provision of electric vehicle parking infrastructure -Began developing a neighbourhood trip planning pilot program -Hosted events including Bike to Work Week and Car Free Day -Developed multi-use pathway education videos -Implemented Google Transit and Bike Routes -Developed new bike maps -Participating with Kelowna General Hospital (KGH) on internal TDM Plan -Worked with University of British Columbia Okanagan (UBCO) on U-Pass referendum -Partnered with Provincial Government on anti-idling signage -Partnered with UBCO on a Glenmore Living Sustainability Laboratory on sustainable Glenmore transportation pilot research project (ComPass)
<p>Proposed Actions for Next Year</p>	<ul style="list-style-type: none"> -Work with stakeholders and Council to refine End of Trip Facility standards and adopt into Zoning Bylaw -Work with stakeholders and Council to refine electric vehicle parking infrastructure standards and adopt into Zoning Bylaw -Investigate an Anti-idling bylaw -Implement neighbourhood trip planning pilot program in the Pandosy Neighbourhood -Host Bike to Work Week -Continue bike rack program -Implement Okanagan College U-Pass program -continue to participate with KGH internal TDM plan development -Continue participation in UBCO Community Pass Program research/development. -Adopt Wayfinding Guidelines for active transportation users to navigate through the network of active transportation corridors

Action Type: **Waste** (e.g. introduced composting and recycling education programs)

<p>Actions Taken this Year</p>	<p>Note the following initiatives are completed by the Regional Waste Management office which coordinates waste management for the entire Central Okanagan</p> <ul style="list-style-type: none"> -Updated solid waste management bylaw (increased tipping fees and new materials bans at landfill) -Implemented Commercial Waste Diversion Program, which encouraged the Institutional, Commercial, Industrial and Construction sectors to reduce recyclables entering the waste stream. -Completed an organic waste management study to identify the best methods for managing multiple organic waste streams -Completed waste reduction education strategy to identify best methods to achieve waste minimization and household organic waste management -Implemented a RFID (radio frequency identification) and camera based curbside data collection system -Developed solid waste smartphone app to replace paper based information calendar
<p>Proposed Actions for Next Year</p>	<ul style="list-style-type: none"> -Implement waste minimization and household organics management education program -Do a feasibility study related to recommended organic waste management techniques

	<ul style="list-style-type: none"> -Use the RFID (radio frequency identification) and camera based data collection system to ensure people are not disposing of recyclables in their curbside garbage cart. -Enhance the Commercial Waste Diversion Program -Implement illegal dumping prevention program
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Action Type: **Water/Sewer** (e.g. participated in water smart initiatives, implemented Water Action Plan, introduced rebates on low flush toilets)

Actions Taken this Year	-Adopted Landscape and Irrigation design and construction standards into the Water Regulation Bylaw, a first of their kind in BC and Canada (visit www.kelowna.ca/CM/page3221.aspx for details)
Proposed Actions for Next Year	-Full scale implementation of the Landscape and Irrigation Standards

Action Type: **Other Actions**

Actions Taken this Year	<ul style="list-style-type: none"> -amended open burning bylaw -partnered with FortisBC on Environmental Mind Grind and Mayor's Environmental Expo educational programs
Proposed Actions for Next Year	-continue educational programs

DIRECT Community Wide Actions

Action Type: **Buildings** (e.g. implement use of sustainability checklists and development permit guidelines for new buildings)

Actions Taken this Year	-Installed 10 new solar lighting equipped transit shelters
Proposed Actions for Next Year	-9 additional solar lighting equipped transit shelters to be installed

Action Type: **Energy Generation** (e.g. implement district energy, geothermal, solar)

Actions Taken this Year	not applicable
Proposed Actions for Next Year	not applicable

Action Type: **Transportation** (e.g. implement bike lanes, pedestrian paths, upgrade *transit* service and infrastructure, improve roads, parking fees etc.)

