

Contaminated Gas Stations Task Force Revised Strategy

Recommendation:

That Contaminated Gas Stations Task Force recommend to City Council:

1. That the Contaminated Gas Stations Strategy, as outlined in Attachment 1 of the July 5, 2010, Deputy City Manager's Office report 2010DCM056, be approved.
2. That the Contaminated Gas Stations Advocacy Activities, as outlined in Attachment 2 of the July 5, 2010, Deputy City Manager's Office report 2010DCM056, be approved.

Report Summary

This report provides findings and recommended strategy and advocacy activities for the City of Edmonton to address brownfields that were previously gas stations.

Previous Council/Committee Action

At the June 14, 2010, Contaminated Gas Stations Task Force meeting, the following motion was passed:

That Attachments 1 and 2 of the June 2, 2010, Deputy City Manager's Office report 2010DCM048 form the basis of the recommendations from the Contaminated Gas Stations Task Force to Council, as part of the Task Force's final report in July 2010.

Report

The Contaminated Gas Stations Task Force Report details the key findings of research and lays out the strategy for addressing remediation and

redevelopment of brownfields that were previously gas stations. (See Attachments 1 and 2).

A Committee of Council was established to develop a plan or strategies to address contaminated gas stations in Edmonton. An administrative team was created with representatives from across the corporation to support the Task Force, undertake research (see Attachment 3) and prepare recommended strategies and actions.

Based on definitions of contaminated and brownfield sites, the scope for the Task Force is "brownfields that were previously gas stations." This distinction places focus on an inventory of closed retail outlets where remediation and redevelopment has not advanced.

The strategy report also identifies measures to address planned retail gas operations as well as mature gas stations that are scheduled for decommissioning to prevent growth in the number of future brownfields.

Taking action to remediate and redevelop brownfield sites is an important step contributing toward municipal sustainability and an improved environment. Remediation of brownfields may include health protection, social, economic and environmental benefits.

The remediation and redevelopment of brownfields which were previously gas stations requires a complex set of activities. There are significant and linked challenges to successful remediation and redevelopment of these sites. The report identifies the barriers and suggests a range of resolution

activities. However, each site will have a different set of barriers that need to be overcome. A flexible toolkit of initiatives to overcome the unique barriers of each site is more likely to succeed than a “one size fits all” approach.

The strategic framework provides a vision, goals, principles and actions on the elements of planning, assessment, remediation, risk management, and redevelopment and addresses all steps on the road from brownfield to reuse (See Attachment 1).

As part of the strategy to achieve redevelopment of the gas station sites, a series of advocacy actions with the Province, other municipalities, organizations and stakeholders is provided (See Attachment 2).

The timelines and responsibilities for implementation activities are provided (See Attachment 3).

A Discussion Paper provides definitions, the location and general features of identified sites as well as barriers and resolution activities (See Attachment 4).

Because the Discussion Paper was expanded from each Task Force meeting, a tracking table is provided to show the changes made from the May 17, 2010, meeting report to the July 12, 2010 report. The tracking table also shows the connection between the recommended strategies and activities in Attachments 1 and 2 with the provisions of Bylaw 15363 (See Attachment 5). In addition, any changes within current versions of Attachments 1, 2 and 4 are highlighted with bold and italicized print to easily recognize new or altered content.

Under the provisions of Bylaw 15363, the Task Force must submit a report to City Council by July 31, 2010, and the Task Force terminates upon acceptance of the report by Council or no later than September 1, 2010. Continuation of the Task Force requires amendments to Bylaw 15363.

If the Advocacy Activities are approved, the Administration will report results quarterly to the Contaminated Gas Stations Task Force.

Focus Area

Preserve and sustain Edmonton’s environment; Improve Edmonton’s Livability

Public Consultation

The Task Force received presentations from Trium Environmental Solutions, the Federation of Canadian Municipalities, the Ontario Centre for Environmental Technology Advancement and the Canadian Petroleum Products Industry. Personal interviews were held with several land owners of brownfields which were previously gas stations.

The Task Force received three presentations at a non-statutory hearing on June 14, 2010.

Budget/Financial Implications

Current funding of \$200,000 for the Brownfield Redevelopment Grant Program is available in the Office of the Environment.

Justification of Recommendation

1. Providing support and addressing obstacles in an integrated manner is designed to advance the goals of the Contaminated Gas Station Task Force and achieve the social, environmental and economic benefits from remediation and redevelopment.
2. Advocacy with other municipalities, organizations, governments and industry partners has potential benefits in advancing redevelopment of brownfields which were formerly gas stations.

Attachments

1. City of Edmonton Contaminated Gas Stations Strategy
2. City of Edmonton Contaminated Gas Stations Advocacy Activities
3. City of Edmonton Contaminated Gas Stations Strategy/Advocacy Timeline
4. Contaminated Gas Stations Discussion Paper, July 5, 2010
5. Tracking Discussion Paper Changes

Others Reviewing this Report

Corporate Leadership Team

City of Edmonton Contaminated Gas Stations Strategy

Introduction

The research into brownfields that were previously gas stations produced a comprehensive list of barriers that prevent timely remediation and redevelopment to align with the City of Edmonton's priorities and goals.

The issues range from regulation deficiencies to process uncertainty to prohibitive remediation costs and lack of financial feasibility. Each property faces a unique combination of issues based on location, size, development opportunity, nature and extent of contamination, and the business goals and financial means of the owner.

A strategy to address these brownfield sites must address all the barriers and provide ways to resolve them.

1. Contaminated Gas Stations Vision Statement

Brownfields which were previously gas stations are remediated and redeveloped to productive land uses to support improving Edmonton's livability and preserving and sustaining our environment.

2. Contaminated Gas Stations Goals

- 2.1. ***Ensure human health and environment is protected.***
- 2.2. Achieve appropriate permanent redevelopment or interim uses of brownfields which were previously gas stations throughout Edmonton.
- 2.3. Promote remediation/risk management of contaminated sites to facilitate more intensive use of the sites.
- 2.4. Leverage financial opportunities from a range of stakeholders.
- 2.5. Reduce the possibility of future contamination from planned gas station operations.

3. Contaminated Gas Stations Strategy Principles

The City of Edmonton Contaminated Gas Station Strategy is based on the following principles to ensure initiative tools are relevant, specific, proactive and responsive to the need for remediation and redevelopment of the sites:

- 3.1. **Meeting acceptable criteria through the application of the provincial guidelines must be the outcome for all properties.**
- 3.2. **Apply Stackable Initiatives:** Individual initiatives will have greater overall impact when combined. For example a tank removal grant combined with an FCM loan, City of Edmonton tax incentive, and Greenhouse Gas Emissions grant may accomplish more than just one grant available in isolation.
- 3.3. **Use Initiatives that can be integrated:** Recognizing the various stages of a full brownfield redevelopment, initiatives that support or address more than one of these phases will increase likelihood of progress. A successful application for rezoning, remediation tax credit and redevelopment grants can be combined to increase the return for developers and the City.
- 3.4. **Use Flexible Initiatives:** The varied characteristics of brownfields require initiatives to have flexible qualifications and be scalable to address the barrier and the potential.
- 3.5. **Taxation initiatives** and taxation regulatory changes, zoning and planning approval processes may all be applied to safely advance brownfield redevelopment.
- 3.6. **Apply Cost-Effective Initiatives:** The initiatives must ensure the financial burden is not unreasonably applied to any one stakeholder or to the taxpayer on a case by case basis.
- 3.7. **Outcome-Oriented Initiatives:** Must promote the advancement of City of Edmonton goals for **human health**, environment, densification, economic development, sustainability and neighbourhood revitalization. ***The City has an obligation to be the steward of land and employ tools and policies that fulfill that responsibility.***
- 3.8. **Designed for Persistence:** Delivery of support and monitoring from the City of Edmonton administration must be firmly established to ensure accountability of remediation/redevelopment projects. The pursuit of continued brownfield redevelopment will require ongoing interaction with municipal partners, provincial regulators, developers, owners and other interested parties.

4. Contaminated Gas Stations Strategy

The City strategy for brownfields which were previously gas stations is to create the development and application of an integrated and stacked set of initiatives that encourage redevelopment. The strategy will involve actions at every level of planning, assessment, remediation/risk management and redevelopment of a site.

Advocacy initiatives with the Provincial government, other municipalities and other stakeholders will be undertaken to promote a collaborative approach to brownfield redevelopment.

4.1. Action Elements

- 4.1.1. Planning Steps
- 4.1.2. Complete the identification, inventory and land use analysis of the individual brownfield sites which were previously gas stations. Establish a tracking process to identify additions, deletions and other relevant changes.
- 4.1.3. Initiate an application to the FCM Green Municipal Funds to use a collaborative approach with land owners wishing to remediate and redevelop identified sites of interest. Ensure the activities associated with the Green Municipal Funds are available to be stacked and integrated with other initiatives.
- 4.1.4. Coordinate the FCM Renewable Energy Program that provides support for stand alone renewable energy production projects implemented on brownfield sites, with or without remediation and approvals by provincial regulator.
- 4.1.5. Contact property owners to identify possible interim use opportunities.
- 4.1.6. Utilize a financial pro forma analysis with private developers to validate the timing of remediation and redevelopment, type of redevelopment, the nature of financial and other incentives being sought from the City and the implications for the rates of return.
- 4.1.7. ***Proponents must demonstrate a measurable improvement to the timelines of redevelopment which may include reduction in the timeline for remediation to access City initiatives.***
- 4.1.8. Develop a Request for Proposal (RFP) process for the redevelopment of identified sites for both permanent ***and interim uses***. The RFP process would be designed as a pilot to show the City's commitment, using a comprehensive set of initiatives, to work with landowners and to achieve successful redevelopment.
- 4.1.9. Restructure the City's Brownfield Redevelopment Grant Program for flexibility and integration with other initiatives. Allow the grant program the flexibility to provide for example: a payment of 25% early in the process at some qualifying step, 25% at mid point, and 50% at confirmed remediation completion. Allow the maximum grant to be \$200,000 per project subject to confirmation from a pro forma analysis.
- 4.1.10. Develop municipal property taxation support packages (forgiveness or deferrals) to facilitate remediation and redevelopment and obtain Council approval as required.
- 4.1.11.** Establish a Brownfield Coordinator within City administration to provide a single point of contact to landowners and coordinate civic initiatives on brownfields that were previously gas stations.

