



VILLAGE OF HARRISON HOT SPRINGS NOTICE OF MEETING AND AGENDA

REGULAR COUNCIL MEETING

Date: Monday, May 1, 2017
Time: 7:00 p.m.
Location: Council Chambers, 495 Hot Springs Road
 Harrison Hot Springs, British Columbia

1. CALL TO ORDER		
Meeting called to order by Mayor Facio.		
2. INTRODUCTION OF LATE ITEMS		
3. APPROVAL OF AGENDA		
4. ADOPTION OF COUNCIL MINUTES		
(a) THAT the Minutes of the Regular Council Meeting held on April 18, 2017 be adopted		Item 4(a) Page 1
5. BUSINESS ARISING FROM THE MINUTES		
6. CONSENT AGENDA		
i. Bylaws	(a) Tax Rate Bylaw No. 1105, 2017	Item 6.i.(a) Page 5
ii. Agreements		
iii. Committee/ Commission Minutes		
iv. Correspondence	(a) Letter dated April 11, 2017 from Fraser Health Re: Health Services	Item 6.iv.(a) Page 9
7. DELEGATIONS/PETITIONS		
(a) Audit Results and Communications Report - Patrick Chan, BDO Canada LLP		Item 7(a)
8. CORRESPONDENCE		
(a) Letter dated April 2017 from the Royal Canadian Legion, Branch 32, Agassiz Re: Inaugural Golf Tournament		Item 8(a) Page 11
9. BUSINESS ARISING FROM CORRESPONDENCE		

10. REPORTS OF COUNCILLORS, COMMITTEES, COMMITTEE OF THE WHOLE AND COMMISSIONS	
11. REPORTS FROM MAYOR	
12. REPORTS FROM STAFF	
(a) Report of Financial Officer – April 25, 2017 Re: 2016 Auditor’s Report	Item 12(a) Page 13
<u>Recommendation:</u> THAT Council receives the Village of Harrison Hot Springs Audit Results and Communications Report to the Mayor and Council for the fiscal year ended December 31, 2016.	
(b) Report of Financial Officer – April 21, 2017 Re: 2016 Audited Financial Statements	Item 12(b) Page 33
<u>Recommendation:</u> THAT the 2016 Financial Statements of the Village of Harrison Hot Springs be adopted; AND THAT the Independent Auditor’s Report be received; AND THAT the Independent Auditor’s Report be attached to the approved Financial Statements of the Village of Harrison Hot Springs.	
(c) Report of Financial Officer – April 20, 2017 Re: Village owned street lighting conversion to LED	Item 12(c) Page 59
<u>Recommendation:</u> THAT Council approves contracting of lighting design services for the Village owned street lights.	
(d) Report of Community Services Manager – April 26, 2017 Re: UBCM Gas Tax Strategic Priorities Fund	Item 12(d) Page 81
<u>Recommendation:</u> THAT approval be given to staff to submit two applications for funding through the Gas Tax Strategic Priorities Fund (SPF) which includes the SPF – Capital Infrastructure Fund Project Stream for Community Energy Systems and for the SPF – Capacity Building Stream for a Long-term Infrastructure Plan.	
13. BYLAWS	
(a) Report of Deputy Chief Administrative Officer/Corporate Officer – April 26, 2017 Re: Highway and Traffic Bylaw No. 974	Item 13(a) Page 83
14. QUESTIONS FROM THE PUBLIC (pertaining to agenda items only)	
15. ADJOURNMENT	

VILLAGE OF HARRISON HOT SPRINGS
MINUTES OF THE REGULAR MEETING OF COUNCIL

DATE: April 18, 2017
TIME: 7:00 p.m.
PLACE: Council Chambers
495 Hot Springs Road
Harrison Hot Springs, BC

IN ATTENDANCE: Mayor Leo Facio
Councillor John Buckley
Councillor Sonja Reyerse
Councillor John Hansen
Councillor Samantha Piper

Chief Administrative Officer, Madeline McDonald
Deputy Chief Administrative Officer/Corporate Officer, Debra Key
Financial Officer, Tracey Jones
Community Services Manager, Alanna Carmichael

ABSENT:

Recording Secretary: Jaclyn Bhatti

1.

CALL TO ORDER

Mayor Facio called the meeting to order at 7:00 p.m.

2.

INTRODUCTION OF LATE ITEMS

None

3.

APPROVAL OF AGENDA

Moved by Councillor Buckley
Seconded by Councillor Piper

THAT the agenda be approved.

**CARRIED
UNANIMOUSLY**

4.

ADOPTION OF COUNCIL MINUTES

Moved by Councillor Hansen
Seconded by Councillor Buckley

THAT the minutes of the Regular Council Meeting held on April 3, 2017 be adopted.

**CARRIED
UNANIMOUSLY**

5.

BUSINESS ARISING FROM THE MINUTES

None

Village of Harrison Hot Springs
Minutes of the Regular Council Meeting
April 18, 2017

6. **CONSENT AGENDA**

i. Bylaws

ii. Agreements

iii. Committee/
Commission
Minutes

(a) Age-friendly Committee Meeting Minutes of March 16, 2017

iv.
Correspondence

(a) Letter dated March 21, 2017 from Canadian Heritage
Re: Canada Day Celebration Funding

(b) Letter dated March 30, 2017 from Minister Peter Fassbender
Re: Infrastructure Planning Grant

(c) Agassiz-Harrison Community Services News – April 2017

Moved by Councillor Buckley
Secoded by Councillor Hansen

THAT the Age-friendly Committee Meeting Minutes of March 16, 2017 and
the correspondence be received.

**CARRIED
UNANIMOUSLY**

7. **DELEGATIONS**

(a) Agassiz-Harrison Transit Service: BC Transit Fare Structure Review –
Barclay Pitkethly, & Adam Lougheed, Fraser Valley Regional District

Mr. Pitkethly and Mr. Lougheed presented a PowerPoint presentation on
BC Transit's Fare Structure Review recently undertaken for the for the
Agassiz-Harrison Transit Service.

8. **CORRESPONDENCE**

None

9. **BUSINESS ARISING OUT OF CORRESPONDENCE**

None

10. **REPORTS OF COUNCILLORS, COMMITTEES, COMMITTEE OF THE WHOLE
AND COMMISSIONS**

Councillor Piper

- Attended the 100th Anniversary of Vimy Ridge Commemoration Ceremony
on April 9, 2017 and thanked Ms. Carmichael and the Royal Canadian
Legion Agassiz Branch for organizing the event.

Village of Harrison Hot Springs
Minutes of the Regular Council Meeting
April 18, 2017

- Attended the “Local Governments and the Sharing Economy” event hosted by LMLGA and CivicInfo BC.

Councillor Reyerse

- Attended the Chamber of Commerce Director’s meeting. The Chamber has contributed \$500 to the Bear Mountain Trail Society and provided the District of Kent with a new way finder. Chamber members are in the process of responding to a request regarding overnight parking on Esplanade Avenue. The Chamber will also have a presence at the Harrison/Agassiz Job Fair.
- Attended the Vimy Ridge 100th Anniversary Commemoration Ceremony and thanked Alanna Carmichael and our community partners for putting on this event.

Councillor Buckley

- Attended Vimy Ridge 100th Anniversary Commemoration Ceremony on April 9, 2017 and thanked everyone involved in organizing the event.

11.

REPORTS FROM MAYOR LEO FACIO

- Reported on the Real Time Intelligence Center BC statistics and highlights for March 2017.
- Reported that Fraser Health has invested in substance use treatment beds and services.
- Reported that the local Social Club had their annual trip the Harrison Resort & Spa where they were treated to use the public pools and enjoyed lunch.
- Attended the Fraser Valley Regional District Regional and Corporate Services Committee meeting on April 11, 2017. There was an update given on the 2017 nuisance mosquito season and a summary of the Outdoor Recreation and Tourism Workshop event.
- Reported that the Province of BC has invested \$36 million to improve the Rosedale overhead and the Agassiz-Rosedale bridge structures and that design work is underway for a shoulder enhancement and resurfacing project on Highway 9.

12.

REPORTS FROM STAFF

- (a) Report of Community Services Manager – April 13, 2017
Re: Agassiz-Harrison Transit Service – BC Transit Fare Structure

Moved by Councillor Buckley
Seconded by Councillor Piper

THAT Council support fare structure Option #3 for the Agassiz-Harrison Transit Service with a cash fare base of \$2.50.

**CARRIED
UNANIMOUSLY**

13. **BYLAWS**

- (a) Report of Financial Officer – April 12, 2017
Re: Tax Rate Bylaw No. 1105, 2017

Moved by Councillor Reyerse
Seconded by Councillor Piper

THAT Tax Rate Bylaw No. 1105, 2017 be given first, second and third reading.

**CARRIED
UNANIMOUSLY**

14. **QUESTIONS FROM THE PUBLIC (pertaining to agenda items only)**

Questions from the public were entertained.

15. **ADJOURNMENT**

Moved by Councillor Buckley
Seconded by Councillor Reyerse

THAT the meeting be adjourned at 7:35 p.m.

**CARRIED
UNANIMOUSLY**

Leo Facio
Mayor

Debra Key
Corporate Officer



VILLAGE OF HARRISON HOT SPRINGS
BYLAW NO. 1105

A Bylaw to establish tax rates for 2017

The Council of the Village of Harrison Hot Springs, in open meeting, lawfully assembled, ENACTS AS FOLLOWS:

1. The following rates are hereby imposed and levied for the year 2017.
 - (a) For all lawful general purposes of the municipality on the assessed value of land and improvements taxable for general municipal purposes, rates appearing in Schedule I attached hereto and forming a part of this bylaw.
 - (b) For Regional Hospital District purposes on the full assessed value of all land and assessed value of all improvements taxable for Regional Hospital District purposes, rates appearing in Column "A" of Schedule II attached hereto and forming a part of this bylaw.
 - (c) For Regional District purposes on the full assessed value of all land and assessed value of all improvements taxable for Regional Hospital District purposes, rates appearing in Column "B" of Schedule II attached hereto and forming a part of this bylaw.
2. The minimum amount of taxation upon a parcel of real property shall be one dollar (\$1.00).
3. This bylaw may be cited as "Tax Rate Bylaw No. 1105, 2017."
4. Tax Rate Bylaw No. 1085, 2016 is hereby repealed.