<p>Actions Taken this Year</p>	<ul style="list-style-type: none"> -Cost shared bike rack program distributed 15 racks to businesses -Added 6.1 km of multi-use pathways -Addition of peak service to some transit routes -Installed 18 upgraded/additional bus shelters and 26 new benches at existing bus stops -Added a bus rapid transit station -Added 6 new street bike lockers -Constructed 2,200 m of bike lanes (at Lanfranco, Acland, Edwards) -Constructed 2,250 m of sidewalks (at Valley, Hunter, Hollywood, Baron and Harvey) -Constructed 700 m of green bike lanes (along Enterprise Way and Benvoulin and Springfield)
<p>Proposed Actions for Next Year</p>	<ul style="list-style-type: none"> -Expansion of on-street bike locker rental program (12 new available services) -Phase 1 of Rutland Transit Exchange to begin -Develop UBCO off street cycling access add three new exchange shelters -Transit service improvements (frequency and efficiency) -Complete online Bus Stop Management System in conjunction with BC Transit -2 transit exchange upgrades in conjunction with road diets, new bus areas, and amenities -Construct approximately 2,000 m of sidewalk -Construct approximately 4,000 m of bike lanes -Complete intersection crossing improvements at 8 locations for students -Bernard Avenue Revitalization to begin and will include reduced vehicle lanes, reduced on-street parking, more pedestrian and cycling friendly infrastructure, traffic calming, and planting more street trees

Action Type: **Waste** (e.g. introduce composting and recycling programs)

<p>Actions Taken this Year</p>	<p><i>Note the following initiatives are completed by the Regional Waste Management office which coordinates waste management for the entire Central Okanagan</i></p> <ul style="list-style-type: none"> -Hosted Community Trunk Sale (similar to large garage sale) -Sold 450 backyard composters as part of the Composter Sale. -Launched a year-round household hazardous waste collection facility -Increased service at recycling depots
<p>Proposed Actions for Next Year</p>	<ul style="list-style-type: none"> -Host another composter sale -Host 2 Community Trunk Sales

Action Type: **Water/Sewer** (e.g. implement water conservation and reduction initiatives)

<p>Actions Taken this Year</p>	<p>see information about Landscape Irrigation Design Standards in previous section</p>
<p>Proposed Actions for Next Year</p>	<p>see information about Landscape Irrigation Design Standards in previous section</p>

Action Type: **Green Space** (e.g. plant trees, conserve forest etc.)

<p>Actions Taken this Year</p>	<ul style="list-style-type: none"> -Planted 1500 seedlings in an area burned in 2003 -Through the Neighborwoods Program (www.kelowna.ca/CM/page2205.aspx), a residential planting initiative by the City, planted 394 trees -Planted 50 street trees -Required restoration of natural areas totalling approximately 25,375 meters squared through the Natural Environment Development Permit process -Partnered with Central Okanagan Community Garden Society, to construct community garden on city property on Lindahl Street -Acquisition of 2 properties along creeks and demolition of buildings in riparian zone to increase natural riparian area -Constructed 2.6 km recreational gravel multi-use loop at Eagle View trail -Restoration and decommissioning of rogue trails in Knox Mountain Park
<p>Proposed Actions for Next Year</p>	<ul style="list-style-type: none"> -Plant 1500+ seedlings in City of Kelowna parks -Continue to offer the Neighbourwoods Program with plans to plant another 400 trees. -Additional restoration and decommission of rogue trails in Knox Mountain Park -Construction of relocated multi-use trail back from Okanagan Lake high water mark at Hot Sands Beach

Action Type: **Other Actions**

<p>Actions Taken this Year</p>	<p><i>not applicable</i></p>
<p>Proposed Actions for Next Year</p>	<p><i>not applicable</i></p>

1.4 Community Wide Innovation

<p>Question</p>	<p>Is there any activity that you have been engaged in over the past year(s) that you are particularly proud of and would like to share with other local governments? Please describe and add links to additional information where possible.</p>
<p>Answer</p>	<ul style="list-style-type: none"> -Council approved Housing Strategy recommendations which rewards (with grants and property tax relief) housing in the Urban Core and in areas designated for multi-residential which will achieve compact development and reduce need for vehicle use. Further the strategy expands the ability for in-house suites in the Urban Core without rezoning. Details are available at www.kelowna.ca/CM/page2806.aspx. -The City has redirected resources within the Development Cost Charges (DCC) schedule for the creation of multi-use pathways (as described in the previous transportation sections)