- 4.1.12. Develop an Edmonton tailored roadmap of the remediation and redevelopment process to assist landowners with decision making and execution.
- 4.2. Assessment
 - 4.2.1. Initiate the City RFP for closed sites offering an integrated set of initiatives and actions to achieve reuse of the sites. Use separate RFPs for permanent redevelopment projects and interim use projects.
 - 4.2.2. Where feasible utilize Direct Control (DC) zoning to address site specific issues with remediation or with the use of exposure control.
 - 4.2.3. Work with the Brownfield Coordinator to minimize processing time.
 - 4.2.4. Encourage industry to consider and apply new, innovative remediation techniques that accelerate remediation.
 - 4.2.5. ***Where long term remediation is unavoidable, confirm the potential for desirable interim uses.***
 - 4.2.6. Consider and assess, on site by site basis, the use and extent of density bonuses or up zoning to increase development options.
- 4.3. Remediation/Risk Management
 - 4.3.1. Work with successful applicants for the RFPs to address issues and achieve appropriate remediation or risk management.
 - 4.3.2. For properties with long term remediation requirements, work with land owners to promote a breadth of interim land uses.
 - 4.3.3. Continue to allow flexibility in the timing of clean up to go beyond the rezoning bylaw stage to the development permit stage when Direct Control zoning is used.
 - 4.3.4. Allow the use of exposure control as acceptable technique on contaminated sites or portions of sites ***subject to the following conditions:***
 - 4.3.4.1. ***Protection of human health and environment is first priority.***
 - 4.3.4.2. ***Acceptable exposure control programs must be formally in place for the intended interim land use.***
 - 4.3.4.3. ***Remedial end points must be defined as part of an exposure control program.***
 - 4.3.5. ***For any interim use, progress toward remedial end points must continue while the temporary use occurs. Meeting acceptable criteria through the application of provincial guidelines must clearly and measurably be the end point for all properties***

- 4.3.6. Support sustainable methods of demolition and clean up, including natural and ecological forms of remediation (in situ) and the reuse of materials.

4.4. Redevelopment

- 4.4.1. Work with successful applicants for the RFPs to address issues and achieve appropriate approved interim uses or redevelopment.
- 4.4.2. Assess Strategy effectiveness and identify improvements.

5. Gas Station Life Cycle: Planning to Open and Scheduled to Close

While the scope of the Task Force was limited to brownfields which were previously gas stations, the Task Force recognizes there is a gas station life cycle that must be considered. The key phases in the gas station life cycle are: ***Planning to Open*** and ***Scheduled to Close***.

The phase of a closed gas station include: site testing infrastructure demolition and cleaning. The strategy provided above is designed to address the closed stations.

- 5.1. The following activities apply to the Planning to Open and the Scheduled to Close gas stations:
 - 5.1.1. Work with industry to ensure best practices for underground gasoline tank design and operation are incorporated in the planning of gas stations.
 - 5.1.2. Continue to review site planning for gas stations and underground tanks and identify and utilize measures to prevent possible contamination flowing into adjacent municipal rights of way or utility installations.
 - 5.1.3. Maximize communication with the Fire Rescue Services Branch to use information available to Administration within Provincial regulations.
 - 5.1.4. Maintain an updated inventory of gas station sites in Edmonton and status of development and environmental information on the sites.
 - 5.1.5. ***Encourage industry to apply a self insurance approach to the development of gas stations so that adequate funds are available for remediation when a site is closed.***
 - 5.1.6. ***Continue to examine the use of a surety bond for permit approval for future gas stations. The intent of the surety bond would be to***

establish financing at the outset of the business for any eventual contamination and resulting remediation that may occur over the life of the gas station. Address such implications as:

- 5.1.6.1. Future development;**
- 5.1.6.2. Financial implications of a long term outstanding financial commitment.**

5.2. Assessment:

- 5.2.1. Encourage industry to undertake Phase 1 and Phase 2 Environmental Site Assessments of sites about to closed.

5.3. Remediation/Risk Management:

- 5.3.1. Encourage remediation plans to be in place before closure and demolition.
- 5.3.2. Ensure the Environmental Site Assessments indicated whether short or long term remediation is required.

5.4. Redevelopment:

- 5.4.1. Encourage prompt demolition to accelerate redevelopment of the site.
- 5.4.2. Ensure that where full redevelopment is not imminent, appropriate interim land uses are employed. **Monitoring reports for long term remediation must show current status relative to remediation goals.**

Conclusion

This strategy addresses remediation / redevelopment activities at each stage of a brownfield redevelopment project: planning, assessment, remediation/risk management and redevelopment. Each step in the economic life cycle of a gas station should be linked to one or more corresponding City of Edmonton initiatives to address brownfield redevelopment.

City of Edmonton Contaminated Gas Stations Advocacy Activities

Successfully addressing some of the barriers to brownfield redevelopment outlined in this report would require the joint commitment of the City of Edmonton, other Alberta municipalities and the Government of Alberta. Federal involvement, through the Federation of Canadian Municipalities Green Municipal Fund, may also be of benefit. Ongoing industry consultation would also be required.

While future advocacy is likely to require the support and efforts of members of City Council to ensure elected officials and leaders in other jurisdictions fully understand the challenges and Council's priorities for moving forward, it is no less important to undertake discussions at the administration level to establish common positions among municipal stakeholders who know and manage the issues on the ground – and to increase awareness and understanding of these positions among, for example, impacted Government of Alberta staff and senior administration.

As a key initial step, advocacy priorities identified by the Task Force should be shared with other municipal stakeholders such as the Alberta Urban Municipalities Association and the City of Calgary to establish – where possible – common positions and priorities.

These municipal stakeholders are currently undertaking explorations of brownfield issues. General agreement has been expressed among the parties at the working level of the value of working collaboratively, and such agreement may form the basis for more formalized partnership **or the development of an appropriate multi-party forum to** address the issues with the Government of Alberta and industry stakeholders.

Potential actions for working with industry stakeholders and the Federation of Canadian Municipalities – as well as steps the City can take in adapting its own practices and processes – are outlined in the draft report and so are not duplicated in this attachment. Such actions must happen alongside any advocacy with other orders of government.

As this project advances, areas for focused cost-benefit discussion and advocacy with other partners and stakeholders could include the following:

1. Legislation, Regulation and Technical Criteria Changes

- 1.1. Work with the Government of Alberta to improve its remediation certificate program to better and more broadly provide regulatory closure for remediated sites, as well as to ensure that sites determined to meet current guidelines and therefore not requiring remediation – but that have historically been used for high risk activities – receive regulatory closure.
- 1.2. Work with the Government of Alberta to allow obligations arising from risk management strategies to be recognized and transferred with land title transfer, thereby allowing for the obligation to manage exposure control programs to be transferred to another party.

- 1.3. Work with the Government of Alberta to provide the legislative amendments necessary to allow municipalities to successfully implement tax policies that would make it more expensive to leave land idle. This may involve amendments to section 297 of the Municipal Government Act (MGA) to allow municipalities to create subclasses for contaminated land based upon the degree of development on the site.
- 1.4. Work with the Government of Alberta to align the purpose of the Environment Protection and Enhancement Act (EPEA) with aims and needs of municipalities so that the regulations contribute to the end objective of redevelopment. Currently, the overall intent of the EPEA is environmental protection, which includes an aspect of public safety. An additional and key municipal objective in these situations is redevelopment. These two objectives do not have to be mutually exclusive between the differing legislative schemes. Amendments could be contemplated which would enable both objectives.
- 1.5. Work with the Government of Alberta to invest in resources to examine and update technical criteria to ensure legitimacy of remediation investments and efforts for environmental protection. Such amendments could be used to require remediation that not only protects the environment but also sets standards that are consistent with future development thresholds.

2. Tax incentives

- 2.1. Work with the Government of Alberta to explore the provision of tax credits for remediation projects
- 2.2. Work with the Government of Alberta to amend section 347 of the MGA to allow multiple year agreements between the City and property owners, thereby providing increased certainty to all parties.
- 2.3. Work with the Government of Alberta to explore an exemption from education property taxes for properties undertaking significant remediation and redevelopment projects in Alberta's municipalities. The exemption from education property tax could be triggered by a municipal property tax exemption provided by the municipality (one option would be to have the education property tax exemption provided at the same level as the municipal tax exemption provided by the municipality).

3. Direct Grants and Funding

- 3.1. Work with the Government of Alberta and Government of Canada to establish new grants or funding programs specifically targeted to brownfield remediation and redevelopment or with guidelines broad enough to allow for funds to be applied to these endeavors.
- 3.2. Work with the Government of Alberta to provide operational funding to municipalities towards a brownfield coordinator position – or equivalent – to allow municipalities to better coordinate the transformation of vacant or underused brownfield sites into redeveloped sites.

Conclusion

Advancing discussions with other orders of government, municipalities and organizations on any of the above issues is a long-term process requiring persistence; given the complexity of the issues and inputs, and the various stakeholders involved, “quick wins” are expected to remain elusive.

Careful consideration must be given to the possible consequences of any amendments.

City of Edmonton Contaminated Gas Stations Strategy/Advocacy Timeline

The following provides a timeline for delivery of the action items proposed in the Contaminated Gas Stations Strategy.

The tasks and action items of the proposed strategy are broken out by three month periods that allows for planning and preparation, execution, measurement and review.

Activity owners are designated in the table below with: √

Activities			
	Brownfield Coordinator	Working Committee	Task Force
Quarter 1			
1.1. Administrative team confirmed/adjusted and retains current meeting schedule		√	
1.2. Refine Brownfield Inventory			
1.2.1. Update with additions and deletions		√	
1.2.2. Adjust parameters for former gas station brownfield as necessary		√	
1.2.3. Review available material pertinent to property status	√		
1.2.4. Engage owners	√		
1.2.5. Categorize and prioritize properties based on remediation timelines and options		√	
1.3. Begin Inventory Tracking of property status	√	√	
1.4. Craft formal advocacy schedule with appropriate resources to approach the Provincial government, other jurisdictions, AUMA, CPPI	√	√	√
1.5. Pro-actively contact inventory property owners to identify possible interim use opportunities.	√		
1.6. Proactively contact inventory property owners for input on RFP approach.	√		
1.7. End of quarter: Quarterly update to Corporate Leadership Team and Task	√		

	Brownfield Coordinator	Working Committee	Task Force
Force. Includes inventory status, interim results, advocacy progress, issues and recommendations.			
Quarter 2			
1.8. Mock Pro Forma exercise with willing owners to test and examine opportunity and support requirements.	√		
1.8.1. Results to assist in RFP design	√	√	
1.8.2. Confirm potential valuations, qualification factors for proposed RFP tools to confirm appropriate administrative and Council approvals	√	√	
1.8.3. Establish target list for RFP Pilot	√	√	
1.9. Pro-actively engage owners for Interim land use options	√		
1.9.1. Support cost-effective and appropriate interim solutions where long term remediation efforts are unavoidable and active	√	√	
1.10. Assign and schedule advocacy activities	√		√
1.11. Quarterly Update to CLT and Task Force	√		
Quarter 3			
1.12. Advocacy efforts continue, activities adjusted as necessary, progress measured	√		√
1.13. Preparation/Distribution of RFP	√		
1.14. RFP Responses vetted	√	√	
1.14.1. Appropriate approvals based on tools required (eg. tax forgiveness requires Council approval)		√	√
1.15. RFP Awarded		√	
1.15.1. Resources assigned for end to end support of awarded project(s)	√	√	
1.16. Assign and schedule advocacy activities	√		√
1.17. Quarterly Update to CLT and Task Force	√		

	Brownfield Coordinator	Working Committee	Task Force
Quarter 4			
1.18. Advocacy efforts continue with all groups (Task Force members, Administrative team, and external partners and stakeholders)	√	√	√
1.19. Restructure City of Edmonton Brownfield Redevelopment Grant Program based on outcome RFP submissions		√	
1.20. Quarterly update	√		
1.21. Strategy review including brownfield progress, grant status and value, advocacy status by initiative, planning summary (zoning activity, exceptions). Recommendation on future strategy directions.	√	√	√

Contaminate Gas Stations Task Force Discussion Paper, July 5, 2010

Contaminated Gas Stations Task Force Discussion Paper

July 5, 2010

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Executive Summary

Remediation of brownfields which were former gas stations within the City of Edmonton poses a variety of issues based on **human health and environmental concerns**, location, ownership, ability to finance, redevelopment options, municipal priorities and economic growth of the community. ***The City of Edmonton has an obligation to act as land steward and responsibly promote the remediation and redevelopment of property within the municipal boundary.***

Bylaw 15363 created a task force of City Councillors to develop a plan or strategies to address contaminated gas stations in Edmonton. An administrative team, with representatives from across the corporation, was created to support the Task Force, undertake research and prepare recommended strategies and actions.

