
CITY OF KELOWNA

MEMORANDUM

Date: August 14, 2007

File No.: 6430-05

To: City Manager

From: Manager, Policy/Research/Strategic Planning
(on behalf of the Sustainability Working Group)

Subject: City of Kelowna Action Towards Sustainability

RECOMMENDATIONS:

THAT Council receive the August 14, 2007 report from the Sustainability Working Group for information;

AND THAT Council direct staff to pursue the short-term actions listed in the recommendations portion of the August 14, 2007 report of the Sustainability Working Group (see page 4, item 1 and items 2.1 to 2.12);

BACKGROUND:

For many years, the City of Kelowna has undertaken projects which although not necessarily labeled 'sustainability' initiatives, have nevertheless complied with principles now associated with sustainability. Appendix A lists some of these projects. Some of Kelowna's projects have even, given their "leading edge" status, been the subject of national and international interest. For example, Kelowna has been recognized for its "Ogogrow" composting initiatives, its Bardenpho tertiary sewage treatment facility, its "waste to energy" microturbine project, its Cultural Capital of Canada award, and its Go Green Week successes.

With "sustainability" now a matter of increased public interest, there is growing community desire to understand what the City is currently doing and there is growing pressure to "keep addressing the issues" and to, in some cases, "do more". In response, Council, in 2006, directed staff to organize a public consultation process that would give Kelowna residents an opportunity to discuss the topic. The purpose of the consultation was to learn more about what sustainability means to those living and working in Kelowna and to get a better sense of the public's expectations of the City.

During the spring of 2006, the City of Kelowna hosted a one-month long consultation process that included both an on-line discussion forum/sustainability survey and a one-day workshop, which together attracted almost 2,000 participants. Through that consultation initiative, the City heard that for Kelowna residents, sustainability means guarding water quality/quantity, green space, and air quality against the pressures created by expanding land development and road networks. Further details on feedback can be found at www.futureok.ca.

In late 2006, Council appointed seven interdepartmental staff representatives to a Sustainability Working Group (SWG) to determine how the City¹ could demonstrate leadership by initiating action to increase the sustainability of *civic* operations. The Sustainability Working Group was assigned the following tasks:

- Identify a definition for a sustainable city applicable to Kelowna;
- Identify principles for sustainability to guide decisions and actions;
- Prepare an inventory of existing policies and initiatives that support sustainability principles and identify areas for improvement;
- Examine management models and mandates for sustainability in other cities; and
- Make recommendations based on the review.

The SWG met eight times over four months to discuss the above-noted matters. Council directed the SWG to report through the Senior Management Team (SMT) and the City Manager. This report summarizes the recommendations emerging from discussions with departmental staff, the SWG, the Senior Management Team and the City Manager.

What is sustainability for the City of Kelowna?

For the City of Kelowna the definition of corporate sustainability is recommended to be as follows: providing services and infrastructure to our community in a way that improves the capacity of future generations and other species/people/places to meet their own needs.

This will be an evolving definition. At this time, it is specific to the operations and business practices of the City as an *organization*. The focus is on initiatives that the City could undertake to achieve greater sustainability *independently* of others' efforts. At a future time, there may be desire to expand the definition to include the City's influence and regulatory capacity to promote or require specific sustainable actions or practices among residents, the development community, private enterprise and other stakeholders.

What Principles ("Code of Ethics") will Guide us Towards Sustainability?

Staff recommends that in order to sustain life and enhance quality of life now and into the future, the City of Kelowna do the following, recognizing that the principles are equal, interdependent and interconnected:

1. Promote health, safety and respect in the workplace
2. Seek opportunities to collaborate with external groups in transparent relationships
3. Strengthen a shared corporate culture that demonstrates sustainability in policy and action
4. Protect biodiversity
5. Conserve resources and reduce pollution
6. Help restore the environment from harm already done

¹ The scope of the Sustainability Working Group's mandate in this review was limited to initiatives that the City as an organization could undertake to achieve greater sustainability *independently* of others' efforts. Regulatory initiatives (e.g. requiring installation of low water use toilets) were not part of this review.

7. Maintain and enhance existing assets
8. Maximize use of physical infrastructure
9. Take a long-term, life-cycle, and triple bottom line view for financial planning

What are we currently doing?

Appendix A lists current City of Kelowna policies, plans and projects that address the interconnected realms of sustainability. Current sustainability initiatives are approximately equally divided between those that facilitate discussion about sustainability-related issues (committees, task forces etc.), those that plan for sustainability (plans, reports etc.), and those that implement sustainability (programs).

The City of Kelowna is already achieving a variety of sustainability objectives. What is lacking today, is a comprehensive, systematic approach.

How Do We Organize Ourselves for Action?

The Sustainability Working Group researched how other cities have integrated sustainability into their operations. Appendix B summarizes the findings.

Municipal management models that successfully advance 'sustainability' in a comprehensive and coordinated way have all of the following characteristics:

- Interdepartmental collaboration is fostered and rewarded;
- Existing functions are organized to prevent duplication;
- Communication with the public and other agencies starts early and is ongoing;
- Staff and resources are dedicated to implementation;
- Responsibility is assigned;
- Feedback mechanisms are incorporated to inform realignment of goals, objectives and action plans where necessary;
- Senior Management Team is supportive; and
- Staff are empowered to influence decisions and are rewarded for sustainable actions.

Recommendations

It is recommended that, in the short-term, the City focus on initiatives it can take to increase the sustainability of *civic* operations. The City will need to “put its own house in order” before attempting to further influence the actions of other players such as developers, builders, home owners, and residents. Having said that, it is recognized that everyone has a role to play in achieving a “sustainable city”. It will be important for the City to work with other partners and players to maximize impact. This report sets out recommendations for initial actions that the city can take to play ‘its part’.

Staff’s recommendations for advancing sustainability within the organization comprise key actions to be taken in the short term (next 12 – 18 months) and the long term (18 months and beyond). The recommendations are based on feedback from the Future OK public consultation initiative, experience of other municipalities, and organizational capacity.

To show leadership in sustainability in the short term, the City of Kelowna should:

1. Work towards achieving the principles of sustainability (outlined above in this report);
2. Assign responsibility for selected short-term actions that respond to Future OK and other community priorities.
 - 2.1. Discuss (as part of the Parks and Recreation Master Plan, the Linear Park Master Plan and/or the next OCP review/update) increasing the target for public natural open space so that it would become greater than the current target of a minimum 5% of the City's land base. Increasing the target would involve identifying additional funding sources (Additional parks DCCs? Greater taxpayer contributions? Other?) for Council's consideration in conjunction with updates to the Financial Plan and 10 Year Capital Plan. (Director, Recreation, Parks and Cultural Services);
 - 2.2. Set up, by the end of 2007, mitigation banking tools and policies to ensure that habitat is not lost as a result of city infrastructure projects (trails, buildings, utilities, roads etc.). In bringing forward recommendations regarding mitigation, staff should identify the associated social, cultural, environmental and financial costs and benefits; (Environment/Solid Waste Manager).
 - 2.3. Embark on initiatives to significantly increase tree cover within the urbanized areas of Kelowna by planting \$60,000 worth of trees on city property in 2007 and by developing a program to encourage residents to plant more trees on private property. (A city vegetation inventory will be prepared this summer to allow staff to monitor the success of future planting initiatives) (Urban Forestry Supervisor);
 - 2.4. Achieve a further 15% reduction in water consumption in City buildings and operations by 2012 (as per the plan previously sanctioned by Council on January 15, 2007). (Water and Drainage Manager);
 - 2.5. Develop, by July 2008, an Action Plan for achieving a 20% reduction in corporate greenhouse gas emissions in all existing and planned City facilities by 2011. The Action Plan should identify the social, cultural, environmental and financial costs and benefits of each recommended action and should generate a prioritized project list that can be implemented in phases. (Civic Properties Manager);
 - 2.6. Work with Natural Resource Canada and Green Fleet BC to obtain an independent "fleet review" to determine how greenhouse gas emissions from the City's vehicle fleet can most effectively be reduced with the goal being achievement of at least a 10% reduction by 2011. (Roadways/Equipment Superintendent);
 - 2.7. Ensure that redevelopment of the City-owned former KSS property occurs in a manner that is capable of achieving Leeds Gold certification

and/or of fulfilling the City's sustainability principles. (Manager, Community Development and Real Estate);

