

# CA-09-19 Appendix B: Inherent Risk Assessment Methodology for City of Burlington Updated 2019

## Risk Factors and Associated Criteria

The audit work plan is established based on the assessment of risks and exposures in City services. The assessed risk is “inherent risk”; that is, the total risk without controls or raw risk. The level of inherent risk (as determined through risk factors) is used to ensure significant risks are addressed and there is effective use of audit resources.

## Inherent Risk Factors

Risk factors include quantitative and qualitative criteria and attributes used to identify areas of City operations that would benefit most from an internal audit. Inherent risk is determined by considering all the factors; not just an individual factor. However, not all factors are considered equal. A weighting is applied to each factor to reflect their relative importance (which is a matter for judgment) based on business practices, legislation and regulations, and the strategic plan. Also, criterion that does not apply to areas will not be considered in the overall factor ranking.

There are many risk factors that can be used in assessing inherent risk. For example, quantitative criteria may include: size of the budget and payroll, number of employees, value of capital equipment, the time elapsed since the last audit, client satisfaction, and extent of partnering/alliances. Qualitative criteria may include: areas of concern to management, possibility of adverse publicity, complexity of IT infrastructure, the effect of governmental or other regulations, technological innovation and information integrity.

The inherent risk factors must be tailored to the City and its operating environment.

## Calculating the Overall Inherent Risk Ranking

The overall inherent risk ranking is calculated using the following formula:

OVERALL INHERENT RISK RANKING SCORE =  $\Sigma$ (INHERENT RISK ATTRIBUTE RANKING SCORE  
x FACTOR WEIGHTING)

Risk assessed audit entities will be listed from highest to lowest score.

## Inherent Risk Assessment for Audit Units

The following table contains the factors and a set of attributes for each criterion to assist in assessing the inherent risk of the service and/or sub-service.

### Inherent Risk Factors and Criteria for Services

Factor (Weighting) & Criteria	Inherent Risk Attribute Ranking (Score)				
	Very High (100)	High (75)	Moderate (50)	Low (25)	Very Low (1)
<p><b>Complexity of Service Delivery (30%)</b></p> <ul style="list-style-type: none"> <li>Nature of technology/equipment used in service delivery (e.g. sophisticated vs. simple)</li> <li>Degree of customization of process (e.g. customized vs. standardized)</li> <li>Number of people involved in service delivery</li> <li>Service delivery sites (e.g. multi-site/counter vs. single site/counter)</li> <li>Level of exposure to hazardous activity</li> </ul>	<ul style="list-style-type: none"> <li>Requires sophisticated technology/equipment with multiple interfaces</li> <li>Customized process for each transaction</li> <li>More than 30 people involved in delivering the service</li> <li>Multi-site/counter service delivery (&gt;5) sites/counters <u>AND</u> contracted services</li> <li>Work involves daily exposure to high hazard activity (e.g. use of heavy machinery/small equipment, working at heights, chemical handling, working in traffic, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Requires sophisticated technology/equipment with minimal interfaces</li> <li>Specialized process for majority of transactions; standardized process for less than a quarter of transactions</li> <li>22 - 29 people involved in delivering the service</li> <li>Multi-site/counter service delivery (&gt;5) sites/counters <u>OR</u> contracted services</li> <li>Work involves frequent exposure to high hazard activity (e.g. use of heavy machinery/small equipment, working at heights, chemical handling, working in traffic, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Requires standalone sophisticated technology/equipment</li> <li>Standardized process for half of transactions; remaining transactions require exceptions to process "rules"</li> <li>11 - 21 people involved in delivering the service</li> <li>Multi-site/counter service delivery (from 3 - 4 sites/counters)</li> <li>Work involves repeated exposure to manual labour (e.g. lifting, pushing, pulling, digging, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Requires simple technology/equipment with few interfaces</li> <li>Standardized process for three quarters of transactions; minimal exceptions to process "rules" required</li> <li>6 - 10 people involved in delivering the service</li> <li>Multi-site/counter service delivery (from 2 - 3 sites/counters)</li> <li>Work involves daily exposure to low hazard activity (e.g. use of computers, desk work, repetitive movement, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>Requires standalone simple technology/equipment</li> <li>Standardized process for all transactions (same process each time; no exceptions)</li> <li>1 - 5 people involved in delivering the service</li> <li>Single site/counter service delivery (from one site/counter)</li> <li>Work involves limited exposure to low hazard activity (e.g. use of computers, desk work, repetitive movement, etc.)</li> </ul>

