

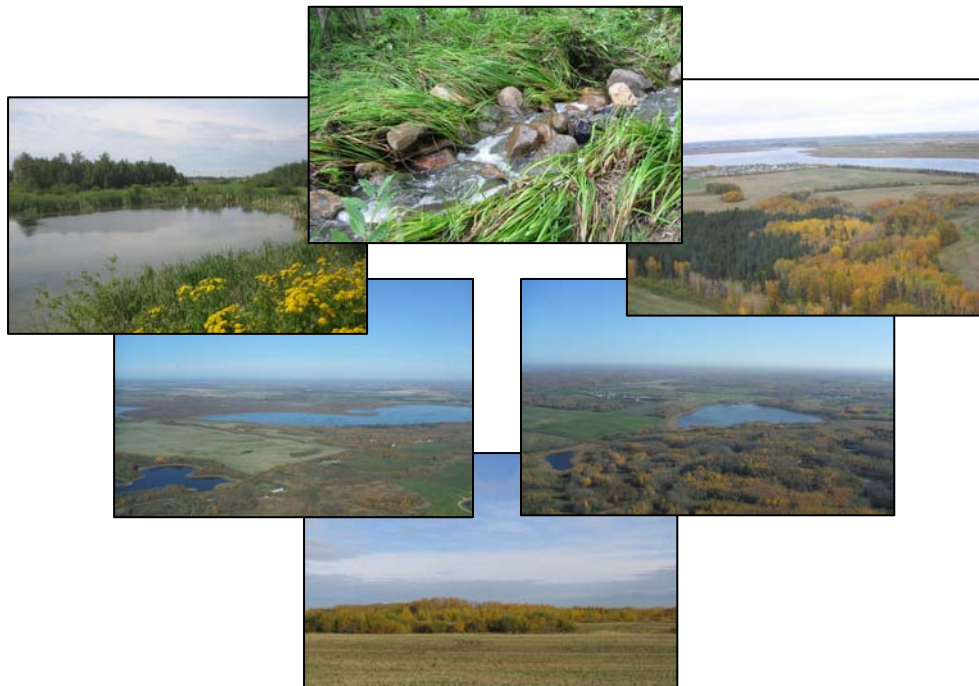


Natural Connections
Edmonton's Integrated Natural
Areas Conservation Plan

Public Engagement Process Report 1

Public Engagement Process Summary Final Report

City of Edmonton, Office of Natural Areas
December 2006



The Office of Natural Areas has prepared six distinct reports – one for each of the public engagement activities – all of which are summarized in this report, *Public Engagement Process Summary*.

Report 1: *Public Engagement Process Summary*

Report 2: *State of Natural Areas Report Release*

Report 3: *Online Survey Results*

Report 4: *Open House Consultations*

Report 5: *Public and ENGO Workshop*

Report 6: *Landowner Consultations*

Report 7: *Conservation Focus Groups*

Each report is available for download from the web pages of the Office of Natural Areas. Visit www.edmonton.ca/naturalareas and follow the posted instructions.

Table of contents

Key recommendations	4
Public engagement process	4
Goal 1: Engage the public	5
Goal 2: Secure the network	6
Goal 3: Manage the network	7
Definitions	8
Conservation history in Edmonton	9
2006 <i>State of Natural Areas</i> report	11
Natural Areas conservation public engagement process	12
Release of the 2006 <i>State of Natural Areas</i> report	13
Online survey	14
Figure 1: Top seven agreement values	15
Figure 2: Eight to fourteen agreement values	16
Four public open houses	17
Figure 3: Frequency of natural areas conservation issues raised by attendees, by theme	17
Figure 4: Geographic conservation issues raised by open house attendees, by quadrant	18
Public and ENGO Workshop	19
Existing strengths	19
Figure 5: Existing strengths of municipal conservation policy	20
Areas for improvement	20
Figure 6: Existing weaknesses of current municipal policy	21
Community mapping	22
Figure 7: Map of designated zones for community mapping exercise	23
Figure 8: Community mapping observations by location	24
Landowner consultations	27
Focus groups	27
Consulting other agencies	29
Conservation plan implementers	29
Development industry	29
Complementary public engagement exercises	30
Focus Edmonton public consultation results	30
2006 <i>Quality of Life and Financial Planning Survey</i>	31
<i>Urban Parks Management Plan General Consultation</i>	32
Implications for <i>Natural Connections</i>	32
Appendix One: A Framework for <i>Natural Connections</i>	34
Vision	34
Mission	34
Guiding principles	34
Defining “Natural Area”	35
Immediate challenge	35
Goals	36
Objectives and outcomes	37
Next Steps	38
Bibliography	39

Key recommendations

“Edmonton has become a global leader in environmental initiatives because of its ability to bring diverse groups together for a common goal. Whether industry, government or community, we all share a common responsibility for a healthy environment.”

– Mayor Stephen Mandel

Environmental protection – in the largest sense – is a shared responsibility. Ninety percent of Edmonton households recycle household solid waste through the City's regular waste collection service. Residents regularly dispose of household hazardous waste through two EcoStations. Increasing numbers of Edmontonians are getting involved in waste reduction, energy and water conservation initiatives, such as composting, household improvements, xeriscaping and grasscycling.

The protection of Edmonton's natural areas is no less a shared responsibility. Although the City provides leadership and guidance, protecting our invaluable natural areas network – one of Edmonton's defining characteristics – for the benefit of Edmontonians today and tomorrow is a challenge that must be embraced by all Edmontonians.

To this end, the Office of Natural Areas undertook a comprehensive public engagement process in late 2006 to collect public input into the development of *Natural Connections*, the City's integrated natural areas conservation plan, and to lay the foundation for the continued involvement of citizens in conservation efforts that will protect Edmonton's ecological network.

Public engagement process

The public engagement process exceeded expectations in every respect except one: the Office was not successful in reaching landowners in the City's outer regions. This is particularly important because more than half of the existing natural areas in the tablelands are located on private property that is highly attractive for residential development – and therefore those natural areas are vulnerable to loss through development. Efforts will have to be redoubled to contact this constituency and get it involved in conservation efforts.

Over 1,500 Edmontonians participated in at least one aspect of the public engagement process. Nearly 700 provided their names and contact information and asked to be involved in future public engagement opportunities in support of the development and implementation of *Natural Connections*, the City's integrated natural areas conservation plan.

The Office of Natural Areas should be encouraged by the findings the Focus Edmonton consultation, 2006 *Quality of Life* survey and the general consultation in support of the *Urban Parks Management Plan*, all of which confirm that the conservation of natural areas remains a high priority for Edmontonians. Given that these other exercises were not focused on conservation, they have not captured detailed opinion or suggestions for action; instead, the Office may be confident that its own process fills in the blanks left in these other public involvement activities undertaken in the recent past.

Public input from the *Natural Connections* public engagement process was used to help develop “A Framework for *Natural Connections: Edmonton's Integrated Natural Areas Conservation Plan*,” which is attached to this document as Appendix One.

Key recommendations arising out of the public engagement process have been provided beneath three headings, corresponding to the three goals identified in the framework document.

Goal 1: Engage the public

The focus groups demonstrated that citizens, in general, are not aware of the City's conservation efforts, nor are they aware of the value and relative scarcity of genuine natural areas within the urban environment. Citizens are also not convinced that the City has a plan to balance growth with conservation. On the other hand, a majority of survey respondents, most open house attendees and all workshop participants were extremely knowledgeable about conservation issues and passionate in their defense of natural areas.

In its conclusions from the 2006 *Quality of Life* survey, Leger Marketing identified improving communication to citizens as a "critical improvement element" and said it would have a "strong positive impact on overall opinions of service levels and value for taxes paid, and is the highest priority area for improvement."

Participants in all aspects of the public engagement process tended not to distinguish between public awareness, education and involvement, instead seeing these as points on a spectrum of public engagement appropriate for the ongoing protection and management of Edmonton's natural areas.

Perhaps most important to participants beneath this theme was the need for the City to articulate a clear corporate vision with respect to conservation, which citizens suggested was lacking. In fact, the lack of a coordinating vision of any kind for the future of the City was frequently cited by participants. This tends to echo observations made in other public consultation exercises that are summarized in the section "Complementary public engagement exercises" beginning on page 29.

Most participants understood the stewardship role of the Office of Natural Areas. They desired improved communication and said that it needed to be coordinated among the various City departments and branches. Participants did not feel that the City delivered a consistent message with respect to conservation and also that some departments clearly did not understand the intrinsic value of natural areas or why they should be distinguished from recreational parklands or other manicured green spaces. This reflects uncertainty about a corporate vision for conservation perhaps more than it reflects a lack of knowledge within the Administration. Participants strongly supported the Office's stewardship role and its ongoing efforts to involve its colleagues more deliberately in the development of planning and management guidelines.

Some participants – particularly focus group participants who best represent ordinary Edmontonians – were not familiar with the term "tablelands" and were not aware of the importance of the tablelands in preserving the integrity of the river valley system. As the City develops and implements its integrated natural areas conservation plan, special attention should be paid to ensuring that Edmontonians understand the essential interconnectedness of its constituent parts in preserving the functionality of the ecological network.

The development community was also identified as deserving special attention. Many workshop participants felt that developers do not have an adequate appreciation for the value of natural areas but that they might act more directly to support conservation if they did – and if the City made it more apparent that this was a municipal priority. The Office of Natural Areas was advised to make a special effort with developers and to find some means of rewarding ecologically sensitive design and

conservation practices so that developers that are cooperating would receive appropriate public recognition.

The 700 Edmontonians who provided their names and contact information to the Office of Natural Areas all indicated that they expect to be kept informed about progress to develop *Natural Connections*, and also that they wished to be involved in further consultation to develop the plan and its implementation strategies. All agreed that the end goal of public outreach was to get as many citizens as possible involved in the appropriate enjoyment, protection and management of Edmonton's functional ecological network.

The Office of Natural Areas agreed that it would re-engage citizens and stakeholder groups at a later date as it refines *Natural Connections* prior to submission of the final plan and affiliated bylaw to City Council in 2007.

Goal 2: Secure the network

The highest priority for public engagement participants was to acquire as many natural areas as possible to maintain the viability of the City's functioning ecological network. Even if it is true that some of the natural areas within the network have been retained by accident as much as by design, the value of these areas – and the need to ensure that they are adequately protected for the future – cannot be underestimated. Participants clearly understood and endorsed the idea of four essential network 'elements.'

A majority, recognizing the challenge of balancing conservation with development, urged the City to prioritize privately-owned natural areas for acquisition to ensure that critical or unique ecological features were protected before those of lesser value.

In some cases, acquisition alone is not sufficient; participants felt the City also needs to develop more stringent policy in support of conservation. Participants were very concerned that the current means of protecting natural areas be improved, not only to bring more lands into protection status but also to ensure that, once protected, a natural area would not be vulnerable to development or other uses not consistent with conservation in the future.

