

CITY OF SASKATOON

**SASKATOON ENVIRONMENTAL
ADVISORY COMMITTEE**

ANNUAL REPORT 2008



City of
Saskatoon

INTRODUCTION

The Saskatoon Environmental Advisory Committee (SEAC) is an advisory body of Saskatoon residents, consisting of nine members of the general public, one City Councillor and one member of the Saskatoon Health Region. These individuals meet regularly to discuss environmental issues relevant to the City of Saskatoon and to provide information and recommendations to Saskatoon City Council. SEAC was formed in 1973 by City Council, and has been actively pursuing its mandate since that time, with the expertise of a dedicated, diverse, and knowledgeable roster of members.

PURPOSE

Through the Administration and Finance Committee, the Saskatoon Environmental Advisory Committee provides City Council with advice on environmental implications of City undertakings. SEAC also identifies environmental issues of potential relevance to the City of Saskatoon.

AIMS and DUTIES

City Council has established that SEAC will:

- ◆ provide to Council advice on environmental implications of City undertakings and identify environmental issues of potential relevance to the City.

SEAC has established that they will:

- ◆ be aware of the resources available to the City of Saskatoon for dealing with environmental problems.
- ◆ prepare and publish an annual report on the activities of the Committee over the past year.
- ◆ encourage liaisons between the City of Saskatoon and environmental agencies serving higher levels of government.



COMMITTEE STRUCTURE

Saskatoon Environmental Advisory Committee is made up of 11 members, all of whom are appointed and/or nominated by City Council. One member is a City Councillor representing the City. Another member is appointed as a representative of the Saskatoon Health Region, Public Health Services. The remaining nine members are members of the general public.

Members are appointed for two-year terms, which are renewable up to six years. In the event that a member fails to complete his/her term, a replacement may be named to complete that term. New appointments are made by City Council upon resignation of a member and on expiration of the term of public appointments.

QUALIFICATIONS OF MEMBERS

Members of SEAC should possess:

- ◆ A sound general knowledge of the Saskatoon area and its existing and potential environmental issues; and
- ◆ Expertise in disciplines such as ecology, biology, chemistry, physics, geography, economics, demography, sociology, medicine, aesthetics, toxicology, engineering and conservation.

MEETING SCHEDULE

Meetings are held monthly.

Day Second Thursday

Time 11:30 a.m.

(except July, August and December)

All meetings are open to the public. Members of the public wishing to attend a meeting are able to review the agenda prior to the meeting, at any branch of the public library beginning on the Friday prior to the meeting date or on the City's web site at www.saskatoon.ca, select 'City Clerk's Office' under Departments on the top of the cover page, then select 'Boards and Committees', followed by 'Agendas'.

THE YEAR IN REVIEW - 2008

Appointments and Reappointments for 2008:

- Mr. Darcy Meyers was appointed Chair for 2008
- Mr. Sean Shaw was appointed Vice-Chair for 2008
- Re-appointed committee members were Councillor T. Paulsen, Ms. Barbara Hanbidge, Ms. Patricia Hanbidge, Mr. Darcy Meyers.
- Mr. Sean Shaw and Ms. Anna Ringstrom were new appointments to replace Mr. Lawrence Pinter and Mr. Mark Warbanski, and Ms. Leslie Rea was appointed to replace Mr. Dwayne Djkowich as the Saskatoon Health Region representative.
- The remaining members of Dr. Tom Wolf, Dr. Judit E. Smits, Ms. Marie-Ann Bowden and Ms. Dani Xu had been appointed in 2007 to the end of 2008.

Administrative support came from Mr. Dorian Wandzura, General Manager, Utility Services Department, followed by Mr. Jeff Jorgenson, General Manager, Utility Services Department, Ms. Sheri Praski, Environmental Services Branch Manager, Mr. Ken Johnson, Environmental Programs Manager, Ms. Colleen Yates, Environmental Management System Coordinator and from Councillor Tiffany Paulsen.

Focus of SEAC for 2008:

Because of the growing complexity of environmental issues that are being dealt with by the City, SEAC held a task group meeting to establish specific Goals and Objectives for 2008. These were submitted to City Council as information, in a report dated February 14, 2008 (Attachment No. 1).

Focus priorities

The 2008 Goals and Objectives included the following areas of focus:

- Dark-Sky Compliant Lighting Policy
- LEED[®] Standards
- Implementation – Bicycle Network Plan
- Support for Greenhouse Gas Management Plan and Saskatoon Waste and Recycling Plan

The Committee wishes to remind City Council that it looks forward to dealing with referrals involving environmental topics, since SEAC consists of a membership well equipped to do so.

Other areas of participation; - Annual Report, inquiries and referrals from Councillors, referrals from Council or Committees, updates from Administration, participation by SEAC members in related events (e.g. Road Map 2020 – see Attachment No. 2), and additional Task Groups.

1) Dark-Sky Lighting Policy

(See Attachment 3)

2) LEED® Standards for all new Civic Building Projects

(See Attachment 4)

3) Update – Bicycle Network Plan –Implementation

SEAC received an update from Administration regarding the Implementation of the Bicycle Network Plan in 2008 – and was advised that their plans for the \$200,000 in funding include route signage, education for schools, bike path improvements along Lanyon Avenue (improve access points to key crossing locations) and improve access points for Circle Drive pedestrian bridge (access from Spadina Crescent bike lanes to bridge). In addition, under the Arterial Sidewalk Retrofit Program (Capital Project 948) they planned to build a shared-use pathway along 33rd Street from Warman Road to Spadina Crescent.

4) Support for Greenhouse Gas Management Plan and Saskatoon Waste & Recycling Implementation Plan

(See Attachment 5)

5) Wetlands Policy

Senior Planner Mitch Comb provided an update on the status of the development of a Wetlands policy and will update the Committee as the process moves forward.

6) SEAC Poster and Essay Contest

The Committee worked with the We Are Many Festival group to develop a poster/art contest. There was little uptake of the contest and other options will have to be looked at for education and outreach in the future.

7) Pesticide Task Group

A letter of support was sent to the Budget Committee for review when considering funding the Pesticide Education Program.

8) Other Areas of Consideration / Review

- a) Appointment of representative to Road Map 2020 (Attachment No. 2)
- b) Letter to Budget Committee in support of Funding for the Waste & Recycling Implementation Plan (Attachment No. 5)
- c) Letter to City Council providing comments on DCD1 Zoning Amendment for River Landing Parcel "Y" (Attachment No. 6)

Summary of SEAC Focus Topics for 2008:

Note: Reports and Recommendations submitted to City Council, plus additional events in which SEAC members participated are presented in the sections following the monthly synopsis.

January 2008

Darcy Meyers was appointed Chair and Sean Shaw was appointed Vice-Chair for 2008. Administration was invited to discuss cost benefits of the Dark-Sky Lighting Policy with reference to Clause 1, Report No. 12-2007 of the Administration and Finance Committee.

A Task Group of Darcy Meyers and other volunteer Committee members was established to bring forward Goals and Objectives for 2008.

A Task Group was established to develop a framework for educational information on LEED[®] standards for use by City Council. This Task Group membership consisted of Marie-Ann Bowden, Barbara Hanbidge, Patricia Hanbidge and Anna Ringstrom.

Dr. Judit Smits was appointed as the Committee contact person to work with the We Are Many Festival group regarding the poster contest.

Preparations and arrangements were made for The Natural Step training session which was held on January 25, 2008. Invitations to the event were extended to the Community Services Department and City Solicitor's Office.

February 2008

Mr. Dorian Wandzura, General Manager, Utility Services Department was in attendance and answered questions of the Committee in regards to the Dark-Sky Lighting Policy.

Mr. Richard Huziak, from The Saskatchewan Light Pollution Abatement Committee was asked to provide comments. The Committee resolved to prepare a report for City Council in regards to the Dark-Sky Lighting Policy.

A communication to City Council from Shelley LePoudre was referred to SEAC on the topic of lighting for the Taylor Street extension. A letter was sent to Ms. LePoudre indicating SEAC was working on City-wide lighting recommendations, and the issue of the specific Taylor extension would be dealt with by administration.

The Committee learned of an administrative report on LEED[®] building standards going to City Council. Since the Committee's task group was working on preparing a report also, the chair asked Council for a referral of the report that was submitted to them to the Committee for consideration. SEAC would then bring forward a report on LEED' standards, taking the administrative report into consideration.

March 2008

Following a presentation from Mr. Alexander Akoulov, discussions on recycling in Riversdale and the Bicycle Plan led to the matters being referred to administration for consideration. The 2008 Goals and Objectives were approved by the Committee and submitted to the Administration and Finance Committee.