READ A FIRST TIME THIS 18th DAY OF APRIL, 2017.

READ A SECOND TIME THIS 18th DAY OF APRIL, 2017.

READ A THIRD TIME THIS 18th DAY OF APRIL, 2017.

ADOPTED THIS DAY OF MAY, 2017.

Mayor

Corporate Officer

BYLAW NO. 1105, 2017

SCHEDULE I

GENERAL MUNICIPAL PURPOSES

PROPERTY CLASS	TAX RATES (DOLLARS OF TAX PER \$1,000 TAXABLE VALUE)
	GENERAL MUNICIPAL
1. Residential	3.07997
2. Utilities	10.77990
3. Supportive Housing	3.07997
4. Major Industry	10.47190
5. Light Industry	10.47190
6. Business/Other	9.79430
7. Managed Forest Land	9.23991
8. Recreation/Non Profit	12.84347
9. Farm	3.07997

BYLAW NO. 1105, 2017

SCHEDULE II

PROPERTY CLASS	TAX RATES (DOLLARS OF TAX PER \$1,000 TAXABLE VALUE)		
	A REGIONAL HOSPITAL	B REGIONAL DISTRICT	TOTAL
1. Residential	.16590	.25194	.41784
2. Utilities	.58065	.88179	1.46244
3. Supportive Housing	.16590	.25194	.41784
4. Major Industry	.56406	.85660	1.42066
5. Light Industry	.56406	.85660	1.42066
6. Business/Other	.40646	.61725	1.02371
7. Managed Forest Land	.49770	.75582	1.25352
8. Recreation/Non Profit	.16590	.25194	.41784
9. Farm	.16590	.25194	.41784

RECEIVED

APR 21 2017



COPY

FILE #	DATE
0400-90	Apr. 21/17
<input type="checkbox"/> CAO	<input type="checkbox"/> CO
<input type="checkbox"/> DCAO	<input type="checkbox"/> ADMIN/ FINANCE
<input type="checkbox"/> DIRF	<input type="checkbox"/> B/L ENF
<input type="checkbox"/> MGR REV SVCS	<input checked="" type="checkbox"/> MAYOR
<input type="checkbox"/> CEDO	<input type="checkbox"/> COUNCIL
<input type="checkbox"/> OP. MGR	
ITEM	A B C
COUNCIL AGENDA	
DATE	MAY 1/17
	INITIALS
(ITEMS: A-REQ, ACTION; B - INFO - WRESP; C - INFO ONLY)	

April 11, 2017

Mayor John Van Laerhoven
District of Kent
PO Box 70
7170 Cheam Avenue
Agassiz, BC
VOM 1A0

Dear Mayor Van Laerhoven,

Thank you for your letter from March 16, 2017 advocating on behalf of the District of Kent and Village of Harrison Hot Springs communities for more health services and access to professional services within these areas. I couldn't agree more and I would like to reassure you that this is certainly a priority for Fraser Health and the portfolio I am responsible for.

Fraser Health is focusing on refining our primary and community care strategies that include enhanced access to our services especially for special populations, such as seniors, mental health substance use clients, Aboriginal people and complex medical patients.

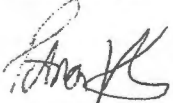
The Agassiz Medical Clinic has currently two full time family physician and two Nurse Practitioners providing primary care and supporting the population in Agassiz and surrounding communities. One of these family physicians is leaving the clinic at the end of June and we are in the process of recruiting two additional physicians for this office starting in the summer and fall of this year. In addition, we have initiated an outreach service from our Seniors Clinic, whereby the clinical resource nurse comes on a weekly basis to the Agassiz clinic to assess elderly and/or frail patients that either already have been referred to the Seniors Clinic or are in need of specialized support and guidance.

With our newly established Internal Medicine physician group at Chilliwack General Hospital we are also exploring the opportunity to have this specialty resource attend a clinic in Agassiz on a weekly basis to support medical guidance and treatments for the population within these communities. This will as well enhance the access to specialty services within the communities you support and advocate for.

The population in the District of Kent and the Village of Harrison Hot Springs is a growing elderly population that comes with its challenges and prevalence's of chronic conditions. We will continue to advocate for quality care and services to our patients, clients and residents and ensure that timely access to appropriate services closer to home can be provided.

Thank you again for your interest and advocating for local health services in order to maintain, sustain and improve the health of the residents in the communities you support.

Best Regards,



Petra Pardy

Executive Director, Health Service Areas, Chilliwack, Hope and Agassiz

CC: District of Kent Council
Mayor Leo Facio, VHHS
Laurie Throness, MLA
Jati Sidhu, MP



FILE #	DATE
0220	Apr. 26/17
<input type="checkbox"/> CAO	<input type="checkbox"/> CO
<input type="checkbox"/> DCAO	<input type="checkbox"/> ADMIN/ FINANCE
<input type="checkbox"/> DIRF	<input type="checkbox"/> B/L ENF
<input type="checkbox"/> MGR REV SVCS	<input type="checkbox"/> MAYOR
<input type="checkbox"/> CEDO	<input type="checkbox"/> COUNCIL
<input type="checkbox"/> OP. MGR	
ITEM	A B C
COUNCIL AGENDA	
DATE MAY 4 /17	
INITIAL [Signature]	
(ITEMS: A-REQ, ACTION: B - INFO - WRESP; C - INFO ONLY)	

RECEIVED
APR 26 2017
BY VILLAGE OF HARRISON HOT SPRINGS

April 2017

To whom it may concern:

RE: Royal Canadian Legion, Branch 32 Agassiz Inaugural Golf Tournament July 8, 2017

We are writing to you to request your consideration in supporting our inaugural golf tournament being held at Harrison Hot Springs Resort Golf course on July 8, 2017. We are hoping to establish an annual tournament where we can raise funds to help not only our Veterans but others in our community that require assistance. With the help of community members such as yourself we are positive we can reach this goal.

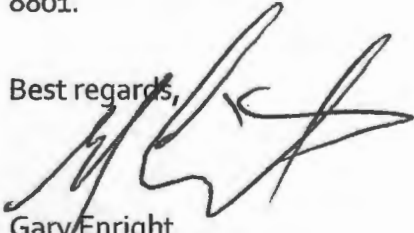
This year's goal is to raise \$5,000 to be shared between a young local boy suffering from a rare medical condition known Battens Disease and the upgrade of a safe parking lot for our Seniors to access the Hall.

The tournament will be open to the public therefore offering your business/organization an opportunity to shine as a supporter of community needs through our fundraising effort. Please consider donating a prize for our prize table, an item for the raffle or perhaps sponsoring a hole.

We understand that there are always requests from well deserving organization for support and that you can only help out with so many. We would ask that you would consider our request in the light of our community and Veteran support. We will be sure to recognize you during our event.

Thank you for considering our request. If you would like further information or if you would like to arrange for one of our volunteers to pick up your donation, please contact astrikjeff@gmail.com or call either Angela Striker at 604-791-3855 or Cathy Squires at 604-798-8801.

Best regards,


Gary Enright
President - RCL Branch 32, Agassiz



Village of Harrison Hot Springs

Audit Results and Communications
Report to the Mayor and Council

For the fiscal year ended December 31, 2016

April 24, 2017





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E-mail: bcox@bdo.ca

April 24, 2017

Mayor and Council
Village of Harrison Hot Springs
495 Hot Springs Road, PO Box 160
Harrison Hot Springs, BC V0M 1K0

Dear Mayor and Council Members:

We are pleased to present the results of our audit of the financial statements of the Village of Harrison Hot Springs (the "Village") for the year ended December 31, 2016. The purpose of our report is to summarize certain aspects of the audit that we believe to be of interest to the Mayor and Council ("Council") and should be read in conjunction with the draft financial statements.

Our audit and therefore this report will not necessarily identify all matters that may be of interest to the Council in fulfilling its responsibilities.

This report has been prepared solely for the use of the Council and should not be distributed without our prior consent. Consequently, we accept no responsibility to a third party that uses this communication.

We wish to express our appreciation for the co-operation we received during the audit from the Village's management and staff that assisted us in carrying out our work. We look forward to discussing the contents of this report and any other matters that you consider appropriate.