Participants suggested that the City must do a better job of making conservation part of its planning processes from the very beginning, rather than an item on a checklist that is considered late in the approval process. It was their opinion that conservation and planning cannot be approached as two separate activities but that one was integral to the other. Planning activity could be augmented by making adjustments to the Municipal Reserve allocation and Environmental Reserve designation – effectively, making better use of existing municipal tools to support conservation. At the same time, many participants advocated joining with Calgary and the AUMA to lobby the provincial government to make changes to the *Municipal Government Act* that would enhance the authority of municipalities to conserve natural areas.

There was a clear consensus that the City needed to work closely with developers, provide incentives to those whose practices support conservation and disincentives to those to whom conservation was an afterthought. Several said that the City should focus on issuing development permits in the foreseeable future only in areas that do not threaten existing natural areas until the City has better articulated its policy and budget commitments.

Participants also agreed with ongoing work of the Office to integrate its own conservation efforts with complementary plans within the region – that is, those of the province, neighbouring municipalities, Ducks Unlimited, *etc.*

Finally, participants strongly advocated planning for the future so that the City does not find itself in the same position in 25 years that is in today. Rapid population growth and urban development has put natural areas under threat that seemed unthreatened ten years ago. If the City truly wants to protect its functional ecological network, then participants feel it needs to extend its planning horizon to prepare for future contingencies.

Agricultural lands were singled out for special attention. Participants said these lands in the City's northeast and southeast are valuable for multiple reasons, including their ability to produce food for the Capital region and all the concomitant ecological benefits (reduced reliance on transported goods, *etc.*) and their value as wildlife corridors between natural areas.

Once the figure of \$150 million as the prohibitive value of privately-owned natural areas was explained to participants, most argued strongly that the City must back up its policy commitment with a commensurate budget allocation. Many suggested that acquiring natural areas will never be less expensive than it is now and some advocated borrowing to purchase these lands, much as the City currently borrows to fund high priority infrastructure projects.

Public recommendations included the observation that the City should not forget about the value of restoration in two senses. First, it might not be possible to acquire all natural areas identified in the 2005 inventory but it might also be possible to purchase lands in near proximity that could either be swapped with developers or restored to 'natural' status over time to replace natural areas lost to development.

Goal 3: Manage the network

The 2006 *Quality of Life* survey indicates that Edmonton's "parks, trails and green spaces" are one of only two municipal leverage elements on which improvements would be readily apparent to citizens. Efforts to improve the protection and management of natural areas should have an appreciable impact on the public's opinion of City Council and the Administration.

This is the area in which the public had the least to contribute. In most cases, participants merely emphasized the need for the City to articulate a clear corporate conservation vision and then to ensure that management plans were aligned with that vision. The Office of Natural Areas has convened an internal Solutions Working Group, consisting of key representation from branches whose business has an impact on conservation, to examine how best to achieve this coordinated approach to *Natural Connections* and the preservation of Edmonton's functioning ecological network.

Participants also emphasized the opportunity to develop partnerships with stakeholder groups and the general public to assist in the management of the network to ensure that specific natural areas are maintained with a view to their ecological function. The community mapping exercise (see page 21), for example, demonstrates that there is a tremendous wealth of local knowledge in the community that the Office of Natural Areas can access to the benefit of conservation efforts in Edmonton.

Definitions

Natural area

Natural areas have not always been defined the same way throughout the City's history. The 1993 inventory, for example, identified "environmentally sensitive" and "significant" natural areas – which are not the same as the criteria brought forward for the 2006 *State of Natural Areas* report. In 2005, the Office of Natural Areas defined natural areas as follows.

An area of land or water that is dominated by native vegetation and relatively undisturbed by human activity. Such areas could include grasslands, forests, wetlands, peatlands or riparian areas. Areas such as groomed parks, sports fields and schoolyards are not natural areas.

In addition, areas less than one hectare in size were not included in the study.

Functional ecological network

In his landmark 1995 book *Land Mosaics*, Harvard ecologist Richard Forman identified four essential elements for any ecological network that have become the standard within the discipline.

The 2006 *State of Natural Areas* report identified that Edmonton has a functioning ecological network comprised of four essential elements:

1. **core habitat areas**, *e.g.*, Whitemud and Blackmud Ravines, Big Lake Natural Area;
2. **riparian corridors** in the North Saskatchewan River Valley and ravine system;
3. **ecological corridors**, *e.g.*, Horse Hills Creek network; and
4. **stepping stones**, which are smaller, dispersed habitat patches, *e.g.*, Poplar Lake, Schonsee Natural Area.

Conservation history in Edmonton

In late 2005, City Council directed the Office of Natural Areas to integrate the presently distinct two municipal policies and related administrative directives that apply explicitly to conservation and the management of natural areas.

There are two primary municipal policies focused on natural areas conservation that have been adopted by City Council.

North Saskatchewan River Valley Area Redevelopment Plan (1985)

Edmonton's North Saskatchewan River Valley Area Redevelopment Plan (ARP) introduced the concept of natural areas conservation into municipal legislation in 1985, and was also the first statutory document to require an environmental impact assessment in the event of development within the area specified by the ARP.

The *Municipal Government Act* (Alberta) provides the legal basis for the preparation of ARPs. Applying principally to older neighbourhoods and the North Saskatchewan River Valley, ARPs are generally comprehensive in their nature and scope and address the following topics:

- land use and physical development patterns;
- urban design;
- physical infrastructure;
- accommodation of growth and decline;
- social and community development;
- transportation facilities;
- community facilities such as schools, parks and open spaces;
- historical preservation; and
- environmental protection.

The North Saskatchewan River Valley ARP Bylaw applies to the entire river valley and ravine system throughout Edmonton. The following excerpt, in which the ARP's major goals are identified, illustrates that previous City Council's anticipated, at least in part, the ongoing challenge of balancing population growth and urban development with conservation of natural heritage.

The North Saskatchewan River Valley and Ravine System is the most unique natural feature of Edmonton and the largest urban open space in North America. As an integral part of the City's urban fabric, the System represents a unique set of problems and opportunities. As Edmonton grows and changes and as land becomes more valuable the River Valley may become threatened by commercial and industrial uses, as well as by civic uses such as public utilities. The municipal level of government has probably exerted the greatest development pressure on the River Valley with public utility proposals and transportation plans. These uses tend to be incompatible with the aims of nature preservation and parkland development. This Plan begins a process for more effectively managing the future of the River Valley and Ravine System.

The major goals of the North Saskatchewan River Valley Area Redevelopment Plan are:

1. to ensure preservation of the natural character and environment of the North Saskatchewan River Valley and its Ravine System.
2. to establish a public metropolitan recreation area.

3. to provide the opportunity for recreational, aesthetic and cultural activities in the Plan area for the benefit of Edmontonians and visitors of Edmonton.
4. to ensure the retention and enhancement of the Rossdale and Cloverdale communities in the River Valley.

(North Saskatchewan River Valley Area
Redevelopment Plan, page 5)

The ARP includes several policies with a clear conservation focus and has been the model for subsequent conservation activities in Edmonton.

Ribbon of Green Master Plan: North Saskatchewan River Valley and Ravine System Master Plan (1990)

“The Master Plan ... establishes policy guidelines for the long-term development, use and care of the entire valley. It provides a data base and criteria on which decisions can be made. It provides standards and guidelines, thereby encouraging a consistent management approach to the entire river valley system.

...

“With the exception of identified park nodes, the Master Plan limits development to an integrated trail system, which makes the river valley accessible to the public, yet protects the natural landscape and wildlife habitat areas. ... It identifies the potential impacts of development projects and the type of environmental review required for each project” (Executive Summary).

The Ribbon of Green Master Plan may be viewed online by visiting www.edmonton.ca/parks, then selecting “Parks Planning” from the menu at left, then, at the bottom of the next page, clicking “more” beneath the heading **Ribbon of Green: North Saskatchewan River Valley and Ravine System Concept Plan and Master Plan**.

Policy C-467, Conservation of Natural Sites in Edmonton's Tablelands (1995)

This policy encourages “the conservation and integration of as many environmentally sensitive and significant natural areas into Edmonton's future urban environment as are sustainable and feasible. The identification of environmentally sensitive areas and significant natural areas has no legal implications for the respective owners and, with the exception of the information requirements, participation in this policy is voluntary” (Policy Statement).

Policy C-467 may be viewed by clicking “City Government” from the City's homepage, then clicking “Policies” from the menu at left and, on the next page, choosing the “access a policy by number” option.

There are, of course, other policy documents with an implicit link to natural areas conservation. These include, but are not necessarily limited to, the following.

Plan Edmonton: Edmonton's Municipal Development Plan – the MDP identifies as a priority the “Preservation and enhancement of the natural environment and open spaces,” specifically, to “preserve and enhance the river valley, natural spaces and open space within the urban landscape; recognize these areas as critical aspects of successful planned growth of the City; and, link them to the extent possible” (*Plan Edmonton*, 21).

2006 *Environmental Strategic Plan* – “Natural Areas Systems Strategy” is one of ten core strategies of the ESP. The Natural Areas Systems Strategy addresses the protection of natural areas and the maintenance of biodiversity (ESP, 52-67).

Urban Parks Management Plan – the Parks Branch is the agency responsible for the ongoing maintenance of parks, including natural areas.

Drainage Master Plan – the Drainage Branch has begun to use constructed wetlands as part of its stormwater management strategy.

Transportation Master Plan – natural areas are incorporated into the design of the City's transportation network.

All of these documents may be viewed online by visiting the City's website at www.edmonton.ca.

2006 State of Natural Areas report

The Office of Natural Areas contracted Spencer Environmental to use the latest conservation science to develop an updated natural areas inventory, and to subject that inventory to critical analysis to identify conservation strengths and weaknesses and emerging trends, that would support an integrated natural areas conservation plan.

Spencer used aerial photography taken in 2005 to update the inventory of natural areas, combining the North Saskatchewan River Valley and Ravine System for the first time with tableland natural areas. The *State of Natural Areas* report identified that nine percent of Edmonton's land base consists of natural areas, including 63 percent of the river valley and just three percent of the tablelands. Spencer then subjected the data to a landscape linkage/connectivity analysis and a natural areas systems analysis.

Spencer's research supports two critical conclusions.

1. Edmonton has a functional ecological network, comprised of four essential elements:
 - **core habitat areas**, e.g. Whitemud and Blackmud Ravines, Big Lake Natural Area;
 - **riparian corridors** in the North Saskatchewan River Valley and ravine system;
 - **ecological corridors**, e.g. Horse Hills Creek network; and
 - **stepping stones**, which are smaller, dispersed habitat patches - e.g. Poplar Lake, Schonsee Natural Area.
2. The viability of that network is under considerable pressure from development. Of the land base identified as natural areas in the 1993 tablelands inventory, 23 percent had been lost, primarily due to suburban development; 21 percent had come into some sort of protection, often with the participation of developers; and 56 percent remained on privately-owned lands, without any protection status. The trend is toward loss over conservation of natural areas. Natural areas in the river valley in the southwest and northeast are also under development pressure.