- 2.8. Contract a consultant or dedicate staff to develop a triple bottom line method for evaluating budget priorities. (City Manager);
- 2.9. Contract a consultant or dedicate staff to identify how to report on the extent to which projects and operational practices comply with the City's sustainability principles. (City Manager);
- 2.10. Recognize, by year-end, staff responsible for recommending and/or implementing viable new practices that most effectively embrace the principles of sustainability noted in the August 14, 2007 report from the Sustainability Working Group (Acting Human Resources Director);
- 2.11. Explore policies for allowing the upfront capital expenses incurred to render a project more 'sustainable' (e.g. energy efficient) to be financed where there are long-term savings. 'Acceptable' payback time frames should be considered in the development of the policies. (Finance Director);
- 2.12. Develop and bring forward for Council's consideration, by December 2007, a "Sustainable Purchasing Policy", the intent of which would be to help the City use its purchasing decisions to achieve the principles of sustainability. Staff will, to the extent possible, include with the report, information on the social, cultural, environmental, and financial costs and benefits of proceeding as recommended. (Purchasing Manager);

To move towards long-term *organizational* sustainability, it would be helpful if City Council gave the City Manager support to:

3. Establish, as soon as possible, a management structure that is consistent with facilitating the principles of sustainability. This may require that the City Manager:
 - Dedicate staff to communicating and coordinating on sustainability. The role of the dedicated staff would be to coordinate corporate efforts, liaise with internal and external stakeholders, monitor and report on achievements, and take advantage of any financial assistance available from potential 'partners'.
 - Establish project working teams and other structures that encourage interdepartmental collaboration in the delivery of major projects so as to take advantage of different talents and perspectives and thereby increase the likelihood of delivering on the multiple dimensions of sustainability.
 - Ensure that staff, wherever possible, have the flexibility in their work arrangements to incorporate sustainability in their personal lives. This could require significantly more flexibility in hours of work, greater scope for working from home etc. than is currently available. (For example, staff

may be able to carpool or take transit more easily if their hours of work were somewhat different from the standard “8-4”).

4. Establish, as soon as possible, a financing/budgeting structure that is consistent with facilitating the principles of sustainability. This may require that the City Manager:
 - Request funding priority for projects that are sustainable. Sustainable projects could be identified by evaluating projects and their outcomes with a triple bottom line perspective.
 - Implement a method for reporting on the sustainability of major civic projects and on-going operational practises.

Moving forward with the above-noted actions will demonstrate leadership and will contribute economic, environmental and socio-cultural benefits. The leadership demonstrated through the above actions may eventually provide a foundation for expanding the corporate mandate for sustainability to the community at large.

There is significant opportunity for the City of Kelowna to ‘operationalize’ sustainability to show leadership which can motivate others, and demonstrate accountability for the impact of our actions on future generations. At this time, the definition and principles are focused on how the City as a corporation manages itself; however, it is anticipated that this will expand to the community to account for the City’s jurisdictional roles and responsibilities. Likewise, the sustainability definition and management framework will evolve over time as our culture and capacity to implement sustainability change.

It is recommended the City Manager monitor compliance with any Council-endorsed direction on sustainability and ensure a “check-up” re: achievement of short-term actions by January 2008.

INTERNAL CIRCULATION TO:

The SWG included representation from the Works and Utilities Services, Planning and Development Services, Recreation Parks and Cultural Services, and Financial Services departments. To extend organizational reach, the departmental representatives on the SWG canvassed colleagues in their respective departments for input on this initiative.

On February 16, February 21 and on July 25, 2007 the Senior Management Team discussed the recommendations of the SWG and provided feedback.

Each member of the Sustainability Working Group and each Departmental Director on the Senior Management Team fully endorses the recommendations itemized in this report to Council.

LEGAL/STATUTORY AUTHORITY:

Dependent on specific activities approved by Council after consideration at a later date.

LEGAL/STATUTORY PROCEDURAL REQUIREMENTS:

Dependent on specific activities approved by Council after consideration at a later date.

EXISTING POLICY:

The pursuit of more sustainable city operations is consistent with the goals of the City's Strategic Plan (2004), which are to:

- maintain, respect and enhance our natural environment
- foster a strong, stable and expanding economy
- foster the social and physical well-being of residents and visitors.

FINANCIAL/BUDGETARY CONSIDERATIONS:

The short-term actions identified in this report can be pursued within 2007 budget allocations. The longer-term actions will likely have budget impacts in subsequent years. The longer-term actions can be brought forward for Council deliberation as part of future budget discussions.

PERSONNEL IMPLICATIONS:

The short-term actions identified in this report can be pursued by existing staff, within the context of their current mandates. Some staffing allocations may need to be adjusted to implement the structure required to foster long-term organizational sustainability. It is anticipated that these changes will be considered as part of the organizational review that is currently underway.

EXTERNAL AGENCY/PUBLIC COMMENTS:

Through FUTURE OK consultation, the City heard that for Kelowna residents, sustainability means guarding green space, water quality/quantity, and air quality against the pressures created by expanding land development and road networks. More detailed information on the feedback received through the FUTURE OK initiative can be found at www.futureok.ca.

ALTERNATE RECOMMENDATION:

Alternative 1:

For a recommendation that would require no further commitments, Council could instead consider just receiving this report for information:

THAT Council receive the August 14, 2007 report from the Sustainability Working Group for information;

Alternative 2:

If Council wishes to go further with recommendations, action could, *in addition to* the recommendations noted earlier, include any or all of the following:

AND THAT Council direct staff to demonstrate improvement in green space and environmental function with all future civic projects (buildings and infrastructure);

AND THAT Council direct staff to prepare an Action Plan for ensuring that all new municipal buildings over 500m² be capable of achieving "LEED Gold" standard with full CaGBC Certification or equivalent/better beginning in 2008. The Action Plan should identify the social, cultural, environmental and financial costs and benefits of each recommended action;

AND THAT Council direct staff to prepare an Action Plan to ensure that all existing municipal buildings over 500m² are capable of achieving "LEED Silver" or equivalent/better within 7 years. The Action Plan should identify the social, cultural, environmental and financial costs and benefits of each recommended action and should generate a priority list that can be implemented in phases;

AND FURTHER THAT Council direct that all buildings constructed or renovated to meet LEED standards be audited at the third year of occupancy to demonstrate that reductions in energy consumption, GHG emissions, and the savings derived from increased productivity have been achieved.

There would be budgetary implications to the above-noted alternative recommendations, which have not as yet been quantified.

Appendix C contains additional staff suggestions for possible corporate actions towards sustainability.