Yours truly,

Bill Cox, FCPA, FCA
Partner through a corporation
BDO Canada LLP
Chartered Professional Accountants

BC/mkn



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EXECUTIVE SUMMARY

Audit Results	<p>Our audit of the financial statements was designed to obtain reasonable, rather than absolute, assurance as to whether the financial statements are free of material misstatement.</p> <p>A detailed description of our audit results has been included on page 6.</p>
Status of Audit	<p>As of the date of this final report, we have substantially completed our audit of the December 31, 2016 financial statements pending the completion of the items highlighted below. These items will need to be completed prior to issuance of our audit report on the financial statements:</p> <ul style="list-style-type: none">• Receipt of the signed management representation letter• Subsequent events review through to financial statement approval date• Approval of financial statements by Council
Audit Risks	<p>In accordance with our audit plan, our procedures focused on the following areas that we identified as containing risks of material misstatements:</p> <ul style="list-style-type: none">• Risk of Management Override• Revenue Recognition• Cash• Staff Salaries• Tangible Capital Assets and Accumulated Amortization• Contaminated Sites <p>We have summarized the results of our audit procedures for each of these risk areas on page 6 of this report.</p>
Internal Control Over Financial Reporting	<p>We did not identify any significant deficiencies in internal controls over financial reporting during the year ended December 31, 2016 that we considered to be material weaknesses.</p>
Fraud and Illegal Activities	<p>We developed procedures within our audit plan as recommended by CAS 240 - The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements. Based on these procedures, we have not encountered any illegal activities or fraudulent events with respect to the Village.</p>
Significant Events	<p>As of the date of this letter, we have not identified any significant events which we believe should be brought to your attention.</p>
Significant Accounting Policies	<p>The Village's significant accounting policies are set forth in Note 1 to the financial statements, and it is the Village's policy to follow Canadian public sector accounting standards.</p>



Estimates	<p>Accounting estimates are an integral part of the financial statements and are based on management's current judgments. These judgments are based on knowledge and experience about past and current events, assumptions about future events and interpretations of the financial reporting standards.</p> <p>Our comments on the significant estimates included in the financial statements are included on page 8 of this report.</p>
Audit Adjustments and Unadjusted Differences	<p>Our final materiality level is \$114,000, which changed from the planning materiality of \$90,000 as stated in our audit planning letter dated January 13, 2017.</p> <p>Unadjusted misstatements for the year ended December 31, 2016 is included in Appendix C.</p> <p>There were no audit adjustments noted.</p>
Disclosures	<p>There are no material omissions with respect to the disclosures in the financial statements for the year ended December 31, 2016 that we have noted.</p>
Independence	<p>We confirm that we are still independent as of the date of this letter.</p>
Representation Letter	<p>A draft version of the representation letter to be signed by management is included in Appendix D.</p>
Conclusion	<p>We intend to issue an unmodified audit report on the financial statements for the year ended December 31, 2016 once the outstanding items referred to above are satisfactorily resolved and the financial statements are approved by the Council.</p>



AUDIT FINDINGS

Based on our knowledge of the Village’s operations, our past experience in this area, and knowledge gained from management, we have identified the following significant risks; those risks of material misstatement that, in our judgment, require special audit consideration.

Significant risks arise mainly because of the complexity of the accounting rules, the extent of estimation and judgment involved in the valuation of these financial statement areas, and the existence of new accounting pronouncements that affect them.

As part of our ongoing communications with you, we are required to have a discussion on our views about significant qualitative aspects of the Village’s accounting practices, including accounting policies, accounting estimates and financial statement disclosures.

ACCOUNTING AND AUDIT MATTERS

Prior Period Adjustment

Adjustments were made to prior period figures to accrue for liabilities related to post employment benefits for sick leave, long service payout and severance pay provided by the Village. In prior years, the Village set up a reserve for these future benefits. However, as required by accounting standards, these benefits are required to be accrued as staff provide services to the Village. The Village hired a specialist to prepare a valuation of these benefit liabilities at December 31, 2015. The adjustments have been correctly stated on the financial statements and are explained in Note 21.

AUDIT RISK AREAS

Revenue Recognition

Risk	Approach	Results
Accounting standards have changed in this area and are complex and open to interpretation. There is a risk that revenue may be incorrectly deferred into future periods.	<p>The revenue stream subject to this risk are transfers from governments, which were agreed to grant claims and cash receipts to ensure that amount recorded exist, are complete, and are recorded accurately.</p> <p>Grant expenditures have also been reviewed to ensure that they meet the requirements per the grant agreement.</p> <p>Other revenues streams have also been reviewed in accordance with latest revenue recognition standards.</p>	<p>All audit testing in this area was executed as planned.</p> <p>We noted one issue related to an unrestricted grant that was incorrectly deferred at December 31, 2015. The grant funds was recorded as revenue in 2016 in error. See Appendix C.</p>



Management Override of Controls

Risk	Approach	Results
<p>Management is in a unique position to perpetrate fraud because of management's ability to directly or indirectly manipulate accounting records, and prepare fraudulent financial statements by overriding controls that otherwise appear to be operating effectively.</p> <p>[A required risk for all audits pursuant to Canadian audit standards.]</p>	<p>We tested the appropriateness of journal entries recorded in the general ledger and other adjustments made in the preparation of the financial statements.</p>	<p>All audit testing in this area was executed as planned and no issues were noted.</p>

Cash

Risk	Approach	Results
<p>Cash planning is an important aspect of good financial controls.</p> <p>Due to its nature, cash is almost always considered to be a risk area in any audit.</p>	<p>We reviewed the reconciliations, performed substantive testing of transactions, and obtained confirmations of end of period balances.</p>	<p>All audit testing in this area was executed as planned and no issues were noted.</p>

Staff Salaries

Risk	Approach	Results
<p>A significant single type of expenditure that covers many employees and departments. As a municipality, this figure is often of particular interest to financial statement users (taxpayers).</p>	<p>We performed systems testing as well as and analytical review of staff salary and levels.</p>	<p>All audit testing in this area was executed as planned and no issues were noted.</p>



Tangible Capital Assets and Accumulated Amortization

Risk	Approach	Results
<p>It is important that the useful lives of tangible capital assets owned by the Village are appropriate and remain accurate. This involves a high level of estimation and coordination of the finance department with other departments.</p>	<p>We performed tests of controls for appropriate authorization of purchases combined with substantive testing of additions and disposals in the year and amortization calculations.</p> <p>We reviewed the useful lives of existing assets for changes in estimates.</p> <p>We reviewed the repairs and maintenance ledgers for possible capital items.</p>	<p>All audit testing in this area was executed as planned and no issues were noted.</p>

Contaminated Sites

Risk	Approach	Results
<p>Due to the complexity of this standard, there is a risk that not all of the contaminated sites are identified, estimated and disclosed correctly.</p>	<p>Reviewed management's assessment of possible contaminated sites and assessed for plausibility.</p>	<p>All audit testing in this area was executed as planned and no issues were noted.</p>

SIGNIFICANT ACCOUNTING ESTIMATES

Management is responsible for determining the Village's significant accounting policies. The choice between accounting policy alternatives can have a significant effect on the financial position and results of the Village. The application of those policies often involves significant estimates and judgments by management. Based on the audit work that we have performed, it is our opinion that the estimates in the financial statements are reasonable and the disclosures relating to accounting estimates are in accordance with Canadian public sector accounting standards.

UNADJUSTED DIFFERENCES

We have disclosed all significant unadjusted differences and disclosure omissions identified through the course of our audit engagement. Each of these items has been discussed with management.

Management has determined that the unadjusted differences are immaterial both individually and in aggregate to the financial statements taken as a whole. Should Council agree with this assessment, we do not propose further adjustments.

For purposes of our discussion, a summary of unadjusted differences has been presented in Appendix C.

AUDIT ADJUSTMENTS

Year-end audit adjustments were discussed with management and approved before the release of the draft financial statements. A summary of these adjustments is included in Appendix D.



MANAGEMENT REPRESENTATIONS

During the course of our audit, management made certain representations to us. These representations were verbal or written and therefore explicit, or they were implied through the financial statements. Management provided representations in response to specific queries from us, as well as unsolicited representations. Such representations were part of the evidence gathered by us to be able to draw reasonable conclusions on which to base our audit opinion. These representations were documented in our audit working papers through memoranda of discussions with management, as well as by written representations received from management. A copy of the representation letter we have requested from management is included in Appendix D of this report.



FRAUD DISCUSSION

Canadian auditing standards require us to discuss fraud risk with the Council on an annual basis. We have prepared the following comments:

Required Discussion	BDO Response	Question to Council
Details of existing oversight processes with regards to fraud.	Throughout our planning process and during fieldwork, we have developed an understanding of your oversight processes including: <ul style="list-style-type: none"> • Council bylaws and policies; • Discussions at Council meetings and our attendance at those meetings; • Review of related party transactions; and • Consideration of tone at the top. 	Are there any new processes or changes in existing processes relating to fraud since the date of our previous discussions, that we should be aware of?
Knowledge of actual, suspected or alleged fraud.	Currently, we are not aware of any actual, suspected or alleged fraud.	Are you aware of any instances of actual, suspected or alleged fraud affecting the Village?

AUDITOR'S RESPONSIBILITIES FOR DETECTING FRAUD

We are responsible for planning and performing the audit to obtain reasonable assurance that the financial statements are free of material misstatements, whether caused by error or fraud.

The likelihood of not detecting a material misstatement resulting from fraud is higher than the likelihood of not detecting a material misstatement resulting from error, because fraud may involve collusion as well as sophisticated and carefully organized schemes designed to conceal it.

During our audit, we performed the following procedures in order to fulfill our responsibilities:

- Inquire of management, Council, and others related to any knowledge of fraud, suspected fraud or alleged fraud;
- Perform disaggregated analytical procedures and consider unusual or unexpected relationships identified in the planning of our audit;
- Incorporate an element of unpredictability in the selection of the nature, timing and extent of our audit procedures; and
- Perform additional required procedures to address the risk of management's override of controls including:
 - Test internal controls designed to prevent and detect fraud;
 - Examine a sample of journal entries and other adjustments for evidence of the possibility of material misstatement due to fraud;
 - Review accounting estimates for biases that could result in material misstatements due to fraud, including a retrospective review of significant prior years' estimates; and
 - Evaluate the Village's rationale for significant unusual transactions.



INTERNAL CONTROL MATTERS

During the course of our audit, we performed the following procedures with respect to the Village's internal control environment:

- Documented operating systems to assess the design and implementation of control activities that were relevant to the audit.
- Discussed and considered potential audit risks.

The results of these procedures were considered in determining the extent and nature of substantive audit testing required.

We are required to report to you in writing, significant deficiencies in internal control that we have identified during the audit. A significant deficiency is defined as a deficiency or combination of deficiencies in internal control that, in the auditor's professional judgment, is of sufficient importance to merit the attention of those charged with governance.

As the purpose of the audit is for us to express an opinion on the Village's financial statements, our audit cannot be expected to disclose all matters that may be of interest to you and, as a result, the matters reported may not be exhaustive. As part of our work, we considered internal controls relevant to the preparation of the financial statements such that we were able to design appropriate audit procedures. This work was not for the purpose of expressing an opinion on the effectiveness of internal controls.