The trend toward the loss of natural areas may threaten the viability of Edmonton's ecological network if *Natural Connections* does not lead to a renewed focus on conservation and habitat preservation, particularly in the tablelands.

The report included other analysis of wildlife sightings, significant vegetation, soil types, watershed integration, etc., which may be of further interest. The three-part *State of Natural Areas Report* is available in .pdf format by visiting the webpages of the Office of Natural Areas at www.edmonton.ca/naturalareas, and then clicking on the "Natural Areas Conservation Plan" link in the menu at left.

Natural Areas conservation public engagement process

In October 2006, the Office of Natural Areas contracted Teleologic Strategic Communications to conduct an extensive public engagement campaign to solicit input from Edmontonians that would support the development of the City's integrated natural areas conservation plan. Specifically, the Office hoped to use public input to help it articulate a vision, mission and guiding principles.

The public engagement process was launched in conjunction with the release of the *State of Natural Areas Report* in November and continued through December.

There was widespread media coverage of the release of the report that drove public participation in the public engagement process. The engagement process itself consisted of six activities:

- an online survey that received 1,367 responses;
- four open houses in each of the four cardinal quadrants of the City – northwest, northeast, southwest and southeast – attended by more than 100 Edmontonians;
- a workshop with 44 pre-registrants representing environmental non-government organizations (ENGOS) and members of the public-at-large through which the Office was able to explore conservation issues in greater depth and to collect local expertise;
- two planned landowner workshop, replaced by direct telephone interviews with landowners; and
- two focus groups of randomly selected Edmontonians, to test the data collected through the other public engagement exercises.

See the specific report prepared for each activity for more information about the research methodology used, as described below.

In total, the Office received direct contributions in support of *Natural Connections* from more than 1,500 Edmontonians on a wide variety of conservation related issues, including efforts to further engage Edmontonians in support of conservation, strategies to secure the natural areas that comprise Edmonton's functional ecological network, and practices to enhance the management of natural areas to protect those irreplaceable resources for future generations.

Public input also helped to identify potential outcomes for an integrated natural areas conservation plan, which the Office has found helpful as it develops the *Natural Connections* framework. The potential outcomes, which articulate a future state of natural areas, have been used to 'reverse engineer' goals, objectives and strategies that support the overall vision.

The public engagement process exceeded expectations in every respect except one: the Office was not successful in reaching landowners in the City's outer regions. Efforts will have to be redoubled to contact this constituency and get involved in conservation efforts. Otherwise, participants showed a remarkable consistency of opinion in support of natural areas conservation, as detailed in the pages that follow.

In addition to public engagement, the Office of Natural Areas also consulted with other agencies whose activities have an impact on conservation, including neighbouring municipalities, departments or agencies of other orders of government, Ducks Unlimited and the Edmonton chapter of the Urban Development Institute. Participants agreed that key challenges include planning (autonomously at local levels and collaboratively at regional levels), performance measures and environmental indicators, municipal authority within provincial legislation, enforcement of existing statutes, appropriate management tools, and working at the operational level to support conservation.

In all cases, representatives of these organizations agreed there was value in pursuing conservation from a regional perspective that recognized the three intersecting watersheds that converge in the Capital region. Though this kind of inter-agency collaboration was relatively new, participants keenly anticipated future opportunities to collaborate with the City of Edmonton in support of conservation in the Capital region.

Release of the 2006 *State of Natural Areas* report

Teleologic advocated a 'soft launch' release of the *State of Natural Areas* report to generate media attention that could be leveraged to maximize involvement in the public engagement process. A soft launch is a strategic media relations technique in which the story is detailed in advance to key reporters who might have a particular interest. In this case, Teleologic targeted environment reporters in all three local print and broadcast media.

Initial interest was not strong, with the exception of Hanneke Brooyemans, the environment beat reporter for the *Edmonton Journal*. Given the relatively low initial interest, Ms. Brooyemans was given an 'exclusive' and prepared her story in advance of the scheduled news conference on Tuesday, November 14. Ms. Brooyemans had an advance interview with Grant Pearsell, Natural Areas Coordinator. The *Journal* ran its story November 13, with a front-page, above-the-fold headline and a virtual full-page story on page A3, immediately inside the cover. The Office of Natural Areas provided the *Journal* with photographs and a map to illustrate Edmonton's natural areas.

One element that seemed particularly effective in the press was to draw attention to the estimated value of privately-owned natural areas at \$150 million. The figure is too large to be comprehensible to most citizens and would have passed without notice had it not been compared to the cost of the 23rd Avenue and Gateway Boulevard interchange, which has a similar cost. This comparison enabled both media and the public-at-large to approach the fiscal implications of natural areas conservation with improved confidence. Although land prices continue to escalate – and 'raw' land prices would not always apply to natural areas in question – the figure has proved useful to support discussion.

Though it is difficult to calculate the value of a front-page, good news story, the *Journal* rate card suggests an approximate value for the story on A3 alone of \$8,000.

CBC Radio One ran the story three times on November 14 at noon, 4:30 p.m. and 5:30 p.m. *Edmonton AM* ran two different features stories on November 20 and twice on November 21.

The story ran in the noon news and in the evening news broadcasts on CFRN and in the evening news broadcast on CBC-TV.

The *Journal* did a follow-up story November 22 on the Edmonton Land Trust, and both the *Edmonton Examiner* and *SEE Magazine* ran full-page features in their issues of the weeks of November 13 and 23, respectively.

Several attendees at each of the open houses cited the newspaper and radio coverage in particular as the reason that they about the opportunity to become engaged in the development of *Natural Connections*.

Estimated press valuation

Print:	4 items, including <i>Edmonton Journal</i> front page headline and page A3
Radio:	6 items, including a running series on CBC 740. Total time: 16:07
Television:	3 items. Total time: 2:10
Total items:	11 (2 print, 6 radio, 3 television)
Estimated value:	Print \$16,000; radio \$2,000; television \$2,000; total \$20,000.

The media soft launch yielded approximately \$20,000 in free media coverage that clearly reached the desired stakeholder group.

Online survey

The Office posted an online survey to collect responses from Edmonton residents from November 13 to December 10. Residency status was confirmed through postal codes.

The Office employed several means to promote the online survey.

- The November 14 press conference resulted in considerable newspaper and radio coverage, including instructions on how to access the survey. See Report 2 for details.
- The Office sent a notification e-mail to all stakeholders in its contact database to encourage survey responses and provide information about open houses and workshops. Recipients were encouraged to circulate the e-mail to friends and family in order to extend the notification as far as possible.
- Academics in appropriate disciplines in the City's post-secondary institutions received notice of the survey and other public engagement opportunities and were encouraged to share this information with students.
- The Office sent an e-mail notice to social studies and science teachers in the Edmonton Public School Board and Edmonton Catholic School District, with an attachment that could be posted in classrooms.
- Survey and other public engagement event notices were placed in public libraries near the free access computers.

1,367 Edmontonians completed surveys. Responses to the 14 questions were remarkably consistent and were strongly in favour of enhancing municipal conservation efforts. For example, 97.7% of respondents agreed that the "City of Edmonton should encourage the conservation and integration of as many natural areas into Edmonton's future urban environment as are necessary to maintain the habitat viability of the natural areas network"; only 0.6 percent disagreed; the remaining 1.3 percent either "did not know" or were neutral.

Survey respondents were overwhelmingly in favour of:

- protecting publicly-owned natural areas;
- working with landowners and developers to conserve natural areas on privately-owned land;
- harmonizing the City's efforts with other agencies; and
- lobbying the provincial government to grant municipalities greater authority to protect natural areas.

Numerical 'agreement value' of "agree with" statements

Respondents were asked to indicate whether they "strongly agree," "agree," "neither agree nor disagree," "disagree" or "strongly disagree" with each of the provided statements. As above, the survey results have been presented such that 5 corresponds to "strongly agree" and 1 to "strongly disagree."

The response data has been presented in a different order than questions were asked such that those statements with the highest agreement value are indicated first, and those with the lowest agreement value

indicated last. This enables a more direct comparison of the values respondents ascribe to natural areas and conservation issues than might be the case if the responses were presented in the original question-based order. The corresponding question is presented to the left of the bar graph that displays the agreement value it received in the survey.

To see the survey questions in the order they were presented online, see Appendix 1.

In general, it can be said that respondents overwhelmingly favoured natural areas conservation. The agreement values with pro conservation statements ranged from a high of 4.9 to a low of 4.2. The only statement that did not favour conservation received an agreement value of 1.4, indicating strong disagreement.