The definition of a brownfield includes any non-residential, non-agricultural property with redevelopment potential that is vacant, underutilized abandoned or was previously a gas station. Related to the examination of this group of brownfields was the need to consider preventive measures for retail gas stations at different points in the business life cycle of the station. This document proposes changes to regulation and policy for new (planned) and aged (nearing decommissioning) gas stations to address ultimate remediation requirements. These efforts are valuable to limit the creation of more brownfields in future.

Task force research involved accessing City and Provincial databases, reviewing best practices of other jurisdictions, engaging provincial and other municipalities for insight, and communicating with property owners, industry representatives and developers. The Federation of Canadian Municipalities (FCM), Ontario Centre for Environmental Technical Advancement (OCETA), and Canadian Petroleum Producers Institute (CPPI) provided presentations on aspects of gas station brownfields.

A strategic framework with actions on the elements of planning, assessment, remediation, risk management, and redevelopment addresses all steps on the road from brownfield to reuse. A tailored approach to each project is possible by drawing from a range of tools in each of the stages of redeploing land to maximum use.

As part of the plan to achieve redevelopment of the gas station sites, a series of advocacy actions with the Province, other municipalities, agencies and stakeholders is also provided.

1. INTRODUCTION

The City of Edmonton faces the challenge of former gas station brownfields located throughout its residential, commercial and industrial areas. A brownfield is an underutilized, abandoned, potentially contaminated property with redevelopment potential.

A Task Force comprised of five City councillors, examined the issue of contaminated gas stations as they relate to the issues of **human health and environment**, economic development, densification strategy and neighbourhood revitalization. Bylaw 15363 established the Contaminated Gas Station Task Force and its key functions. The Task Force directed Administration to define a scope for the investigation, engage stakeholders, identify issues and possible solutions and craft a strategy for the City that addresses a comprehensive rehabilitation of these properties.

Remediation and redevelopment of former gas station properties provides a variety of potential improvements including:

- **Social Benefits:** returns underutilized land to productive use and assists in revitalizing communities.
- **Economic Benefits:** denser communities and more compact land use is more economically efficient. Redevelopment or repurposing underutilized sites could increase land values and municipal property tax revenue.
- **Environmental Benefits:** human health must be protected from the dangers posed by contaminated sites through vapor penetration into basements, ingestion of contaminated soils or through direct contact with contaminants. Adverse impacts on groundwater, aquatic environments and degradation of utility lines must be eliminated.

Although active and new retail gas stations are outside the scope of this research, there is recognition of the need to address issues and possible solutions to prevent the inventory from growing as gas station sites progress through their business life cycle. The basic premise is accelerating the return of brownfields to productive use, as well as preventing the addition of new sites to the inventory.

2. DEFINITIONS AND SCOPE

The following definitions are used in this report.

Contaminated Site

A site where there is the presence of a substance or substances in soil or groundwater at concentrations that exceed the environmental standards identified by the Province of Alberta

Brownfield Site

Abandoned, idle or underutilized commercial or industrial properties where past actions have caused or may have caused environmental contamination, but where there is a potential for redevelopment. Brownfields constitute a subset of contaminated sites.

In an effort to clarify the scope of the strategy, vacant or underutilized sites that are proven to not be contaminated would no longer meet the definition of a brownfield (i.e. a confirming event has invalidated the assertion that the site is contaminated). These types of undeveloped or underutilized properties lie outside the definition of contaminated sites but may be target sites for increased development.

Contaminated sites can be productive sites and not all contaminated sites are brownfields (underutilized, vacant or undeveloped).

Environmental Liability

Environmental Liability means the person or persons responsible have the legal and financial responsibility to undertake remediation of contaminated property to Provincial Guidelines relevant to the zoning and usage requirements for the neighbourhood.

Financial Liability

The responsibility to fund remediation and exposure management costs during reclamation of property.

Legal (Civil) Liability

This refers to the power of the law to compel a party to remediate property to specific standards and/or compensate injured parties for damages caused by contamination.

Regulatory Liability

The requirement to hold property owners to environmental standards and regulations as set out by the Province of Alberta.

Exposure Control

Exposure Control involves meeting or exceeding provincial guidelines managing contact between contaminants and receptors through exposure pathways (e.g. through water, soil and/or air). This includes oversight management of the property as it is brought to increasing utilization.

Task Force Scope: Brownfields that were previously gas stations

Based on the definitions of contaminated and brownfield sites, the scope for the Task Force is “brownfields that were previously gas stations.” This distinction places focus on the closed retail outlets where remediation and redevelopment has not advanced for at least one year according to tax data.

For the purposes of continuing to reduce the number of properties on the brownfield inventory, the report also identifies measures that would address the future for planned retail operations as well as mature gas stations that are scheduled for decommissioning.

3. BENEFITS FROM REMEDIATION AND REDEVELOPMENT

Taking action to remediate and redevelop brownfield sites is an important step contributing to municipal sustainability and an improved environment. Remediation of brownfields includes social, economic and environmental benefits.

Social Benefits

Redeveloping these sites of interest in an expedient manner can return underutilized land to productive use and assist in revitalizing communities. Past experience has shown that investment in remediation combined with a commitment to the redevelopment of brownfields can lead to rapid revitalization of areas, residential intensification, and vibrant community growth. Examples of successful brownfield redevelopment in Edmonton are Railtown and Oliver Square. Brownfield redevelopment can also reduce public nuisances such as overgrown bushes, weed filled lots and vagrancy.

Economic Benefits

Redeveloping underutilized properties can lead to denser communities and compact land use which is more economically efficient. The management of contaminated lands may create employment opportunities.

Redevelopment of underutilized sites is also shown to increase land values and in turn, increase property tax revenue for the municipality. If the 50 identified brownfields which were previously gas stations (listed in Table 1), were redeveloped to an average productive use (as shown in Appendix 1), the additional municipal property tax would be approximately \$18,000 per site and \$900,000 per year.

Environmental Benefits

The City of Edmonton in the role of land steward has the obligation to address the appropriate use of property from a variety of perspectives including the impact on human and ecological health. Leaving a site contaminated without actively managing the environmental impacts can adversely influence groundwater systems, leading to possible contamination of drinking water, impacts to aquatic environments and degradation of utility lines. In addition, human health can be impacted through vapour penetration into basements, ingestion of contaminated soils, or through direct contact with contaminants (e.g. excavations). Remediation and/or exposure control/risk management of contaminated sites will help protect human health and maintain the ecological integrity of the urban environment. Redeveloping brownfields in city centres reduces the pressure on lands in urban fringes (i.e. greenfields) from being developed. The redevelopment of brownfield sites will also contribute to more sustainable living. Brownfields are generally located in the inner city and their redevelopment supports Edmonton's Smart Choices program, contributing to compact urban form by promoting infill.

4. INVENTORY OF FORMER GAS STATION BROWNFIELDS

Process for Inventory Creation

The list of brownfields which were previously gas stations was prepared using information from three City of Edmonton databases: POSSE, SLIM, and TACS. The provincial source ESAR was also referenced. With some limitations of the data, the list identifies properties which were formerly gas stations and are currently vacant, derelict, non-residential, non-agricultural or underutilized. Properties which were residential or agricultural were excluded from the analysis. Site vacancy was confirmed using the 2009 aerial photographs in SLIM and Google Street View (2009).

TACS is a database in use since 1993 and which holds information related to tax assessments. Current land use to determine vacancy, derelict status or underutilization was taken from the assessment of the 2010 tax year. Several land use codes which could indicate the presence of a gas station were included in the analysis. The resulting list was compared to the properties identified as vacant, derelict, or underutilized. Land use was confirmed using information in POSSE such as business licenses, Emergency Response Inspections (Fire), and development permits when available.

The resulting list included fifty (50) properties. Investigation into whether these properties exceed environmental guidelines has not been completed. These properties have been identified as potential brownfields, not as confirmed contaminated sites. Further investigation into each will be required to confirm their brownfield status as well as potential land use and development opportunity issues.

Of the 50 properties, there are 27 distinct owners.

- Twenty-two (22) single property owners were included in the list
- One (1) owner was responsible for 18 of the total
- One (1) owner was responsible for four.
- Three (3) different companies owned two (2) properties each

The total assessed value of the 50 properties for 2010 is \$41,536,500 and the total 2010 tax revenue generated by these properties is \$646,258. Individual assessed values of the properties range from \$61,500 to \$4,590,500 with an average assessed value of \$830,730.

Thirteen of the 50 properties were located in a Business Revitalization zone, a Revitalization Neighbourhood or both.

The size of the properties varied greatly from the smallest at 395.83 m² and the 10,285.43 m². The average property size is 2670.33m². These very small properties,

with six (6) being less than 760m², may face limitations in development options. Reflecting the previous commercial use, most of the identified sites are in variety of commercial zones such as CNC, CB1, CB2. There are a limited number of DC1 or DC2 zones; no site is in a residential zone.

Map 1 shows the locations of the identified sites, while Table 1 shows the number of the locations and features of the identified sites.