DEFICIENCIES IN INTERNAL CONTROL

Deficiency	Issue and Impact
None noted.	None noted.

While there are no significant deficiencies in internal controls noted, we do take the opportunity to comment on non-critical matters in our "Management Letter".



APPENDIX A - Other Required Communication

Required Communication	Audit Planning Presentation	Audit Results Presentation	Auditor Comments
1. Our responsibilities under Canadian Auditing Standards (CAS)	✓		Included in our engagement letter dated December 13, 2016.
2. Our audit strategy and audit scope	✓		Included in our Planning Report dated January 13, 2017.
3. Fraud risk factors	✓		Included on page 9 of this final report.
4. Going concern matters		✓	None.
5. Significant estimates or judgments		✓	See Page 8.
6. Audit adjustments		✓	None noted.
7. Unadjusted differences		✓	See Appendix C.
8. Omitted disclosures		✓	None.
9. Disagreements with management		✓	There were no disagreements with management.
10. Consultations with other accountants or experts		✓	No external experts were consulted during this engagement.
11. Major issues discussed with management in regards to retention		✓	None.
12. Significant difficulties encountered during the audit		✓	No significant difficulties were encountered during our audit.
13. Significant deficiencies in internal control		✓	No significant deficiencies were noted.
14. Material written communication between BDO and management		✓	No material written communications were noted.
15. Any relationships which may affect our independence	✓	✓	No independence issues noted.



16. Any illegal acts identified during the audit	✓	No illegal activities identified through the audit process.
17. Any fraud or possible fraudulent acts identified during the audit	✓	No fraud identified through the audit process.
18. Significant transactions with related parties not consistent with ordinary business operations	✓	None noted.
19. Non-compliance with laws or regulations identified during the audit	✓	No legal or regulatory non-compliance matters were noted as part of our audit.
20. Limitations of scope over our audit, if any	✓	None.
21. Written representations made by management	✓	See Appendix D.
22. Any modifications to our opinion, if required	✓	Please see our draft auditor's report included in Appendix B.



APPENDIX B - Draft Independent Auditor's Report

INDEPENDENT AUDITOR'S REPORT

To the Mayor and Council of the Village of Harrison Hot Springs

We have audited the accompanying financial statements of the Village of Harrison Hot Springs, which comprise the Statement of Financial Position as at December 31, 2016, and the Statements of Operations, Change in Net Financial Assets and Cash Flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted the audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Village of Harrison Hot Springs as at December 31, 2016, and the results of its operations, changes in net financial assets and cash flows for the year then ended, in accordance with Canadian public sector accounting standards.

Emphasis of Matter

Without modifying our opinion, we draw attention to Note 21 to the financial statements, which explains that certain comparative information for the year ended December 31, 2015 has been restated.

Other Matter

The financial statements of the Village of Harrison Hot Springs for the year ended December 31, 2015 were audited by other auditors who expressed an unqualified opinion on those financial statements on May 2, 2016.

Chartered Professional Accountants

Vancouver, British Columbia
May 1, 2017



APPENDIX C - Unadjusted Differences

SUMMARY OF UNADJUSTED DIFFERENCES

The following is a summary of uncorrected misstatements noted during the course of our audit engagement:

	Increase (Decrease)			
	Assets	Liabilities	Accumulated Surplus	Annual Surplus
Grant revenue recognized in F2016 that was incorrectly deferred in F2015.	\$ -	\$ -	\$ 11,900	\$ (11,900)
Total	-	-	11,900	(11,900)
Effect of Prior Year's Reversing Errors	-	-	-	-
Total Unadjusted Differences	\$ -	\$ -	\$ 11,900	\$ (11,900)



APPENDIX D - Representation Letter

May 1, 2017

BDO Canada LLP
Chartered Professional Accountants
600 Cathedral Place
925 West Georgia Street
Vancouver, BC V6C 3L2

Dear Sirs:

This representation letter is provided in connection with your audit of the financial statements of Village of Harrison Hot Springs for the year ended December 31, 2016, for the purpose of expressing an opinion as to whether the financial statements are presented fairly, in all material respects, in accordance with Canadian public sector accounting standards.

We confirm that to the best of our knowledge and belief, having made such inquiries as we considered necessary for the purpose of appropriately informing ourselves:

Financial Statements

- We have fulfilled our responsibilities, as set out in the terms of the audit engagement dated December 13, 2016, for the preparation of the financial statements in accordance with Canadian public sector accounting standards; in particular, the financial statements are fairly presented in accordance therewith.
- Significant assumptions used by us in making accounting estimates, including those measured at fair value, are reasonable.
- Related party relationships and transactions have been appropriately accounted for and disclosed in accordance with the requirements of Canadian public sector accounting standards.
- All events subsequent to the date of the financial statements and for which Canadian public sector accounting standards require adjustment or disclosure have been adjusted or disclosed.
- The financial statements of the entity use appropriate accounting policies that have been properly disclosed and consistently applied.
- The effects of uncorrected misstatements are immaterial, both individually and in the aggregate, to the financial statements as a whole. A list of the uncorrected misstatements is attached to the representation letter.
- We have reviewed and approved all journal entries recommended by the auditors during the audit.

Information Provided

- We have provided you with:
 - access to all information of which we are aware that is relevant to the preparation of the financial statements, such as records, documentation and other matters;
 - additional information that you have requested from us for the purpose of the audit; and
 - unrestricted access to persons within the entity from whom you determined it necessary to obtain audit evidence.



- We are responsible for the design, implementation and maintenance of internal controls to prevent, detect and correct fraud and error, and have communicated to you all deficiencies in internal control of which we are aware.
- All transactions have been recorded in the accounting records and are reflected in the financial statements.
- We have disclosed to you all known instances of non-compliance or suspected non-compliance with laws and regulations whose effects should be considered when preparing the financial statements.
- We have disclosed to you the identity of the entity's related parties and all the related party relationships and transactions of which we are aware.

Fraud and Error

- We have disclosed to you the results of our assessment of the risk that the financial statements may be materially misstated as a result of fraud.
- We have disclosed to you all information in relation to fraud or suspected fraud that we are aware of and that affects the entity and involves:
 - management;
 - employees who have significant roles in internal control; or
 - others where the fraud could have a material effect on the financial statements.
- We have disclosed to you all information in relation to allegations of fraud, or suspected fraud, affecting the entity's financial statements communicated by employees, former employees, analysts, regulators, or others.

Existence, Completeness and Valuation of Specific Financial Statement Balances

- All assets, wherever located, to which the Village had satisfactory title at year end, have been fairly stated and recorded in the financial statements. There are no liens or encumbrances on the Village's assets.
- All financial instruments have been appropriately recognized and measured in accordance with Canadian public sector accounting standards. Significant assumptions used in arriving at fair value of financial instruments are reasonable and appropriate in the circumstances.
- Where the value of an asset has been impaired, an appropriate provision has been made in the financial statements or has otherwise been disclosed to you.
- The employee future benefit costs, assets and obligation have been determined, accounted for and disclosed in accordance with Canadian public sector accounting standards. The source data and plan provisions provided are complete and accurate. The plans included in the valuation are complete. The determination of the discount rate and the use of specific assumptions are our best estimate assumptions.

General Representations

- The nature of all material uncertainties have been appropriately measured and disclosed in the financial statements, including all estimates where it is reasonably possible that the estimate will change in the near term and the effect of the change could be material to the financial statements.
- There were no direct contingencies or provisions (including those associated with guarantees or indemnification provisions), unusual contractual obligations nor any substantial commitments, whether oral or written, other than in the ordinary course of business, which would materially affect the financial statements or financial position of the Village, except as disclosed in the financial statements.



- We confirm that there are no derivatives or off-balance sheet financial instruments held at year end that have not been properly recorded or disclosed in the financial statements.
- We have disclosed to you all significant customers and/or suppliers of the organization who individually represent a significant volume of business with the organization. We are of the opinion that the volume of business (sales, services, purchases, borrowing and lending) done by the organization with any one party is not of sufficient magnitude that discontinuance would have a material negative effect on the ongoing operations of the organization.
- There have been no plans or intentions that may materially affect the carrying value or classification of assets and liabilities.
- No significant matters, other than those disclosed in the financial statements, have arisen that would require a restatement of the comparative financial statements.

Other Representations Where the Situation Exists

- We have informed you of all known actual or possible litigation and claims, whether or not they have been discussed with legal counsel. Since there are no actual, outstanding or possible litigation and claims, no disclosure is required in the financial statements.

Yours truly,

Signature

Position

Signature

Position



HARRISON HOT SPRINGS

Naturally Refreshed

Village of Harrison Hot Springs

Financial Statements

December 31, 2016

Village of Harrison Hot Springs

December 31, 2016

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Management's Responsibility for Financial Reporting

The financial statements of the Village of Harrison Hot Springs (the Village) are the responsibility of management and have been prepared in accordance with Canadian public sector accounting standards, consistently applied and appropriate in the circumstances. The preparation of the financial statements requires the use of estimates which have been made using careful judgement. In management's opinion, the financial statements have been properly prepared within the framework of the accounting policies summarized in the financial statements and incorporate within reasonable limits of materiality, all information available as of the audit date. The financial statements have also been reviewed and approved by the Mayor and Council of the Village.

Management maintains a system of internal controls designed to provide reasonable assurance that assets are safeguarded, transactions are properly authorised and recorded in compliance with legislative and regulatory requirements and that reliable financial information is available on a timely basis. These systems are monitored and evaluated by management. Council is responsible for ensuring that management fulfills its responsibilities for financial reporting and internal control.