CONSIDERATIONS THAT WERE NOT APPLICABLE TO THIS REPORT:

TECHNICAL REQUIREMENTS

Submitted by:

S. Bagh, MCIP
Manager, Policy/Research/Strategic Planning

Approved for Inclusion: ☐

Ron Mattiussi
City Manager

Cc: *Director, Works and Utilities*
Interim Director, Planning and Development Services
Director, Human Resources
Director, Recreation, Parks and Cultural Services
Director, Corporate Services
Director, Financial Services

APPENDIX A – Inventory of Existing Sustainable Policies & Initiatives

- **Increased Use of Recycled Paper** - As of 2007, the City of Kelowna prints staff business cards on recycled stock. Recycled paper is also used for printing of the City newsletter “Cityscapes”.
- **Compact Fluorescents Lights** – Lights are being switched to compact fluorescents in offices throughout City Hall and other city buildings. These lights use less power.
- **Employee Safety and Wellness Programs** - These programs provide policies, tools and support to promote employee safety as well as a healthy lifestyle through active living to achieve a life/work balance.
- **Waste Audit** – A waste audit was conducted at City Hall. Recommendations from this audit include:
 - Develop a standardized collection system for office paper, cardboard and boxboard, beverage containers, plastics, tin and ink cartridges. Ensure that each recycling station is clearly labeled for the acceptable materials;
 - Place recycling bins in common areas like meeting rooms and next to public garbage containers;
 - Purchase and install a dishwashing unit(s) in the staff lunch room;
 - Invest in reusable cutlery, coffee mugs, glasses, and dishes to be used daily by staff, as well as for meetings;
 - Establish a ‘no Styrofoam’ purchasing policy for staff meetings and events – if in need of large quantities purchase paper products;
 - Consider replacing paper towel dispensers with electric hand dryers in washrooms;
 - Implement a composting program; and
 - Develop an environmental policy that is communicated to all staff, and potentially displayed in the front foyer for community recognition.
- **Purchasing** -- Only Greenguard certified office casegoods and panel systems are now purchased.
- Any new offices that are built are furnished EXCLUSIVELY with **environmentally friendly furniture** with low VOC emissions. This includes workstations, panels, meeting tables, media cabinets, shelving and filing.
- **Achievement and Reward Program** – The City has a program in place to recognize and reward staff for implementing innovative ideas.
- **Kyoto Resolution** - on April 22, 2002 Kelowna City Council passed a resolution endorsing ratification of the Kyoto Protocol towards reducing Greenhouse Gas Emissions (GHG) to pre-1990 levels.
- **Council Resolution for "Partners for Climate Protection"** Council declared Kelowna as a formal participant partner in the "Partners for Climate Protection" program. Since 2002 Kelowna has inventoried and tracked GHG emissions and is now working on reducing those emissions.
- **Cultural Strategy** - preparation of a long range vision for Kelowna's cultural development is underway.
- **Parks & Leisure Services Master Plan** - RPCS will complete a master plan for the provision of City recreation, parks and cultural services for the next 10 years. In addition to determining

appropriate and affordable levels of service, it will address water conservation, environmental protection, greening the city, the fitness and wellness of Kelowna's citizens and the significance of culture both as the 4th pillar of sustainability and the way civil society makes decisions that affect place-making and the resilience of our city through time.

- **Public Art Program & Public Art Committee** – The public art program aims to humanize and animate the urban environment, increase the liveability and artistic richness of the community, and stimulate the growth of arts and arts-related businesses through the provision of public art. This City has a Public Art Reserve Fund (max. \$100,000/yr) and a Public Art Committee.
- **Linear Park Greenway Master Plan** -- A plan and implementation strategy to create an interconnected network of linear parks that provides recreation, alternative transportation and habitat benefits.
- **Housing Opportunities Reserve Fund** Money from land sales and leases (as well as other sources) is used to acquire land suited to development opportunities that would include affordable housing. Land is leased or sold to builders, non-profit housing societies, developers and others to achieve projects that include affordable housing. An annual commitment to the fund is part of the budget process.
- **Hillside Development Audit** -- The audit was a policy, regulatory and procedural review to assess whether changes are needed to achieve hillside development that is aesthetically pleasing, environmentally friendly and functionally appropriate. Council endorsed the recommendations of the audit in October 2006. Implementation is underway.
- **Wildland Fire Prevention Audit** – The audit reviewed existing policies, procedures and regulations relating to wildfire. Council endorsed the recommendations in January 2007. Implementation began in 2007.
- **Sustainability Checklist for Development** – Council has endorsed staff's use of a checklist that will prompt inclusion of building and development features that would render new construction more "sustainable".
- **Strategic Land Acquisition to Protect Sensitive Natural Ecosystems** -- The City has purchased land (e.g. Kathleen Lake in Knox Mountain Park) and coordinated density transfers (e.g. Southwest Mission) to preserve key natural areas.
- **Foreshore Aquatic and Physical Assessment Project** -- A predictive model is being developed to ensure that development does not alter the foreshore.
- **Sensitive Ecosystem Inventory** -- By the end of 2007, sensitive natural areas will be comprehensively mapped to ensure that habitat preservation issues are addressed as part of development permit review processes.
- **Erosion & Sediment Control Requirements for Construction Sites** -- The City has a Sanitary Sewer/Storm Drain Regulation Bylaw which prevents discharge of pollutants (chemical and sediment) into water infrastructure, water courses or other water. Fines are levied against offenders.

- **Kelowna Centre Streetscape Improvement Study** -- Funds are allocated annually to provide for streetscape improvements in the Downtown and other Town Centres to contribute to attractive, functional public open space that attracts business and investment.
- **Agricultural Advisory Committee** -- The Agricultural Advisory Committee advises Council on land use and economic matters relating to agriculture.
- **Proven Sound Financial Management Practices** -- Kelowna is recognized around the province for excellent reserve management, a key component of lifecycle management.
- **EECO Heroes** -- The EECO Heroes (Environmental Educators of the Central Okanagan) is a unique partnership of public and private sector environmental educators in the Central Okanagan, including the Regional Waste Reduction Office, the City of Kelowna's Environmental and Transportation Demand Management Divisions, the Regional District of Central Okanagan Parks Services and Water Smart.
 - Delivered more than 420 interactive classroom and field presentations in the 2005-06 school year to approximately 11,000 elementary, middle and high school students. The local environmental issues examined were water and airshed health, waste reduction, water and energy conservation, transportation alternatives, endangered species, ethnobotany, and pond study ecology.
 - Delivered Environmental Fear Factor programs at six middle and high school assemblies reaching about 2500 students. This program was designed to impact the more challenging-to-reach middle and high school students. This interactive assembly places the students on two teams where each team has to "navigate" through obstacles faced in nature by kokanee salmon, "car pool" to school, participate in a "Reach for the Top" environmental knowledge question and answer session, and guzzle a "compost shake". All games are exciting and interactive for both the participants and audience, while creating awareness of important issues in our community and what individuals can do to help protect the environment.
 - Introduced the School Eco-Challenge. Schools kept track of classroom environmental initiatives throughout the year, gaining points for recycling, energy conservation, carpooling, and many other innovative environmental endeavours. The greenest school won \$1000, ice cream for the entire school and received the Mayor's Environmental Achievement Award for Most Environmentally Friendly School.
 - Implemented the Kokanee in the Classroom program in seven schools in partnership with the Federal Salmonoids in the Classroom program. The students learned about the lifecycle of the kokanee by raising kokanee from eggs to fry in an aquarium and then releasing the fry into nearby streams and rivers. The program was supported by interpretive programs at Mission Creek and Hardy Falls Regional Parks where 4100 students came to watch spawning kokanee and to learn about their lifecycle and spawning behaviour.
 - Coordinated an International Walk to School Day event to encourage students and parents to walk in support for a cleaner environment, healthier students, safer streets and a stronger community. The school that had the most students walk, cycle, in-line skate, skateboard or scoot to school was awarded the coveted "Golden Shoe Award".