## Inherent Risk Assessment for Audit Units

Factor (Weighting) & Criteria	Inherent Risk Attribute Ranking (Score)				
	Very High (100)	High (75)	Moderate (50)	Low (25)	Very Low (1)
<b>Materiality &amp; Susceptibility to Error/Fraud (25%)</b> <ul style="list-style-type: none"> <li>Gross revenue (excluding recovery from capital)</li> <li>Gross operating expenditures (including human resource costs and excluding one-time project costs)</li> <li>Transparency/openness to scrutiny</li> <li>Extent of staff complement vacancy</li> <li>Nature of Assets Used in Service Delivery (i.e. tangible/intangible, convertibility to cash)</li> <li>Involvement in known risk areas of misconduct <sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>&gt; \$400,000</li> <li>&gt; \$2,000,000</li> <li>One person responsible for tracking, reporting and monitoring</li> <li>Staffing level at less than 65% of full complement</li> <li>Liquid (e.g. cash includes cheques and debit/credit card, bonds, etc.)</li> <li>Involved in more than one of procurement/contracting, approvals/permits and licensing, by-law enforcement</li> </ul>	<ul style="list-style-type: none"> <li>Between \$250,001 and \$399,999</li> <li>Between \$1,000,000 and \$1,999,999</li> <li>Limited number (1-2) of people involved in tracking, reporting and monitoring</li> <li>Staffing level between 65% and 75% of full complement</li> <li>Easily converted to cash (i.e. &lt; 14 days); readily available market; highly liquid</li> </ul>	<ul style="list-style-type: none"> <li>Between \$100,001 and \$250,000</li> <li>Between \$500,000 and \$999,999</li> <li>Small group (3-4) of people involved in tracking, reporting and monitoring</li> <li>Staffing level between 76% and 89% of full complement</li> <li>Can be converted to cash (i.e. between 15 days and 29 days); market is specialized; somewhat liquid</li> <li>Involved in any of procurement/contracting, approvals/permits and licensing, by-law enforcement</li> </ul>	<ul style="list-style-type: none"> <li>Between \$25,001 and \$100,000</li> <li>Between \$250,000 and \$499,999</li> <li>Group (5-6) of people involved in tracking, reporting and monitoring</li> <li>Staffing level between 95% and 99% of full complement</li> <li>Difficult to convert to cash (i.e. 30 days); small market</li> </ul>	<ul style="list-style-type: none"> <li>&lt; \$25,000</li> <li>&lt; \$250,000</li> <li>Larger number of people (6+) involved in tracking, reporting and monitoring</li> <li>Staffing level at full complement</li> <li>No cash value; not liquid</li> <li>Not involved in any of procurement/contracting, approvals/permits and licensing or by-law enforcement</li> </ul>

<sup>1</sup> International Centre for Criminal Law Reform and Criminal Justice Policy, *Municipal "Best Practices": Preventing Fraud, Bribery and Corruption* (Vancouver: ICCLR 2013) <  
<http://icclr.law.ubc.ca/sites/icclr.law.ubc.ca/files/publications/pdfs/Municipal%20Best%20Practices%20-%20Preventing%20Fraud,%20Bribery%20and%20Corruption%20FINAL.pdf>>