Figure 1: Top seven agreement values

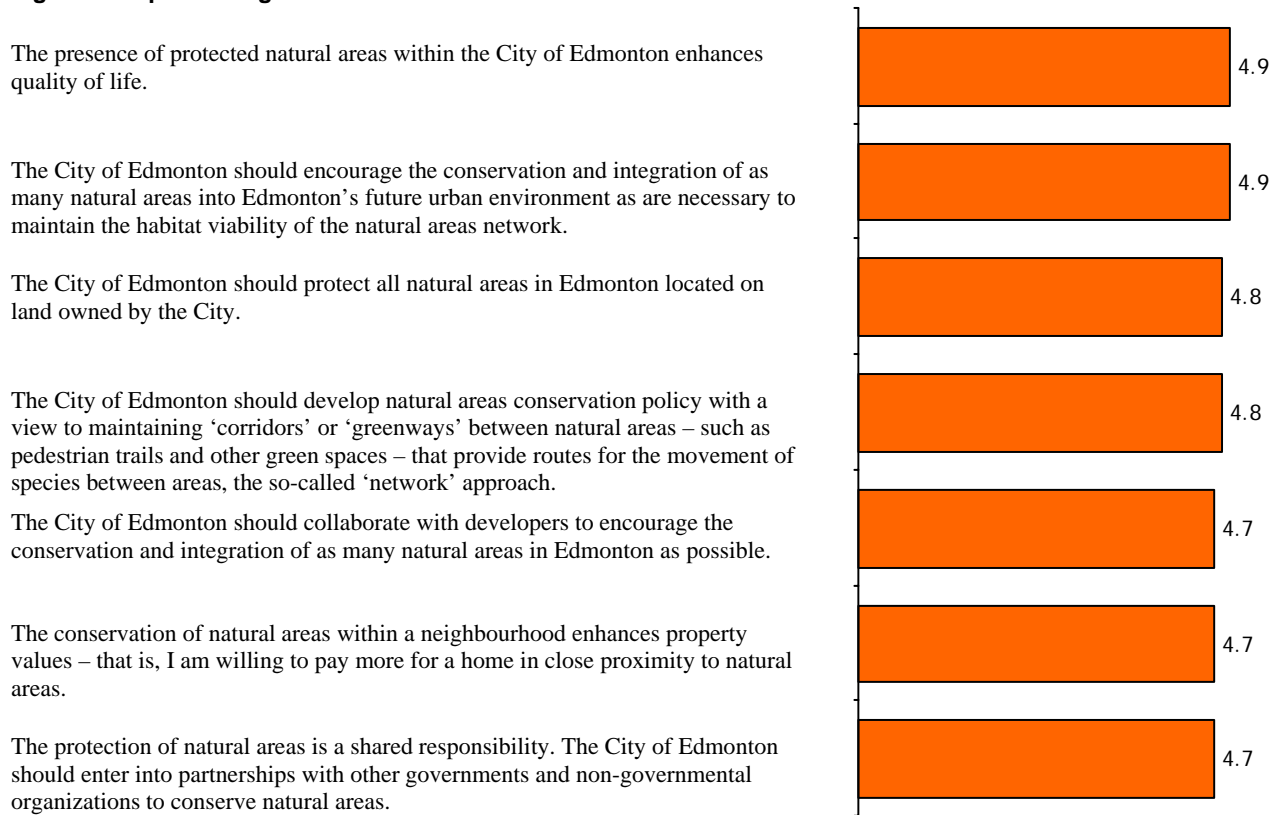


Figure 2: Eight to fourteen agreement values

The City of Edmonton should harmonize its conservation goals with the conservation efforts of the governments of Canada and Alberta to support such plans as the provincial fisheries and wildlife management plans ...[more; for the rest of the question, see the footnote below.]¹

In June 2006, the City of Edmonton became a partner with the Edmonton Community Foundation, Edmonton Nature Club, Urban Development Institute, Legacy Lands Conservation ...– [more; see the footnote below.]²

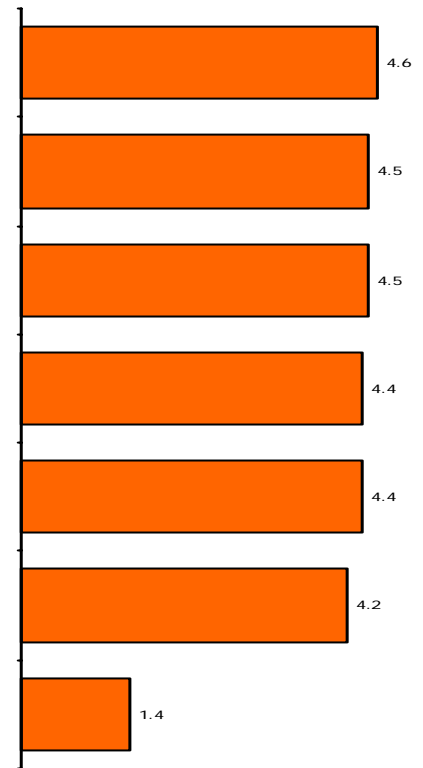
The federal government provides tax incentives for the donation of ecologically sensitive land to approved conservation charities and has reduced the capital gains tax on such land to zero. [more; see the footnote below.]³

Protection of the environment is a federal and provincial responsibility and the City of Edmonton has limited authority under the Municipal Government Act (Alberta) to implement conservation measures. [more; see the footnote below.]⁴

Where feasible, the City of Edmonton should purchase natural areas on private land.

The City of Edmonton should develop incentives to encourage the acquisition of natural areas and/or their conservation by developers.

Accommodating growth and economic development is more important than the conservation of natural areas.



Five hundred and fifty respondents (40 percent) provided additional comments at the conclusion of the survey. The most common themes of those comments have been below. Only comments made by two percent or greater of respondents (27 or more) are in the list.

1. More needs to be done to protect Edmonton's Natural Areas.
2. The natural areas make Edmonton a good place to live / It's why I live in Edmonton.
3. Natural areas contribute to healthy living / quality of life.
4. Too much natural land and green space is being lost to development.
5. There should be stricter rules for developers/ Developers should be required to protect natural areas.
6. Once natural areas are gone, they are gone forever / We must protect them for future generations.
7. The City of Edmonton has done a good job protecting the River Valley and the City's green spaces.
8. More awareness is needed / More education is needed.
9. There is too much urban sprawl / City should control urban sprawl.

¹ ... the United Nations Convention on Biodiversity and the North American Waterfowl Management Plan, and species-at-risk protection legislation.

² ... Society and the Land Stewardship Centre of Canada to create the Edmonton Land Trust. City Council will consider a proposal during its 2007 budget deliberations to provide a \$2.5 million endowment to cover operational expenses. The City should provide operational support to the Edmonton Land Trust that will better enable it to receive donations from private landowners of natural areas.

³ In a complementary decision, the City approved the creation of the Ecological Conservation Assistance Program to cover the reasonable costs (legal, accounting, surveying, etc.) to landowners of making a donation to the City of Edmonton. The City should invest in a campaign to raise awareness of this program among landowners.

⁴ The Province should provide municipalities with new powers to protect and conserve natural areas.

Some caution is advised in the interpretation of this data derived from the online survey. Most survey respondents were likely part of a self-selecting constituency of people already well-versed in and committed to conservation. The uniformity of opinion among respondents should not be construed as representing a similarly common opinion among Edmontonians. However, the number of respondents also indicates that conservationists are a particularly motivated group and that they are passionate about the issue.

The complete survey data set is available as Appendix Three to Report Three, *Online Survey Results*.. All respondent comments are provided in Appendix Four.

Four public open houses

Over 100 Edmontonians attended four workshops hosted in each of the City's four quadrants – northwest, northeast, southwest and southeast – hosted by Natural Areas staff. Open house attendees made written comments on a broad spectrum of conservation issues. Attendees seemed to appreciate the challenge of balancing conservation with rapid population growth but argued strongly in favour of enhanced conservation efforts. In particular, sentiment was high that the City must act now. Attendees challenged City Council and the Administration to demonstrate through action – the creation of supporting policy and budget allocations – that they are committed to preserving Edmonton's functional ecological network.

Specific issues have been grouped on thematic lines as shown in Figure 3. Response rates can nominally be considered as percentages – that is, 24 of 100+ attendees is roughly equivalent to 25 percent.

Figure 3: Frequency of natural areas conservation issues raised by attendees, by theme

Prioritize acquisition/allocate budget/borrow funds 24	Work more aggressively with developers to conserve natural areas 15	Shift conservation focus away from human use to acknowledge other species 14	Make environmental sustainability a Council focus 12
Improve public education and public involvement 9	Protect creeks and ravines* 9	Protect agricultural lands from development 8	Use residential densification to reduce development pressure 7
Protect wetlands, recharging areas, saline springs, etc.* 7	Promote conservation donations – i.e., land trust and ECAP* 7	Make conservation a planning priority, not afterthought 6	Protect all existing natural areas* 5
Provide/protect natural areas W of 142 St, N of river* 5	Construct wetlands to manage stormwater 5	Protect habitat* 5	Balance recreation and protection 5
Protect Horsehills region* 4	Lobby provincial government to enhance legislative tools† 4	Protect large core areas* 4	Pursue restoration/naturalization 4
Work closely with NGOs to manage natural areas 4	Improve use of MRs/ERs† 3	Use native vegetation whenever possible 3	Adopt Earth Charter or its principles in sustainability 2

* All issues marked with an asterisk may be considered subsets of a prioritized acquisition strategy; that is, they are in some way related to the number one issue and are more specific recommendations for action within that theme.

† These might be considered variant expressions of the same idea – change municipal authority to support conservation.

As indicated above, securing the natural areas network was the single most important issue to open house attendees. No less than one person in four indicated that s/he wished the City to act quickly to prioritize unprotected sites for acquisition and to make the budget allocations required to do so. Related issues included attendees’ wish that creeks, ravines, wetlands, core areas and areas west of 142 Street be protected. Some felt that development too much development close to, or even in, the river valley was being permitted.

Attendees challenged the City to protect natural areas prior to receiving development plans, effectively making conservation a requirement rather than a voluntary obligation entered into by the developer. A related observation was the need to enhance municipal authority to protect natural areas, whether that is through acquisition strategies, expansion of the municipal reserve allotment and environmental reserve designation, land exchange programs, greater zoning stringency, expropriation or other measures that might arise out of amending the *Municipal Government Act*. Some attendees said in conversation that the City needs not only an integrated *conservation* plan but an integrated *development* plan that reconciles economic, environmental and social concerns.

Several open house attendees lamented the City’s anthropocentric approach to ‘parks’ management and emphasized that natural areas are not intended only for human benefit but for the benefit of all living things. They stated strongly that the City has a responsibility to preserve the biodiversity and requisite habitat that exists now for future generations. In conversation, this was, again, linked to the City’s acquisition strategy, in that attendees felt certain natural areas with habitat implications for other species must be identified as priority areas.

A large number of open house attendees wished the City to maintain the zoning of agricultural land within municipal borders rather than see that land rezoned for residential or industrial development. This was raised particularly in the northeast workshop (see below) but was also raised in each of the other open houses. In side conversations, attendees frequently cited the value of Edmonton region market gardens, particularly with the increase costs of shipping food to Edmonton from other regions, and said they felt compromising those areas for industrial development was short-sighted since food would never not be in demand but oil and gas resources would ultimately be depleted and their economic value null. In the northwest, attendees were concerned about the disappearance of prime agricultural lands west of Edmonton. In the southeast, attendees noted the importance of protecting the remaining wetlands from residential development.

Attendees also spoke about the importance of communication, public engagement, education and public involvement.

Due to the geographic catchment of the four open houses, attendees at each also identified issues specific to the area that corresponded to the City’s approximate cardinal quadrants – northwest, northeast, southwest and southeast. These ‘site-specific’ issues are identified in Figure 2.

Figure 4: Geographic conservation issues raised by open house attendees, by quadrant

Northwest	Northeast	Southwest	Southeast
Attendees were concerned about the lack of parks and natural areas west of Laurier Park and advocated protection of the river valley and tributary ravines.	Attendees indicated strong support for the preservation of agricultural land in the Horsehills area.	Attendees indicated support for restoration efforts and ‘naturalized’ stormwater ponds.	Attendees particularly cited the need to protect wetlands in the City’s agricultural zones in the southeast.

Attendees from the City's largest quadrant, delineated by being north of the North Saskatchewan River and west of 97 Street, were disappointed by their relative lack of access to the river valley or other natural areas. Accordingly, they voiced great concern that areas such as the McKinnon Ravine continue to be protected and that efforts be made to provide a natural areas experience in closer proximity than the river valley and tributary ravine system.

In the northeast, as discussed in detail above, attendees indicated strong support for the preservation of agricultural lands in the Horsehills area.