The financial statements have been examined by the Village's independent external auditor, BDO Canada LLP in accordance with Canadian generally accepted auditing standards. The external auditor's responsibility is to express their opinion on whether the financial statements, in all material respects, fairly present the Village's financial position, results of operations, changes in net financial assets and cash flows in accordance with Canadian public sector accounting standards. Their Independent Auditor's Report outlines the scope of their examination and their opinion.

The external auditor has full and open access to all records of the Village and has direct access to management and Council when required.

Madeline McDonald
Chief Administrative Officer
May 1 , 2017

Tracey Jones
Financial Officer
May 1 , 2017



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vancouver@bdo.ca
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BDO Canada LLP
600 Cathedral Place
925 West Georgia Street
Vancouver BC V6C 3L2 Canada

Independent Auditor's Report

To the Mayor and Council of the Village of Harrison Hot Springs

We have audited the accompanying financial statements of the Village of Harrison Hot Springs, which comprise the Statement of Financial Position as at December 31, 2016, and the Statements of Operations, Change in Net Financial Assets and Cash Flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted the audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of the Village of Harrison Hot Springs as at December 31, 2016, and the results of its operations, changes in net financial assets and cash flows for the year then ended, in accordance with Canadian public sector accounting standards.

Emphasis of Matter

Without modifying our opinion, we draw attention to Note 21 to the financial statements, which explains that certain comparative information for the year ended December 31, 2015 has been restated.

Other Matter

The financial statements of the Village of Harrison Hot Springs for the year ended December 31, 2015 were audited by other auditors who expressed an unqualified opinion on those financial statements on May 2, 2016.

Chartered Professional Accountants

Vancouver, British Columbia
May 1, 2017

BDO Canada LLP, a Canadian limited liability partnership, is a member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of independent member firms.

Village of Harrison Hot Springs

Statement of Financial Position

As at December 31, 2016

	2016	2015 Restated Note 21
Financial assets		
Cash (Note 2)	7,208,557	7,794,822
Accounts Receivable (Note 3)	896,906	820,704
MFA Deposits (Note 4)	6,287	6,103
	8,111,750	8,621,629
Liabilities		
Accounts Payable and Accrued Liabilities (Note 5)	420,142	393,735
Employee Future Benefits (Note 6)	93,800	78,000
Developer's Deposits and Other Trust Liabilities (Note 7)	377,665	378,097
Deferred Revenue (Note 8)	263,093	500,267
Development Cost Charges (Note 9)	1,575,819	1,212,301
Capital lease (Note 10)	106,046	139,211
Long-term debt (Note 11)	568,905	600,000
Interim financing debt (Note 12)	440,000	550,000
	3,845,470	3,851,611
Net financial assets	4,266,280	4,770,018
Non-financial assets		
Tangible Capital Assets (Note 13, Schedule 1)	33,517,112	31,234,292
Prepaid expenses	65,840	35,302
	33,582,952	31,269,594
Accumulated surplus	37,849,232	36,039,612
Represented by:		
Operating fund (Note 15)	3,147,858	3,385,784
Appropriated Surplus (Note 15)	1,040,150	1,690,730
Statutory Reserves (Note 15)	1,259,060	1,018,016
Equity in tangible capital assets (Note 14)	32,402,164	29,945,082
	37,849,232	36,039,612

Madeline McDonald,
Chief Administrative Officer

Leo Facio
Mayor

The accompanying notes and schedule are an integral part of these financial statements.

Village of Harrison Hot Springs

Statement of Operations

for the year ended December 31, 2016

	Budget (Note 22)	2016	2015
Revenue			
Property Taxes (Note 16)	1,972,400	1,972,081	1,920,696
Sale of Services (Note 17)	928,740	1,171,999	884,361
Utility Service Fees (Note 18)	394,000	401,154	395,923
Government Transfers (Note 19)	1,929,700	1,937,998	1,036,076
Investment Income	42,400	54,759	56,795
Penalties and interest	48,500	57,222	57,464
Development Cost Charges (Note 9)	350,000	7,065	16,480
Other revenue	17,900	117,856	36,548
	5,688,640	5,720,134	4,404,343
Expenses (Note 23)			
Legislative Services	130,750	108,704	109,463
General Government	916,320	888,867	1,065,420
Protective Services	241,050	182,432	181,428
Public Works	381,450	410,781	266,367
Transportation Services	473,900	455,551	389,137
Public Health	5,200	5,657	3,838
Planning and Development	233,400	156,114	33,422
Tourism, Community and Economic Development	89,800	95,242	146,511
Sustainability	10,800	7,711	9,559
Solid Waste Management and Recycling	194,400	141,299	171,070
Beaches, Parks, Recreation and Culture	566,050	448,369	434,127
Water Services	374,900	308,845	358,300
Sewer Services	759,100	700,942	600,088
	4,377,120	3,910,514	3,768,730
Annual surplus	1,306,520	1,809,620	635,613
Accumulated surplus, beginning of year re-stated (Note 15 , 20)	36,039,612	36,039,612	35,403,999
	37,346,132	37,849,232	36,039,612

The accompanying notes and schedule are an integral part of these financial statements.

Village of Harrison Hot Springs

Statement of Change in Net Financial Assets

For the Year Ended December 31, 2016

	Budget (Note 22)	2016	2015
Annual Surplus	1,306,520	1,809,620	635,613
Acquisition of tangible capital assets	(3,664,300)	(3,135,321)	(604,698)
Amortization Note 1., Schedule 1	794,000	852,502	792,248
	(1,563,780)	(473,199)	823,163
Acquisition of prepaid expenses	-	(65,840)	(35,302)
Use of prepaid expenses	-	35,302	54,696
	-	(30,538)	19,394
Increase (decrease) in net financial assets	(1,563,780)	(503,737)	842,557
Net financial assets, beginning of year	4,770,018	4,770,018	3,927,461
Net financial assets, end of year	3,206,238	4,266,281	4,770,018

The accompanying notes and schedule are an integral part of these financial statements.

Village of Harrison Hot Springs

Statement of Cash Flows

For the Year Ended December 31, 2016

	2016	2015
Cash provided by (used in):		
Operating Transactions		
Annual surplus	1,809,620	635,613
Non Cash items:		
Amortization	852,502	792,248
Changes to cash items:		
Accounts receivable	(76,202)	(14,965)
MFA Deposits	(184)	(6,103)
Accounts payable and accrued liabilities	25,976	(31,359)
Prepaid expenses	(30,538)	19,394
Employee Future Benefits	15,800	-
Deferred revenue	(237,174)	(148,669)
Development Cost Charges	363,518	234,280
Net change in cash from operating transactions	2,723,318	1,480,439
Capital Transactions:		
Acquisition of tangible capital assets	(3,135,321)	(604,698)
Net change in cash from capital transactions	(3,135,321)	(604,698)
Financing Transactions		
Debt repayment	(174,262)	(82,120)
Proceeds from Debt	-	600,000
Net change in cash from financing transactions	(174,262)	517,880
Net change in cash	(586,265)	1,393,621
Cash at beginning of year	7,794,822	6,401,201
Cash, end of year	7,208,557	7,794,822

The accompanying notes and schedule are an integral part of these financial statements.

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

1. Significant Accounting Policies

The Financial Statements of the Village of Harrison Hot Springs which are the representation of management are prepared in accordance with Canadian generally accepted accounting principles for governments as prescribed by the Public Sector Accounting Board (PSAB) of the Chartered Professional Accountants Canada. Significant accounting policies adopted by the Village are as follows:

a. Basis of reporting

The Financial Statements reflect the combined results and activities of the reporting entity which is comprised of the Operating, Capital and Reserve funds. Inter-fund transactions have been eliminated .

- i. Operating Funds: These funds include the General, Water and Sewer operations of the Village. They are used to record the operating costs of the services provided by the Village.
- ii. Capital funds: These funds include the General, Water and Sewer capital funds. They are used to record the acquisition and disposal of property and equipment and their financing.
- iii. Reserve funds: Under the *Community Charter*, Village Council may, by bylaw establish reserve funds for specified purposes. Money in a Statutory Reserve Fund, and interest earned thereon, must be expended by bylaw only for the purpose for which the fund was established. If the amount in a reserve fund is greater than required, Village Council may, by bylaw, transfer all or part of the balance to another reserve fund. Non-statutory Reserves require being included in an approved council budget or a resolution before these funds can be expended.

b. Revenue Recognition

The Village recognizes the transfer of government funding as revenue when the transfer is authorized and any eligibility criteria are met, except to the extent that the transfer stipulations give rise to an obligation that meets the definition of a liability. Transfers are recognized as deferred revenue when the transfer stipulations give rise to a liability. Transfer revenue is recognized in the statement of operations as the stipulation liabilities are settled.

Taxation revenues are recognized at the time of issuing the property tax notices for the fiscal year. Sale of services and user fees are recognized when the service or product is provided by the Village. All other revenue is recognized as it is earned and is measurable. Revenue unearned in the current period is recorded as deferred revenue and is recognized as revenue in the fiscal year the services are performed.

Development Cost Charges are restricted revenue liabilities representing funds received from developers and deposited into separate deferred revenue liability accounts for specific future capital expenses. In accordance with Canadian public sector accounting standards, the Village records these funds as restricted revenue which is then recognized when the related costs are incurred.

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

1. Significant Accounting Policies

c. Financial Instruments

The Village's financial instruments consist of cash, accounts receivable, accounts payable and accrued liabilities, long-term debt and interim financing debt. It is management's opinion that the Village is not exposed to significant interest, currency or credit risk arising from these financial instruments.

d. Non-financial Assets

Non-financial assets are not available to discharge existing liabilities and are held for use in the provision of services. They may have useful lives extending beyond the current year and are not intended for sale in the ordinary course of operations.

i. Tangible Capital Assets

Tangible capital assets, comprised of capital assets and assets under construction, are recorded at cost less accumulated amortization and are classified according to their functional use. Amortization is recorded on a straight-line basis over the estimated useful life of the asset commencing when the asset is put in to service.