A draft Dark-Sky Lighting report was circulated at the meeting by Barbara Hanbidge seeking input from the Committee. Dani Xu and Sean Shaw volunteered to help Barbara complete the report and submit it at the next meeting.

The Committee also resolved that Vice-Chair Sean Shaw draft a letter of support for the implementation of the recommendations of the Saskatoon Waste and Recycling Master Plan.

April 2008

Dr. Judit Smits reported on the Committee's poster contest and the We Are Many (WAM) Festival group's progress on administering the contest. It was believed that the contest winners could be reported at the June meeting. Judit was also to assist in the prize determination and distribution with WAM organizers.

The Dark-Sky Lighting report was receiving some finishing touches and would come forward to the next meeting.

A LEED® Standards report was referred to the Committee from City Council at the request of the Chair. Ms. Anna Ringstrom circulated copies of an April 8, 2008 letter concerning the LEED® Task Group's planned response to City Council. Ms. Ringstrom indicated the Task Group would have a two-part response to the referral. The first aspect would be the letter which was circulated and the second being a more detailed analysis of LEED® standards and cost recoveries, that will come forward in the Fall. Mr. Rob Tomiyama, Facilities Branch, Infrastructure Services Department was in attendance as the author of the original report that was referred to SEAC from City Council. Mr. Tomiyama reviewed the information in his report and answered the questions the Committee. The information was referred to the Task Group for their consideration and incorporation into a future SEAC report on LEED' building standards.

The Committee also resolved that Vice-chair, Sean Shaw, be authorized to speak on behalf of SEAC in support of funding for the implementation of the Saskatoon Waste and Recycling Plan at the Budget Committee meeting.

May 2008

Review and approval of the 2007 SEAC annual report prepared by Judit Smits. The Committee expressed thanks to Judit for her work in preparing the report.

From the Goals and Objectives discussion, a review on sustainability measures and approaches in other centers will be undertaken. The Committee approved an expenditure of \$1 500 to gather information and prepare a report on sustainability. This will likely be a student project and be a report of 10-15 pages looking at other cities with respect to sustainability approaches and resources allocated for them.

Dr. Tom Wolfe indicated that his term is up on the Committee at the end of the year and his representation on the Road Map 2020 board will require a replacement. The Committee recommended that Sean Shaw would replace Tom on the Road Map board and that SEAC would cover his \$50 membership fee.

June 2008

It was reported that the Administration and Finance Committee made a referral to City Council to appoint Sean Shaw as the SEAC representative for Road Map 2020.

The Committee resolved to fund some promotional posters for the We Are Many Festival to facilitate the SEAC poster contest, pending a detailed report from WAM.

More discussion on retaining Meredith James for the information-gathering project - in regards to sustainability measures being undertaken in other centers in Canada.

The Committee resolved that the report on LEED[®] standards be submitted to City Council through Administration and Finance Committee at the first meeting in September.

SEAC also resolved to submit the Dark-Sky Lighting report through the Administration and Finance Committee to City Council.

September 2008

Discussion on the status of the Wetlands Policy led to an invitation being extended to the Manager of Future Growth to the next meeting to provide an update.

There was also discussion on environmental impact assessments and what level of assessment projects require. This was to be brought forward for further discussion at the next meeting.

The Information Gathering report on Sustainability was received and deferred to the next meeting for discussion. Meredith James will be invited to discuss the report and take questions.

A final report was provided by WAM in regards to the SEAC poster contest. There was only one submission and therefore no funds were required from the 2008 budget. WAM and the Committee were disappointed that there was not more participation and the Committee noted that the future of the poster contest would have to be reviewed.

It was reported that City Council adopted the SEAC recommendation to develop an Integrated Dark-Sky Lighting Policy.

October 2008

Ms. Laura Hartney, Manager of Future Growth, provided an overview of the process for future growth planning. Mr. Mitch Comb, Senior Planner, Planning and Development Branch was present to give an update on the development of the Wetlands Policy. Strategic Services Manager Cal Sexsmith elaborated on the wetlands in the Rosewood area and the collaboration with Ducks Unlimited in the development. All presenters were very informative and provided great information for consideration and discussion amongst the Committee members.

The Sustainability report prepared by Meredith James was presented and discussed. It was resolved that the report be received and referred to a task group for further consideration and determination of possible recommendations.

The Committee received Policy No. A-07-020 Idling Policy for City Vehicles. The e-mail correspondence of Councillor Paulsen in regards to environmental assessments was brought forward and received as information.

The Committee also received information in reference to the deferral of the LEED[®] report to the September, 2009 meeting of the Administration and Finance Committee, for review, as well as obtaining a report on costs related to planned LEED[®] projects.

November 2008

Land Bank Manager Trevor Bell, Land Development Project Manager Frank Long and Senior Planner Derek Thompson were present to provide a presentation on the proposed Evergreen Neighborhood. The detailed and informative presentation on this exciting new project was very well received by the Committee.

Two Committee members went to the Saslc. Green Building Conference and they provided a brief update. They found the Conference to be well organized, interesting and informative.

Ms. Allyson Brady, Executive Director of the Saslcatchewan Environmental Society was present to discuss the Pesticide Education Program for 2009. The Committee resolved to send a letter to the Budget Committee in support of the requested funding for the continuation of the program.

Referrals from Council

A communication to City Council from Shelley LePoudre regarding lighting policy (Taylor Street Extension) was referred to SEAC. SEAC responded with a letter indicating their involvement in the Dark-Sky Lighting Policy.

At the February 19, 2008 Council meeting, the SEAC Chair requested that an administrative report with respect to LEED® standards be referred to SEAC for consideration. SEAC had a task group already formed and was looking to forward recommendations. The report was considered and a subsequent SEAC report was prepared and submitted to Administration and Finance Committee for consideration at the September 8, 2008 meeting. The Administration and Finance Committee deferred consideration of the report until September 2009.

Referrals from Committees

None to report.

Reports /Recommendations submitted to City Council

- ◆ SEAC 2007 Annual Report - May 2008
- ◆ Recommend Sean Shaw as SEAC representative on Road Map 2020.
- ◆ Darcy Meyers spoke to City Council requesting referral of LEED® report to SEAC for Committee consideration.
- ◆ Recommend the adoption of an integrated Dark-Sky Lighting Policy
- ◆ LEED® report and Recommendations
- ◆ Letter in support of funding for the Pesticide Education Program
- 4 Sean Shaw spoke to the Administration and Finance Committee, as well as a letter, in support of funding for the implementation of the Saskatoon Waste and Recycling Plan.
- ◆ Letter to City Council providing comments on DCD1 Zoning Amendment for River Landing Parcel “Y”

Summary of Projects, which received support from SEAC in 2008:

- a) Road Map 2020 – SEAC continued to both support Road Map, and has a member appointed to the Board of Road Map 2020 for a 1-year term.
- b) SEAC Poster & Essay Contest – SEAC, in collaboration with the We Are Many Festival, held an art contest.

Additional events in which SEAC members participated:

Updates and Presentations from City Administration:

Throughout the year, an important component of each Committee meeting was the update from the City Administration representative in attendance. Ms. Sheri Praski, Manager, Environmental Services Branch, Utility Services Department Mr. Ken Johnson, Manager, Environmental Programs, and Ms. Colleen Yates, EMS Coordinator, Utility Services Department made summary presentations throughout the year. The presentations updated SEAC with information on initiatives being undertaken by this Branch of the Utility Services Department. Details of all reports may be found in the SEAC meeting minutes on the City of Saskatoon website.

There were also other presentations throughout the year from different areas in the administration that provided insight into the planning and initiatives being undertaken and their impact on the environment. Dorian Wandzura, Mr. Rob Tomiyama, Ms. Laura Hartney, Mr. Mitch Comb, Mr. Cal Sexsmith, Mr. Trevor Bell, Mr. Frank Long, and Mr. Derek Thompson all provided great information to the Committee and their contributions and time were greatly appreciated.

ACKNOWLEDGEMENTS

The Saskatoon Environmental Advisory Committee wishes to express gratitude to all those who have helped the Committee in 2008. First and foremost, the expertise, advice and excellent secretarial services provided by Marlene Hall, Deputy City Clerk was greatly appreciated. Ms. Hall's cheerful, competent and professional attitude was integral to the success of this Committee during the year.

SEAC would also like to commend the Saskatoon Environmental Services Branch for the work they are doing for the citizens of Saskatoon. Many of the questions and referrals that could or would have been sent to the volunteers who serve on SEAC, have been handled completely or in part by members of this Branch. This has allowed SEAC to focus on other issues and aspects of environmental relevance to the City of Saskatoon. This collaborative working relationship has resulted in positive environmental decisions that will provide long-term benefits for the people in Saskatoon and in the rest of the province.