Map 1: Locations of Brownfields Which Were Previously Gas Stations

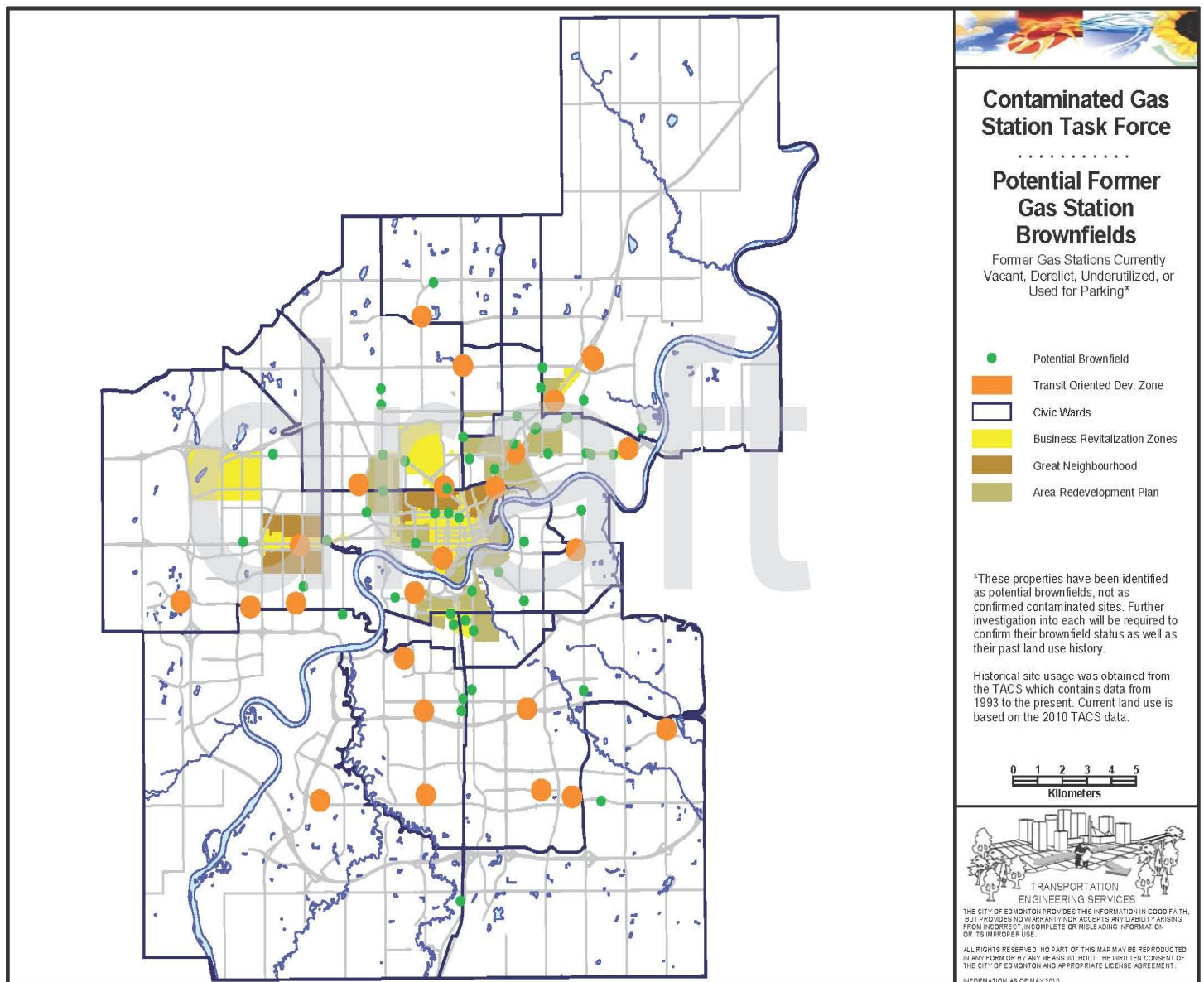


Table 1: List of Brownfields Which Were Previously Gas Stations

	Address	Approx. Lot Size (sq. m)	Zoning	2010 Assessed Value	Estimate 2010 Tax	Current Land Use	BRZ	Revitalization Neighbourhood	ARP?	TOD Zone?
1	4613 118 AVE NW	1674.87	CB1	\$536,000	\$8,340	Undevd Land	Beverly		N	N
2	4802 118 AVE NW	1861.24	CB2	\$590,000	\$9,180	Undevd Land	Beverly		N	N
3	17630 STONY PLAIN R NW	4358.92	CHY	\$1,193,000	\$18,562	Undevd Land			N	N
4	10831 CASTLE DOWNS RD N	755.41	CNC	\$245,500	\$3,820	Undevd Land			N	N
5	9221 156 ST NW	3085.88	CNC	\$790,000	\$12,291	Undevd Land			N	N
6	8510 142 ST NW	2172.61	CNC	\$591,000	\$9,195	Undevd Land			N	N
7	14740 STONY PLAIN RD NW	1328.94	CSC	\$441,500	\$6,869	Undevd Land	Stony Plain Road and Area		N	N
8	13210 127 ST NW	1762.25	CNC	\$497,000	\$7,733	Undevd Land			N	N
9	12876 127 ST NW	1999.89	CNC	\$551,500	\$8,581	Undevd Land			N	N
10	12620 118 AVE NW	1566.73	CB1	\$511,000	\$7,951	Undevd Land	Inglewood		N	N
11	10704 GROAT RD NW	2389.33	CNC	\$572,000	\$8,900	Undevd Land			N	N
12	11045 127 ST NW	1259.19	CB1	\$415,500	\$6,465	Undevd Land			Y	N
13	10455 82 AVE NW	2820.64	DC1	\$3,655,500	\$56,875	Undevd Land	Old Strathcona		Y	N
14	1212 CALGARY TRAIL SW	4626.82	CHY	\$1,171,500	\$18,227	Undevd Land			N	N
15	12515 56 ST NW	3926.17	IB	\$687,500	\$10,697	Derelict Comm			N	N
16	4265 23 AVE NW	4043.84	DC2	\$987,500	\$15,364	Undevd Land			N	N
17	10425 107 AVE NW	1396.10	CB1	\$878,500	\$13,668	Undevd Land	107 Avenue	Central McDougall & Queen Mary Park	Y	N
18	6804 YELLOWHEAD TR NW	1703.37	IH	\$144,000	\$2,240	Undevd Land			N	N
19	5620 99 ST NW	9247.48	IM	\$1,946,500	\$30,285	Undevd Land			N	N
20	10502 111 AVE NW	743.20	DC2	\$522,500	\$8,129	Undevd Land			N	Y
21	10576 101 ST NW	1389.57	DC1	\$878,500	\$13,668	Undevd Land	Chinatown and Little Italy	Central McDougall & Queen Mary Park	Y	N
22	10652 109 ST NW	1788.66	CB1	\$1,080,500	\$16,811	Undevd Land	107 Avenue	Central McDougall & Queen Mary Park	Y	N
23	11558 JASPER AVE NW	1475.26	DC1	\$1,114,500	\$17,340	Undevd Land			Y	N
24	11903 KINGSWAY NW	1555.91	IM	\$270,000	\$4,201	Undevd Land	Kingsway		N	N
25	5003 55 AVE NW	1309.54	CSC	\$437,500	\$6,807	Undevd Land			N	N
26	11730 87 AVE NW	2044.20	CNC	\$632,000	\$9,833	Undevd Land			N	N
27	16610 118 AVE NW	5014.16	IB	\$1,017,000	\$15,823	Undevd Land			N	N
28	13615 66 ST NW	2280.42	CNC	\$1,320,500	\$20,545	Undevd Land			N	N
29	7724 104 ST NW	864.25	CB2	\$592,500	\$9,219	Undevd Land	Old Strathcona		N	N
30	5138 GATEWAY BLVD NW	1315.03	CB2	\$797,500	\$12,408	Undevd Land			N	N
31	4710 GATEWAY BLVD NW	10285.43	CHY	\$4,590,500	\$71,423	Undevd Land			N	N
32	7907 101 ST NW	1617.04	IB	\$461,000	\$7,173	Undevd Land	Old Strathcona		Y	N
33	8930 99 ST NW	1311.17	CNC	\$543,000	\$8,448	Undevd Land			Y	N
34	9340 CONNORS RD NW	1767.59	CNC	\$565,500	\$8,799	Undevd Land			N	N
35	8535 83 ST NW	1837.36	CNC	\$582,000	\$9,055	Undevd Land			N	N
36	10102 82 ST NW	932.10	CNC	\$330,500	\$5,142	Undevd Land			N	N
37	9859 76 AVE NW	395.83	CNC	\$61,500	\$957	Undevd Land			Y	N
38	10604 50 STR NW	2221.02	CNC	\$685,000	\$10,658	Undevd Land			N	N
39	5630 YELLOWHEAD TR NW	6968.23	IB	\$1,552,500	\$24,155	Undevd Land			N	N
40	11704 95 ST NW	704.89	CB2	\$262,000	\$4,076	Parking Lot, Unpvd, No nets	Alberta Avenue	118th Ave and Area	N	N
41	8505 115 AVE NW	799.29	CNC	\$259,000	\$4,030	Undevd Land			Y	N
42	6330 118 AVE NW	1354.56	CB1	\$453,500	\$7,056	Undevd Land			Y	N
43	6730 YELLOWHEAD TR NW	9987.54	IH	\$1,280,500	\$19,923	Undevd Land			N	N
44	12015 FORT RD NW	745.19	CB1	\$219,500	\$3,415	Undevd Land			Y	Y
45	7606 YELLOWHEAD TRAIL N	3809.83	IM	\$540,000	\$8,402	Undevd Land			N	N
46	3649 118 AVE NW	1817.06	CB1	\$582,000	\$9,055	Undevd Land	Beverly		N	N
47	12831 50 ST NW	4963.63	CSC	\$1,180,000	\$18,359	Undevd Land			N	N
48	12621 VICTORIA TR NW	7096.87	DC2	\$1,353,500	\$21,059	Undevd Land			N	N
49	12145 97 ST NW	1906.16	CNC	\$596,500	\$9,281	Undevd Land			Y	N
50	13208 66 ST NW	1235.55	CNC	\$370,500	\$5,765	Undevd Land			N	N

5. REGULATORY AND REMEDIATION PROCESSES

The Alberta government, through Alberta Environment, is responsible for the regulatory regime for the reporting and remediation of contaminated sites. The City of Edmonton is involved through the land use planning and development approval process.

While provincial legislation and regulations provide the basic steps for remediation, there is a fundamental distinction between the remediation process and exposure control. Remediation involves activities to reverse the impacts of contamination and return altered substance levels to within acceptable guidelines. Exposure control provides a strategy and actions required to prevent further contamination, reduce immediate sources of contamination, ie. remove surface deposits, engage appropriate stimuli to address contaminants requiring more complex reversal, and protect human and other life forms from harmful exposure.