Asset	Useful Life - Years
Land improvements	10-25
Parks infrastructure	10-50
Buildings	40-50
Machinery, furniture and equipment	5-10
IT infrastructure	4-10
Vehicles	5-20
Roads infrastructure	15-75
Water infrastructure	10-100
Sewer infrastructure	10-100
Drainage infrastructure	10-100

ii. Contributions of tangible capital assets

Tangible capital assets received as contributions are recorded at their fair value at the time of donation.

iii. Works of art and cultural and historic assets

Works of art and cultural and historic assets are not recorded as assets in these financial statements.

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

1. Significant Accounting Policies

d. Non-financial Assets

iv. Leased tangible capital assets

Leases which transfer substantially all the benefits and risks incidental to ownership of property are accounted for as leased tangible capital assets.

e. Use of estimates

The preparation of financial statements in accordance with Canadian public sector accounting standards requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from management's best estimates as additional information becomes available in the future. Areas requiring the greatest degree of estimation include employee future benefits and useful lives of tangible capital assets.

f. Liability for Contaminated Sites

Contaminated sites are a result of contamination being introduced into air, soil, water or sediment of a chemical, organic or radioactive material or live organism that exceeds environmental standard. The liability is recorded net of any expected recoveries. A liability for remediation of contaminated sites is recognized when a site is not in productive use and all the following criteria are met:

- (i) an environmental standard exists;
- (ii) contamination exceeds the environmental standard;
- (iii) the Village is directly responsible or accepts responsibility;
- (iv) it is expected that future economic benefits will be given up; and
- (v) a reasonable estimate of the amount can be made.

The liability is recognized as management's estimate of the cost of post-remediation including operation, maintenance and monitoring that are an integral part of the remediation strategy for a contaminated site.

The Village has determined that as of December 31, 2016, no contamination in excess of an environmental standard exists to land not in productive use for which the Village is responsible.

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

2. Cash

	2016	2015
Restricted cash		
Statutory Reserves	\$ 1,259,060	\$ 1,018,016
Non-Statutory Reserves	1,040,150	1,690,730
Development Cost Charges/Deposits in Trust	2,216,577	1,903,407
	4,515,787	4,612,153
Unrestricted cash	2,692,770	3,182,669
Total cash	\$ 7,208,557	\$ 7,794,822

3. Account Receivable

	2016	2015
Accounts Receivable - Property Taxes	\$ 416,984	\$ 329,001
Accounts Receivable - Other Governments	150,869	189,979
Accounts Receivable - Trade and Other	329,053	301,724
	\$ 896,906	\$ 820,704

4. Municipal Finance Authority Deposits

The Municipal Finance Authority of British Columbia (the MFA) provides capital funding for regional districts and their member municipalities. The MFA is required to establish a Debt Reserve Fund. The MFA must then use this fund if at any time there are insufficient funds to meet payments on its obligations. If this occurs the regional districts may be called upon to restore the fund.

Each regional district, through its member municipalities who share in the proceeds of a debt issue, is required to pay into the Debt Reserve Fund certain amounts set out in the financing agreements. The interest earned on the Debt Reserve fund, less administrative expenses, becomes an obligation of the MFA to the regional districts.

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

5. Accounts Payable and Accrued Liabilities

	2016	2015
Trade and Other	\$ 230,886	\$ 316,845
Holdbacks payable	55,884	10,103
Other government	62,737	1,040
Accrued Employee benefits	70,635	65,747
	\$ 420,142	\$ 393,735

6. Employee Future Benefits

Sick Pay

The Village provides paid sick leave to qualifying employees, this benefit accrues at two days of sick leave per month. At the end of each calendar year 2/3 of the unused portion of sick leave is vested up to a maximum of 360 days. The amount recorded for this benefit is based on an actuarial evaluation prepared by an independent firm and will be reviewed on a periodic basis. The date of the last actuarial evaluation was as of December 31, 2015.

Retirement Allowance

A regular employee who retires under the provisions of the Municipal Pension Plan is entitled to a retirement benefit as outlined in the Collective Agreement and Management Policy. In all instances, the rate of pay used in the calculation of the retirement benefit shall be the rate of pay applicable on the last day worked. The amount recorded for this benefit in 2016 is based on an actuarial evaluation prepared by an independent firm and will be reviewed on a periodic basis. The date of the last actuarial evaluation was as of December 31, 2015.

As of December 31, 2016, \$93,800 (2015 - \$78,000) of the accrued benefit liability has been charged to operations. The significant actuarial assumptions adopted in measuring the Village's accrued benefit liability for Sick Pay and Retirement Allowance are as follows:

	2016	2015
Discount rates	1.90%	1.90%
Expected future inflation	1.75%	1.75%

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

6. Employee Future Benefits

Accrued Benefit Obligation as at December 31, 2016

	2016	2015
Beginning benefit obligation	\$ 78,000	\$ 58,600
Current service cost	20,500	22,900
Interest on accrued benefit obligation	1,800	1,500
Actuarial (gain) loss	-	-
Benefits paid during the year	(6,500)	(5,000)
Ending benefit obligation	93,800	78,000
Less Unamortized net actuarial (loss)	-	-
Accrued Benefit Liability	\$ 93,800	\$ 78,000

7. Developers Deposits and Other Trust Liabilities

	2016	2015
Property and event damage deposits	\$ 40,450	\$ 14,306
Developers Deposit	335,959	335,406
Community groups funds held in trust	1,256	28,385
	\$ 377,665	\$ 378,097

8. Deferred Revenue

	2016	2015
Prepaid taxes	\$ 125,096	\$ 131,482
Facility rentals and other	137,997	368,785
	\$ 263,093	\$ 500,267

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

9. Development Cost Charges

	Opening Balance	Receipts	Interest	Transfers Out	Closing Balance
Sewer DCC	\$ 875,607	\$ 143,156	\$ 10,427	\$ 7,065	\$ 1,022,125
Water DCC	266,919	103,360	3,498	-	373,777
Drainage DCC	44,266	65,265	847	-	110,378
Parks DCC	25,509	43,510	520	-	69,539
	\$ 1,212,301	\$ 355,291	\$ 15,292	\$ 7,065	\$ 1,575,819

10. Capital Lease

In 2013, the Village entered into a 4 year capital lease agreement with the Municipal Finance Authority to finance the acquisition of two pick-up trucks. In 2014, the Village entered into a capital lease agreement with Caterpillar Financial Services Limited to finance the acquisition of a new backhoe in the amount of \$132,725. The term of the lease is five years with an option to purchase at the end of the lease of \$47,723.

Changes in capital lease are as follows:

	2016	2015
Balance, January 1,	\$ 139,212	\$ 171,331
Less: Principal repayments	(33,166)	(32,120)
Balance, December 31	\$ 106,046	\$ 139,211

The minimum lease payments over the next three years of the leases are as follows:

2017	\$ 30,425
2018	22,902
2019	62,133
Less: Amount representing interest	(9,414)
	\$ 106,046

Total interest expense during the year was \$4,868. Total interest over the term of the leases is \$22,660.

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

11. Long-Term Debt

In 2015 the Village borrowed funds under loan authorisation bylaw 1052. MFA Issue 131 has an amortization period of 15 years at 2.2% interest for the first 10 years of the term. Early repayment options exist at the rate reset date of 10 years.

	Balance, beginning of Year	Additions	Principal Repayments	Actuarial * Adjustment	Balance, end of year
General Fund					
MFA Issue 131	\$ 600,000	\$ -	\$ 31,095	\$ -	\$ 568,905

The following principal amounts are payable over the next five years:

	GENERAL	WATER	SEWER
2017	\$ 31,095	\$ -	\$ -
2018	\$ 31,095	\$ -	\$ -
2019	\$ 31,095	\$ -	\$ -
2020	\$ 31,095	\$ -	\$ -
2021	\$ 31,095	\$ -	\$ -
Thereafter	\$ 413,430	\$ -	\$ -
Total	\$ 568,905	\$ -	\$ -

* Actuarial Adjustments represent interest earned on sinking funds held by the Municipal Finance Authority. Such interest is used to reduce the principal amount of outstanding debt.

12. Interim Financing Debt

In 2009 the Village borrowed \$1,500,000 under the Interim Financing Program from the Municipal Finance Authority of British Columbia under Loan Authorisation Bylaw 885, for the purpose of constructing a new water reservoir. In 2015 the Village received an extension and has until 2021 to pay back the principal amount. Any principal balance unpaid will be converted into long-term debt at that time. The Village can pay down any amount on the principal in the next year. Interest was paid monthly in 2016 at daily interest rates that varied between 1.31% and 1.44% . During 2016 the Village paid \$7,541 in interest (2015 \$8,018).

	2016	2015
Beginning Balance Jan 1,	\$ 550,000	\$ 600,000
Principal repayments	(110,000)	(50,000)
Ending Balance, December 31	\$ 440,000	\$ 550,000

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

13. Tangible Capital Assets

	2016	2015
Land and improvements	\$ 9,984,913	\$ 9,984,913
Buildings	3,466,349	996,021
Machinery, equipment, furniture, IT and vehicles	666,202	735,551
Engineering Structures:		
Engineering structures - water	6,303,179	6,420,738
Engineering structures - sewer and drainage	6,754,557	6,913,732
Engineering structures - roads	4,895,669	4,306,829
Engineering structures - parks and other	1,207,488	1,223,517
Other tangible capital assets	199,541	162,195
Work in Progress	39,214	490,796
Total	\$ 33,517,112	\$ 31,234,292

For additional information, see Schedule of Tangible Capital Assets. (Schedule 1)

Included in equipment, furniture and vehicles are vehicles and equipment purchased under capital leases totalling \$209,626 with accumulated amortization to the end of 2016 of \$58,234.