## Inherent Risk Assessment for Audit Units

Factor (Weighting) & Criteria	Inherent Risk Attribute Ranking (Score)				
	Very High (100)	High (75)	Moderate (50)	Low (25)	Very Low (1)
<ul style="list-style-type: none"> <li>Dollar value of daily cash deposits</li> </ul>	– greater than \$5,001	– between \$2,501 and \$5,000	– between \$1,501 and \$2,500	– between \$251 and \$1,500	– less than \$250
<b>Exposure to Scrutiny (10%)</b> <ul style="list-style-type: none"> <li>Degree of public/external customer involvement</li> <li>Degree of internal customer involvement</li> <li>History of media attention (e.g. newspapers, blogs, op eds, etc.)</li> <li>Employee Base Involved</li> </ul>	<ul style="list-style-type: none"> <li>Everyday direct involvement of public/external customers</li> <li>Everyday direct involvement of internal customers</li> <li>Subject of regular and sustained media attention</li> <li>Every employee involved</li> </ul>	<ul style="list-style-type: none"> <li>Frequent direct involvement of public/external customers</li> <li>Frequent direct involvement of internal customers</li> <li>Subject of frequent media attention</li> <li>More than three-quarters of employees involved</li> </ul>	<ul style="list-style-type: none"> <li>Periodic direct involvement of public/external customers</li> <li>Periodic direct involvement of internal customers</li> <li>Subject of minimal or short-lived media attention</li> <li>Half of employees involved</li> </ul>	<ul style="list-style-type: none"> <li>Infrequent direct involvement of public/external customers</li> <li>Infrequent direct involvement of internal customers</li> <li>Subject of infrequent media attention</li> <li>More than one-quarter of employees involved</li> </ul>	<ul style="list-style-type: none"> <li>Rare direct involvement of public/external customers</li> <li>Rare direct involvement of internal customers</li> <li>Never been subject of media attention</li> <li>Less than one-quarter or one group of employees involved</li> </ul>
<b>Degree of Change (20%)</b> (over last 12 months and expected within next 6 months) <ul style="list-style-type: none"> <li>Changes to service and/or processes</li> <li>Technology/equipment change</li> </ul>	<ul style="list-style-type: none"> <li>Totally new service and/or delivery process(es)</li> <li>Implemented new software/hardware/equipment to support service</li> </ul>	<ul style="list-style-type: none"> <li>Multiple/major changes to service and/or delivery process(es)</li> <li>Major upgrade or update to <u>all</u> software/hardware/equipment to support service</li> </ul>	<ul style="list-style-type: none"> <li>Small number changes to service and/or delivery process(es)</li> <li>Major upgrade or update to <u>some</u> software/hardware/equipment to support service</li> </ul>	<ul style="list-style-type: none"> <li>Infrequent/minor changes to service and/or delivery process(es)</li> <li>Minor upgrade or update to all or some software/hardware/equipment to support service</li> </ul>	<ul style="list-style-type: none"> <li>No changes to service and/or delivery process(es)</li> <li>No changes to software/hardware/equipment to support service</li> </ul>

## Inherent Risk Assessment for Audit Units

Factor (Weighting) & Criteria	Inherent Risk Attribute Ranking (Score)				
	Very High (100)	High (75)	Moderate (50)	Low (25)	Very Low (1)
<b>People Participation (15%)</b> <ul style="list-style-type: none"> <li>• Staff turnover (due to reasons such as retirement, leaves of absence, job rotations, etc.)</li> <li>• Staff performing “must do” activity(ies)</li> <li>• Difficulty in filling positions (beyond normal recruitment timing)</li> <li>• Difficulty in attracting candidates</li> </ul>	<ul style="list-style-type: none"> <li>– More than 50% of all staff has changed in last year</li> <li>– Only one person knows how “must do” activity(ies) are performed. <u>OR</u> key person dependency</li> <li>– Takes 8 or more months longer</li> <li>– Had to go back to market &gt; 2 times after original recruitment <u>OR</u> &gt; 2 offers made and declined</li> </ul>	<ul style="list-style-type: none"> <li>– Between 30% - 50% of all staff have changed in last year</li> <li>– 2 people know how “must do” activity(ies) are performed</li> <li>– Takes 6 – 7 months longer</li> <li>– Had to go back to market 2 times after original recruitment <u>OR</u> 2 offers made and declined</li> </ul>	<ul style="list-style-type: none"> <li>– Between 20% - 30% of all staff have changed in last year</li> <li>– 3 people know how “must do” activity(ies) are performed</li> <li>– Takes 4 – 5 months longer</li> <li>– Had to go back to market 1 time after original recruitment <u>AND</u> 1 offer made and declined</li> </ul>	<ul style="list-style-type: none"> <li>– Between 10% - 20% of all staff have changed in last year</li> <li>– 4 people know how “must do” activity(ies) are performed</li> <li>– Takes 2 – 3 months longer</li> <li>– Had to go back to market 1 time after original recruitment <u>OR</u> 1 offer made and declined</li> </ul>	<ul style="list-style-type: none"> <li>– Less than 10% of all staff has changed in last year</li> <li>– 5 or more people know how “must do” activity(ies) are performed</li> <li>– Takes less than 1 month longer</li> <li>– Filled position from original recruitment <u>OR</u> no offers declined</li> </ul>