- Organized and promoted the Clean Air Day poster contest for any student in the Central Okanagan. In the process of creating their posters, students learned about how vehicles affect our environment and alternatives that they can use to get around.
 - Introduced the Class Rides Free Program to allow students to experience the Kelowna Regional Transit System free of charge. Students learned the importance of transit in ensuring a strong community including, job creation, environmental protection, enhanced quality of life, the provision of cost effective mobility, and freedom of choice.
 - Created and hosted the 1st annual Environmental Mind Grind in 2000, a “Reach for the Top” style competition for elementary, middle and high school students. Since its inception, more than 280 teams have competed locally in the curriculum-approved environmental challenge. In 2004, developed a “how to” manual and template CD and now four additional communities in South Central British Columbia host competitions and then participate in regional play-offs hosted by the EECO Heroes. The competition has been well received by the students, teachers and the School Boards with many teachers returning to the competition year after year.
 - Celebrated Waste Reduction Week by touring more than 500 students through the Metro Materials Recovery recycling processing plant. The tours were augmented by information sessions about Zero Waste, the 3 Rs and what recyclables are remanufactured into.
 - Hosted Jr. Naturalists’ day-camps throughout the summer with the help of two summer students. One hundred and sixty-eight kids, age five through 12, attended three week and two-week camps that featured wilderness hikes, interactive games and lots of fun activities.
 - Coordinated the largest one day tree planting event in the world in May 2005. In partnership with School District 23 and the City of Kelowna and Regional Districts’ Parks Divisions, the EECO Heroes helped organize 25,000 students to plant 140,000 trees in 30 sites throughout the Central Okanagan on a single day. The program was designed to: 1) educate school children about trees and their benefits through active participation in tree planting; 2) help restore the environment and replace some of the trees lost in the Okanagan Mountain Park fire; 3) help celebrate Kelowna’s 100th Birthday and Arbour Day; and 4) break two Guinness World Records for the most trees planted (140,000; previous record is 110,000) by the most people (25,000; previous record is 10,000).
- **Annual ‘Living Greener ‘Calendar and Radio ads** – The City distributes information about Environmental Protection, Pollution Prevention, Watershed and Airshed awareness, Environmental events, Waste Reduction initiatives and Eco Center activities.
 - **Watershed Stewardship Programs** ---The City operates outreach programs for watershed protection and enhancement directed to Kelowna students and citizens. Programs include Adopt-a Stream, Mayor's Expo, Environmental Mind Grind, The Amazing Race, Environmental Fear Factor, Family Environment Day, Kokanee in the Classroom and Fisheries Awareness Day. Also included is over 5000 meters of stream restoration in the last 10 years.
 - **Sidewalk Infrastructure** -- Investments in sidewalks will foster more trips over time by walking and perhaps motivate decisions to live close to frequent destinations such as work or shopping. In 2007, \$700,000 will be invested in new sidewalks.
 - **Transportation Demand Management Group** -- The City has staff dedicated to changing or reducing demand for car use by encouraging the behavioural change of household travel

choices. Initiatives include: Eco-Pass Parking Program & Carpooling Parking Incentive, Off-Street Parking & Transit Pricing Incentives, Cost-sharing of bike racks, Pro-pass for transit bulk purchase, TDM Education & Outreach.

- **Bio-Fuels Feasibility Study** -- The City participated in a joint research initiative with the Regional District and BC Transit to investigate bio-waste streams and evolving technology to convert municipal waste to energy. There isn't sufficient waste to warrant the cost of a treatment plant, however the study identified bio-diesel as a fuel for the municipal and transit fleet.
- **Regional Transport Model** -- The City uses a regional transport model to assess future growth and model optional transportation systems to ensure effective multi-modal mobility.
- **Central Okanagan Smart Transit Plan** -- The Smart Transit plan for the region provides a vision for a new order of public transit that includes bus-rapid-transit. It also provides planning principles and guidelines for transit-oriented development. These initiatives have positioned the region to take advantage of senior government funding assistance to develop transit service as a key future mode of transportation.
- **Zoning Bylaw Provisions for Bike Facilities and Reduced Parking** -- There is opportunity for development in Urban Centres to pay cash-in-lieu to the City instead of providing the required off-street parking spaces. The reduced number of parking spaces helps to encourage walking and cycling. Off-street bicycle facilities are required for new development to make biking easier and more appealing.
- **Purchase of Hybrid & Smartcars** -- In 2005, the City, in conjunction with BC Transit, added three hybrid buses to the Kelowna Regional Transit fleet and, in 2006, the City added two Smart cars and three hybrid vehicles to its fleet. During 2007, the City plans to add fifteen Smart cars to its fleet.
- **Use of Permanent Road Markings** -- For the past five years permanent road markings have been used for stop bars and crosswalks where new pavement is installed. The 5-7 year lifespan of the permanent road markings eliminates the need to paint markings once or twice per year. The use of these permanent markings will be expanded as budgets permit.
- **Installation of LED Traffic Signals** -- Since 2005, every traffic signal lamp is LED (Light emitting diode) – reducing electrical power consumption by 90%. LEDs are expected to have an average life span of seven years compared to the 1-2 years for incandescent lamps. All new pedestrian activated warning lights are solar powered. The goal is to use solar power where feasible and cost effective.
- **Bike Lanes Program** - Kelowna has the highest kilometers of bike lanes in the Province and continues to expand its network as part of the Master Bike Plan. A Master Bike Plan has been prepared to promote cycling - a clean and healthy form of urban mobility - by providing safe bikeways and facilities for cycling.
- **Recycled Water** - Kelowna became one of the first in Canada to feature a home with a toilet that uses recycled water. The system captures and filters bath and shower water and supplies the chlorine-treated water (grey water) to toilet tanks for flushing. The system is expected to save the average household 30% or more on water consumption, which also means that much less water will require treatment at the Waste Water Treatment Facility.

- **Storm Drainage-Sanitary By-law-** Kelowna ensures that its drainage facilities and wastewater facilities do not get compromised through illegal or legal discharges to their systems by enforcing the bylaws and educating (Pollution Prevention) and screening new businesses and development for compliance. The treated (Wastewater) and untreated (Storm Drainage) water is discharged to Okanagan Lake and local streams and to groundwater.
- **Water Smart** – Council has endorsed a seven-point water sustainability action plan that will reduce water consumption by 15% over the next five years. Other programs for increasing water efficiency usage for the Kelowna Water Utility include outreach education, social marketing, soil water retention programs, irrigation efficiency program and continuous education.
- **Water Sustainability Action Plan** – The City has committed to a comprehensive strategy to meet the goal of reducing water consumption within City operations by 15% by 2020. The plan includes measures in the following areas: demand side management, social marketing, development approval requirements (building & landscape), full cost pricing, reducing water system leakage, efficient fixtures and reuse.
- **Soil Amendment** - The soil in Kelowna is not conducive to growing grass. It is either pure sand, pure gravel, or pure clay, none of which holds water or encourages deep root growth. The soil amendment program is a cost-shared program in which the Water Smart program spreads compost on lawns. This helps improve soil quality and reduces water used to irrigate lawns by an average 25%.
- **Irrigation System Assessments** - Approximately 65% of our residential customers and almost 100% of our commercial customers have underground irrigation systems connected to timers. Underground sprinkler systems are not as common in the rest of the Country. In theory, underground sprinklers are the most efficient way to water; in reality they are wasteful. That is because most people don't really know how to program their timers, or maintain their system. So we offer free irrigation system assessments. We will walk through a customer's system, showing where they can cut back on the water and where they can make improvements to the system. We also show the customer how to program their timer.
- **Compost Tea** - There is not a lot of organic material in our soil, which means customers rely heavily on chemical fertilizers. Unfortunately, high nitrogen fertilizers require a lot of water and encourage shallow roots, which need a lot of water through the heat of summer because they are not drought tolerant. So, we offer a cost-shared program where we spray compost tea on lawns as an alternative to chemical fertilizers. Adding organic material (fungi, bacteria, etc) brings poor soil "alive" making it more conducive to creating a drought tolerant lawn.
- **Drought Tolerant Grasses** - Many people are obsessed with green lawns. Kelowna is an affluent community where a green lawn is a status symbol. Rather than try to make people believe a brown lawn is beautiful, we are experimenting with drought tolerant grasses that will remain green even in our climate. This is another cost-shared program; we provide seed to customers who want alternatives to traditional water-thirsty Kentucky bluegrass.
- **Landscape and Irrigation System Standards** - Rather than continue to encourage development the "same old" way – which is extremely wasteful – we are in the process of developing landscaping and irrigation standards for all new development. This means reduced turf areas, drought tolerant grasses, an "approved plants list" that does not include plants like