14. Equity in Tangible Capital Assets

Equity in tangible capital assets (TCA) represents the net book value (NBV) of total capital assets less long term obligations assumed to acquire those assets. The change in consolidated equity in tangible capital assets is as follows:

	2016	2015
Equity in TCA, beginning of year	\$ 29,945,082	\$ 30,650,512
Add:		
Capital Expenditures	3,135,322	604,698
Debt Repayments	174,262	82,120
Less:		
Proceeds from Long Term Debt	-	(600,000)
Amortization	(852,502)	(792,248)
Equity in TCA, end of year	\$ 32,402,164	\$ 29,945,082

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

15. Accumulated Surplus

Accumulated surplus consists of individual fund surplus and reserves and reserve funds as follows:

	2016	2015
Surplus:		
Invested in tangible capital assets	\$ 32,402,164	\$ 29,945,082
Operating Fund	3,147,858	3,385,784
Total surplus	35,550,022	33,330,866
Reserves set aside by Council:		
Appropriated Surplus:		
Community Recreation	1,803	406,114
Assessment appeal	127,275	125,901
Beach	36,777	36,379
Building	60,641	59,985
Contingencies	11,088	10,969
Dock replacement	11,064	10,944
Boat Launch	40,332	20,069
Flood box / drainage	15,045	14,883
General	28,449	28,141
Insurance	9,635	9,531
Memorial Hall restoration	5,381	5,323
Parking / traffic management	55,511	54,910
Office Equipment	32,586	22,320
Property	45,914	45,418
Road/Sidewalk	13,046	12,905
Sick leave/Retirement	49,317	42,987
Community Works Fund	117,063	318,900
Sewer	364,470	341,290
Water	14,753	123,761
Total Appropriated Surplus	1,040,150	1,690,730
Statutory Fund Reserves:		
Community amenities	149,289	148,016
Fire department capital	236,640	214,249
Land unexpended funds	12,754	12,616
Parkland acquisition	126,108	124,743
Public works capital	47,968	17,709
Sewage treatment replacement	585,266	400,742
Sewer unexpended funds	80,815	79,940
Port Divestiture income	20,220	20,001
Total Statutory Fund Reserves	1,259,060	1,018,016
	\$ 37,849,232	\$ 36,039,612

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

16. Property Taxes

The Village is reliant upon one taxpayer for approximately 17.09 % (2015, 17.15%) of the municipal property tax revenue. Taxation revenue, reported on the statement of operations, is made up of the following:

	Budget	2016	2015
Taxes collected			
Municipal property taxes	\$ 1,933,000	\$ 1,932,456	\$ 1,883,594
1 % Utility taxes	34,300	34,331	32,035
Payments in lieu of taxes	5,100	5,352	5,063
School taxes	1,278,400	1,240,214	1,253,344
Regional District	122,040	122,284	116,946
Regional hospital district	101,436	101,642	101,518
Police tax	120,500	120,856	118,126
Other agencies	29,300	27,850	28,720
	3,624,076	3,584,985	3,539,346
Less transfers to other governments			
School taxes paid	1,278,400	1,240,213	1,253,344
Regional district taxes paid	122,040	122,318	116,944
Regional hospital district taxes paid	101,436	101,667	101,517
Police taxes paid	120,500	120,856	118,125
Other agencies taxes paid	29,300	27,850	28,720
	1,651,676	1,612,904	1,618,650
	\$ 1,972,400	\$ 1,972,081	\$ 1,920,696

17. Sale of Services

	Budget	2016	2015
Sewer user fees	\$ 500,000	\$ 517,845	\$ 501,289
Water user fees	195,520	198,483	190,279
Curbside collection fees	98,000	93,101	92,093
Pay Parking Revenue	-	201,922	-
Licenses and permits	74,970	95,882	48,713
Facility rentals	47,500	46,007	46,986
Fines	9,250	15,141	1,525
Other	3,500	3,618	3,476
	\$ 928,740	\$ 1,171,999	\$ 884,361

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

18. Utility Service Fees

	Budget	2016	2015
Sewer service utility fee - residential	\$ 179,000	\$ 182,549	\$ 180,225
Sewer service utility fee - business	20,000	20,540	19,830
Water service utility fee - residential	174,000	176,605	174,834
Water service utility fee - business	21,000	21,460	21,034
Total	\$ 394,000	\$ 401,154	\$ 395,923

19. Government Transfers

The Government transfers reported on the Statement of Operations are:

	Budget	2016	2015
Provincial:			
Conditional			
Infrastructure - Miami River Dike Pump Station	\$ 423,700	\$ 437,256	\$ 123,132
Resort Municipality Initiative	635,900	613,000	145,915
Other	11,000	9,972	3,758
Unconditional	321,000	326,087	321,239
Federal			
Conditional			
Infrastructure - Miami River Dike Pump Station	423,700	437,256	123,132
Gas tax	114,400	114,427	318,900
	\$ 1,929,700	\$ 1,937,998	\$ 1,036,076

20. Comparative Figures

Certain comparative amounts have been restated to conform with the current year's presentation.

21. Prior period adjustment

As set out in Note 6, the Village accounts for its employee future benefits on an accrual basis. In the prior year, the amount was included in an Appropriated Surplus category instead of as a liability. These financial statements retroactively correct for this. The impact of this retroactive adjustment was to:

- Increase reported amount of employee future benefits liability for 2015 by \$78,000
- Decrease reported amount of Net financial assets and accumulated surplus for 2015 by \$78,000
- Decrease balance of Appropriated Surplus for 2015 by \$78,000
- Decrease closing balance for 2014 and opening balance for 2015 of Net financial assets and accumulated surplus by \$78,000

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

22. Budget Data

The data presented in these financial statements is based upon the 2016 operating and capital budgets adopted by Council on May 2, 2016. The table below reconciles the approved balanced budget to the budget figures reported in these financial statements.

2016 Adopted Operating and Capital Budget	Budget Amount
Revenues:	
Operating budget	\$ 4,377,120
Capital budget	4,080,620
Total revenue	8,457,740
Expenses:	
Operating budget	4,377,120
Capital Budget	4,080,620
Total expenses	8,457,740
Budgeted surplus (deficit)	\$ -
Add:	
Capital expenses	\$ 3,664,300
Transfers to reserves	244,520
Principal repayments	171,800
Less:	
Transfers from reserves	(963,600)
Appropriation from Surplus	(1,016,500)
Amortization	(794,000)
Annual budgeted surplus (see statement of operations)	\$ 1,306,520

23. Classification of Expenses by Object

The Schedule of Operating Fund Activities represents the expenditures by function; the following table classifies those same expenditures by object:

	Budget	2016	2015
Salaries, wages and employee benefits	\$ 1,596,300	\$ 1,402,953	\$ 1,483,864
Operating Materials and supplies	840,550	565,753	565,655
Contracted services	363,800	413,209	243,202
Administrative services and supplies	507,500	375,690	405,967
Utilities	151,050	177,435	153,099
Rentals and contractual obligations	95,850	97,362	97,523
Debt financing	28,070	25,610	27,172
Amortization	794,000	852,502	792,248
Total expenditures by object	\$ 4,377,120	\$ 3,910,514	\$ 3,768,730

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

24. Commitments and Contingencies

- a. The municipality and its employees contribute to the Municipal Pension Plan (a jointly trustee pension plan). The board of trustees, representing plan members and employers, is responsible for administering the plan, including investment of the assets and administration of benefits. The plan is a multi-employer defined benefit pension plan. Basic pension benefits are based on a formula. As at December 31, 2015, the plan has about 189,000 active members and approximately 85,000 retired members. Active members include approximately 37,000 contributors from local governments.

Every three years, an actuarial valuation is performed to assess the financial position of the plan and adequacy of plan funding. The actuary determines an appropriate combined employer and member contribution rate to fund the plan. The actuary's calculated contribution rate is based on the entry-age normal cost method, which produces the long-term rate of member and employer contributions sufficient to provide benefits for average future entrants to the plan. This rate is then adjusted to the extent there is amortization of any funding deficit.

The Village of Harrison Hot Springs paid \$87,504 (2015 \$91,780) for employer contributions to the Plan in fiscal 2016.

The most recent actuarial valuation as at December 31, 2015 indicated a \$2,224 million funding surplus for basic pension benefits on a going concern basis. The next valuation will be as at December 31, 2018 with results available in 2019. Employers participating in the Plan record their pension expense as the amount of employer contributions made during the fiscal year (defined contribution pension plan accounting). This is because the Plan records accrued liabilities and accrued assets for the plan in aggregate, resulting in no consistent and reliable basis for allocating the obligation, assets and cost to individual employers participating in the plan.

- b. Debts of the Fraser Valley Regional District are, under provisions of the Local Government Act, a direct, joint and several liability of the District and each member municipality within the District, including the Village of Harrison Hot Springs.
- c. The Village is a subscribed member of the Municipal Insurance Association of British Columbia (The "Exchange") as provided by section 3.02 of the Insurance Act of the Province of British Columbia. The main purpose of the Exchange is to pool the risks of liability so as to lessen the impact upon any subscriber. Under the Reciprocal Insurance Exchange Agreement, the Village is assessed a premium and specific deductible for its claims based on population. The obligation of the Village with respect to the Exchange and/or contracts and obligations entered into by the Exchange are in every case several, not joint and several. The Village irrevocably and unconditionally undertakes and agrees to indemnify and save harmless the other subscribers against liability losses and costs which the other subscriber may suffer.
- d. The Village has an agreement with the Harrison Hot Springs Tourism Society to provide annual funding of \$31,000. The term of the agreement ends December 31, 2018.
- e. In 2014, the Ministry of Environment directed the Village to assess any potential effects the closure of the landfill in 1983 has on well water. Water samples were taken and the results prompted the Ministry to direct the Village to drill test wells and monitor the water which began in 2015. The Village is to continue this process for the years 2017-2021 at which time the results will determine if any further action is required.