In the southwest, the quadrant with the best access to natural areas both in the North Saskatchewan River Valley and the Whitemud Creek area, attendees indicated strong support for restoration efforts, including measures to re-introduce native vegetation and remove invading weeds. Attendees also supported the efforts of the Drainage Branch to build constructed wetlands for stormwater management.

Lastly, as above, attendees in the southeast singled out existing wetlands in agricultural lands for protection.

It should also be noted that at least half of open house attendees indicated gratitude either in their written responses, on the sign-up sheet or in conversation that the City had made it possible for them to express their opinion on conservation issues. There was a tremendous amount of goodwill generated among attendees that should be respected as *Natural Connections* is developed.

Ninety-five open house attendees left contact information and indicated that they would like to be involved in future public engagement efforts to support the development of *Natural Connections*. It should also be noted that a significant number thanked the City for the opportunity to provide input, either in written submissions or in conversation.

All written submissions have been attached to Report Four as Appendix One.

Public and ENGO Workshop

The Office hosted 27 Edmontonians⁵ representing the general public and ENGOs at a facilitated public workshop on November 29. Participant enthusiasm was high and the Office received a tremendous amount of outstanding information from participants.

Participants were asked three questions regarding conservation to help structure input.

1. What is the City doing well?
2. What can it do better?
3. Where should the Office of Natural Areas focus its efforts [potential outcomes]?

Existing strengths

When asked to identify current strengths, the two highest ranking issues on which workshop participants agreed the City was doing a good job were:

1. preservation of the North Saskatchewan River Valley; and
2. the Office's focus on connectivity.

⁵ There were 44 pre-registrants but extreme weather resulted in 17 cancellations or no-shows. Several of the pre-registrants unable to attend contributed their comments via e-mail or through the online survey.

This latter is especially important because, prior to the presentation that preceded the exercise, “connectivity” may not have been viewed as a significant issue. In other words, there was widespread approval among workshop participants for the proposed management approach to Edmonton’s natural areas. That idea was reinforced by the fact that “integration” – a corollary concept – was mentioned by two tables.

A wide range of comments was recorded by each table’s scribe, all of which were entered into a matrix as below, and then the group, as a whole, was invited to make additional comments.

Figure 5: Existing strengths of municipal conservation policy

Preservation of North Saskatchewan River Valley 5	Focused on connectivity/ network approach 4	Public engagement 3	Inventory of natural areas/Research 3
Leadership 2	Integrated approach to conservation 2	Creating Office of Natural Areas/moving Office out of Waste Branch 2	Taking regional perspective/ watershed management 2
Constructed wetlands 1	Working with development community 1	Elevating issue to political realm 1	Sense of urgency 1
Engaging City Council 1	Building trust 1	Encouraging SMART choices/Transit-oriented-development 1	

Because there were only five tables, any mention of a single issue by three or more could be considered to represent a majority opinion.

Although not mentioned by a majority, other areas in which existing strengths were acknowledged by a reasonable number of workshop participants included:

- commitment to public engagement;
- the inventory of natural areas included in the State of Natural Areas Report;
- the provision of leadership to the conservation community;
- integrating management of river valley and tablelands natural areas;
- establishing the Office of Natural Areas and locating it appropriately within the civic administration; and,
- taking a regional perspective to conservation that acknowledged watershed basins.

Areas for improvement

When asked to identify areas in which the City could do better, public education and acquisition of natural areas in the tablelands generated the most discussion.

Not surprisingly, many of the issues raised as strengths were also repeated as areas in which participants felt the City could do better. And, also not surprisingly, participants identified considerably more areas for improved attention.

Figure 6: Existing weaknesses of current municipal policy

Acquisition of natural areas in the tablelands 5	Public education ⁶ 5	Addressing regional issues 4	Budgeting to acquire and manage natural areas 3
Management plan/ accountability/ protection/monitoring 3	Prioritize natural areas for acquisition 2	Refine the inventory/ 'ground-truthing' 2	Public involvement 2
Wetland preservation 2	Stormwater management/ habitat creation 2	Restoration 2	Controlling air and water pollution 2
Managing political motives 1	Engaging City Council 1	RV encroachment 1	Restrict access during sensitive periods 1
Access 1	Operations/management 1	Buffer zones 1	Connectivity 1
Partnerships with developers 1	Development density/intensification 1	Adopt the Earth Charter 1	

Acquisition of natural areas in the tablelands and public education and generated the most follow-up discussion.

Participants were keenly aware of the development threat to natural areas in the tablelands, which could be said to embrace a number of other issues raised, such as Council's creating the capacity to secure the natural area network, prioritizing areas for acquisition and refining the inventory. The trend is to the loss of natural areas in the tablelands, a trend that has accelerated since the 1993 inventory was taken.

Participants were strongly in favour of enhancing public education to ensure that Edmontonians are both aware of the City's unique functional environmental network and that they value its preservation. Participants felt that population growth and rapid development were dominating the public agenda without sufficient consideration for the impacts of that growth on natural areas.

There was a general consensus that the conservation of natural areas is approaching a crisis point because explosive growth is putting tremendous development pressure on those tablelands regions of the City that include a large number of unprotected natural areas. Some limited discussion of the southern and northern portions of the North Saskatchewan River Valley also indicated that protection of natural areas, particularly on privately owned lands, remains an issue. Participants felt that they could not overemphasize the importance of acting now to secure the functionality of Edmonton's ecological network.

Participants felt it was important that protection measures, whether using municipal or environmental reserves or a new designation yet to be determined, must recognize and preserve a natural area's ecological function – not merely distinguish it as a landscape feature. If protection measures do not explicitly acknowledge the value of natural areas, then their value as protection measures is suspect.

⁶ This was actually mentioned several times in different ways by all groups and so represents a key area for improvement.

Participants were strongly in favour of enhancing public education to ensure that Edmontonians are both aware of the City's unique functional environmental network and that they value its preservation. Participants felt that population growth and rapid development were dominating the public agenda without sufficient consideration for the impacts of that growth on natural areas.

The development threat to natural areas in the tablelands generated much discussion and could be said to embrace a number of other issues raised, such as Council's willingness to budget for the protection – including acquisition and management – of natural areas, prioritizing areas for acquisition and refining the inventory. More than one participant noted that some natural areas identified in the report in 1995 had been lost or substantially diminished by development activity in the past year alone.

Although encouraging regional cooperation was cited as an existing strength, participants also cited regional cooperation as an existing weakness. Participants expressed anxiety about regional economic development, such as the number of upgraders planned for the 'Industrial Heartland' and the recently leaked provincial proposal to develop a regional ring road, which, as currently planned, would cut through the middle of the Horse Hills, one of the remaining undisturbed regions in the City's northeast.

As suggested above, participants are hopeful that City Council will take action commensurate with its apparent commitment to conservation by, for example, making budget commitments that will enable the Office of Natural Areas to acquire high-priority natural areas in the tablelands and effectively manage the entire network.

Participants were also concerned that the Office does not have the capacity to manage natural areas but that management is distributed to other departments. While participants understood this arrangement, they also argued that more needs to be done with respect to developing a management plan that could be used to keep the City accountable, as a whole, for natural areas management. Participants also wanted the City to review the means by which it puts natural areas under protection to ensure that protection is meaningful and not subject to change if a future Council reconsiders the value of a given natural area protected within the network. Finally, participants advocated management plans that included methods to monitor natural areas to ensure that conservation objectives were being met.

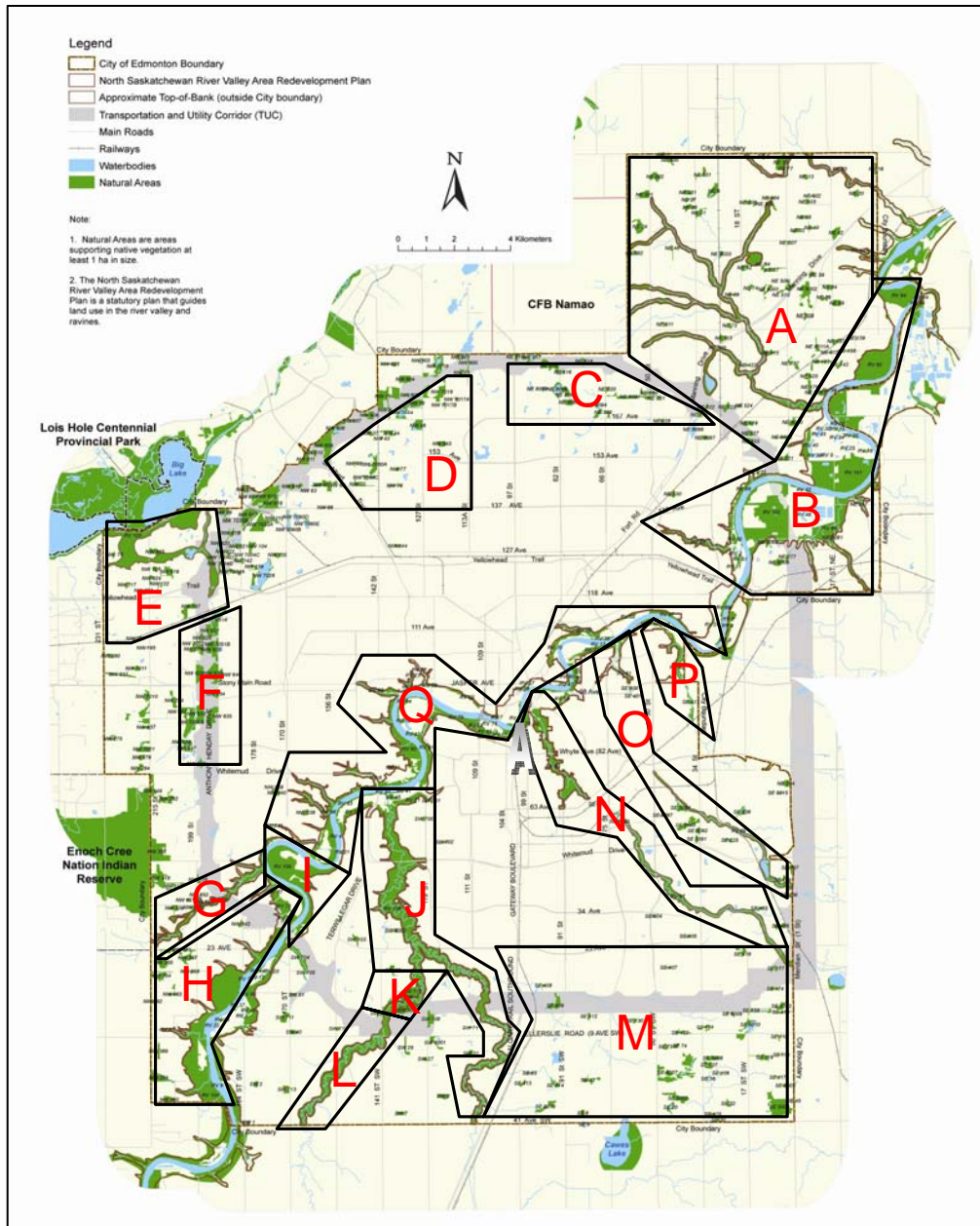
Participants made two related observations that demonstrate both their strong feeling about the importance of securing natural areas in the tablelands within the network but also the budgetary challenge the City faces. First, participants argued for the prioritization of natural areas for acquisition such that resources be dedicated to those most crucial to maintaining the functionality and connectivity of the ecological network. Second, participants suggested 'ground-truthing' to help refine the inventory and identify priority natural areas, as well as using ground-truthing as an ongoing management strategy.