In 2008 the following individuals provided reports, information, and other forms of assistance:

Councillor Tiffany Paulsen	Representative of Saskatoon City Council who participated in Committee Meetings.
General Manager, Utility Services Department	Representative of the City Administration who attended several Committee Meetings and provided information requested by the Committee.
Ms. Sheri Praski – Utility Services Environmental Services Branch Manager	Representative of the City Administration who attended Committee Meetings and provided updates regarding the Department's activities throughout the year.
Mr. Ken Johnson – Utility Services Environmental Programs Manager	Representative of the City Administration who attended some Committee Meetings and provided updates regarding the Department's activities.
Ms. Colleen Yates – EMS Coordinator, Environmental Services Branch	Representative of the City Administration who attended Committee meetings and provided updates regarding the Department's activities.
Mr. Richard Huziak, Saskatchewan Light Pollution Abatement Committee	Representing The Royal Astronomical Society of Canada presented issues and solutions regarding light pollution January 16,2007.
Ms. Laura Hartney, Manager of Future Growth, City Planning Branch, Community Services Department	Provided an overview of the process for future growth planning.
Mr. Mitch Comb, Planning and Development Branch, Community Services Department	Provided an update on the development of the Wetlands Policy.

Mr. Cal Sexsmith Strategic Services Manager,
Infrastructure Services Department

Provided information on the Wetlands in the Rosewood area and the collaboration with Ducks Unlimited in this development.

Mr. Trevor Bell, Land Bank Manager,
Mr. Frank Long, Land Development Project
Manager, Land Branch, and Mr. Derek
Thompson, Senior Planner, Land Branch,
Community Services Department

Provided a presentation of the proposed Evergreen Neighborhood.

MEMBERSHIP of SEAC for 2008

Mr. Darcy Meyers, Chair

Mr. Meyers is a Product Development Chemist at Fytokem Products Inc. with an interest in environmental issues in our community.

Dr. Sean Shaw, Vice-Chair

Dr. Sean Shaw is a Research Associate in the Department of Geological Sciences at the University of Saskatchewan. His research focuses on the geochemical impacts of mining wastes on the surrounding environment.

Dr. Judit Smits

Dr. Smits is a professor in the Department of Veterinary Pathology, with a cross appointment at the Toxicology Centre, University of Saskatchewan. Her research involves environmental toxicology, wildlife and domestic animal health & toxicology.

Ms. Marie-Ann Bowden

Ms. Bowden is a Professor of Environmental Law at the College of Law, University of Saskatchewan.

Ms. Barbara Hanbidge

Ms. Hanbidge is a biologist and Saskatchewan education specialist with Ducks Unlimited Canada.

Dr. Tom Wolf

Dr. Wolf is a research scientist at Agriculture & Agri-Food Canada specializing in application technology and environmental fate of pesticides.

Leslie Rea

Ms. Rea is the Manager, Safe Communities Department, Public Health Services, Saskatoon Health Region.

Ms. Patricia Anne Hanbidge

Ms. Hanbidge is a well-known horticulturist, author and columnist. She is the principal and owner of the fully accredited local horticultural school - the Saskatoon School of Horticulture. She has a special interest in environmental issues and imports biological controls for use by homeowners and commercial players in the horticultural industry.

Ms. Dani Xu

Ms. Xu is a Ph.D candidate in the Department of Soil Science at the University of Saskatchewan. She has broad research interests in the inter-disciplinary fields of environmental chemistry as well pesticide science.

Ms. Anna Ringstrom

Anna Ringstrom is a landscape architect with Crosby Hanna + Associates. She has a particular interest in issues related to innovative stormwater management, green roofs and urban agriculture

Councillor T. Paulsen

Councillor Paulsen represents Ward 9 and is City Council's representative on the Committee.

ATTACHMENTS:

1. Report dated February 14, 2008 advising City Council regarding the Committee's 2008 Goals and Objectives. (This report was adopted by City Council at its meeting held on April 21,2008.)
2. Report dated May 14, 2008 recommending that City Council approve the appointment of Sean Shaw to replace Tom Wolf as the Saskatoon Environmental Advisory Committee's representative on the Board of Directors for Road Map 2020. (This report was adopted by City Council at its meeting held on June 9,2008.)
3. Report dated June 12, 2008 recommending that City Council approve a request for the City to develop a comprehensive and integrated Dark-Sky Lighting Policy that will apply to all areas within the current and future City Limits. (This recommendation was adopted by City Council at its meeting held on August 11, 2008.)

4. Report dated May 26, 2008 recommending that City Council approve the City of Saskatoon adopt LEED[®] Silver certification as a minimum standard to which all new civic buildings are built. (This report was considered by the Administration and Finance Committee at its meeting held on September 8, 2008 and deferred to September, 2009 at which time Administration was asked to report on its experience with the new Fire Hall being built to LEED[®] standards.)
5. Letter dated March 25, 2008 to Budget Committee in support of funding for the Saskatoon Waste & Recycling Implementation Plan.
6. Letter dated June 18, 2008 to City Council providing comments on the proposed Zoning amendment for Parcel Y in River Landing to DCD1 – Central Business District.

ADVISORY COMMITTEE REPORT

TO: Administration and Finance Committee
FROM: Saslatoon Environmental Advisory Committee
DATE: February 14, 2008
SUBJECT: 2008 Goals and Objectives
FILE NO.: CK. 175-9

RECOMMENDATION: that this report be received as information and submitted to City Council.

BACKGROUND:

The Saslatoon Environmental Advsiory Committee's mandate is to provide to Council, advice on environmental implications of City undertakings and identify environmental issues of potential relevance to the City. With this in mind, the Committee undertakes an annual session on Goals and Objectives for the next year, and this report outlines the issues selected as a focus for 2008.

REPORT:

A Task Group of Committee members held discussions on the issues for focus in 2008. The draft of issues was submitted to the Committee for review, and the Committee approved a focus on Sustainable Development in the context of the growth of the City, and to continue developing a culture of sustainability with the City of Saskatoon. More specifically, there are ongoing issues that the Committee will continue to monitor, namely:

- Dark Sky Compliant Lighting Policy
- LEED Standards
- Implementation – Bicycle Network Plan
- Support for Greenhouse Gas Management Plan and Saslatoon Waste and Recycling Plan

CONCLUDING COMMENTS:

The Committee appreciates referrals from City Council on all matters relating to the Environment, and would encourage that this continue as we move into interesting and challenging times ahead. The Committee is committed to ensuring that Saskatoon remains a leader on environmental initiatives.

Written by: Darcy Meyers

Approved by: “Darcy Meyers”
Darcy Meyers, Chair
Saskatoon Environmental Advisory Committee
Dated March 13, 2008

ADVISORY COMMITTEE REPORT

TO: Administration and Finance Committee
FROM: Saskatoon Environmental Advisory Committee
DATE: May 14, 2008
SUBJECT: Road Map 2020 - Board of Directors
FILE NO.: CK. 175-9

RECOMMENDATION: that this report be submitted to City Council recommending that Sean Shaw be appointed to replace Tom Wolf as the Saskatoon Environmental Advisory Committee's representative on the Board of Directors for Road Map 2020.

BACKGROUND:

Attached is Clause 2, Report No. 11-2007 of the Administration and Finance Committee which was adopted by City Council at its meeting held on August 13, 2007, appointing Tom Wolf as the Saskatoon Environmental Advisory Committee (SEAC) representative on the Board of Directors for Road Map 2020, to December 31, 2008.

REPORT:

SEAC has determined that the new appointments to the Board of Directors for Road Map 2020 will be installed at the Annual General Meeting in June, 2008, and that Tom Wolf will not be able to fulfill a complete term to June, 2009 as his 6-year term on SEAC expires on December 31, 2008. The Committee is therefore requesting that Sean Shaw be appointed as the SEAC representative on the Board of Directors for Road Map 2020.

CONCLUDING COMMENTS:

Road Map 2020 has secured funding to hire an Executive Director and establish a program plan for the upcoming year. Its Goals and Objectives are 'Active Transportation' driven and 'Greenhouse Gas' driven, and they want to expand their sustainability champions network and assist corporations in making changes to the way they function. SEAC supports these goals and objectives and will assist in keeping within its mandate to review and/or bring forward environmental management measures for consideration by the City of Saskatoon.

ATTACHMENTS:

1. Clause 2, Report No. 11-2007 of the Administration and Finance Committee.

Written by: Darcy Meyers

Approved by: "Darcy Meyers"
Darcy Meyers, **Chair**
Saskatoon Environmental Advisory Committee
Dated: May 14, 2008

ADVISORY COMMITTEE REPORT

TO: Administration and Finance Committee
FROM: **Saskatoon** Environmental Advisory Committee
DATE: June 12, 2008
SUBJECT: Benefits of a Comprehensive and Integrated
Dark-Sky Lighting Policy for Saskatoon
FILE NO.: **CK. 6300-1**

RECOMMENDATION: that the City develop a comprehensive and integrated Dark-Sky Lighting Policy that will apply to all areas within the current and future City limits.