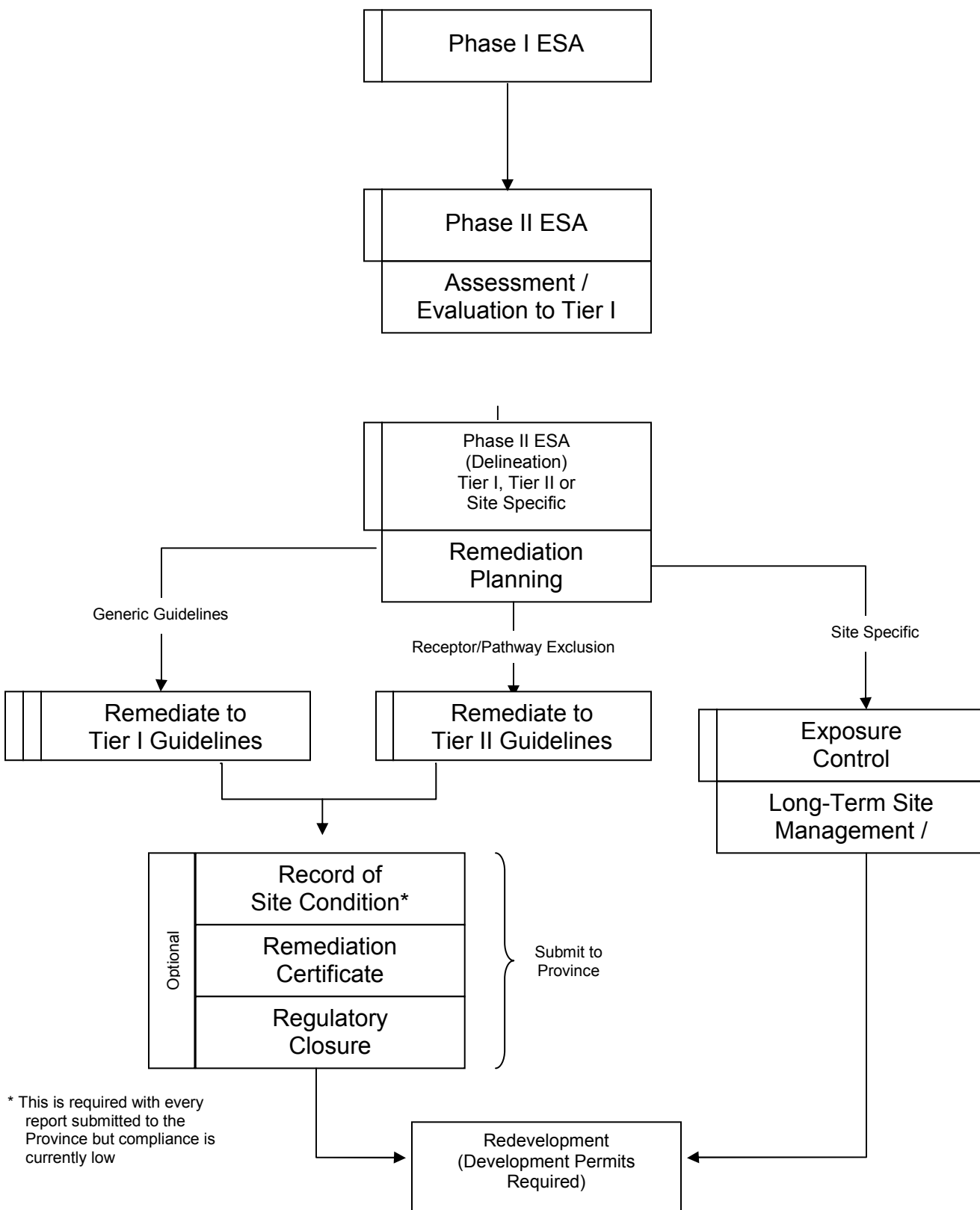
Upon voluntary application by a landowner, successful remediation activity can lead to the issuance of a Provincial Remediation Certificate. Exposure control activity cannot receive a remediation certificate, but enables the return of the land to a useful purpose while long term remediation continues. ***All affected third parties must agree to the terms and conditions of a risk management plan. A formal declaration by third parties documenting their understanding and acceptance of remediation plans must be submitted to Environment Alberta as part of a complete risk management strategy.***

While the remediation certificate program advances the clarity of process and expectations for brownfield owners, there are key issues that require attention to further advance the program's value and credibility:

- Where no remediation is required beyond the specific area that is contaminated, no remediation certificate will be granted. The stigma of being a former gas station cannot be removed through any activity by the owner. This leaves owners frustrated and potential buyers wary.
- Where only parts of the property require remediation, the remediation certificate can be awarded for the individual areas but not for the entire property. This leaves some uncertainty about the status of the balance of the property.
- The effect of these two limitations is that complete regulatory liability closure is not achieved. This regulatory uncertainty can affect the perspective of a developer regarding the potential opportunity and development costs for a site.

The unique features of each site mean that the exact activities and sequencing for remediation and redevelopment processes will vary. However, the general activities in the processes are shown in Figure 1 Schematic of Remediation and Redevelopment Processes.

Figure 1: Schematic of Remediation Process



Available Environmental Information

Several sources of environmental information are available to the public and the City. The most comprehensive source of contamination related information is the provincial Environmental Site Assessment Repository (ESAR) which is a searchable on-line repository of reports and correspondence submitted to Alberta Environment. Much of the information submitted to Alberta Environment is available on this website, publicly accessible at no charge. Some of the information held by Alberta Environment is not included in ESAR as it either was determined to be not routinely releasable (through a routine request for information, FOIPP) or the information owner (usually the property owner) specifically requested that it be withheld from the repository.

6. BARRIERS AND RESOLUTIONS

The remediation and redevelopment of brownfields that were previously gas stations requires a complex set of activities. There are significant and linked challenges to successful remediation and redevelopment of these sites. Each challenge or barrier needs to be identified and assessed and then a range of resolution activities proposed.

This section of the report identifies the barriers and suggests a range of resolution activities. However, it is crucial to recognize that each site will have a different set of barriers that need to be overcome. A flexible toolkit of initiatives to overcome the unique barriers of each site is more likely to succeed than a “one size fits all” approach.

Federation of Canadian Municipalities (FCM) Best Practices in Brownfield Remediation and Redevelopment.

While the scope of brownfield issues varies from province to province across Canada, a wealth of research and experience has generated these best practices for brownfield remediation and redevelopment. FCM has identified the following as best practices for municipalities to address brownfields:

- Offer tax incentives and waive municipal fees.
- Offer grants for environmental and feasibility studies
- Guide developers through regulatory processes and streamline approvals
- Rezone brownfield properties to raise their value.
- Create an inventory of under-utilized properties and include them in municipal planning.
- Adopt a team approach and engage development and the public in the planning process.
- Collaborate with other municipalities and with the provincial and federal governments to streamline and clarify regulations and share success stories.
- Establish a reserve fund to support municipal brownfield projects.
- Redevelop Brownfields using smart growth principles (concentrating growth in central cities to avoid urban sprawl, and developing compact, livable communities) and a “triple bottom line” approach that integrates economic, environmental and social benefits.
- Use sustainable methods of demolition and cleanup, including natural and ecological forms of remediation and the reuse of building materials.

These best practices from FCM provide an excellent starting point for the development of the strategy and toolkit to promote remediation and redevelopment of the brownfield sites.

Barriers and Resolutions

The following is an inventory of barriers identified during research with relevant parties. These stakeholders included industry representatives, developers, property owners, City of Edmonton administrative staff, other municipalities, environmental professionals, provincial and federal government representatives.

The list below includes all contributions as identified by stakeholders. Some of the resolutions may be contradictory, but are included to provide the complete range of options considered by the Task Force.

The following list identifies specific barriers as raised by stakeholders with a detailed, potential resolution. ***It must be noted that all redevelopment actions require the landowner in order to advance.***

City of Edmonton Initiatives

Limited Redevelopment Potential: Use of Direct Control Zoning
Planning and Development has used Direct Control zoning to allow for the stripping out of sensitive uses to reduce cleanup costs, to allow for deferral of cleanup past the rezoning bylaw stage to the development permit stage and to allow the implementation of exposure control solutions on contaminated sites.

- While a Direct Control (DC) zone is not a proposed new feature, it is a tool proven to facilitate the cleanup of both contaminated sites and brownfields.
- Where exposure control solutions have only been allowed on sites having direct control zoning, proactive contact with developers may increase frequency of the this zoning option and subsequently exposure control approaches in redevelopment.

Limited Development Potential: Density Bonuses

Density bonuses may be added to the maximum allowable density of a standard land use zone, as set out in the Zoning Bylaw (Bylaw 12800), in exchange for community benefits. Density bonuses can be used to encourage additional enhancements in a development project.

The success of density bonuses depends on the current land market. There must be strong development demand so that the potential value of the additional density is high relative to the costs of the enhancement elements provided by the developer. A mechanism to measure the public value resulting from the 'upzoning' is needed.

Redevelopment of former gas stations may involve rezoning, particularly if residential uses are proposed. Density bonuses could be considered on a case by case basis within the local area context and the plans that apply to the site. However, many of the identified sites from the list of brownfields that were formerly gas stations may not

require rezoning because they are already commercially zoned or density bonusing measures may not be appropriate for a variety of reasons.

1. Lack of Awareness of City Plans and Goals: Transparent and Proactive Contact with Developers

Industry representatives suggested a more proactive contact with City representatives regarding these former gas station brownfields and City plans. Key development areas and the municipal timelines and goals would be useful for owners to understand. Dialogue may foster options, even transitional land usage while long-term remediation continued. A single point of contact within the City, or a Brownfield Coordinator, could assist in guiding resolution by providing proactive contact.

2. Absence of Clarity on Process for Brownfields: Process Facilitation

Through focused resources, City staff would give priority to processing rezoning/subdivision applications for Brownfield gas station sites in specified priority areas or on a City-wide basis. This support could be provided by one or more departments depending on the unique requirements of the property. This could include:

- Applications for these sites would receive first priority in the processing queue for both Current Planning and Environmental Planning Group (EPG) and would receive reduced circulation timelines.
- The City of Edmonton could approach owners of contaminated sites to identify problems and solutions. A City staff member would offer advice and be available for consultation in a support role as a Brownfield Coordinator. The assigned Coordinator would serve as a single point of contact for the owner/developer and engage additional City resources at appropriate steps in the remediation and redevelopment process.

3. Undisclosed Brownfields: Planning and Development Intervention on Selected Development Permits for Identified Former Gas Station Sites of Interest

Planning and Development has investigated changes to protocol that would trigger intervention for selected development permits. At this stage, planning staff would determine if Environmental Site Assessments and cleanups would be required at the permit issuance stage. The forecasted impact net of the additional resource investment would be insignificant in reducing the number of brownfield gas station sites.

4. Absence of Clarity on Process for brownfields: Process Facilitation

Industry representatives suggested the development and promotion of a formal "Roadmap" that would clearly define steps through remediation and beyond to the end of redevelopment. Detailing the activity required with various regulatory agencies, permitting and incentive opportunities may spur developers to action with more complete understanding of the effort and complexity.