The remaining issues from the matrix are discussed in greater detail in Report 5.

Community mapping

Workshop participants possessed invaluable local expertise concerning urban natural areas that was captured through the community mapping exercise. Participants were asked to document on a natural areas inventory map (developed by Spencer Environmental) notable features of which they were aware that applied to the network of natural areas. Community mapping contributions made during the four open houses have been included in this analysis.

Figure 7: Map of designated zones for community mapping exercise



NOTE: Natural areas in the City's northwest between those areas identified as "D" and "E" in the community mapping exercise that are within the transportation and utility corridor are not within municipal jurisdiction and so were not included in this analysis.

The chart beginning on the next page describes specific habitat features, vegetation and wildlife sightings specific to each of the designated regions contributed by workshop participants, with some observations related to recent loss of habitat or restoration opportunities.

Figure 8: Community mapping observations by location

Area	Observations
A Horse Hills Complex	<ul style="list-style-type: none"> Critical corridors for wildlife Retention of agriculture matrix lands as stepping stones Connectivity to ravines, river and region Corridor connecting Horse Hills watershed to Sturgeon River Important market gardens Rich lands Need to keep farmland for food production Profile of this area should be raised Birdwatching
B NE River Valley	<ul style="list-style-type: none"> New subdivision built too close to valley edge (Fraser) Rich agricultural land (RV 92) Excellent potatoes (RV 92) Archaeological significance (RV 92) Aspen woodland and grassland species (RV 102) White pelicans (Hermitage Park) RV 94 and RV 92 should be easier to protect since there are fewer landowners Fantastic farmland Good market garden area – Riverbend, Kuhlman's City Farm Lots of deer (RV 102) Old Strathcona sewage lagoons Canadian toads along river Kinnaird Ravine Wood frogs (RV101) Tiger salamanders (RV101) Need to extend river valley park system all the way to NE edge of city (RV101) Quarry Ridge/Ravencrest Natural Area – deer, owls, view (RV101) Need to extend river valley park system all the way to NE edge of city Great natural areas
C Poplar Lake to Brintnell	<ul style="list-style-type: none"> Loss of critical habitat (Brintnell) Saline wetlands Connectivity to river potential Species that were lost from Brintnell Major frog site (NE 528) Three-spine stickleback (NE 8089) Lots of birds: waterfowl, shorebirds, songbirds Much more than just nuisance geese Hooded merganser Black-crowned night heron Grebes Cormorants Chukar Owls
D Palisades Area	<ul style="list-style-type: none"> Last green space in sea of development Phalaropes (NW 7016) Wood frogs (NW 46 and NW 7060A) Coots (NW 7060A) Black terns (NW 7060A) Damselflies (NW 7060A) Invasive crayfish (SWMF in Cumberland)
E Big Lake Area	<ul style="list-style-type: none"> Critical amphibian habitat Frogs and salamanders Priority link to Big Lake Old growth Ravine Wood frogs Wetlands Waterfowl Rodents Riparian area especially for pasturing birds Continue to support as proposed protected area
F West AHD	<ul style="list-style-type: none"> Need to preserve white spruce and tamarack Natural Black spruce forests Larch Wetland/bog Marl pond springs Almost destroyed already Ditches along 199 St. between Stony Plain Road and Whitemud Drive are excellent bird habitat
G Wedgewood Ravine	<ul style="list-style-type: none"> Houses built too close to ravine Outstanding ecologically Amazing example of ecological integrity/health Needs to be protected Best example of healthy riparian ecosystem Owls Important for connectivity Ostrich fern
H Southern NW	<ul style="list-style-type: none"> Critical multi-species corridor (Big Island) Sand dunes (NW 384) Unique area (NW 384) Needs management plan (NW 384) Wood frogs (RV 33) Snake valley (RV 33) Good wetland habitat (RV 33) Probable garter snake hibernacula (RV 33)

Figure 8: cont.

Area	Observations
I Terwillegar Park Area	<ul style="list-style-type: none"> • Lowlands • Bird and ungulates • Currently development free • Old gravel pit • Invasive species <ul style="list-style-type: none"> • Several interesting native species • Wild clematis • Yellow lady-slippers • Osprey nest (AHD and 23 Avenue)
J Downstream Whitemud Creek and Blackmud Creek	<p><u>Blackmud Creek</u></p> <ul style="list-style-type: none"> • Observed in residential front yard: porcupines, coyotes, kestrels, many songbirds (Blackmud Creek @ 23 Avenue and 119 Street) <p><u>Whitemud Creek @ river</u></p> <ul style="list-style-type: none"> • Recommend Whitemud Integrated Concept Plan to naturalize lower Whitemud Creek • Tufa springs • Caragana Hill • Tubifex worms • Stoneflies • Rainbow Valley • South facing slope – bentonite • Skeleton weed • Several rare prairie species • Rare Artemisia <p><u>All of J</u></p> <ul style="list-style-type: none"> • Wildlife • Black-crowned night heron • Saw-whet owl • Popular walking trails • Nature enjoyment • Should provide information/education for maintaining healthy ecosystem • Scenic area • Hiking • Rabbits, birds, <i>etc.</i>, in nearby residential area
K McTaggart Sanctuary Area	<ul style="list-style-type: none"> • Not as accessible now because of so much development • Nice place for being alone in nature • Geology • Old coal mine <ul style="list-style-type: none"> • Edmontonsaurus bed • Series of beaverlodges (historical/long term) • Other wildlife (deer, coyotes, moose) • Wildlife corridor under AHD
L Whitemud Creek South of AHD	<ul style="list-style-type: none"> • Tiger salamanders • Native sunflowers? • Fireflies • Excellent dragonfly nymph development • Bank swallows • Fossil outcroppings along shores • Wood frogs <ul style="list-style-type: none"> • Coyotes' paradise • Many woodpeckers • Deer • Rabbits • Ostrich fern • Tablelands along edges at least 10 m
M Developing SE Edmonton	<ul style="list-style-type: none"> • Wetland and grassland • Habitat for shorebirds, waterbirds and songbirds • Drainage near Prairie Meadows Golf Course has potential for drainage from natural wetlands for irrigation of golf course • Wood frogs • Tiger salamanders <ul style="list-style-type: none"> • SWMF E of Blackmud, N of AHD: One of first SWMF in Edmonton; geese, ducks, shorebirds breeding; drainage to increase capacity by increasing wetland portion; impressed with this approach; pipelines have potential to act as wildlife corridors from pond to Blackmud Creek and other fragmented areas.

Figure 8: cont.

Area	Observations
N Mill Creek	<ul style="list-style-type: none"> • Bobcat just S. of Whitemud Drive • Fox @ 34 Avenue • Restoration • Flower species between 63 and 82 Avenues • Pheasant between 63 and 82 Avenues • Concern regarding contamination of water with industrial leachate and dumping rendering it toxic to wildlife • Need to create wildlife corridor through industrial area where Mill Creek goes underground; perhaps industry could be persuaded to help in this initiative • Riparian habitat potential is good N of Whyte Avenue • Recreational pressure removing understory – off trail use N of Whyte Avenue • Beautiful walking trails • Biking • Native vegetation needed to maintain ecological function N of Whyte Avenue • Important to consider tolerance to “wear and tear” – Mill Creek is reaching limit N of Whyte Avenue • Great paved and dirt trails fro mountain biking • Feeling of being out of city, away from urban sprawl • Easy to commute to downtown and Whyte Avenue • Social atmosphere along walking trails • Only natural area in Silverberry • Roper Pond: well developed; each year seems to be used by new bird species
O Fulton Creek	<ul style="list-style-type: none"> • Restoration • Fulton Marsh is an important waterfowl site • Marsh species (SE 5093) • Good connectivity (SE 5093) • Chemical damage on plants widespread from pollutants and emissions • Old growth forest near river
P Goldbar Creek	<ul style="list-style-type: none"> • Bald eagle nest • Red fox den • Important wildlife corridor • Overwintering ducks at waste water treatment plant • Artesian well (RV 76)
Q Central River Valley	<ul style="list-style-type: none"> • Tiger salamanders @ Hawrelak Lake • Garter snakes (RV69) • Flying squirrels @ University lands • Birding • Great Horned owls @ University lands • Saw-whet owls @ University lands • Duck prints in winter @ University lands • Albino magpies @ University and Kinsmen lands • Mushrooms @ Kinsmen • Cliff swallow colony across from Goldbar Creek • Picnics • Walking • Break from hectic life • Personal enjoyment • Research • Special place not well appreciated for its quality • MacKinnon Ravine: beautiful picnic spot; lovely view of city; walking
SW	<ul style="list-style-type: none"> • Nesting pair of hawks for at least 3 years @ U of A Farm – Belgravia • Moose, deer, rabbits, coyotes @ U of A Farm – Belgravia • Geese, sandpipers, ducks, crows, many types of songbirds @ U of A Farm – Belgravia • Songbird habitat (SW 704 and SW 705) • Corridor connecting Whitemud Creek to North Saskatchewan River • Geology – Kame (SW 86 – Magrath) • Birding: 17 species @ Hodgson Wetland • Restore access to wildlife corridor between Magrath Hill and Whitemud (developer recently removed it)
NW	<ul style="list-style-type: none"> • Kinokamau Lake is a problem area since there is no recharge to lake due to adjacent industrial use
Beyond City Limits	<ul style="list-style-type: none"> • Bretona Pond: headwater for Mill Creek particularly important (within Strathcona County) • Enoch Nation: City has no jurisdiction; giant fence along east side; perhaps negotiate with Enoch Nation • NE river valley towards Fort Saskatchewan: sturgeon habitat; frogs, toads; shorebirds; link to Regional Beaverhills Initiative

Much of the information provided through the community mapping exercise could be used to help prioritize natural areas for acquisition, specify conservation objectives in the management plans for specific areas, and to support public education. The diversity of species to be found in an otherwise urban

environment, for example, would likely surprise a great many residents, and could enhance public support for conservation measures.

Landowner consultations

The two landowner workshops planned for November 30 and December 4 were cancelled due to poor registration. The consultant did, however, have an opportunity to speak directly with four landowners about the conservation plan. None of these landowners are identified to protect their rights to privacy.