cedars (water-thirsty), and incorporation of xeriscaping concepts. This will create landscapes far more suited to the Okanagan, rather than the landscapes we are creating now, which are more suited to England. The standards will also require a minimum amount of soil before grass can be planted, and this soil will have to be a certain blend that has been developed specifically for water retention. Landscapes in new developments will have to be designed by a Certified Landscape Designer, who will have to follow a "water conservation" check list. New standards will also apply to irrigation systems, which will have to be designed by Certified Irrigation System Designers following a check list

- **Pro-active Customer Contact** - Every month we review monthly water meter readings to look for sudden jumps in consumption that could indicate a water leak, or some other problem. We contact these customers – often before they even get the water bill – to let them know there may be a problem. Water Smart staff is available to visit homes and assist homeowners in finding the cause of the high water use. This is another free service.
- **Commercial Pesticide Notification Registry** – The registry allows residents to be notified when commercial spray operations are occurring on abutting residential properties. In 2006, 280 households registered in the program to minimize unwanted exposure to pesticides. Also launched a Be Pesticide Free education campaign, promoting healthy families and communities.
- **Mitigation Banking Program** -- The City is developing policies to ensure "no net loss" of habitat from infrastructure construction using a "compensation" bank.
- **Mission Creek Restoration Plan**- Council has endorsed a series of projects for restoring Mission Creek to more natural biological and flooding functions. These may later serve as a mitigation bank.
- **Streamside Acquisitions and ROW** - Through the development (up to 15 meters from top-of-bank) and also purchase process, the City has obtained over 3 km of streamside areas in the last 5-10 years. Significant acquisitions included Casorso Lands along Mission Creek and numerous properties along Mission, Mill and Bellevue Creeks.
- **Beach Water Quality** – The City has worked with the University of Victoria to research what bacteria are causing water quality fluctuations on beaches and identify where the bacteria coming from.
- **Catch Basin Mosquitoes Control Program** – The City operates a program to ensure reduction in mosquito larvae related to West Nile Virus transmission by using biological pesticides in catch basins and wetlands.
- **Central Okanagan Regional Air Quality Program Partner** – The City has partnered with other local governments in the Central Okanagan, Interior Health, B.C. Lung Association, Environment Canada & Ministry of the Environment to prepare an Air Quality Plan that includes performance measures & targets. Initiatives include Air Quality Advisory System, Air Quality Education Program, vehicle emissions clinics, burning regulations and bylaw, Cash for Clunkers Program, and the Woodstove Exchange.
- **Anti-Idling** - The City has an anti idling policy for all City vehicles and has implemented a school campaign to encourage parents and caregivers to turn off their vehicles while parked around local schools – because of this program SD23 just implemented an anti idling policy.

- **Environmental Indicators Monitoring & State of the Environment Report** – A 5 year report revisits indicators list and provides a profile of how we are doing to sustain our environment. The City provides information on key indicators on an annual basis.
- **Pesticide Bylaw Staff Advisory Committee** -- This Committee is examining the potential to develop by-laws or alternatives to reduce cosmetic use of pesticides in Kelowna.
- **Glenmore Landfill Microturbine Project** -- The City uses landfill gas to generate electricity and reduce GHG.
- **Energy Management Committee** -- The City has a committee to advise on energy consumption and oversees creation of an educational “Energy Matters” Newsletter.
- **Environmental Management Systems** Landfill, Parks and City yards have identified significant environmental aspects in operational areas which require procedures and continuous improvement to not harm the environment.
- **Environmental Development Permit System** -- Any city project that is in a Natural Environment or Hazardous Condition Development Permit Area triggers an environmental review that may identify special development requirements.
- **Environmental Review of Drainage** - The City completed a comprehensive review of the storm drainage bylaws and policies to ensure storm water flows do not harm receiving streams and/or Okanagan Lake from a volume and quality basis. The focus is on storm water retention, detention, ground absorption where possible, treatment, and enhanced system maintenance.
- **Wastewater Treatment** - Kelowna implemented the first Biological Nutrient Removal Tertiary Treatment Plant in North America to ensure effluent discharged does not contain key pollutants that are harmful to Okanagan Lake. As a measure to reduce sewage flows in the early 1990s Kelowna was the first community in BC to implement requirements for low flow toilets, water fixtures, etc as part of new home and other building construction.
- **Salt Management Plan** - The City has developed a salt management plan as part of its winter snow and ice control program to minimize the environmental impact of this product on the environment. The Snow and Ice Control Program uses the latest Best Practices to minimize the impact of this important public service on the environment.
- **Powersmart Program** - Working through Fortis BC, the City Electric Utility provides a subsidy program to new buildings and in retrofits for the installation of electric energy saving devices.
- **Integrated Pest Management (IPM)** - In an effort to provide sustainable maintenance practices for City road medians, turfed and landscaped areas, the City's Parks and Roadways Departments have developed and implemented IPM measures to reduce pesticide usage to a minimum. Continued investigation into alternative horticultural and other maintenance techniques is ongoing.
- **Fleetsmart Program** - In an effort to reduce fuel consumption by the City fleet, the City is participating in a provincial program. Efforts are ongoing to use alternative fuels (biodiesel, propane, natural gas), reduced fuel consumption vehicles, anti-idling programs, etc.