Perceptions also leaned toward an inability or unwillingness on the part of municipal staff to support industry with new or innovative approaches to remediation. Cooperation and support of City staff through a coordinator approach could dispel this perception and advance projects more quickly. Project support services could extend to facilitate properties with options limited by size or zoning.

5. Lack of Options for Long-term Remediation: Accept More Interim Uses.

Where the prognosis for remediation is good, but the duration of remediation is several years, even decades, interim uses can be the solution to advance redeployment of the land at a staged rate. The range of exposure control options could allow for a broad range of alternate, interim uses that can demonstrate that the land is being looked after and provide for more productive use of the site.

6. Ineffective City Brownfield Redevelopment Grant Pilot Program: Redesign Program to Address Deficiencies

Feedback from the applicants regarding the City of Edmonton Grant Pilot Program pointed out elements that have prevented them from participating as per original agreements. Deadlines, value, requirements and timing have been misaligned with the five development proposals.

The restructuring of the program for greater flexibility and the option to integrate with other incentive programs such as the Green Municipal Fund of FCM will increase the likelihood of uptake of this City initiative. Currently, there is \$200,000 per year available for the Brownfield Redevelopment Grant Program. The program allowed for up to a \$100,000 grant per site.

Among possible changes, the Remediation Grant may be delivered in a single lump sum or be staggered over key milestones during remediation and development or made as a larger amount (\$200,000 versus \$100,000). An example of scheduled payments may include 25% at approval stage, 25% at mid point, and 50% at confirmed remediation completion. Earlier payment is valued by developers in easing cash flow issues.

The property taxation process is not affected under this methodology. The property owner will continue pay the full property tax associated with the assessed value of the property annually.

A legal repayment and penalty process would be established for unfulfilled proposals, although collection of such repayment/penalties is not assured.

For development of projects that were not attached to the original City Brownfield Grant Program, examination of the potential for retroactive awards has been done. The current incentive program was not designed to be retroactive, but there are no strict legal concerns with the program being made retroactive. However, there would have to be consideration of a number of issues in terms of restructuring the program including

the need for a defined point in time when a project could qualify (i.e. how far back in time to qualify?), appropriate notice to solicit applications, accepted standards of remediation to apply and the appropriate documentation of clean up and possibly the current environmental state of the property. As well, the question comes down to whether City efforts should be to encourage future remediation/redevelopment or to compensate for past remediation as the policy direction.

7. Ineffective City Brownfield Redevelopment Grant Pilot Program: Remediation Grant Funded by New Tax Revenue Post-development

This variation of the remediation grant is in practice in the Province of Ontario and allows property owners/developers to complete the redevelopment and receive grant payment(s) over several years or via a third party such as a financial institution at a discounted amount.

The City would make payments to the developer annually for a predetermined total value and time period. Alternatively, the developer may sell this municipal debt obligation to a financial institution at a discounted rate.

By selling the debt obligation, the developer exits the arrangement with an early, albeit reduced sum and the City would make the grant payment(s) to this third party instead. The payments could be calculated based on projections similar to the Tax Cancellation Program. An important distinction is that the original property owner receives the discounted grant payment at a specific milestone such as upon issuance of an occupancy permit. The newly developed property may be sold to a third party before the grant program is fully paid out by the City; however the obligation remains between the Municipality and the developer.

8. Prohibitive Remediation Costs: Municipal Government Act (MGA) and Tax Forgiveness/Deferral

Some flexibility in the latitude of the MGA would allow for the City to more nimbly apply tax forgiveness / deferral incentives. Currently such arrangements would need annual approval by Council for arrangements that span multiple years.

In addition, the education portion of taxes is the jurisdiction of the Province of Alberta. Coordination and approval by this body would be required for any programs that included forgiveness in any form of the Education Tax.

In Appendix 1, a section on Municipal Property Tax Cancellation or Deferral provides an in-depth overview of the use of the property tax system as an incentive to redevelopment. Two scenarios are provided to show the financial implications to the City of property tax forgiveness and deferral. In each of the remediation and redevelopment scenarios, an average remediation cost of \$1,500,000 is used. Calculation of the repayment through tax uplift from redevelopment (municipal and/or education tax revenue) results in a return on investment to the city measured in decades. As a result of this 27 to 40 year payback, the intent of the City to provide these

financial initiatives must be for reasons beyond a financial return. Benefits as identified in the section above “BENEFITS FROM REMEDIATION AND REDEVELOPMENT” of environmental, social and economic impacts must also be considered as part of the investment return for such redevelopment support initiatives.

9. Brownfields in Key Development Areas: COE Strategic Purchase of Properties

The strategic purchase of brownfield gas station sites by the City of Edmonton could be done on a priority basis, involving an offer to purchase and the preparation of a pro forma. Purchase would require the ability to undertake ESAs on the subject property to determine the extent of contamination and clean up required. The pro forma would determine the costs of purchasing and cleaning up the subject property and implementing any zoning changes. These costs would be set out relative to the potential revenues that could be realized by the future sale of the property as well as reasons beyond a financial return.

- Purchase of adjacent or nearby lots could also be considered to enhance redevelopment potential.
- Properties could be purchased either for municipal use or for resale to the private sector.
- A capital budget would be required to cover off cleanup costs as well as any planning application/advertising fees related to any rezoning application and to allow for purchase of the property.
- There are always risks associated with this kind of proactive strategy in that the actual cleanup costs may exceed the estimated costs, irrespective of having an excellent Phase 2 ESA done for the property. Given the potential risks and liability, a formal business case would be required to drive this decision demonstrating value and why other strategies were not pursued.
- The advantage of this kind of approach lies in the ability of the City of Edmonton to acquire useable and marketable strategic sites at a time of our choosing, assuming that the necessary funds have been allocated by the City. This approach also builds on the investment that has already occurred or has been planned in high priority areas.
- Purchase could also occur in cooperation with other prospective owners or other agencies.

10. Inexpensive to Leave Land Idle: Land Taxation Shift that increases taxes on vacant land.

The intent of this activity would be to make it more expensive to keep land vacant or underutilized. The legislation under Section 297 of the Municipal Government Act (MGA) allows a municipality to split the tax rates for vacant and improved non-residential property.

There are some elements of this strategy that would need careful attention:

- Minor improvements such as installation of a chain link fence are currently classified as improvements and would circumvent the intent of the action.
- Treatment of non-brownfields where developers purchase uncontaminated lands well ahead of development.

Application of this shift for a fixed time frame is advisable to prevent long term impact to tax revenue and allow the municipality to re-establish fairness and equity.

11. Third Party Recoveries: Contamination of City Rights of Way and Titled Lands

Often the City will want a polluter to undertake ex-situ remediation (e.g. excavation) when city sites have been impacted, particularly under roadways, as there are significant peripheral costs and community inconveniences associated with this activity. The past strategy of the City is generally to 'wait and remediate' when the road is to be upgraded or a buried utility needs to be replaced. This approach, at times, makes it difficult to recover the costs of this remediation from the polluter as there is often a significant lapse in time from the remediation undertaken by the third party and the planned roadway work. Having a legal plan to assess and collect fees regardless of City upgrading schedule has merit. This may include adding a step whenever right of way upgrades occur that involves Environmental Site Assessments to pro-actively identify contamination issues and assess fees upon discovery. Statutes of limitations make timely discovery of contamination even more critical in recovering costs.

Currently, Corporate Properties has 1,377 properties on lease (950 of which are public utility lots). Community Services and Transportation have some properties on lease as well. If the contamination is caused by the lessee, third party recovery is a viable option for funding assessment and remediation. Currently, City practice is to prohibit the lease of properties for uses that pose a risk of contamination.

Green Municipal Fund, FCM:

1. Prohibitive Remediation Costs: Federation of Municipalities: Green Municipal Funds Program. City Partnership to Facilitate Remediation and Redevelopment

FCM's Green Municipal Fund (GMF) is a unique program which supports municipal initiatives across Canada that benefits the environment, local economies and quality of life.

GMF grants and below-market loans directly support municipal initiatives, while GMF education and training resources help municipal governments share expertise and strengthen their ability to set and surpass their sustainable goals. The Government of Canada endowed the Federation of Canadian Municipalities (FCM) with \$550 million to establish GMF.

The program has been in existence for several years and has undergone a redesign to address concerns of current and potential applicants as of June 2010.

The exact details of the new program are expected to be made available shortly, but based on the presentation by a FCM representation to the Task Force, the revised program would provide greater flexibility for grant and loan delivery that allows stackable and integrated funding sources. The following are the details of the proposed program as currently understood by the City of Edmonton:

Financials

- Feasibility Studies and Field Tests - Grants for up to 50% of costs, up to a maximum \$350,000 for feasibility studies & field tests.
- Brownfield Remediation - Low-interest loans equivalent to 80% of eligible costs. For municipal governments, GMF interest rates are Government of Canada bond rate for equivalent term less 1.5%.

Eligibility

- Feasibility Studies and Field Tests - Municipal governments, corporations wholly owned by a municipal government, and public non-governmental or private-sector organizations applying in partnership with a municipal government. Applicants must identify one of the following sectors as their primary focus: Brownfields, energy, transportation, waste or water. The municipal council must have adopted a sustainable community plan or sector plan that includes goals or targets related that sector.
- Brownfield Remediation - Any Canadian municipal government is eligible for a GMF brownfield remediation loan. Private-sector companies or corporations wholly-owned by a municipal government may also be eligible for funding. Various remediation components of Brownfield redevelopment projects are eligible, including removal and disposal of contaminated soils or materials, in-situ or ex-situ treatment of contaminated soils, groundwater or materials, the construction or installation of engineering controls and monitoring systems, and building demolition. The remediation project must start within 18 months of the date the application is approved. The following activities must be complete before submitting an application: Phase I and Phase II Environmental Site Assessments of the project site and a remedial action plan or risk management plan.
- A new project element has been designed for the 2010 release that provides support to renewable energy production. This refers exclusively to stand-alone renewable energy production projects implemented on brownfield sites, with or without remediation, and approved by the provincial or territorial regulator.

The City of Edmonton could assume a greater role in sponsorship and facilitation in supporting these projects targeted by the GMF program funding. This may include

cooperating in applications for this and other funding program opportunities with private sector developers. Support would be designed to assist with program qualification and process facilitation. Any consideration for the City assuming project related debt or liability would be a separate consideration altogether.

Regulatory Issues:

1. Undisclosed Brownfields: Nuisance Bylaw for Suspected Contamination

The City has the ability to create a specific bylaw to address contamination similar to the design of the Nuisance Bylaw.

Fines could be assessed and levied to a maximum value and frequency. Investigation of suspected infractions would require additional resourcing and environmental assessment budgets.