EXECUTIVE SUMMARY:

The Saskatoon Environmental Advisory Committee (SEAC) is recommending that a comprehensive and integrated Dark-Sky Lighting Policy be developed and implemented for the City of Saskatoon. The primary consideration in the Policy should be the total effect of lighting on the environment. With this in mind, consideration would then focus on the costs and energy efficiency of the fixtures, the cost of upkeep of the fixtures and the ability of the fixtures to prevent light pollution, glare, or nuisance lighting. SEAC also recommends that this policy should be expanded beyond street lighting to include outdoor lighting in all areas.

SEAC has compiled the following report to identify additional steps that should be considered and implemented to move Saskatoon even further towards being a national leader of Dark Sky Lighting

BACKGROUND:

On September 17, 2007, Saskatoon City Council approved the following recommendations from Administration and Finance Committee:

- 1) that flat lens street lighting fixtures be adopted as the standard for all future residential street lighting installations including replacements in existing neighbourhoods.
- 2) that cobra head fixtures with drop lens fixtures continue to be utilized for lighting arterial streets and other major thoroughfares.
- 3) that flat lens fixtures not be used as replacements in existing residential neighbourhoods with specialized light fixtures¹.

¹ Outdoor Lighting Policy, Saskatoon Light & Power recommendation to City Council, adopted at the September 17, 2007 City Council Meeting.

Mr. Lawrence Pinter, the Committee's former Chair, made a presentation to Council during which he commended Council for taking steps towards a more environmentally-sound street lighting policy and suggested that Saskatoon would benefit from a comprehensive Dark Sky Lighting Policy.

SEAC is submitting the following report to provide information and to identify additional positive actions that should be considered. If these actions are taken it would move our City towards having a comprehensive and integrated Dark-Sky Lighting Policy for all of Saskatoon.

SEAC is also suggesting that further consideration be given to the three recommendations outlined above, as provided in the following report.

REPORT:

For the purposes of this report SEAC has used the following description for Light Pollution:

Light pollution is:

- light that shines off the property where the light fixture is located
- light that shines onto a property from source not located on that property
- light that shines up into the sky

In all of the above, light is being wasted. Examples of the above include glaring light from poorly aimed fixtures or from a light that is too bright for its surroundings. Light pollution may also be a result of a design problem in the fixture. Please refer to Appendix 1 for a list of frequently asked questions and misconceptions about lighting.

SEAC has used the terms dark sky friendly, dark sky compliant and environmentally sound when describing lighting methods that produce little or no light pollution and also when describing changes in behaviours that will help to decrease or eliminate light pollution in our City.

Full cut off lighting fixtures (FCO) are mentioned in this report because they are able to provide the required lighting on the ground without contributing to light pollution. Other fixtures with appropriate shielding to direct the light to where it is needed may also be used to reduce the amount of light pollution produced.

When lighting fixtures are selected for use in Saskatoon, the main criteria for selection should be energy efficiency, dark sky conpliance and the long-term maintenance costs. The lights should be designed to have minimum impact on the environment by eliminating glare, light trespass, light pollution and should be designed to assure that they do not shine where light is not needed or wanted. The lights should be FCO or properly shielded fixtures that eliminate glare, light trespass and energy wasted beyond the area being illuminated.

Selection of lighting fixtures should not be based on their appearance but rather on their environmental soundness and long-term costs. An example of what might be considered in the long-term cost of the fixture would be the number of people required to work on a light. If the

light could be serviced or maintained by one person rather than a two-person crew, this would be a potential cost saving that should be considered. The City of Calgary, for example, found they saved maintenance costs because the newer and lighter Envriosmart streetlamps allowed them to be changed by a single crew member instead of two or more.

The Committee believes that for all outdoor lighting, simple technology already exists and that Saskatoon can wisely illuminate our city with fixtures chosen for least environmental effect, lowest energy consumption and smallest carbon footprint.

As mentioned above, on September 17, 2007, Saskatoon City Council approved recommendations regarding lighting in Saskatoon. SEAC has made the following suggestions regarding these recommendations.

- 1) *that flat lens street lighting fixtures be adopted as the standard for all future residential street lighting installations including replacements in existing neighbourhoods. (Adopted by Council on September 17 2007)*

SEAC commends the intent of this recommendation but would suggest the following in order to increase the effectiveness in moving the City forward as a national leader in Dark-Sky Lighting. The Committee recommends that a comprehensive review be conducted in order to classify and rank the environmental soundness of all existing lighting across the city. The Committee further recommends that this review serve as the basis for prioritizing the eventual future replacement of all lighting fixtures with Dark-Sky compliant lighting. Additionally, SEAC recommends that all future residential street light installations be Dark-Sky compliant without exemption. Decorative or special fixtures also must be Dark-Sky compliant. However, to mitigate the potentially enormous cost of lighting retrofit, the Committee agrees that the best way to proceed is to change polluting fixtures to Dark-Sky friendly lighting at the end of their normal service lives except for the worst-offending lights, which should be changed sooner.

Any light structures owned by SaskPower, within City limits, must also be Dark-Sky compliant in order to harmonize with the City's Dark-Sky recommendations of September 17th. At the February 14, 2008 SEAC meeting, Mr. Dorian Wandzura, General Manager, Utility Services Department, indicated that he would be willing to approach SaskPower to see if they would voluntarily meet Saskatoon's recommendation for the street lights under their management for both retrofit and new installation.

- 2) *that cobra head fixtures with drop lens fixtures continue to be utilized for lighting arterial streets and other major thoroughfares. (Adopted by Council September 17, 2007)*

Similar to the complication in Recommendation 1, the Saskatchewan Department of Highways owns and maintains freeway and thoroughfare lighting within Saskatoon city limits. It would be desirable for this Department to implement a Dark-Sky lighting plan. Suitable lighting for major thoroughfares has already been used in Saskatoon on the Circle Drive Bridge renovation. Edmonton and Calgary have installed FCO fixtures on the Whitemud Drive and Calgary Trail, respectively. These fixtures are designed so that little or no light is directed upwards.

SEAC is also aware that Saslatoon Light & Power is amicable to testing flat lens FCOs at the end of the Taylor extension beyond Boychuk Road as requested by Ms. Shelley LePoudre¹ and indicated by Mr. Chan in a return letter. This is a very positive move.

3) that flat lens fixtures not be used as replacements in existing residential neighbourhoods with specialized light fixtures. (Adopted by Council on September 17, 2007)

SEAC feels that the Dark-Sky Policy recommendations are a very good first step in protection of the environment, but they need to be expanded and applied to the City as a whole. These recommendations deal with only one part of the overall lighting plan for Saslatoon and do not cover any lighting other than street lights. We feel there is therefore a need for a comprehensive lighting policy that, because of its nature, will involve a number of City branches and departments who are normally involved in proposals, development and approval of all civic designs.

Rewards of a successful Dark Sky Policy applying to all lighting in Saslatoon:

- fewer complaints about glare and light trespass
lower maintenance costs
- lower energy costs
- lighting free of glare
- national press and recognition on the environment
- promotion of Eco-tourism
Greenhouse Gas Management Plan compliance

There are many examples of environmentally-friendly lighting in many locations in Saslatoon, some of which are listed in Appendix 2. Visiting these areas of our City would show the positive effects of properly-designed lighting, and dispel some of the myths regarding environmentally-sound lighting.

Other communities in Canada with progressive lighting policies or bvlaws

Other communities in Canada who are working on or have adopted progressive light pollution policies or bylaws include: Victoria, North Saanich, Langley and Prince George in British Columbia, Canmore, Banff, Calgary, Cochrane and Olcotoks in Alberta , North York, Richmond Hill, Sherbrooke, La Salle and Ottawa in Quebec and Ontario.

The City of Calgary spent \$7.5M over a number of years in a self-recovering lighting retrofit program which has to date saved approximately \$2M annually in energy costs. The program replaced over-wattage drop-lens cobras with lesser-wattage FCOs to produce better lighting at reduced cost. Banff and Canmore use FCO lighting to reduce costs, encourage eco-tourism and

¹ Copy of letter from Shelley LePoudre is attached.

provide better nighttime aesthetics. North York and Sherbrooke have light pollution policies to protect professional astronomical observatories. Prince George is experimenting with new technology traffic and utility lighting to reduce operations costs.

The following Dark-Sky Preserves (DSP) have been created in Canada. The Cypress Hills Dark-Sky Preserve (SK/AB), Beaver Hills DSP (AB), Point Pelee DSP (ON), McDonald Park DSP (BC), Torrance Barrens DSP (ON), Manitoulin Island DSP (ON), and Mt. Megantic DSP (QC).