Although there was no substantive consultation with landowners during the public engagement process, the consultant's conversations with four landowners did enable the Office to learn some important things about working with landowners to achieve the City's conservation goals.

First, this constituency is difficult to reach and future efforts will have to be undertaken with the assistance of Planning and Development, who can use its taxpayer database to identify appropriate landowners in the lands in question.

Second, there is a tremendous amount of uncertainty, even suspicion, among some landowners about the City's intentions. Though the Office spoke with only four private landowners, two were very unhappy about the history of their dealings with the City and felt that they had been poorly treated for many years. If this sentiment is in any way representative, then the Office has much work to do to restore goodwill before it can begin to enter into substantive discussions to promote conservation. This will no doubt require a deliberate and persistent strategy that will become an ongoing part of *Natural Connections*. It may be that elected officials have a larger role to play in this area than they do in other aspects of the integrated natural areas conservation plan.

New developments provide the City with alternatives when working with landowners to conserve natural areas on privately-owned lands. The Ecological Conservation Assistance Program can help to defray expenses; the Edmonton and Area Land Trust provides a new administrative entity to receive conservation donations; and an experiment in zoning called "transfer of development density" currently underway in the Municipal District of Bighorn may be adaptable to the Edmonton context.

The Office of Natural Areas will renew efforts in the spring of 2007 to reach this constituency and ensure that it has the opportunity to contribute to the development of *Natural Connections*.

Focus groups

The Office conducted two random sample focus groups on December 11 to test the data collected through other public engagement exercises. It must be recognized that the online survey, open houses and workshops tended to be self-selecting; that is, respondents and participants are much more likely to be already committed to conservation issues than the general public.

Initially, focus group participants showed little awareness of conservation issues. However, when queried more directly, most were concerned about the impacts of rapid population growth and urban development. Edmonton's river valley and parklands were consistently highly valued and respondents agreed that conservation of natural areas added to the quality of life of Edmontonians.

The focus group findings suggest that the public still has a difficult time with the abstract concept of "the environment" generally and natural areas conservation in particular.

When asked about the most important issues presently facing Edmonton, most participants gave answers related to growth pressures, such as housing, infrastructure, and city planning. Other common issues included violence, crime and policing. A few participants mentioned urban sprawl and pollution as concerns. However, conservation of natural areas did not receive specific mention as a top-of-mind concern.

Participants repeatedly demonstrated an affinity for the City's parkland, and perceived a clear connection between the abundance of green space in Edmonton and the overall quality of life that its citizens enjoy. This is entirely consistent with the findings of other public involvement exercises related to natural areas that are summarized in the section "Complementary public engagement exercises" beginning on page 30.

Although the conservation of natural areas was not a top-of-mind concern for participants, they did agree there is value in preserving natural areas because natural areas improve the quality of the environment and add to the City's natural beauty. Participants had little knowledge of past or current conservation and were equally ignorant as to how Edmonton compares with other jurisdictions in this regard.

Once the term "functional ecological network" was explained, participants were not surprised to discover that Edmonton was fortunate enough that its natural areas comprise a functioning ecological network. However, they tended to view this more as a result of contingency – *i.e.*, a deep and wide river valley unsuited to development – than a result of foresight or planning. At the same time, participants were clear that they believe the City has a critical role in preserving that attribute.

Of all the information presented during the focus group sessions, participants were most struck by the statistic that 23% of natural areas in the tablelands have been lost since 1993, and that 56% remain unprotected. The trend toward loss of natural areas in the face of rapid urban development was easily perceived. More than any other fact shared during the focus groups, participants responded to this information with an assertion that taking immediate action to conserve Edmonton's remaining natural areas is important.

Consulting other agencies

Conservation plan implementers

In addition to its public engagement process, the Office of Natural Areas also met with representatives from other orders of government, neighbouring municipalities and ENGOs all of whom had responsibility to implement local or regional conservation plans.

Participants agreed that key challenges include planning (autonomously at local levels and collaboratively at regional levels), performance measures and environmental indicators, municipal authority within provincial legislation, enforcement of existing statutes, appropriate management tools, and working at the operational level to support conservation.

Though this kind of inter-agency collaboration was relatively new, participants keenly anticipated future opportunities to work together to support conservation in the Capital region.

Development industry

The Office of Natural Areas also met with representatives from the Edmonton Chapter of the Urban Development Institute to discuss ways in which the City could work more effectively in partnership with the development industry to preserve natural areas.

The key issue appeared to be streamlining planning processes. Developers would like the different departments to have a unified approach to conservation. Most important, the Chair of UDI's Natural Areas committee agreed that on-going discussion and, perhaps, a working group could address many outstanding concerns to mutual benefit.

Complementary public engagement exercises

The following observations are put forward from other research conducted by the City that complements the findings of the public engagement process undertaken by the Office of Natural Areas.

Focus Edmonton public consultation results

Several of the values identified through the Focus Edmonton: City Plan public consultation process supervised by Kaleidoscope Consulting are consistent with the findings of the *Natural Connections* public engagement process.

Among the themes identified was the following.

Leadership to fulfill a vision

Edmonton needs a vision (the lack of a shared vision for Edmonton was one of the most commonly cited issues) and the land use plan must manage development toward that vision, not the other way around. Participants felt the City needs to take a leadership role in creating a definitive land use plan with clear principles, enforcing those principles, and not deviating under pressure (Steers, page 6).

This observation was reflected in the focus groups undertaken by Teleologic to support Natural Connections. Participants were not convinced that the City's success-to-date conserving natural areas was part of a deliberate plan; instead, they felt that it was simply a matter of good fortune. However, they did encourage the City to develop a vision for conservation – which was among the primary objectives of the public engagement process – and it is possible that natural areas conservation is one of those issues around which a vision for the City might coalesce.

Another finding made by Kaleidoscope of import to the present discussion of conservation includes the following unique characteristics on which it is suggested that the City should build.

Without a doubt, Edmonton's river valley is seen as the jewel of the city. Rich with unspoiled natural landscape, relatively clean water and recreational opportunities, the river valley also represents the heritage and history of Edmonton (8).

This view, widely held and confirmed in every aspect of the public engagement process supervised by Teleologic, should be considered when determining the future dispensation of natural areas in privately-owned sections of the North Saskatchewan River Valley in the southwest and northeast.

Over and above the river valley, Edmonton is a green city with a number of tracts of natural areas, developed green spaces and mature areas with beautiful tree-lined streets.

Again, natural areas are named first among equals when citing unique characteristics of Edmonton.

Kaleidoscope sought to identify commonly-held values among Edmontonians as a key element to the Focus Edmonton. Considerations associated with two values are relevant here.

Value: A sustainable city

- Ecologically sustainable through a culture of conservation, protection of natural areas and role modeling of best practices in land use, development and redevelopment (12).

Value: Land stewardship

- An overall strategy that makes the best use and re-use of the land within Edmonton's boundaries.
- Protection of the river valley and other natural areas.
- Preserving agricultural land for agricultural use and to benefit the eco-system (13).

Kaleidoscope conducted a telephone survey of 400 adult Edmonton residents to test the findings of its stakeholder consultations, which generated the above themes and value statements. Kaleidoscope said

- Edmonton residents give a *particularly high priority to having access to natural areas* (4.02 mean rating on a 5-point scale), ensuring that neighbourhoods have *gathering places like parks or plazas* (3.99), and to including commercial areas, parks and other facilities with residences in new communities, so that “people can live, work and play in the same area, if they choose” (3.94).
- In terms of policy and standards preferences, Edmonton residents give especially high priority to living in a beautiful city (4.54) [clearly associated with an abundance of natural areas] ... and for ensuring that new developments have the smallest possible ecological impact, even if it means higher costs (4.01) (15; emphasis added).

Kaleidoscope noted that the telephone survey results confirmed “the values statements identified in the public consultation process.”

The values held by Edmontonians that Kaleidoscope identified in support of the City's municipal development plan are very closely aligned with the overall vision and goals proposed for *Natural Connections*.

2006 Quality of Life and Financial Planning Survey

Edmontonians who responded to the 2006 *Quality of Life* survey cited “parks and trails” as one of the two most satisfying municipal services. Recycling and waste management received a use rating of 93 percent; parks and trails received a rating of 85 percent (Leger, page 6). These same services were also the top-two ranking in terms of use, at 96 percent and 84 percent, respectively (13).

Leger Marketing singled out Edmonton's “parks, trails and green spaces” as one of only two municipal leverage elements on which improvements would be readily apparent to citizens.

Any incremental improvements in the overall level and quality of services in these already positive areas will result in a corresponding increase in perception of services. However, decreases in positive perceptions will have the opposite effect: if performance ratings on these elements decrease, perception of services will also decrease (11).

In other words, efforts to develop and implement *Natural Connections* that are promoted to the public are likely to have a disproportionate favourable impact on citizens' impressions of the City than other activities and so have increased political capital. By the same reasoning, public perception that the City has failed to address conservation issues will have a greater impact on citizens' impressions of their municipal government than might arise from other issues.

In its conclusions, Leger Marketing also identified improving communication to citizens as a “critical improvement element” and said it would have a “strong positive impact on overall

opinions of service levels and value for taxes paid, and is the highest priority area for improvement” (34).

Efforts to improve public awareness of *Natural Connections* should have an appreciable impact on the public's opinion of the City.

Urban Parks Management Plan General Consultation

As part of its efforts to develop the Urban Parks Management Plan, the Parks Branch retained in fact Research and Consulting to conduct a general public consultation in 2004.

infact conducted a telephone survey of 606 Edmonton households. It noted a strong preference among survey respondents for maintaining natural areas within Edmonton's boundaries. “Over one-third of respondents either stated that the river valley system should be maintained as a natural area or identified elements or concerns that suggested something similar” (Urban Parks Management Plan General Public Consultation, page 25). While there seemed to be some uncertainty as to what, exactly, respondents meant by a “natural area,” the descriptors were similar enough to suggest that the definition implied was not substantially different from that later adopted by the Office of Natural Areas and included in this report on page 8.

When asked whether they thought “there should be more, about the same, or less natural space in areas outside the river valley and ravines [tablelands],” 57 percent said “more and 37 percent said “the same”; only two percent thought there should be less natural space in the tablelands. Natural spaces were defined in this question as “places with tree stands, wildflowers, grasses or open water marshland, with birds and wildlife, that are pretty much left to grow as they please.” Though different from the definition of natural area used by the Office of Natural Areas, the definition was sufficiently consistent to warrant comparison of the data (27).

On a follow-up question, 71 percent of respondents indicated a preference for a “combination of quickly accessible small natural spaces and larger natural areas with more features” (27-28). This response, which predates the formal adoption of the concepts of a ‘functional ecological network’ and connectivity by the Office of Natural Areas suggests that Edmontonians coincidentally support an approach congruent with natural areas management using those principles.