While the intent of the bylaw may be to spur on owners to remediate and redevelop and potentially generate new revenue, the maximum fine that the Municipal Government Act allows a municipality to impose under a bylaw is \$10,000.

This may not be a sufficient deterrence given the costs of clean up. In addition, the City has a difficult time enforcing such penalties against numbered companies. Brownfield sites that are not owned by individuals may result in fines going unpaid with little ability for recourse. Adding fines to remediation costs could drive the opposite behaviour and result in more abandoned sites with the only option being City-funded remediation.

2. Inability to Transfer Risk Management (RM) Strategy with Land Sale: Land Title Caveat of RM Strategy, Allow Transfer, Trigger Regulatory Monitoring

The current practice with risk management strategy causes challenges for owners committed to following the environmental legislation. The strategies are tied to the owner and not to the property. While property becomes tainted for potential buyers because of the attached exposure control strategy, in the event of the sale of the property under remediation, liability and accountability is not transferable and original owners cannot disengage from the arrangement. Working with the province to adjust regulations around land titles may address this, both from a transparency perspective and in creating transferable liability. Cooperation between municipalities to advocate Alberta Environment would be required to advance possible changes.

3. Shortcomings in Provincial Remediation Certificate Program: Provincial Remediation Certificate Program Revisions

While the Alberta Environment's Remediation Certification program is lauded by landowners and developers as a step in the right direction to provide elements of closure to remediation, usage of the program has revealed some issues that require review. Some of the elements of the program that would benefit from redesign include:

For brownfields where no remediation was required beyond standard excavation, owners are unable to receive a Certificate.

Where problem areas on a property have been remediated, Certificates will only be granted for those areas of the property. There is no process to receive certification for the entire property.

4. Contradictory Priorities between Jurisdictions: Harmonize Goals between Regulators

There are several issues with jurisdiction when managing remediation and redevelopment activity:

- The Province of Alberta holds jurisdiction over the Environmental Standards including compliance and enforcement.
- The Environmental and Protection Enhancement Act, Municipal Government Act and some elements of taxation are independent, with some contradictory aims and rigid guidelines. An effort to harmonize these may reinforce ideal behaviours with property owners.
- Where municipalities identify technical and standards issues with the environmental regulations, change is outside of municipal jurisdiction and advocacy for change can be a lengthy process.
- Addressing these obstacles may accelerate redevelopment and increase accountability.

5. Prohibitive Remediation Costs: Remediation Tax Credits

The intent of this activity would be to make it address potentially prohibitive costs of remediation. Current practice in the U.S. allows credit of certain expenses to a maximum amount to be applied in the year of the remediation.

The Provincial and/or Federal governments would be required to establish a program to allow these credits and the rules for application. The program was recently extended through approval of the US Senate.

6. Orphan Sites Liability: Establish a Fund for a Resource Pool to Address Unfunded Brownfields.

These may include orphan sites, sites that have moved to municipal ownership through tax forfeiture or abandonment, or sites where no liability can be assigned. Strides in regulations, monitoring and technology have been made to stop the creation of new orphan sites, but the historical backlog requires investment. Application of a gas tax to fund the pool or some other related premium has been examined previously and continues to have merit.

Prevention:**1. Funding for Future Decommissioned Gas Stations: Remediation Insurance**

There is the potential for an insurance requirement for new gas stations.

As part of the permitting process, the confirmation of insurance for the ultimate remediation activity at the end of a retail gas station life cycle would create surety of funding to address future remediation costs. While technology and regulations continue to make decommissioning remediation less and less costly, the need for guaranteed funding remains.

2. Funding for Future Decommissioned Gas Stations: Surety Bond for new Gas Station Developments

There may be a possibility to create regulations where an applicant is required to give some type of surety (letter of credit or performance bond) when seeking a development permit for a new gas station use.

The intent of the surety bond would be to establish financing at the outset of the business for any eventual contamination and resulting remediation that may occur over the life of the gas station. This method would have a number of critical considerations. First, it could not be achieved retroactively. The existing uses could not be required to adopt such regulations and would be free to carry on as per current requirements. Secondly, this may be a substantial detriment to progressive development. This action may cause fewer new gas stations in greenfield neighbourhoods, which are often the catalyst of a small commercial site within a neighbourhood. Finally, this approach would create a substantial burden on the applicant to keep an outstanding surety for upwards of 20 years.

There are two possible avenues that this approach would be challenged. First, the applicant is asking for a development permit for a use. This permit inherently gives a right that is perpetual and does not contemplate an end date. It may be an inappropriate condition to apply a requirement for an event that is not contemplated. Second, there is a possible argument that the new standards under the Fire Code do not require such an onerous condition. It is inappropriate to base a condition on past practices on other sites. Each permit application must be based on the site in question and the proposal that is presented. If the application does not demonstrate that there is a risk of contamination such a condition may be challenged on that basis.

Conclusion

Each brownfield which was previously a gas station has its own challenges as a result of the property characteristics. The size, location, nature and extent of contamination, options for redevelopment, and possible stigma attached to the property all contribute to the range of support required to accelerate its remediation and redevelopment. No single solution will propel an owner to action. Instead, a strategy with a range of initiatives must be combined to address the particular obstacles an owner faces.

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Appendix 1: Examples of Municipal Property Tax Cancellation or Deferral

The municipal property tax system can be a potential tool as an incentive to address the financial costs of remediation and redevelopment. This appendix provides a detailed analysis of how such incentives could be structured and the financial implications or benefits.

Under this program, once initiated, the City Assessor would establish a baseline property value and project a new assessment based on submission of a proposed remediation and redevelopment. The tax revenue uplift from the increased assessment value is used as the basis for calculating incentive value and impact to City revenues.

Under this program, the property owner would be required to submit detailed remediation and redevelopment proposals. The municipality would calculate potential financial support (value of tax incentive) required to reach a reasonable return on investment.

An advantage of this program is that the City is not required to provide advance funding, which is challenging within current municipal tax and budget circumstances. In addition, the methodology proposed in this program is within the jurisdiction of City Council. Under Section 347(1) of the Municipal Government Act, Council may annually, through resolution of City Council, provide for cancellation or deferral of the municipal portion of the property tax for a period of time.

In considering the provision and value of tax incentive for the property owner of a former gas station brownfield to remediate the property, the following could be evaluated:

- Qualified expenses related to remediation;
- A maximum percentage of the cost of remediation (e.g. 25% - 50%);
- Maximum percentages may be stepped ranges such that a more significant redevelopment proposal could result in higher relative incentives; and/or
- Maximum time period for the cancellation/deferral.

The City does not have jurisdiction to defer or cancel the education portion of the property tax which could only occur through a change in legislation by the provincial government. This element of the incentive would require administrative cooperation between the two orders of government. A partnership with the Province increases the potential value of the incentive substantially.

For illustrative purposes only, two scenarios are being presented below. Both scenarios are based upon a 15,000 square feet property, formerly a gas station and currently a brownfield. It may or may not be contaminated. In the first scenario, the redevelopment is a one-storey commercial building under current approved zoning. The second scenario contemplates the impact of changing the zoning from commercial to RA7 residential (multi-family), and building to maximum density. The figures used are based upon estimates using a high-level industry norm and applying the 2009 Tax Rate Bylaw. A nominal assessment is placed on the current property to illustrate the mechanics of the program.

A maximum incentive value has been used for demonstration purposes based on both the greatest of 50% of remediation cost and 5 years of municipal property tax lift from the redevelopment. Other values may be considered.

Tax Cancellation

This method does not require an existing source of financing as it funds the incentive from future increases in property tax revenues.

The following is a summary of the impact of taxes forgone by the City and the incentive provided to the property owner/developer using two different sized parcels and potential redevelopment capacity.

The City would continue to collect only the baseline property taxes of \$1,045 (and the Province, the education tax) for a period of time as if the property were still a brownfield site.. The total value of the incentive is calculated by the number of years in the agreement and the value of the cancelled taxes yearly.

Pro-Forma for Potential Tax Lift on Contaminated Gas Station Redevelopment

Scenario 1 - Gas station brownfield, 15,000 square feet, located in BRZ. Remediated and developed 6,000 square feet, one-storey commercial building.

	2009 Assessment	2009 Municipal Taxes	2009 Education Taxes
Assessed as a brownfield	100,000	1,045	271
Assessed as fully redeveloped	1,995,000	20,850	5,405
Tax Lift		19,805	5,134

	Remediation Cost Projection*	Maximum Cancellation/Deferral at 50%	Years of Municipal Tax Cancellation Required**	Cost to City (Assume Maximum of 5 Years)	Years of Municipal & Education Tax Cancellation Required*
Low	350,000	175,000	8.8	99,025	7.0
Medium	1,500,000	750,000	37.9	99,025	30.1
High	3,000,000	1,500,000	75.7	99,025	60.1

Scenario 2 - Gas station brownfield, 15,000 square feet, located in BRZ. Remediated and rezoned to RA7 residential, maximum 17 units.

	2009 Assessment	2009 Municipal Taxes	2009 Education Taxes
Assessed as a brownfield	100,000	1,045	271
Assessed as fully redeveloped	4,250,000	19,348	9,496
Tax Lift		18,303	9,225

	Remediation Cost Projection*	Maximum Cancellation/Deferral at 50%	Years of Municipal Tax Cancellation Required**	Cost to City (Assume Maximum of 5 Years)	Years of Municipal & Education Tax Cancellation Required*
Low	350,000	175,000	9.6	91,515	6.4
Medium	1,500,000	750,000	41.0	91,515	27.2
High	3,000,000	1,500,000	82.0	91,515	54.5

* City is currently involved in 3 remediation projects, one involving an auto repair shop, the second a bus garage, and the third the Strathcona Shooting Range.

Tax Deferral

Similar to the tax cancellation program, tax deferral requires the property owner to continue paying the existing municipal property taxes on the property of \$1,045 (and the Province, the education tax) as if it were a brownfield site. The incremental tax on the redevelopment assessment uplift will be deferred subject to similar criteria under the tax cancellation program. The cost of the tax deferral to the City is the interest forgiven on deferred tax payments as the property owner ultimately pays the entire property tax arising from the redevelopment. The following illustration assumes a 5-year tax deferral with the cumulative deferred amount repaid over another 5-year period, using 5% as the opportunity cost of capital.

	Scenario 1		Scenario 2	
	Cumulative Amount of Tax Deferred	Opportunity Cost at 5%	Cumulative Amount of Tax Deferred	Opportunity Cost at 5%
Year 1	19,805	990	18,303	915
Year 2	39,610	1,981	36,606	1,830
Year 3	59,415	2,971	54,909	2,745
Year 4	79,220	3,961	73,212	3,661
Year 5	99,025	4,951	91,515	4,576
Subtotal		14,854		13,727
Year 6	79,220	3,961	73,212	3,661
Year 7	59,415	2,971	54,909	2,745
Year 8	39,610	1,981	36,606	1,830
Year 9	19,805	990	18,303	915
Year 10	-	-	-	-
Total Cost		24,756		22,879

Appendix 2: Example Analysis of City of Edmonton Strategic Purchase of Brownfield Properties

This option involves the City identifying former gas station brownfields that are considered strategic. Factors involved in determining if a property is strategic may include its location as part of a larger City project or the support of specific capital plans or projects. Among the risks with this option is that while the fair market value of a contaminated property may be relatively low, the potential liability beyond the projected remediation expenses could be significant. Another risk is that after remediation costs and development costs are factored, the selling price results in a net loss to the City and any tax increase and recovery will take many years.