However, within a few years of their creation, all DSPs are already threatened by the expanding, uncontrolled lighting policies of their nearest cities. Cities threatening these precious habitats are, in order, Medicine Hat, Edmonton, Windsor/Detroit, Abbotsford, Orillia/Toronto, Sudbury, and Sherbrooke.

Important Considerations in a Dark Sky Policy

The following issues should be addressed when planning outdoor lighting:

- turn off non-essential lighting when not in use (commercial, residential, and city buildings)
- use top down, not bottom up lighting for signs, buildings, and roadways
- use only Dark-Sky friendly lighting fixtures for all outdoor applications
- use only the minimum number of light fixtures needed and use only the minimum amount of lighting required
- do not light alleys

By creating a set of desired environmental leadership standards, the City will influence the quality of lighting in all City, commercial & residential lighting projects and will be leading by example.

Locations in or near Saskatoon where light fixtures are creating light pollution are listed in Appendix 3. This appendix also includes information on how light pollution is produced.

Additional considerations with respect to decreasing light pollution are listed in Appendix 4.

Adopting environmentally-friendly lighting may be considered in two segments due to the costs considerations. Initially a policy specific to lighting for new construction would start to implement change. The second segment would be a policy that would be created to grandfather in all existing lights, with the exception of those specifically identified for replacement because of the amount of light pollution they produce. Lights identified in this segment of the Policy are replaced at the end of the fixture's life. In many cases, existing bad lighting can be made more environmentally sound by simple redirection of the light, by addition of very simple shields or by reducing luminaire wattage. Where period and decorative fixtures exist in wasteful designs, they will also exist in as-appealing non-polluting fixtures'.

² International Dark Sky Association Guide on Lighting Fixtures. See Appendix 5.

Appendix 1

Frequently Asked Questions about Lighting

Light pollution is everywhere because there are so many misconceptions:

1. Does increasing the amount of light at night prevent crime? This scenario is not supported by studies. Studies are generally indifferent on the effects of lighting and crime in that more light prevents crime. Most studies conclude that there is little or no reduction of crime and indeed, improper lighting can increase crime by making night time environments more easily accessible to criminals who do not look suspicious in well-lit areas. Crime is generally averted if lighting invites the general public to participate in area events, but once the public goes home, areas that remain lit become targets for criminal activity.

2. Does more light always improve visibility? No it does not. At night your eyes switch from using daytime colour cones to their low-light-sensitive monochromatic nighttime rods. Our eyes work better in lower light that is free from glare. More light causes your eyes to try to use daylight cones again, which are not sensitive at night. This produces poor vision, eyestrain and poor contrast. Light should be subdued and non-glaring. Light in different areas needs to be well-balance as not to create over-bright areas that cause eyes to revert to daytime use. Conversion to daytime use only takes seconds, but conversion back to nighttime rod use can take as long as 20 minutes. (Joanna A. Phipps, Peter Yee, Erica L. Fletcher, and Algis J. Vingrys 2006. Rod Photoreceptor Dysfunction in Diabetes: Activation, Deactivation, and Dark Adaptation. Investigative Ophthalmology and Visual Science. 47:3187-3194.)

3. Light pollution is not real pollution. Energy used to produce wasted light still produces greenhouse gases (GHGs). Reducing light pollution reduces the waste of light and in turn, decreases energy used.

4. Light pollution is only a problem for astronomers. One does not have to be an astronomer to appreciate the beauty of the night sky. Animals (including humans) and plants have also evolved to have a 24-hour day and night cycle, and even small changes to night lighting affect plants and also animal migration, predation, reproduction and survival. 24-hour lighting may also be a factor in the formation of some cancers, according to recent research.

References:

Lights out on Britain's bats <http://www.guardian.co.uk/environment/2007/jul/15/conservation.endangeredspecies>

Melatonin-Depleted Blood from Premenopausal Women Exposed to Light at Night Stimulates Growth of Human Breast Cancer Xenografts in Nude Rats; David E. Blask¹, George C. Brainard², Robert T. Dauchy¹, John P. Hanifin², Leslie K. Davidson¹, Jean A. Krause¹, Leonard A. Sauer¹, Moises A. Rivera-Bermudez³, Margarita L. Dubocovich³, Samar A. Jasser², Darin T. Lynch¹, Mark D. Rollag⁴ and Frederick Zalatan¹

<http://cancerres.aacrjournals.org/cgi/content/abstract/65/23/11174>

5. To alleviate Light Pollution we have to turn off our lights at night. To reduce or eliminate light pollution we need to think about lighting our streets and other parts of our City in a different way. We need to light Saskatoon in a way that uses less energy, does not produce waste light, does not produce glaring light or light that shines up into the night sky and does not result in harmful effects on the inhabitants of Saskatoon or the wildlife in our area.

6. If we alleviate Light Pollution our City will be dark and dangerous. The lumens (brightness) produced by light fixtures that do not contribute to light pollution can still provide the illumination on the ground that we desire. In fact, the lighting could be better than what we currently have in some areas because if the glare is removed our eyes function more efficiently. Older citizens will especially notice an improvement in their vision if the glare is removed.

Appendix 2

Examples of Environmentally Sound Lighting



Figure 1: Saskatoon Skate Park in Riversdale has environmentally sound, dark sky compliant lighting. Only the area intended to be lit is illuminated. The lights **are** fully-shielded and point only downward. **The** architect who produced this design is known to design for the environment. One improvement on this might be to turn the lights **off at** a certain time.

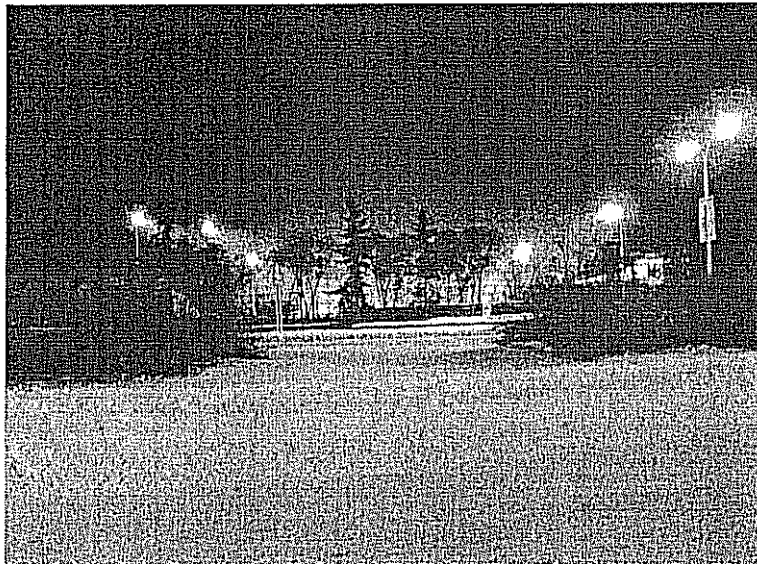


Figure 2: Griffiths Stadium. Lighting was installed by a sports-lighting company **that** specializes in environmental solutions. Lights **are** well-shielded, properly pointed and produce no glare on College Drive. **These** lights are **used** only during night games and are turned off immediately after the game. The *minimum* amount of lighting required for the field was chosen. The new Soccer Centre in Attridge Drive uses similar, **excellent** lighting.



Figure 3: City of Yorkton Broadway Avenue Retrofit (2006). Period-style non-polluting full cut-off fixtures do exist. Producing *no* light pollution is an option if proper lights are chosen. The lights also look good in the daytime. **Unfortunately**, this planned environmental lighting will soon be **overwhelmed by** unshielded intense teepee lighting from the new Painted Hand Casino just to the right of **this** location.

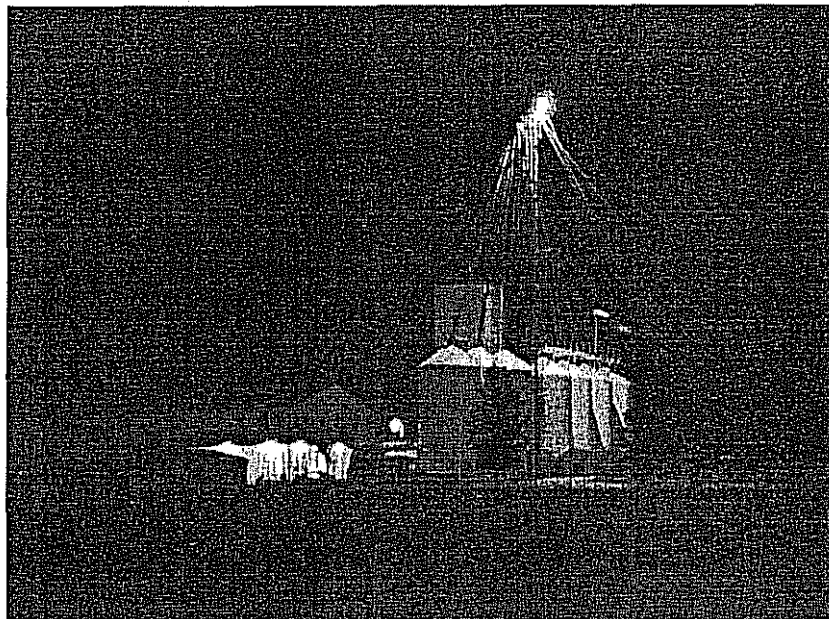


Figure 4: Perfect Night Lighting at Agricore United on **Hwy 5 & Hwy 41**. Security **and** accent lighting can be done with down-facing light. This design produces no light pollution or light trespass.