- **Watershed Stewardship Program** – The has partnered with with Fisheries and Oceans Canada, the Regional District, School District 23, business, landowners and community groups to operate a watershed stewardship program.
- **Adopt-A-Stream Program and Friends of Mission Creek** – The City has worked cooperatively with the development community to restore more than 8.1 km of streams and 4 ha of wetlands in the community. Over 43,000 plants have been planted to help create healthy riparian zones.
- **Soil Sample and Irrigation System Assessments** – The City provides free soil sample tests and irrigation system assessments to homeowners and makes recommendations to homeowners, service clubs, schools, churches and not for profit groups on how to maintain a healthy green lawn with less water.
- **Agricultural Chipping Program** – The City has developed an agricultural chipping program as an alternative to outdoor agricultural burning.
- **Wood Stove Exchange** – The City offered an incentive for residents to trade in their old wood burning stoves for a higher efficiency EPA/CSA emission approved wood stoves which burn up to 90% cleaner. This program was created to reduce wood smoke pollution and raise public awareness about smoke-free burning. A new bylaw was also introduced to only permit emission approved stoves.
- **Cash For Clunkers** – The City operates a Clean Air Rewards Program to encourage residents to trade older, high polluting vehicles for incentives toward cleaner forms of transportation. Older vehicles traded-in to the program are recycled according to environmental guidelines.
- **Regional Biosolids Compost Project** – The City composts biosolids from two regions and three municipalities to make a soil amendment offered for sale. Proceeds of compost sales go to the facility operating budget.
- **Glenmore Grow** Yardwaste compost is processed at the Glenmore landfill from the 30,000 tonnes of organics received and used by local nurseries and the City Watersmart Program.
- **Regional Waste Reduction Office Partner** -- The Regional Recycling and Diversion Programs that the City participates in have reduced the materials going to landfill burial by 50% over the last 10 years. A 10 year Regional Solid Waste Management Plan was developed in cooperation with the City Landfill Operations and Citizen committee to ensure garbage stream is minimized and landfill life is maximized. In 2007, a Waste Audit was completed on City Hall. Solid waste initiatives have included bag limits for garbage placed at the curb, recycle pickup programs, yard waste programs, composting programs, recycle material bans, all under a User Pay System to encourage reduction.
- **2006 Solid Waste Bylaw Update** -- Increased tip fees and fines for mixed garbage, paper disposal, and construction and demolition debris have diverted waste from the landfill.
- **Asphalt & Concrete Recycling Project for City Infrastructure Projects** -- The City reuses existing materials rather than drawing on further resources, while directing material from the landfill.
- **Hazardous Waste “Round up”** -- This event collects the equivalent of 65,000 litres of consumer grade pesticides, flammable materials, oil, chemicals, etc. from residents. More than

50 high school students and five local businesses volunteered to make this a safe and highly successful event in 2006.

- **E-waste Collection Program** -- In 2006 more than 80 tonnes – 4 semi loads – of old computers and peripherals were collected, all of which were recycled entirely in Canada. Again, the success of the event was because of the 50 plus student and community group volunteers who helped staff the event.
- **Variable Tipping Fees** -- The City charges lower tipping fees for all source-separated wood, metal, concrete and asphalt (\$10/tonne down from \$40/tonne). The City increased fees for mixed waste. It is anticipated this initiative will reduce overall waste disposal by 5-10%.
- **Blue bag curbside recycling collection program** -- The recycling program continued to enjoy one of the highest participation and collection rates in the country. Nearly 12,000 tonnes of recyclables were collected from households in 2006, about 10 percent more than in 2005.
- **Zero Waste** – The regions' Councils in 2006 adopted the zero waste philosophy that maximizes recycling, minimizes waste, reduces consumption and ensures products are made to be reused, repaired or recycled back into nature or the marketplace.

Appendix B: Models for Operationalizing Municipal Sustainability

Model A – All Departments are Responsible

This approach involves assigning responsibility to all City departments for advancing sustainable actions. A team or group is created to coordinate communication, participation, training and public education, which is administered through the Office of the City Manager. The key benefit of this approach is City-wide support and actions; however, dedicated resources are still required and well-structured mechanisms for decision-making, monitoring and reporting.

The City of Vancouver selected this model, with several groups responsible for coordinating the sustainability mandate across the organization, including an interdepartmental Steering Group and a Sustainability Support Group with two full time positions administered through the Office of the City Manager. The Sustainability Support Group is tasked with preparing a Sustainability Action Plan and coordinating assessments.

The City of Toronto set up a governance framework using this approach, which is no longer functioning. The CAO was designated the 'Sustainability Lead'. In turn, the CAO appointed a 'Sustainability Director' to prepare a plan in consultation with a 'Sustainability Roundtable' and members of the Senior Management Team. A member of Council was appointed the 'Sustainability Advocate' who chaired the roundtable with 'a prominent citizen member.' One member of each of the Council Standing Committees sat on the Sustainability Roundtable.

Merits of Toronto's approach included assignment of responsibility, broad representation of interests and recognition of the importance of a champion for the initiative. Challenges which may have contributed to its breakdown include 'politicizing' the advocate position, and thus the Roundtable which was large and unwieldy and included external groups, and the lack of outreach and involvement at all levels of the organization.

Model B – Create a Department

Several cities and jurisdictions have created a department or office charged with delivering policy and programs that integrate sustainable practices. In cases where this governance model was used, existing offices considered to be well-aligned with sustainability were merged. The size of these offices varied from 5 full-time staff and secondments to 26 full time staff.

This approach creates a profile for sustainability, but could result in other departments feeling less responsible for integrating sustainability principles into practice. A variation of this approach is to create an office, with the intent of phasing into an integrated approach across the organization (Model 'A'). This model was not used in Canadian examples, which may indicate that it is not as well suited to our local government structures.

In 2000, the City of Portland merged its Solid Waste & Recycling Division with its Energy Office to form the Office of Sustainable Development. The same year, Seattle created their Office of Sustainability and the Environment by joining their Office of Environmental Management with the Seattle Urban Sustainability Initiative. Both offices work with City departments to provide technical assistance, policy and research to implement strategic/action plans for sustainability. In addition, the offices are tasked with collaborating with regional government, business groups, non-profits and other partners to coordinate and implement the plans. Advisory Groups comprised of members from the private and public sectors – in Portland's case regional representation – meet either bi-monthly or quarterly to provide advice and support.

Model C – Institutionalize an Integrated Planning Approach

A third approach is for the City to identify target issues, desired outcomes, establish management structures and procedures specific to achieving these goals, and to dedicate the staff and resources to projects. For example, the City of Freiburg, Germany set its sights on being known as an 'eco-city' and for its citizens to be known for their love of cycling and recycling. Mobility, energy, housing and social life are target issues.

Freiburg strategies include integrating environmental concerns in early planning, institutionalizing public participation for participatory planning, partnering with citizens and other agencies, particularly for funding, and seeking innovative policy ex. car-free residential areas. Information on the structural systems in local government to support this wasn't readily available. The benefits have tangible results and high citizen participation and support. However, opportunities to improve the sustainability of day-to-day operations where significant gains can be made for economic, environmental and social sustainability are not addressed.

APPENDIX C – DARING SUSTAINABILITY INITIATIVES SUGGESTED BY STAFF

Staff across the city organization were canvassed for ideas for initiatives they would recommend to achieve gains for sustainability. The ideas are paraphrased in bold, however the wording of the ideas has been retained as initially expressed/submitted (i.e. they have not been edited). It should be noted that in some cases other staff have remarked that some of the suggestions reflect misunderstandings or incorrect information. Further investigation into each project and its feasibility would be required prior to being further pursued.

- **Solar power** all city buildings
- **City adopt a LEED green building standard** - Commitment that all new city facilities will be certified LEED.
- (Leadership in Energy Efficient Design)gold or better
- **City management show leadership through alternative transportation** -All city management and Council members to use sustainable forms of transportation.
- **Wind power** - Wind turbines up and down the lake providing us with all our electrical needs
- **Set green building standards for the community** - Require new buildings over a designated size to be LEED Certified. This is something Vancouver has already mandated. There are 3 or 4 levels of certification and very specific guidelines and a point system that addresses numerous areas of sustainability (ie. reuse of materials, energy efficient design, recycled water processes, composting toilets, solar power and much more). Maybe there could be incentives for achieving higher certification.
- **Life Cycle Asset Management** - Strategic life cycle asset management (planning for the full cost of ongoing maintenance on an annual basis for the life of an 'asset; to ensure the asset doesn't result in infrastructure renewal deficit/liability at a future date)
- **Invest in a socially responsible manner** - Include a social responsibility policy for City investments.
- **Adopt a Corporate Disaster Recovery and Business Resumption Plan** - Develop an appropriate corporate disaster recovery and business resumption plan.