The following is a simple comparative illustration using the same scenarios as the tax cancellation/deferral program outlined in Appendix 1 and using a medium remediation cost of \$1.5 million.

	Scenario 1	Scenario 2
Purchase Price	100,000	100,000
Medium Remediation Cost	1,500,000	1,500,000
Estimated Development Cost	1,310,000	2,962,000
Upfront Cost to City	2,910,000	4,562,000
Projected Sale Proceeds	1,995,000	4,250,000
Loss on Development	(915,000)	(312,000)
Tax Lift from Redevelopment	19,805	18,303
Recovery in Years	46.2	17.0

This example illustrates that, under what are considered reasonable assumptions, the direct City strategic purchase and redevelopment of a brownfield site is likely to create a direct net loss on the development.

Appendix 3 Example of Private Remediation and Redevelopment Financial Rate of Return Pro Forma

Development of a vacant property or redevelopment of an existing property is dependent upon an owner/developer's belief that a required rate of return from an investment can be achieved. The most common obstacles encountered in the redevelopment of former gas station brownfields are the added expenses and risks to investigate and remediate the contaminated site and the uncertainty associated with redevelopment. The options available to owners according to Provincial regulations can lead to lengthy and costly remediation strategies. There is also the added risk of unknown additional liability for offsite contamination both for the current owner and for potential purchasers post development.

As a source of financial support, the City of Edmonton could consider financial aid (tax relief, grant), and/or partnership in tailoring an Exposure Control and Risk Management Strategy. While using public funds to subsidize remediation for the purposes of redevelopment may seem like rewarding remediation inactivity, the alternative may be municipal redevelopment goals remaining unrealized.

In order to know where and how much to intervene or contribute in the remediation and redevelopment processes, the following is an example of the financial rate of return pro forma that a developer would undertake when considering a brownfield redevelopment project.

The financial pro forma identifies three key rates of return calculations. In all cases, the development proposal fails to achieve the required rates of return and therefore would be considered financially infeasible. The development would not likely proceed. At face value, the calculations show why remediation and successful redevelopment of former gas stations is an ongoing issue.

However, an analysis of the pro forma allows an assessment of what changes, or combination of changes in development revenues and costs could make the project financially viable. In the example above, the development profit is approximately \$600,000 to \$1,000,000 below the required rates of return. A series of initiatives such as upzoning the site (more sales revenue), a grant for remediation costs (lowers costs), lower financing costs possibly using GMF funding (lowers costs) and property tax forgiveness/deferral (lowers costs) could be combined to increase the rate of return. No one individual initiative is likely sufficient to change the financial feasibility.

To facilitate redevelopment of these sites, a new strategy would require a developer to apply for relief from the City and as part of this application process, include details on the proposed timing and type of development, including a pro forma, and the support sought from the City. The City would then review the pro forma to determine whether or not the request is reasonable, then choose to advance support based on this and other criteria. A secondary analysis to determine the amount of new tax revenue that could be generated determines the payback period and, essentially, our return (tax revenue) on investment (grant funds).

The design of a municipal funding program should encourage redevelopment while balancing shared risk with a reasonable rate of return acceptable to developers and the City of Edmonton. Qualified costs may include, but are not limited to:

- Environmental Site Assessment
- Remediation proposal including costs and timeline, proposed development, target rate of return
- Monitoring remediation activity
- Post-remediation testing and certification by recognized professionals.

**Development Profit
Contamination Hypothetical
21000 Sq Ft Strip Retail Centre**

Sale Price		\$	6,616,560		
Less	Real Estate Comission	\$	330,828		
	Selling Expenses	\$	38,000		
		\$	6,247,732		
Rental Income and Expenses					
	Potential Gross Income	\$	889,000		
	Less Vacancy Allowance	\$	12,250		
	Rental Expenses	\$	163,000		
	Net Operating Income	\$	713,750		
Development Costs					
Investment					
	Land & Remediation Cost	\$	2,000,000		
Site Preparation					
	Site Cleaning	\$	15,000		
	Site Servicing	\$	172,000		
		\$	187,000		
Construction					
	Building Construction Costs	\$	1,937,493.00		
	Parking & Landscaping	\$	150,000.00		
	Contingency Allowance	\$	319,500.00		
		\$	2,406,993.00		
Professional Fees					
	Architectural & Engineering	\$	181,000		
	Project Management	\$	102,998		
	Mortgage Brokerage Fees	\$	65,000		
	Appraisal Fees	\$	8,000		
		\$	356,998		
City Fees					
	City Permits and Fees	\$	47,000		
	Development Cost Charges	\$	85,000		
	Property Taxes	\$	35,000		
		\$	167,000		
Administration					
	Insurance	\$	25,000		
Marketing					
	Advertising	\$	30,000		
	Real Estate Commissions	\$	331,000		
	Leasing Commissions	\$	75,000		
		\$	436,000		
Leasehold Improvements					
	Leasehold Improvements	\$	294,000		
Financing Interest Costs					
	Land Loan	\$	90,000		
	Construction Loan	\$	361,222		
		\$	451,222		
Total Development Costs		\$	6,324,213		
Development Profit					
	% of Total Development Costs	\$	637,269	10.08%	<u>below</u> target 25%
	% of Sale Price			10.20%	<u>below</u> target 18%
	Maximum Equity	\$	1,641,443		
	Return on Equity			38.82%	<u>below</u> target 100%

Tracking Discussion Paper Changes

Bylaw 15363 Section	Functions From Bylaw 15363	Discussion Paper Draft 3, Barriers and Resolutions – May 17, 2010	Discussion Paper – July 12, 2010	Report July 5: Attachment 1: Contaminated Gas Stations Revised Strategy Report Attachment 2: Contaminated Gas Stations Advocacy Activities
5.1(a)	Develop a position with a plan or individual strategies to address contaminated gas station sites in Edmonton.	2. Legal Considerations 3. Definitions 4. Scope 5. Regulations 6. Considerations for Brownfield Redevelopment 6. Land Development Process 7. Inventory 8. Benefits 9. Potential Funding Avenues 10. Incentive Options 11. Other Jurisdictions 13. Barriers and Resolutions 14. Developing an Interim Land Use Strategy. 15. Possible Approaches	2 Definitions and Scope 3. Benefits 4. Inventory 5. Regulatory and Remediation Process 6. Barriers and Resolutions Appendix 1 Appendix 2 Appendix 3	Attachment 1 Attachment 2
5.2(a)	Financial mechanisms to encourage site clean up and deter continued inaction.	9. Potential Funding Avenues	6. Barriers and Resolutions Appendix 1 Appendix 2 Appendix 3	Attachment 1: 2.4, 3.2, 3.3, 3.4, 3.5, 3.6, 4.1.3, 4.1.4, 4.1.6, 4.1.8, 4.1.9, 4.1.10, 5.1.5, 5.1.6, Attachment 2: 1.3, 1.5, 2, 3
5.2(b)	Identification of key barriers to the rehabilitation of land for a new use.	5. Regulations 6. Considerations 10. Incentive Options 13. Barriers and Resolutions	5. Regulatory and Remediation Processes 6. Barriers and Resolutions	Attachment 1: 2.4, 3.2, 3.3, 3.4, 3.5, 3.6, 4.1.3, 4.1.4, 4.1.5, 4.1.6, 4.1.8, 4.1.9, 4.1.10, 4.1.11, 4.1.12, 4.2.2, 4.2.3, 4.2.4, 4.2.5,

Bylaw 15363 Section	Functions From Bylaw 15363	Discussion Paper Draft 3, Barriers and Resolutions – May 17, 2010	Discussion Paper – July 12, 2010	Report July 5: Attachment 1: Contaminated Gas Stations Revised Strategy Report Attachment 2: Contaminated Gas Stations Advocacy Activities
				4.2.6, 4.3.2, 4.3.3, 4.3.4, 4.3.6, Attachment 2: 1,2,3
5.2(c)	New ways and means to assist responsible, willing landowners in cleanup of their contaminated lands.	10. Incentive Options 13. Barriers and Resolutions	6. Barriers and Resolutions	Attachment 1: 2.3, 2.4, 3.2, 3.3, 3.4, 3.5, 3.6, 4.1.2, 4.1.3, 4.1.4, 4.1.5, 4.1.6, 4.1.7, 4.1.8, 4.1.9, 4.1.10, 4.1.11, 4.1.12, 4.2.1, 4.2.3, 4.2.5, 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.6, 5.3.1, 5.4.1, 5.4.2 Attachment 2: 1,2,3
5.2(d)	More radical options to deal with irresponsible landowners who refuse to clean up their sites.	13. Barriers and Resolutions	6. Barriers and Resolutions	Attachment 1: 3.5, 4.1.2, 4.1.6, 4.3.2, 4.3.3, 4.3.4, 5.1.4, Attachment 2: 1.2, 1.3, 2.1, 2.2, 2.3, 3.2
5.2(e)	Propose regulatory and legislative changes to compel cleanup.	13. Barriers and Resolutions	6. Barriers and Resolutions Attachment 2	Attachment 1: 4.1.10, Attachment 2: 1,2,3
5.1(c)	Establish partnerships with Calgary, Capital Region municipalities and other Alberta Cities to advocate for necessary legislative	13. Barriers and Resolutions	6. Barriers and Resolutions	Attachment 1: 5.4.1, 5.4.2 Attachment 2: 1,2,3

Bylaw 15363 Section	Functions From Bylaw 15363	Discussion Paper Draft 3, Barriers and Resolutions – May 17, 2010	Discussion Paper – July 12, 2010	Report July 5: Attachment 1: Contaminated Gas Stations Revised Strategy Report Attachment 2: Contaminated Gas Stations Advocacy Activities
	changes and enforcement.			
5.1(d)	Initiate discussions with Alberta Environment and Alberta Municipal Affairs, the Federal Government and senior industry representatives to explore funding needs, sources and programs.	11. Other Jurisdictions 13. Barriers and Resolutions	6. Barriers and Resolutions	Attachment 2: 1,2,3
5.1(e)	Advocate the City's position on any matter related to contaminated gas station sites in the City.	13. Barriers and Resolutions	6. Barriers and Resolutions	Attachment 2: 1,2,3
5.1(b)	Oversee and direct the implementation of the plan or individual strategies.			