Other examples of environmentally sound lighting:

The Hampton Village Pilot Project for light pollution compliant lighting was approved by the Planning and Operations Committee in 2004 and approximately 30 full cut-off fixtures with standard height poles and spaces were installed in October 2005. The project is exciting since it is the first attempt to produce subdivision lighting with completely non-polluting lighting fixtures. Fixtures chosen are similar to those used in the ongoing Calgary retrofit program, which continues to save Calgary energy, and eliminates light pollution. However, positive results of the Hampton Village Pilot Project are compromised by **two** feeder roads whose lights negate the positive effects of the FCO fixtures. **The** new feeder road from the airport uses tall poles and drop lens cobra beads that produce both glare and light trespass to the sides. The entry boulevard from Junor Road uses **unshielded** lights that direct light upwards and sideways as well as downwards.

River Landing – the Meewasin Valley Authority (MVA) portion of the River Landing development **has** environmentally sound lighting that produces virtually no glare, no light trespass and no light pollution. Lighting is generally used at minimum requirement levels for the area. Timers have **been** used so that in the late evening the lights shut off to both save energy and to discourage use of the **riverbank**.

MVA Parks – **The** MVA uses FCO fixtures on **walkways** and down-shielded wall-packs on buildings in the area of the **Mendel** Art Gallery, Gabriel Dumont Park and others. Playgrounds within the parks are generally unlit. **This** was done to discourage use of the area at night.

Saskatoon Soccer Centre – the architects for the Soccer Centre chose FCO sports light fixtures that do not produce light pollution, light trespass to adjacent residences or glare **even** on nearby Attridge Drive. Only the sports fields and **the** surrounding 20-metres are lit. All sports-field lighting should be required to use similar systems.

University of Saskatchewan – Campus Drive lighting – **over time fixtures are being changed from full-drop lens cobra to slight-drop lens fixtures on an attrition basis. The slight-drop lenses limit glare and light trespass.** The Administration Building (and other building on campus) was recently renovated to LEED (Leadership in Energy and Environmental Design) standards and uses environmentally sound shielded wall-packs. The beneficial effects of these lights are negated by the lighting in the plaza in front of the Administration building. This area has decorative **globe** lighting that pollutes the night sky. These lights were an unfortunate choice for those conducting research through the astronomy laboratory and using the roof of the immediately-adjacent **Physics** Building.

Saskatoon Inn – **The** Saskatoon Inn uses only FCO fixtures in **their** parking lot. The building is accented by lights that shine on the sides (unfortunately sometimes **shining** both upwards and downwards). By using the minimal outdoor lighting, the Saskatoon Inn **has** covered both utility and aesthetics without creating significant **light** pollution. The Saskatoon Inn also participates in a nation hotelier's environment and energy reduction program.

Jubilee Ford & Saskatoon Mitsubishi – use only FCO fixtures in their parking lot. In the late evening, after **the** business is closed, approximately one-half of the lights are turned off. **The FCOs** produce no glare, no light pollution and no spill light onto adjacent roadways. With the exception of a few side-facing wall-packs at the rear of the building, these businesses have very environmentally sound **night lighting**.

RCMP Building – **Located** on Idylwyld South adjacent to Jubilee Ford may be **Saskatoon's** most perfectly lit building. The RCMP building was designed with under-soffit lighting and wall-mounted accent and **rear-door** lighting **that** is FCO and subdued. Parking lot lighting are also FCO producing no glare, no light pollution and no spill light while providing exceptional utility lighting at minimum wattage.

Appendix 3

Sites in or near Saslatoon where light pollution occurs



Figure 1: “Acorn” lights on 23rd Street & Spadina Crescent with up to 3 lights per pole and up to 24 lights per city **block**. This style of light produces glare, wastes energy by producing light that is not needed and also pollutes the night **sky**.



Figure 2: Diagram of how light pollution is produced. Useful light is only the light **that** shines down in a 120 degree cone. All other light is wasted and causes unnecessary light pollution.



Figure 3: Semi-reflected lighting with open tops – globes in the Saskatoon Downtown Area. One-third of the light exits the top of these fixtures unimpeded, cause light pollution and light trespass into windows.



Figure 4: The Royal University Hospital: Every light in this picture, including the five high intensity lights at the top of the building, serve solely to light up a parking lot.

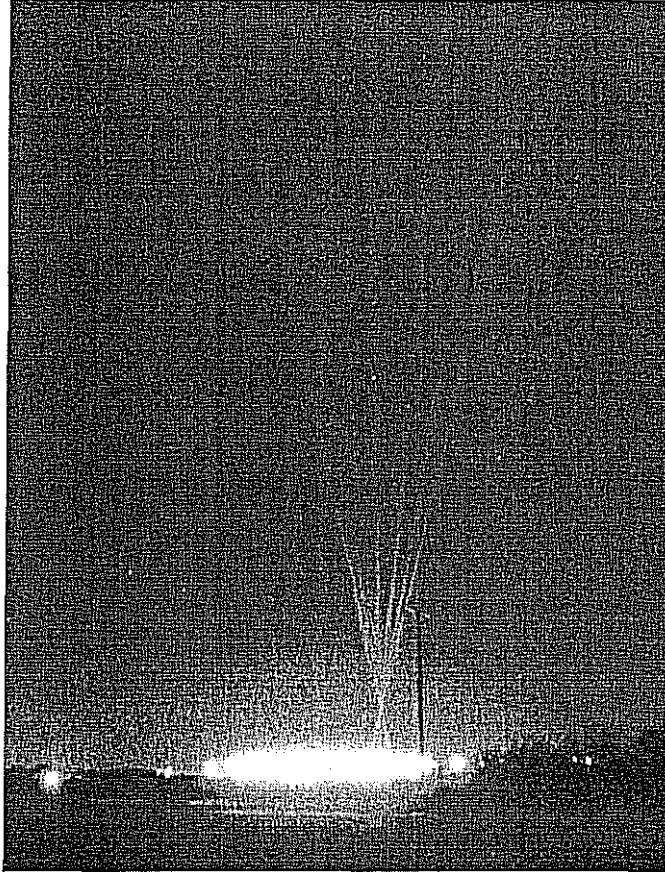


Figure 5: Dakota Dunes Casino Light Tepee: This design uses the energy equivalent of approximately 20 streetlights, but with each beam producing 332 *million* candlepower. The lights from the adjacent parking lot add to the light pollution. **The** lighting is so intense that their glare and general nuisance have resulted in hundreds of public complaints.

ADVISORY COMMITTEE REPORT

TO: Administration and Finance Committee
FROM: **Saskatoon** Environmental Advisory Committee
DATE: May 26, 2008
SUBJECT: **LEED**[®] Standards for all new Civic Building Projects
FILE NO.: CK. 375-3

RECOMMENDATION: that this report be submitted to City Council recommending that the City of Saskatoon adopt LEED Silver certification as a minimum standard to which all new civic buildings are built.

BACKGROUND:

The Saskatoon Environmental Advisory Committee (SEAC) applauds the City of Saskatoon's interest and willingness to demonstrate leadership in the area of sustainable design and, in particular, the interest it has shown regarding the (Leadership in Energy and Environmental Design) LEED[®] program. Further to SEAC's Report of November 16, 2007, and our recommendation that the City of Saskatoon adopt LEED[®] certification for all new civic buildings, we are grateful for a prompt response and the attention that has been paid to this matter in the form of a Report of February 1, 2008, from the General Manager's (GM's report). This GM report outlines the cost comparison of LEED[®] certification vs. LEED[®] registration under the LEED[®] program.

Although we believe that many of the facts outlined in the GM report are valid and important, there is information that has been omitted that we believe will be of interest to Council. We also feel that one of the points made in the report is incorrect. This report document addresses each of these areas and provides the additional information to Council that we believe is necessary to enable informed decision-making.