Benefits:

- Disaster Response: To the degree possible in a disaster situation, ensure provision of critical municipal services and functions following a regional, local or corporate disaster event (loss of City Hall due to fire).
- Business Recovery: The ability to recover quickly and efficiently from a disaster has a direct correlation to organizational sustainability.
- Constraints: budget and staff resources. Cost of initial development: \$100,000+

Solution: Resource the plan development and maintenance.

- **Tree planting pledge for all staff** - How about a pledge from as many City employees, who are able, to plant or donate a tree once a year? i.e. Plant a tree in their yard or a friends/relatives, donate a tree to a park, etc.
- **Agri-Heritage Landscape Emblem** - I've envisioned the word "Kelowna" written on the landscape in very large letters out of fruit trees and/or vineyards so that everyone who flies in to our beautiful city can see what Kelowna is, at a glance (a green oasis of agriculture/orchards and vineyards). Much like the rocks in the hillsides of Penticton, Kelowna will become world famous for its living letters. Each of the high schools could adopt a letter to look after. Students could learn to look after this precious greenbelt which made Kelowna so special in its early years. In this time of rapid growth we need to remember to sustain our orchard, farming and wine industry.
- **Be known for multi-modal linear greenways** - A north south urban linear greenway from one end of the City to the other that bisects the Mission Creek Greenway.

- I would suggest that the City address green space/ fitness issue by fast tracking an addition to the linear trail concept that has already proven successful with the creation of the Mission Creek Greenway. Since its completion the greenway has seen a huge amount of use by members of all demographics of both residents of the city and visitors to the area. It could be said that the greenway is an icon representative of the "Kelowna outdoor lifestyle".

- As the Mission greenway is already in place and other linear trails are proposed along Mill and Bellevue creeks I would suggest the idea of the nature walk east to west is well served. With increased multi-family and high rise development in the downtown core becoming a reality it would be a great asset to create an urban linear trail running north to south. I think the City should alter its focus and capitalize on assets already in place in the urban environment and link a pedestrian/ cycling "Urban Trail" from Knox Mountain all the way south to meet the Mission Creek greenway.

- Possible path: Extend Abbott Street corridor all the way south to the Truswell Rd entrance to the Mission Creek Greenway. This would mean the trail would follow the Abbott Street corridor to City Park. The waterfront portion of the trail already is in place to Rotary Marsh at Sunset Dr. This could be improved to be more cohesive with the Abbott Street corridor. At Sunset Dr the trail would follow the existing Brandt's Creek trail that exits just before Ellis St. on Manhattan Dr. The trail would need to be constructed new from this point to Sutherland Park adjacent to the mill and then could tie into Sutherland Park to Knox Mtn Park.

- This would be a huge asset to the residents of the downtown and create a cohesive, safe and enjoyable non-automotive link between the largest park in the city to the longest park in the city. For the most part it capitalizes on existing assets and could be implemented in the shorter term (3-5 years) if the assets were allocated to do it. The city could market the trail as a tourism asset similar to Victoria's Galloping Goose trail or Vancouver's Stanley Park seawall. Additionally it would provide an additional "green" asset that would blend with other City initiatives like the "Kick Start Kelowna" and possibly limit the amount of traffic interruption caused by events like the Apple Triathlon etc.

- Finally, If you view it as a long range investment the "Urban Trail"/ Mission Creek link could eventually tie into the Mill Creek/ Rutland Trail link providing non-automotive loop trail showcasing much of the city that would truly represent an asset to ALL Kelowna residents.

- **Boating Resource Assessment** – Suggest we have an overall boating resource assessment and planning initiative to protect our most valuable asset (OK Lake) and enhance the boating opportunities in our community.
- **Car-free streets** - Get people out of their cars by creating vehicle free corridors that only allow bike and pedestrian traffic.
- **Incentives & Initiatives for Reducing Vehicle Emissions** - Pursue initiatives to limit one vehicle per household and implement an air-care type program.
- **Regulate Lake Traffic** - Place a cap on the size of motors that are allowed on Okanagan Lake.
- **Green Building Guidelines for Development with Incentives** - A short term idea would be to create 'Green Building Guidelines' which incorporate new construction and remodeling methods which would reduce energy use in both construction materials, methods, and ultimately the longevity of low energy living. As initiative it should include a 'green calculator' to reduce the cost of a development or building permit fees.
- **No New Roads** - Don't build any new roads or expand any existing roads for five years. Redirect money that would be spent on roads to alternative forms of transportation.
- **Prioritize Transportation Investment by Mode** - Build the Rails with Trails corridor BEFORE adding any further to the North End Connector
- **An SOV Reduction Plan** - The City of Kelowna is the largest employer in Downtown Kelowna, and one of the largest employers in Kelowna. As such it has tremendous ability (not to mention responsibility) to influence greener outcomes. Here's my "drastic" action that I think Council

could consider. Essentially it's aimed at encouraging greener transportation. Specifically it's aimed at making SOV's less appealing and making public transit more appealing.

I would suggest that the City of Kelowna:

1) eliminate all subsidized parking to its employees (could be phased out). This would principally mean increasing the costs to market rates of all parking stalls in the north lot and for all City staff who use the Library parkade. Managers need to lead the way. I'm not sure how to get them out of their cars but we could start with eliminating any leases that are part of packages to senior management. If the City wants to compensate managers for this loss in the form of some other perk then so be it.

2) subsidize the cost of transit passes for all employees to bring the out-of-pocket cost for the employee below the amount of the current cost for a yearly transit pass. This program could be modelled on any number of similar programs that exist in other jurisdictions. A catch might be that if paid for by the employer, the cost is a taxable benefit to the employee, but if paid for by the user, according to recent changes to the legislation, is tax deductible to the employee. Not sure what the implications of this are.

3) create a recognition program for employees who regularly walk, bicycle, or in-line skate to work. This could take the form of gift certificates or the City could cover the costs of repairs and maintenance for bicyclists and skaters.

- **A Green Purchasing Policy -**

Reasons:

It seems a basic initiative for companies committed to sustainability --- start at the start

We don't need to recreate the wheel, lots of examples to "steal" from, could be a "quick win" with impact

It will hurt a bit, cost us more on a transaction basis (in some cases) but the pain will be spread out over time and over operations / budgets

It improves sustainability effectiveness organization wide

The purchasing manger supports it

It shows leadership to all our vendors and the public --- it will be visible

- **Foster transit oriented development** - around key stations on our proposed bus rapid transit line. One of those stations is in front of the Parkinson Rec Centre. Reid has talked about the idea of a public/private partnership to develop a building to house the relocated Seniors Activity Centre at this location. We're also proposing a joint project with the Stobbers to build a pedestrian overpass here for the bus station. The building could provide some low-cost housing and it could include many features of sustainability such as geo-thermal heating. It might be possible to get senior government funding to help facilitate a public/private partnership. brown-field densification, supporting the viability of public transit, comprehensive mixed-use development, life-cycle integration and seniors accessibility, public-private partnerships. The south facing orientation of the site and the proximity of a daylighted stream are environmental amenities that could be amplified. There are a set of dominoes that need to have some connection in design philosophy. The trigger for the seniors facility is the relocation of the Yacht Club to make way for the Stuart Park redesign scheduled for 2010. Associated with waterfront revitalization is the work on City Park connected with the new bridge and the adaptive re-use of the pontoons.

- **A bio-diesel production facility** - Do we know what types of crops are best grown for production of bio-diesel? Do we know how much land and what soil type is needed to grow this crop? As we talked a couple of years ago, the area around and over the landfill would seem like an ideal location assuming the answers to the these questions support this location. UBC's agricultural department likely could help with answering these questions.