Corporate Actions for 2011

2.1 Measure

Corporate Measurement Actions

Question	What steps has your local government taken toward completing its corporate emissions inventory (e.g. corporate assets gathered related to energy and fuel data and calculated GHG emissions from energy use)?
Answer	<i>The Corporate Energy and GHG Reductions Plan was completed earlier this year and includes a corporate GHG emissions inventory as well as identifies potential reduction initiatives that could be implemented .</i>

Question	What tool are you using to measure, track and report on your corporate emissions (e.g. SMARTtool, other tools including excel spreadsheets)?
Answer	<i>Tracking is being done primarily using FAME Asset Management Solutions Software. The information that is being tracked in FAME is then incorporated into SMARTTool.</i>

2.2 Reduce

Supportive Corporate Actions

Action Type: **Broad Planning** (e.g. developed corporate climate action plan)

Actions Taken this Year	<i>-Corporate Energy and GHG Reductions Plan was completed -Established a dedicated Carbon/Energy Reserve fund to be used exclusively for projects that will reduce Corporate GHG emissions to help achieve the Corporate goal of 26% below 2007 values by 2017.</i>
Proposed Actions for Next Year	<i>nothing proposed at this time</i>

Action Type: **Building and Lighting** (e.g. developed energy reduction plan for all corporate buildings)

Actions Taken this Year	<i>-Purchased and implemented utility tracking software (FAME) to help identify energy reduction initiatives and track results</i>
Proposed Actions for Next Year	<i>Continue to explore opportunities for energy reduction</i>

Action Type: **Energy Generation** (e.g. undertook feasibility study of green energy generation for civic buildings)

Actions Taken this Year	<i>-Investigated possibility of conversion of City Hall to a district energy system should one be implemented in downtown core.</i>
Proposed Actions for Next Year	<i>nothing proposed at this time</i>

Action Type: **Transportation** (e.g. created anti-idling policy for city vehicles, bike to work week promotion)

Actions Taken this Year	<ul style="list-style-type: none"> <i>-Hired Equipment policy completed - the new process ensures hired equipment is newer which leads to better efficiencies including lower fuel use.</i> <i>-Automated Vehicle Locators (AVL) RFP for phase one of three year implementation to be completed by December 2011, to provide info on routes, idle time and vehicle function which will assist with better management and fuel use.</i> <i>-Completed E3 Fleet Review</i> <i>-Initiated Equipment Fleet Operator Training Program</i> <i>-Initiated particulate and emission engine exhaust testing</i> <i>-Specified requirements in new equipment tendering process that equipment be out fitted with 3 minute idle engine shut down systems (if available)</i> <i>-Included operational and projection reports in determining the best suited equipment for new Landfill Compactor.</i>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <i>-Continue to investigate alternate fuels for equipment and vehicles</i> <i>-Analyze Automated Vehicle Locator (AVL) data and implement best equipment/vehicle utilizations</i> <i>-Investigate small gasoline engine hand tools annual renewal program to increase equipment reliability and provide newest, most efficient equipment</i> <i>-Implement internal equipment processes that make the equipment/vehicle users department more responsible for utilization and carbon footprint.</i>

Action Type: **Waste** (e.g. completed waste audit of City Hall)

Actions Taken this Year	<i>not applicable</i>
Proposed Actions for Next Year	<i>nothing proposed at this time</i>

Action Type: **Water/Sewer** (e.g. completed study of sewer and water energy use)

Actions Taken this Year	-Conducted feasibility assessment and now moving into the pilot study phase for 2 stage acid digestion at wastewater treatment facility. These proposed changes in biosolid management will allow for energy recovery through methane gas extraction to supply heating for plant facilities as well as reduce methane discharge to atmosphere. 40% reduction in biosolids generation is expected which will also reduce GHGs associated with trucking the solids for disposal. Struvite generation is proposed that will serve as a natural fertilizer and nutrient for horticulture within the community.
Proposed Actions for Next Year	-Pilot study to be implemented in 2012 with possible design and construction in 2013

Action Type: **Other Actions**

Actions Taken this Year	-Multi-departmental Sustainability Action Team to educate and inspire staff to embrace corporate sustainability -Awarded 4 staff through internal City Manager's Sustainability Awards
Proposed Actions for Next Year	-Sustainability Action Team to work directly with staff on specific sustainability issues