REPORT:

Building construction, renovation and operation consume more of the earth's resources than any other human activity. Each year, at least 40% of the raw materials and energy produced in the world are used in the building sector. This generates millions of tonnes of greenhouse gases, toxic emissions, water pollutants and solid wastes. No other sector has a greater impact on the global environment or faces a greater obligation to improve its environmental performance. With so much of the world's resources consumed in the building sector, learning how to build with the environment in mind is a necessary step that will have a tremendous positive impact.'

¹ The Athena Institute: www.athenasmi.ca



LEED® is a *voluntary*, consensus-based national standard for developing high-performance, sustainable buildings. First developed and operated in the United States by the U.S. Green Building Council (USGBC), it represents the USGBC's effort to provide a national standard for what constitutes a "green building".² The LEED® Green Building Rating System™ hopes to encourage and accelerate global adoption of sustainable green building and development practices, through the creation and implementation of universally understood and accepted tools and performance criteria.

The USGBC is a *non-profit* community of leaders working to make green buildings accessible to everyone within a generation. Since USGBC's founding in 1992, the Council has grown to more than 14,500 member companies and organizations, a comprehensive family of LEED® green building rating systems, an expansive educational offering, and a network of 72 local chapter affiliates and organizing groups. The *Canada Green Building Council* (CaGBC), also a non-profit entity, was created to further the expansion of green building in Canada, and administers the LEED® Canada green building rating system, an evolving set of standards tailored specifically for Canadian climates, construction practices and regulations.³

SEAC would like to stress the impact that the built environment has on our environment, and its tremendous tax on our natural resources. Because the need to have a roof over our heads in order to live and do business –because constructing buildings is a necessity- it is all too easy to dismiss the actual cost to our environment in the construction of our built environment. It is from this knowledge that the green building movement started, and a desire to build in a sustainable manner that the LEED® green building rating system evolved.

Particular to the Report from the Office of the General Manager, SEAC takes issue with the statement in the Report that states: "additional front end costs (of LEED® certified buildings) are not likely to be recovered through savings in energy costs or tipping fees for refuse." After consultation with various local design and engineering professionals, and much additional research, SEAC believes this Report fails to convey the very considerable reduced operating and maintenance costs of LEED® certified and registered buildings. Although the exact period of time required to absorb the increased construction costs varies from project to project, there is no doubt that long-term owners recoup their increased construction costs and consultants fees in the medium to long-term life cycle of a building.⁴

²The US Green Building Council: www.usgbc.org

³See Appendix 1. What is LEED Canada? www.cagbc.ca

⁴See Appendix 2. NBI and CoStar News Release: Studies Confirm that Energy Savings Significant in LEED and CoStar Buildings.

That the initial increased in costs are eventually recovered with LEED® building seems to be common knowledge. The following excerpt from the online encyclopedia, Wikipedia, has an entry for regarding LEED' that states the following:

Green buildings cost more both to design and to construct when compared to conventional buildings. These increased costs typically represent initial up front costs which are incurred at the start of the project. However, these initial cost increases can be minimized by the economic gains associated with constructing a LEED® certified green building. These economic gains can take the form of anything from productivity gains to decreased life cycle operating costs. Studies have suggested that an initial up front investment of 2% will yield over ten times the initial investment over the life cycle of the building. From this perspective, there is no initial cost. In fact the initial cost is actually an investment.⁵

SEAC also believes the Report fails to make mention of the many cities, universities, provinces, municipalities and corporations throughout North America who have successfully adopted LEED® standards for new buildings.⁶ SEAC believes that it is important to recognize that LEED® guidelines are being adopted by many cities all across the continent, and around the world, and that it is important that our civic government follow suit, so that we can keep pace with the leadership and stewardship that others cities are demonstrating. In addition, we could find no instance of cities backing down from their guidelines once they are in place. In fact, many cities seem to find the LEED® guidelines so successful that the required level of certification has been raised in many cases, and several US cities are also requiring LEED® guidelines on building retrofits and private development. The adoption of LEED' guidelines by civic governments seems to be the required catalyst towards creating a local interest and momentum regarding sustainable design.'

Information on the many short and long term benefits of LEED® buildings, and many buildings constructed to meet high sustainability standards, was not part of the information request from Council to Administration and was, therefore, not part of the GMO report. However, SEAC wants to stress the importance of the human health, worker productivity, and environmental benefits of LEED® construction. LEED' buildings offer the added benefit of:

- o 25 – 30% increased energy efficiency.
- o better lighting quality (high glare reduces performance by 15 – 21% and good daylight increases productivity by 13% and can increase retail sales by 40%)
- o lower source emissions
- o improved thermal comfort
- o better ventilation (reduces sickness by 9 to 50%)
- o better performance systems
- o net financial benefit per square foot is ~\$71

⁵ [http://en.wikipedia.org/wiki/Leadership in Energy and Environmental Design](http://en.wikipedia.org/wiki/Leadership_in_Energy_and_Environmental_Design)

⁶ See Appendix 3, a list from CaGBC of all cities in Canada known to have adopted LEED standards for civic buildings.

⁷ See Appendix 4, U.S. Green Building Council, report entitled "LEED Initiatives in Governments and Schools"

- o increase in human productivity
(1% for employees – equivalent to 5min/day+\$600 to 700 per employee per year and 1.5% increase in productivity – equivalent to ~\$1000 per year)
- o high performance green buildings also increase the number of local, living wage jobs. When building energy use is cut millions of dollars are saved, some of which is spent for local goods and services, boosting the local economy. In 2006 alone, Energy Trust of Oregon's energy efficiency savings and spending programs produced over 400 local jobs.⁸
- o children and workers also gain from high performance green buildings. Kids in green school perform better on tests and workers in green buildings are sick less frequently and have higher morale, according to three recent studies.⁹
- o health of construction industry workforce is improving, as exposure to toxic substances decreases both on the construction site and in producing building components at off-site manufacturing plants (i.e. millwork shops, etc.).

The marketability of LEED[®] is not an issue that can be ignored. This effort has been successful. In centres where LEED[®] certified buildings exist, these buildings are setting the standards for both new and retrofitted structures. LEED[®] certified buildings are attracting greater numbers of tenants and owners of the buildings are experiencing a higher than expected ROI.¹⁰ LEED[®] certification is now a guarantee that people will look for when buying an apartment or house, when looking for rental locations for offices or, in some cities, when looking for a convention centre to hold an event or conference. The higher costs associated with planning, construction and certification are consistently recovered through the lower energy and water costs and also as a result of the increased amount that people are willing to pay to live or work in these structures.¹¹

SEAC feels that it is critical that the City of Saskatoon adopt LEED[®] standards as soon as possible. The City of Saskatoon has entered a period of opportunity and unprecedented growth. According to the 2007 Annual Report of the City, "building permits went from \$323 million in 2006 to \$549 million, 5,900 new jobs were created, our municipal triple-A credit rating was renewed, and a bustle of activity and growth could be felt throughout Saskatoon." Along with this growth comes new pressure on city infrastructures: water supply and distribution, sewage treatment and infrastructure, energy consumption and supply, the landfill, and servicing requirements for new communities. Adoption of LEED[®] offers many spin-off benefits to the city, which address some of these issues. The present plan to maximize the life of the existing landfill beyond 25 years (Annual Report, 2007 p.15) will be supported by the recycling component of LEED[®].

⁸ "Economic Impacts from Energy Trust of Oregon 2006 Program Activities."

⁹ "Daylighting in Schools – An Investigation into the Relationship Between Daylighting and Human Performance," "Greening America's Schools: Costs and Benefits" and "Green Buildings, Organizational Success and Occupant Productivity."

¹⁰ <http://www.qigroup.com/News/Green-Building-Retrofitting-Makes-Good-Dollar-Sense-21697.html>

¹¹ According to a November 2007 study of 223 Class A office buildings ("Does Green Pay Off," by Normal Miller, Jay Spivey and Andy Fiorance) "owners and managers of Energy Star rated buildings can expect \$2/ft² greater rents, 2% higher occupancy rates and \$.54/ft² lower energy related operating costs compared to traditional buildings, and have sale prices 30% higher per ft² than traditional buildings. The conclusion is that green buildings' capital values."

Other issues directly impacted by the adoption of LEED® include the reduction of green house gas emissions through energy efficiency, reduced stress on water/sewage infrastructure attributable to water conservation requirements in the program, and the encouragement of inner city development associated with the site selection criteria points awarded in the LEED® calculations.

To illustrate the benefits of LEED® in microcosm, the recent College of Law expansion (which is presently seeking LEED® gold status), was able to divert 303,681 tons of construction waste from the landfill during construction, has reduced water consumption by 46% of an equivalent building, and energy consumption is 57.4% more *efficient* than the national energy model for an equivalent building. The overall building materials used included 24.8% recycled supplies *and* 32.8% of *the* materials *used* were *regional* in origin — both of which promote economic activity within the prairie provinces and reduce transportation costs and related energy consumption. If this is possible with one building, the future for a sustainable Saskatoon seems boundless.