Over two-thirds of respondents, characterized by infact as “overwhelming” support, said that they would prefer to have an equal proportion of natural area and landscaped area in new parks developed in the tablelands. An additional 20 percent said that “most” parkland should be set aside as natural areas (28).

In summary, the general public consultation conducted in 2004 to support the Urban Parks Management Plan indicated tremendous and widespread support for the preservation of natural areas in Edmonton.

Implications for Natural Connections

The Office of Natural Areas should be encouraged by the findings of three other municipal efforts to measure public opinion that yielded results so similar to those of the Office's own public engagement process. The findings of the Focus Edmonton consultation, 2006 *Quality of Life* survey and the general consultation in support of the *Urban Parks Management Plan* all confirm that the conservation of natural areas remains a high priority for Edmontonians.

Given that these other exercises were not focused on conservation, they have not captured detailed opinion or suggestions for action; instead, the Office may be confident that its own process fills in the blanks left in these other public involvement activities undertaken in the recent past.

Appendix One: A Framework for *Natural Connections* Edmonton's Integrated Natural Areas Conservation Plan

The Office of Natural Areas is currently working to develop *Natural Connections*, an Integrated Natural Areas Conservation Plan for the City of Edmonton. *Natural Connections* will replace and unite previously disparate policies that protect the North Saskatchewan River Valley and Ravine System (the *Ribbon of Green Master Plan* and the *River Valley Area Redevelopment Plan*) and natural areas in the tablelands (Policy C-467). The plan will establish formal management practices based on conservation science that will protect the integrity of Edmonton's natural areas for future generations.

Natural Connections will help City Council and the Administration to balance conservation with the urban development pressures of one of Canada's fastest growing cities.

Natural areas conservation is one of ten core strategies in the City's revised 2006 Environmental Strategic Plan.

Vision

→ What future state are we striving to achieve through implementation of the Plan?

"A network of conserved and ecologically managed natural areas connected to the ravines and river valley, linking the natural and restored green spaces and regional natural areas and supported by the community of Edmonton as a valued asset."

This vision was prepared in 2006 by the City of Edmonton Natural Areas Advisory Committee, which consists of citizen representation, as well as representation from Ducks Unlimited Canada, the development community, the University of Alberta and Alberta Community Development.

Mission

→ What approach will the Office take in order to achieve its Vision?

"To preserve and enhance the City's unique ecological network for its intrinsic value; for the ecological services it provides; and to provide opportunities for outdoor recreation, natural heritage appreciation and academic inquiry."

Guiding principles

→ What tenets will guide the Office's decisions respecting what actions to take in achieving its Vision?

The following Guiding Principles were developed by the Office of Natural Areas, and will guide both the Office's activities in coming years, as well as development of the Conservation Plan itself.

1. **Build capacity for ecological protection in Edmonton.** Natural areas protection and management are complex and large-scale issues, and ones which will require the cooperation of many partners. The Office of Natural Areas is well-positioned to lead, partner with and coordinate other organizations in aspects of this work. This will result in strengthened community capacity for conservation.

2. **Balance public interest with property rights.** Implementation requires a balance between the limits of the public interest and the rights of individual property owners.
3. **Think continentally and regionally, and plan locally.** Ecological boundaries must be considered at different spatial scales ranging from the site level to regional, continental and global scales. In addition, ecological boundaries almost never coincide with administrative boundaries. It is essential that this be recognized in the decision-making process. Decisions made locally can have significant consequences beyond local borders.
4. **Align with existing conservation plans, aiming to be additive rather than redundant.** Other orders of government and non-government organizations have developed a wide range of conservation plans. The City of Edmonton will find ways to align its goals and objectives with those of other plans and form partnerships where possible.
5. **Use best available science.** The City's efforts must be grounded in current conservation science. Because the knowledge base of conservation science is continually improving, implementation of the plan must adapt to this changing knowledge base.
6. **Engage the community in conservation and management of natural areas to raise awareness and harness existing local knowledge.** The scope of natural areas conservation is beyond the capacity of the City of Edmonton to manage alone; partnership arrangements are essential to successfully implement conservation goals. Partnerships will also enable the City to leverage differing levels of knowledge and expertise available in the local community. Accordingly, the City will promote natural areas as a common good and conservation as a collective responsibility.
7. **Promote Edmonton's ecological network as a context to which urban development must be tailored, not the opposite.** An ecological network that is viable into the future must maintain diversity at genetic, species, population, and ecosystem levels. Consequently, it is essential that ways be found to accommodate urban development while, at the same time, protecting the ecological network and integrating other social and aesthetic benefits.

Defining "Natural Area"

The City defines a **natural area** as follows:

"An area of land or water that is dominated by native vegetation and relatively undisturbed by human activity. Such areas could include grasslands, forests, wetlands, peatlands or riparian areas. Areas such as groomed parks, sports fields and schoolyards are not natural areas."

Immediate challenge

The 2006 *State of Natural Areas* report identified that Edmonton has a functioning ecological network comprised of four essential elements:

1. **CORE HABITAT AREAS** - *e.g.* Whitemud and Blackmud Ravines, Big Lake Natural Area);
2. **RIPARIAN CORRIDORS** in the North Saskatchewan River Valley and ravine system;
3. **ECOLOGICAL CORRIDORS** - *e.g.* Horse Hills Creek network; and
4. **STEPPING STONES**, which are smaller, dispersed habitat patches - *e.g.* Poplar Lake, Schonsee Natural Area.

Natural areas throughout the network are under pressure from tremendous growth, which leads to increased development and, in some cases, the loss of natural areas.

The State of Natural Areas report identified that nine percent of Edmonton's land base consists of natural areas, including 63 percent of the river valley and just three percent of the tablelands.

Of the total land base of tablelands natural areas identified in 1993, 23 percent has since been lost to development; another 21 percent has come under some form of protection through either public or private means. The 56 percent of the remaining natural area lands in the tablelands, however, is unprotected and subject to increased development pressure. Natural areas in the river valley in the southwest and northeast are also under development pressure.

The trend toward the loss of natural areas may threaten the viability of Edmonton's ecological network if *Natural Connections* does not lead to a renewed focus on conservation and habitat preservation, particularly in the tablelands.

Goals

→ What general activities will be undertaken in order to achieve the Plan Vision?

Three primary goals have been developed to support the development and implementation of *Natural Connections*.

1. **ENGAGE** Edmontonians

We will work to engage the community in the stewardship of natural areas through the development of partnerships with key stakeholders (including the Edmonton and Area Land Trust, regional partners, ENGOS, community groups and citizens), and through outreach and education. This engagement will enable the Office to ensure a transparent conservation planning process, share information, draw upon the expertise and experience of knowledgeable community members, and expand its capacity. The City cannot ensure the ongoing protection and management of natural areas without the support and involvement of the community.

2. **SECURE** a Functioning Ecological Network.

We will work to build a functioning ecological network through the acquisition, restoration and connection of key network elements, including core natural areas, stepping stones and ecological corridors. Proactive natural systems planning and the acquisition of sites through purchase and use of the Environmental/Municipal Reserve designation will be crucial to this process, as will encouraging the dedication of private land through conservation easements and incentive programs. The Edmonton and Area Land Trust, the Province and community conservation organizations will be essential partners in this work.

3. **MANAGE** Edmonton's Ecological Network.

We will work to manage Edmonton's ecological network for protection, and will enlist community involvement in this collective responsibility. Through the development of stewardship and monitoring programs, we will ensure that the network components – core areas, riparian corridors, natural linkages, stepping stones, and the flora and fauna supported within each of Edmonton's ecological communities – are protected in the face of development both for their intrinsic value, and for the many benefits they provide Edmontonians.

Objectives and outcomes

→ **Objectives:** What specific, tangible tasks will the Office seek to achieve, in support of the Plan Goals?

→ **Outcomes:** What will the future state of things be if we are successful in achieving a given Objective?

Many of the outcomes outlined below were identified during the public engagement process held during the fall of 2006, and are provided here for discussion purposes. **The Office of Natural Areas is requesting that stakeholders review these outcomes for any errors or omissions.** Feedback should be provided to Mike Evans at dmenigma@shaw.ca. It is important to note that this list of outcomes will continue to evolve throughout the course of Plan development, and is by no means final at this stage.

1. Engage Edmontonians

- Public is aware of and appreciates the inherent value of natural areas conservation.
- Public understands the “natural capital value” of its natural areas.
- Public understands and supports that natural areas are not intended only for human benefit but for the benefit of all living things.
- Landowners and developers take significant action to conserve natural areas on privately-owned land.
- Other organizations enter into partnerships with the Office of Natural Areas to help with the management of the network.
- *etc.*

2. Secure a Functioning Ecological Network

- Natural areas are prioritized for acquisition.
- Assess and rank privately held natural areas for their contribution to the integrity of the ecological network.
- All publicly-owned natural areas are protected.
- Municipal reserve designation accommodates natural areas in addition to programmable parkland.
- Agriculturally zoned lands, especially in the Horsehills area, remain with that designation.
- The City is able to compete financially to obtain key natural areas.
- New protected natural areas west of Laurier Park.
- Wetlands within municipal boundaries are protected.
- Municipalities have more tools available to protect natural areas.
- *etc.*

3. Manage Edmonton's Ecological Network

- The City is committed to preserving the biodiversity and requisite habitat that exists now for future generations.
- Natural areas are managed within the context of watersheds.
- Natural areas are monitored on an ongoing basis to assess their health and viability.
- Natural areas are identified for protection prior to receiving development plans.
- *Natural Connections* is integrated with other municipal plans to reconcile economic, environmental and social concerns.
- New tools that enhance corporate policy and support natural areas conservation are in use.
- The City actively pursues policy to balance development with conservation.
- Native vegetation is reintroduced.
- Invading weeds are removed from water bodies.
- Naturalized stormwater ponds become a standard part of neighbourhood development.
- Culverts are removed during road maintenance when appropriate.

- A working group including agencies from other orders of government, neighbouring municipalities and ENGOs with plan implementation responsibilities jointly explores regional conservation strategies.
- *etc.*

Next Steps

Now that the Vision, Mission, Guiding Principles and Goals for the Conservation Plan have been identified, the next steps in the process are to:

1. Articulate Plan **Outcomes** and **Objectives**
 - a. Started with the Public Engagement Process in the fall of 2006
 - b. Office of Natural Areas will be seeking input from the Natural Areas Advisory Committee and other key stakeholders over the next several months
2. Develop **Strategic Actions, Indicators, Roles & Responsibilities** and **Timelines**
 - c. Will be done internally by an inter-departmental working group, with representation from key relevant departments – Parks, Planning, Drainage, Transportation, Office of the Environment, and Emergency Services
3. Circulate the draft Conservation Plan among all stakeholders for final review prior to seeking Council approval

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