Direct Corporate Actions

Action Type: **Building** and Lighting (e.g. energy efficiency retrofits to municipal buildings)

Actions Taken this Year	-Built new Waste Water Treatment Facility (WWTF) Maintenance Building to LEED Gold (Pending) Standards (note see the Corporate Innovation section for further details) -Completed energy upgrades and retrofits to Kelowna Family Y including energy efficient boilers, heat recovery pump system and dehumidification system -Began construction on new Parkinson Activity Centre to replace old inefficient Water Street Seniors Centre with a state-of-the-art energy efficient building
Proposed Actions for Next Year	-Complete construction of new Parkinson Activity Centre with state-of-the-art energy efficiencies. -Will continue to identify and implement energy reduction initiatives through post commissioning activities, new construction designs and upgrades to building systems as end of service life opportunities present themselves.

Action Type: **Energy Generation** (e.g. implemented heat recovery systems, solar)

Actions Taken this Year	<i>-Use treated effluent from the Waste Water Treatment Facility for heat recovery system to heat and cool the Maintenance building.</i>
Proposed Actions for Next Year	<i>not applicable</i>

Action Type: **Fleet** (e.g. anti-idling policies for fleet vehicles, purchasing of hybrid)

Actions Taken this Year	<ul style="list-style-type: none"> <i>-Developed internal bike share pilot program and purchased 10 bikes for corporate bike fleet</i> <i>-Purchased second hook lift style truck which allows for greater equipment versatility and may allow for reduction in fleet size</i> <i>-Continued biodiesel use</i> <i>-Automated engine idle down installed on process equipment to reduce wear and fuel use.</i> <i>-Experimenting with extending higher percentage biofuel use longer into winter months and start use earlier in the spring.</i>
Proposed Actions for Next Year	<ul style="list-style-type: none"> <i>-Implementing corporate bike fleet program in spring 2012</i> <i>-Diesel/electric drive conversion on composting trommel screen (budget pending) to increase equipment reliability and eliminate diesel fuel consumption for this piece of equipment.</i> <i>-Develop staff transit pass program (based on Pro Pass program)</i>

Action Type: **Waste** (e.g. introduction of composting and recycling programs and education)

Actions Taken this Year	<i>-Proposed and costed a staff-run composting initiative for City Hall</i>
Proposed Actions for Next Year	<i>-Will secure funding for implementing pilot composting project at City Hall</i>

Action Type: **Water/Sewer** (e.g. initiated water conservation and reduction initiatives)

Actions Taken this Year	<ul style="list-style-type: none"> <i>-Fine bubble aeration upgrades at the Wastewater Treatment Plant resulting in significant savings in power and more efficient aeration.</i> <i>-Partnered with UBCO on a Glenmore Living Sustainability Laboratory on reducing Water Usage in Civic Parks Using Adaptive Irrigation</i> <i>-Parks and Water Utility working together on audits and infrastructure upgrades for City Parks to reduce water usage</i>
Proposed Actions for Next Year	<i>not applicable</i>

Action Type: *Green Space* (e.g. planting of trees)

Actions Taken this Year	<i>-Doing organic fertilizer trials on City Parks</i>
Proposed Actions for Next Year	<i>not applicable</i>

Action Type: *Other Actions*

Actions Taken this Year	<i>not applicable</i>
Proposed Actions for Next Year	<i>not applicable</i>

2.3 Corporate Innovations

Question	<p>Is there any activity that you have been engaged in over the past year(s) that you are particularly proud of and would like to share with other local governments? Please describe and add links to additional information where possible.</p>
Answer	<p><i>-After three years of construction, the Waste Water Treatment Facility upgrade is almost complete. Energy efficiency and reducing GHG emissions were key design criteria including the following sustainable design features:</i></p> <ol style="list-style-type: none"> <i>1. energy efficient pumps, mixers and mechanical equipment;</i> <i>2. LEED Gold (pending) Maintenance building;</i> <i>3. retrofit of existing mechanical systems with more energy efficient systems (i.e. fine bubble aeration system replaced inefficient mechanical mixer);</i> <i>4. reuse of treated effluent for irrigation and non-potable uses (i.e. toilets and irrigation);</i> <i>5. use of treated effluent as a source of heating and cooling in heat pump application for New Maintenance Building.</i>