The 2007 Annual Report of the City of Saskatoon highlighted a strategy to "Exercise responsible progressive environmental management in the provision of all civic services." Adopting LEED® certification shows the City is taking that commitment seriously. The City of Saskatoon enjoys the luxury of learning from the example of other prairie cities that have entered a boom period without sufficient attention to environmental issues. By LEEDing the way to a sustainable future, City Council will set a standard of excellence in the physical development of Saskatoon while there is still time to chart a sustainable future. Private developers will follow the lead of such a progressive initiative, particularly when the benefits of LEED® construction become evident to our citizenry. Moreover, the longevity and aesthetic appeal of many LEED® buildings will create a legacy for the future residents of our City — a legacy which our present City Council can take pride in promoting.

Research conducted by SEAC members on the internet, and with local professionals with expertise in LEED® construction, indicates a growing movement within civic institutions to adopt LEED® Standards, and many cities have either just adopted standards or poised to adopt LEED® standards in the very near future. Momentum is building and the time is ripe to join these other progressive cities to become leaders in the sustainability movement.

As a final point, SEAC would like to emphasize that the LEED® Program is a non-profit venture, created and maintained by a large and diverse group of professionals from within the disciplines of architecture and engineering that work to construct or renovate buildings, most of whom volunteer their time." It is a program conceived by and maintained by the professionals who work to design and construct buildings every day, and who realized years ago that guidelines were needed to instruct the process of building sustainable buildings. Although other certifications standards have been developed and are in use, the LEED® Program has definitely become the industry standard.

¹² LEED has grown (since 1998) from six volunteers on one committee to over 200 volunteers on nearly 20 committees and three dozen professional staff (Wikipedia).

Criticism of the LEED® program is often given because it is a set of standards that occasionally does not translate well in locations with extremes of weather or particular environmental issues. The CaGBC is conscious of such concerns and has shown flexibility in addressing unique climate problems. Saskatchewan's extreme climate has not in any way slowed down projects like the Prince Albert Forestry Centre, the College of Law Expansion, Murray Library Renovations (U of S), 121 Research Drive, Meadow Lake Courthouse, Kirk Hall Renovations, and the forthcoming 3rd Ave. Commercial Office Building.

CONCLUDING COMMENTS:

Buildings that are built to strong and relevant sustainable guidelines make sound financial sense, particularly for long term building owners. Civic governments, because they are not in the business of developing real estate for short-term profits, should be building sustainable buildings to maximize their capital investment. Following a set of standards such as LEED® is logical, so that the design and construction industry can be held accountable, and that the public can have some assurance that funds are being spent wisely.

In conclusion, SEAC, recommends that the City of Saskatoon adopt LEED® Silver certification as a minimum standard to which our new civic buildings are built. Much more research could be done regarding which level of certification we should choose to set as our goal, but we feel that this research is unnecessary – we need only look at what other cities are doing and what is successful for them. Most other North American cities that have adopted LEED® certification standards have chosen Silver as their target, and SEAC believes that Saskatoon should follow suit. If Saskatoon would like to set the bar higher in the future, and perhaps go for Gold or Platinum certification, SEAC would support this effort.

ATTACHMENTS:

Appendix 1. What is LEED® Canada? www.cagbc.ca

Appendix 2. NBI and CoStar News Release: Studies Confirm that Energy Savings Significant in LEED® and CoStar Buildings.

Appendix 3. A chart comprising all known civic governments in Canada who have adopted LEED® Standards, CaGBC.

Appendix 4. A report entitled: "LEED® Initiatives in Governments and Schools", a publication of the U.S. Green Building Council.

Appendix 5. LEED® certified projects in Canada, as of April 28, 2008 (www.CaGBC.ca).

Appendix 6. An overview of LEED® buildings in Canada (joint publication of the CMHC/SCHC, CaGBC, and Industry Canada.

Written by: Marie-Ann Bowden, Barbara Handbidge,
Patricia Hanbidge, Anna Ringstrom
Task Group of Saslcatoon Environmental Advisory Committee

Approved by: "Darcy Meyers"
Darcy Meyers, Chair,
Saslcatoon Environmental Advisory Committee

Dated: June 12,2008

March 25, 2008

His Worship the Mayor & City Council
(Budget Committee)

Dear Your Worship and Members of the Budget Committee:

Re: Support for Funding - Saskatoon Waste & Recycling Implementation Plan
(File No. CK. 7830-1)

I hereby request that I, Sean Shaw, Vice-Chair of the Saskatoon Environmental Advisory Committee, be scheduled to speak to the Budget Committee on the above matter, at the meeting to be held on April 8, 2008.

Over the past several years, the City of Saskatoon has recognized and attempted to address the unsustainable waste management practices currently in place. Most importantly the Saskatoon Waste & Recycling Plan was unanimously adopted by City Council. This Plan sets out clear goals that will see a more comprehensive and inclusive waste & recycling program brought into effect across all areas of the City, which will bring the City of Saskatoon in line with most of Canada's large urban centres over the next ten years. In this regard, the Saskatoon Environmental Advisory Committee (SEAC) is pleased to express its full support for the Saskatoon Waste & Recycling Implementation Plan.

SEAC would also like to strongly encourage that the Saskatoon Waste & Recycling Plan be implemented as fast as possible and that every effort be made, where possible, to in fact shorten the timelines associated with the main goals of the Plan. As similar waste reduction and recycling plans have been implemented in countless other cities over the past twenty years, SEAC believes that there is a wealth of experience to be drawn upon that can be used to considerably reduce the implementation timeline of the Waste & Recycling Plan.

Given that the current system of recycling depots and SARCAN outlets requires City residents to drive significant distances, SEAC would also encourage that any pilot projects be undertaken in Riversdale, or other communities where travel by automobile is lower than the City average. Moreover, SEAC would also encourage that additional recycling resources be placed in all neighbourhoods during the time period prior to the Plan implementation and during the time period of the Plan when curbside recycling is not available to all residents.

On behalf of SEAC, thank you once again for your continuing attention to environmental issues in Saskatoon.

Yours truly,

"Sean Shaw"

Sean Shaw, Vice Chair
Saskatoon Environmental Advisory Committee

June 18, 2008

Honourable the Mayor, and City Councillors

Dear Your Worship and Members of Council:

Re: Proposed Development Plan Amendment
DCD1 – Text Amendment to Section 19.2 - Central Business District
(River Landing Parcel "Y" – Lake Placid Investments Inc.)
File No. CK. 4110-08-3)

In February I requested that an administrative report on LEED® standards be referred to the Saskatoon Environmental Advisory Committee (SEAC) for consideration, and Council kindly complied with the request. Since that time SEAC has compiled a LEED® report, which has been publicly reviewed by SEAC, to be submitted to Council in September. We look forward to speaking to the Report at that time.

The Committee would urge you to consider environmental standards during your deliberations regarding zoning guideline changes for Parcel Y and the Lake Placid development. This is an opportunity to connect Lake Placid's request for increased density with a consequent increased commitment to environmental standards, such as LEED®. There is precedent in several other cities in North America that require minimum environmental commitments, such as LEED® certification for developments of this scale. Many cities have comprehensive incentive programs that have been implemented, and are designed to encourage sustainable building practices. Such programs offer incentives for building to LEED® standards, such as an expedited permitting process, reduced permit fees, density bonuses, grants to cover for some consulting fees, or tax abatements for a limited period of time.

It appears that the City of Saskatoon is in the process of already expediting the permitting process with regard to the Parcel Y development, and is poised to also offer Lake Placid the opportunity to increase density on the site beyond the current allowable density guidelines, which is being very accommodating toward this development without asking for much in return. The fact that there is a development going up isn't enough – for the sake of creating a legacy, the City should be requiring a sustainable building in return.

The City of Saskatoon has shown strong leadership by adopting LEED® standards for new civic buildings. The prominent development on Parcel Y provides an opportunity to ensure high environmental standards remain a priority, specifically for high-density developments such as this. It is particularly relevant in this case due to the extraordinary request of the developer and the location of the project within the Meewasin Valley Conservation Zone. It is an ideal opportunity for City Council to set the standard for environmentally-conscious development in the river area and create a legacy for the future of Saskatoon growth.

June 18,2008

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SEAC remains dedicated to providing information to City Council on all environmental issues and is available to review any inquiries that Council may have.

Thank you for your time and consideration.

Yours truly,

"Darcy Meyers"

Darcy Meyers, Chair

Saskatoon Environmental Advisory Committee

DM:rwf