- **Increase landfill electrical generation capacity to divert to other City operations** - You already have a electricity generation facility at the landfill. Is it possible that this would produce sufficient electricity to run the irrigation pumps that feed the Bredin farm? It seems to me that

we have enough information to at least undertake a feasibility study. If it proved feasible, there likely would be plenty of government funding to purchase the equipment to cultivate and harvest the crop and to put in place the bio-diesel production facility.

- **Intelligent Transportation System** - aggressive transit priority program supported by the latest technologies such as Intelligent Transportation System (ITS)."
- **Ban car idling** - my thought is to put a ban on any future drive-thru's which have cars idling for minutes on end when they could easily go inside to collect their coffee or take-out or go to a bank auto-teller.
- **Modal –Prioritized Roadways** - Designated road networks for green vehicles/transit/car poolers/taxis only.
- **Tax Incentives for Being Car-free** - A tax break if you don't have any vehicles registered in your name , or a tax break if you do own a 'green' vehicle.
- **City Composting Program** - As part of the recycling program, have a compost materials pick-up
- **Energy Audit & Retrofit for all City Facilities** - Retrofit all City buildings with low-energy, motion-controlled (after hours so buildings aren't lit up at night) lights and recycling containers for staff to recycle materials other than paper.
- **City Hall Community Garden** - Turn the City Hall surface parking lot into a model community garden, which educates about our local agricultural heritage.
- **City Run Car Coop** – Have the City coordinate a car coop that employees can join for a fee. The cars would be available for use for an additional "per mile" travel fee.
- **Charge market rate for City Hall parking** – Charge all employees and Council full market rate for parking in the City Hall parking lot. Use increased revenue from parking fees to subsidize transit passes for staff. Eliminate leased vehicles for senior management.
- **Gas Tax** – Work with senior governments to allow the City, through 'concurrent authority' to impose a new gas tax, with the revenues going to fund 'green' initiatives
- **Partner with Terasen** – Partner with Terasen, or other entity, to retrofit downtown city-owned buildings to improve energy efficiency
- **Leeds Gold** – Require that all new buildings constructed by the City or funded by the City, through public-private partnerships, be capable of achieving Leeds Gold certification
- **KSS redevelopment as Leeds Gold** – Make sure that any redevelopment at the KSS site be capable of achieving Leeds Gold.
- **Purchasing Policies** – Change purchasing criteria so that they require sustainability to be addressed
- **Building Checklist** – Require developers to complete a 'green building' checklist.
- **Varied DCCs** – Charge more for developments creating big residential lots
- **Telecommuting** – Give more staff the option of working from home.
- **Matching Performance of Others** – City should match or exceed the practises of other municipalities
- **Staff Eco-footprint analysis/competition** -- I thought that maybe our department could start by completing an ecological footprint analysis for our department's staff (maybe by having each individual do a test like this - <http://www.earthday.net/footprint/>) and then challenging all of the city departments to do theirs. We could measure this quarterly and the Department with the greatest % change would be rewarded in some way. I guess it relies on the honour system a bit but would be a step in the right direction. This would also be a great PR tool in the media. This is something that could eventually be rolled into a Corporate type challenge that is on-going and tracked through our website?
- **Energy Efficiency for New Suites** The suggestion is that any home that is proposing a suite must upgrade their entire building to energy efficient and low water consumption standards as part of the suite approval. Improvements could include low flow toilets, water conservation

fixtures (shower heads, landscaping improvements), energy efficient furnance or heat pump, insulation improvements, and low e windows. At least then we reduce system impact on those areas of infrastructure.

- **Workstation Audits** Conduct workstation audits, have someone or a small team visit all work stations and provide advice – ie. Unplug rechargeable batteries; turn out the lights if full sun out; turn off monitor during lunch, etc.
- **Carpool System** Well organized car pool system with bonus for users, eg. Free parking
- **Low Flush Toilets** Promote low flush toilets etc. through rebates to the public, and include grey water recycling systems and designed irrigation systems or convert the Fintry Queen to solar power and put the planning department on it
- **More Green Space** People want green space. 1) DCCs include natural spaces; 2) increase park targets and DCCs accordingly; 3) through subdivision require developers to plant 'x' amount of trees and have good soil for lawns to reduce water use
- **Rapid Transit System** Design a Rapid Transit System to reduce vehicle traffic congestion – KRT – sooner better than later!!
- **Recycling Storage Area** Build into a 'building permit' approval a requirement for a recycling storage area within the structure. One such area for each residential unit – whether single family or multi-family dwellings
- **Pine tree shadowing.** Distribution of Coniferous seedlings other than pine for planting next to existing pines to respond to the likelihood that the older trees will need to be removed because of the pine beetle. This proactive initiative will assist in responding to the sustainability issue in a big way.
- **Green Space Reserve** With the intense pressure for development, more importance needs to be on a large central, green space reserve (such as Springfield on North, Burtch on West, KLO on South, Benevoulin- Mission Creek to the East).
- **Bylaws and Fines for Wasted Water Use** some of the American cities like Palm Springs or Las Vegas as examples for water conservation and implement some of their water saving ideas, ie. Bylaws and fines for water waste; desert landscaping; education on how to conserve for residents, etc.
- **Recycle Ice Making Water** Convert arenas to recycle all water used for ice making. Convert to a closed system; capture heat from compressions to heat recycled water.
- **Emission Standards** Impose local (municipal) emission standards for all resident vehicles. And resources to enforce.
- **Leeds for extra Density** Reduce density in all zones; then develop Leeds bonus system as a way to get back to full density.
- **Lights off** City Hall – light should go off automatically at 6 or 8pm
- **Turn computers off** Turn computers off every night – it saves power, loads security updates in morning. Double win.
- **Fix HVAC system** Fix the HVAC system (City Hall) so that there aren't a lot of heaters working in offices in summer and winter.
- **Heating and electricity controls** Heating and electricity controls in all municipal buildings so as to reduce heat and electrical usage when buildings are not in use.
- **Lights off** You know what really bugs me? Leaving the office late in the evening or driving by City Hall at night/weekends and seeing many of our lights still on. Is there any way to shut them off or have systems to shut off automatically after hours?
- **No Drive Throughs** 1) Amend the relevant bylaws not to allow any new drive-thru's to be developed, and to require their removal on redevelopment of existing sites. Having vehicles idling for up to 15mins at Tim's to get a coffee is environmentally ridiculous, both in terms of energy uses and exhaust emissions; 2) Ensure all computers and office lights are switched off when staff leave an office for more than, say, 3 hours.

- **Free composting bins** Get free composting bin per household and free composting learning session
- **Phase out Garbage Bags** It is my understanding that it takes approximately 400 years for plastic garbage bags to decompose in the landfill. In order to create a more “sustainable” landfill, composting, and recycling programs should be stepped up and enforced. Phasing out the plastic garbage bags through a garbage can program may help improve sustainability of the landfill.
- **New Pool Technology** Save money and water. Add new swimming pool water chemical/disinfecting/sanitizing technology at PRC and Athens Pool to reduce the used of chlorine and reduce the requirements to add fresh water continually to the swimming pools (already in the new MRP pool).
- **Gas Tax** Surtax on local gas sales earmarked for sustainable projects.
- **Car Coop** City sponsored/organized Car co-op – as a pilot project.
- **Work from Home Days** Once per month planned “Work from Home Day” – no need to drive in; no use of city space, materials, etc. resulting in: less janitorial and maintenance, less electrical and other utility consumption, likely less printing.