Village of Harrison Hot Springs

Notes to the Financial Statements

December 31, 2016

25. Segmented Disclosures

The Table of Segmented Information - Schedule 2 has been prepared in accordance with PS2700 Segmented Disclosures. Segmented information has been identified based upon functional activities provided by the Village. For each reported segment, revenue and expenses represent amounts directly attributable to the functional activity and amounts allocated on a reasonable basis. The functional areas that have been separately disclosed in the segmented information, along with services they provide are as follows:

Legislative Services

Legislative services includes Council and legislative services

General Government

General government includes taxation, sale of services, government transfers, investment income and administrative services for the general fund

Protective Services

Protective Services includes the volunteer fire depart, emergency measures and bylaw enforcement

Development and Planning

Development and Planning includes economic development, planning, land development, community development and tourism

Engineering, Transportation and Storm Water

Engineering, transportation and storm water services include engineering, fleet, public health, roads, sidewalk, storm sewers and transit.

Solid Waste

Solid waste includes sustainability, curbside collection, recycling and organic waste

Parks, Recreation and Cultural Services

Parks, recreation and cultural services includes the maintenance of the beachfront, parks and cultural facilities within the Village

Wastewater Utility

Wastewater includes the wastewater collection system, lift stations and wastewater treatment plant.

Water Utility

Water includes the water collection, treatment and distribution of potable water

Village of Harrison Hot Springs

Schedule 1 - Statement of Tangible Capital Assets

For the Year Ended December 31, 2016

	Engineered Structures								Other Tangible Capital Assets	2016	2015
	Land	Building	Equipment Furniture Vehicles	Water	Sewer Drainage	Roads	Other	Work In Progress			
COST											
Opening balance	\$9,984,913	\$1,984,778	\$2,069,476	\$7,702,915	\$9,029,627	\$8,521,923	\$1,885,641	\$490,797	\$327,090	\$41,997,160	\$41,392,462
Add: Additions	-	2,562,992	41,333	-	-	877,703	60,183	(451,583)	44,693	3,135,321	604,698
Closing Balance	9,984,913	4,547,770	2,110,809	7,702,915	9,029,627	9,399,626	1,945,824	39,214	371,783	45,132,481	41,997,160
ACCUMULATED AMORTIZATION											
Opening Balance	-	988,756	1,333,925	1,282,177	2,115,896	4,215,094	662,124	-	164,895	10,762,867	9,970,619
Add: Amortization	-	92,665	110,682	117,559	159,174	288,863	76,212	-	7,347	852,502	792,249
Closing Balance	-	1,081,421	1,444,607	1,399,736	2,275,070	4,503,957	738,336	-	172,242	11,615,369	10,762,868
	\$9,984,913	\$3,466,349	\$666,202	\$6,303,179	\$6,754,557	\$4,895,669	\$1,207,488	\$39,214	\$199,541	\$33,517,112	\$31,234,292

The accompanying notes and schedule are an integral part of these financial statements.

Village of Harrison Hot Springs

Schedule 2 - Table of Segmented Information

For the Year Ended December 31, 2016

	Legislative	General Government	Protective Services	Development Planning	Engineering, Transportation & Storm Water	Solid Waste	Parks, Recreation & Cultural Services	Wastewater Utility	Water Utility	Budget	2016	2015
Revenue:												
Property Taxes	\$ -	\$ 1,972,081	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,972,400	\$ 1,972,081	\$ 1,920,696
Sale of Services	-	316,563	-	-	-	93,101	46,007	517,845	198,483	928,740	1,171,999	884,361
Utility Service Fees	-	-	-	-	-	-	-	203,089	198,065	394,000	401,154	395,923
Government Transfers	-	1,324,998	-	613,000	-	-	-	-	-	1,929,700	1,937,998	1,036,076
Investment Income	-	44,207	-	-	-	-	-	9,277	1,275	42,400	54,759	56,795
Penalties and interest	-	44,806	-	-	-	1,136	-	6,827	4,453	48,500	57,222	57,463
Development Cost Charges	-	-	-	-	-	-	-	7,065	-	350,000	7,065	16,480
Other revenue	-	96,556	-	-	-	-	-	9,000	12,300	17,900	117,856	36,548
	-	3,799,211	-	613,000	-	94,237	46,007	753,103	414,576	5,683,640	5,720,134	4,404,342
Expenses:												
Salaries, wages and employee benefits	93,667	461,086	3,825	33,079	281,456	28,025	222,349	183,954	95,512	1,596,300	1,402,953	1,483,863
Operating Materials and supplies	-	11,637	93,262	400	95,230	100	91,286	226,824	47,014	840,550	565,753	565,655
Contracted services	-	11,893	-	117,801	83,689	120,885	14,384	60,057	4,500	363,800	413,209	243,202
Administrative services and supplies	13,972	196,233	34,341	69,076	22,191	-	9,462	16,897	13,518	507,500	375,690	405,967
Utilities	1,065	14,465	4,964	-	39,744	-	22,282	71,715	23,200	151,050	177,435	153,099
Rentals and contractual obligations	-	17,928	38,876	31,000	4,511	-	5,047	-	-	95,850	97,362	97,523
Debt financing	-	18,068	-	-	-	-	-	-	7,542	28,070	25,610	27,172
Amortization	-	157,557	7,164	-	345,168	-	83,559	141,495	117,559	794,000	852,502	792,248
	108,704	888,867	182,432	251,356	871,989	149,010	448,369	700,942	308,845	4,377,120	3,910,514	3,768,729
Annual Surplus (Deficit)	\$ (108,704)	\$ 2,910,344	\$ (182,432)	\$ 361,644	\$ (871,989)	\$ (54,773)	\$ (402,362)	\$ 52,161	\$ 105,731	\$ 1,306,520	\$ 1,809,620	\$ 635,613

The accompanying notes and schedule are an integral part of these financial statements.

COST estimates:

Lighting Design Services

- LUX Measurement of existing system
- CAD modelling – existing system
- CAD modelling – LED comparisons
- LUX measurement of LED's post-install \$6,000

Optional Design services:

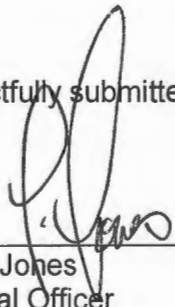
- Light trespass estimates \$1,200
- LED Replacement Report \$2,500

LED luminaire purchase and installation costs will depend upon lighting requirements and product selection identified as part of the design process. The Village of Harrison is now a member of the Corporate Supply Arrangement (CSA) through the Province of BC and LED luminaires are available for purchase through the CSA.

RECOMMENDATION:

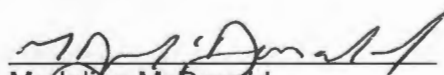
THAT Council approves contracting of lighting design services for the Village owned street lights.

Respectfully submitted;



Tracey Jones
Financial Officer

REVIEWED BY: (If applicable)



Madeline McDonald
Chief Administrative Officer



LED STREET LIGHTING
DESIGN & INSTALLATION
FOR
THE VILLAGE OF HARRISON HOT SPRINGS

PREPARED FOR TRACEY JONES, FINANCIAL OFFICER, HARRISON HOT SPRINGS

PREPARED BY KEITH MCPHERSON LMI STREET LIGHT PROGRAM

April 11 2017

INTRODUCTION

LUX Measurement Inc. Street Light Program is proud to have the opportunity to present its proposal to assist the Village of Harrison Hot Springs to replace 77 High Pressure Sodium (HPS) cobra-head style street lights with LED street lights.

This proposal includes; the measurement of existing illumination levels, CAD modelling of the existing HPS system, selection of appropriate luminaires from manufacturers identified by Harrison Hot Springs officials, and analyses of illumination levels and other parameters, in order to arrive at an LED system design that most closely meets illumination standards at the price and quality required by Harrison Hot Springs.

We are a local technology initiative with global potential. We add value to the local economy rather than cost. We also engage students in our projects whenever practicable in order to provide quality work experience. We are committed to an environmentally responsible transition to LEDs that recognises the impact of over lighting on our natural habitat, while at the same time ensuring we meet safe illumination standards.

Our experience is based on the installation of 2,700 LED street lights and retrofitting 900 HPS cobraheads with adaptive lighting technology in North and Central B.C. These projects were supported by the Innovative Clean Energy Fund (Province of British Columbia) and BC Hydro Power Smart between 2009 and 2014.

More recently we formed a strategic partnership with the University of the Fraser Valley, Trades and Technology Centre, to develop our LUX Measurement System which we presented to B.C. municipalities on the February 15, 2017 BID B.C. webinar with BC Hydro as part of the Province's "LED Streetlights Across B.C." initiative.

We look forward to assisting the Village of Harrison Hot Springs to make a smooth and cost effective transition to LED street lighting.

Keith McPherson

Keith McPherson

Executive Director, LMI Street Light Program
604 – 819 7982 Cell

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SCOPE

This proposal covers 77 street lights on 22 streets and cul-de-sacs in the Village of Harrison Hot Springs (the client). Included in the scope of this proposal are:

1. Assessment of present roadway illumination levels
2. Selection of LED luminaires to replace existing HPS cobra-head luminaires
3. Installation of the schedule of luminaires selected by the client
4. Post-installation assessment of illumination levels from the new LED street lighting system

METHODOLOGY

1. Assessment of present illumination levels

LUX Measurement Inc. Street Light Program (LMI SLP) will schedule its LUX Measurement System (LMS) to measure and report on existing LUX levels on the streets and cul-de-sacs in scope. This will include average and minimum LUX levels between poles or in a cul-de-sac, as well as luminaire locations (height and over-hang) and pole spacings. A comparison with standards (ANSI IESNA RP18-14) will point out over-lit and under-lit areas and uniformity of lighting along each section of roadway.

The next step will be the development of a Computer Aided Design (CAD) model of the existing system. The model will be based on GPS data from the LMS coupled with satellite maps and some field measurements. With regard to the present HPS luminaires, there are two basic types of luminaires in use; prismatic and cut-off.

A luminaire schedule of wattages and type will be developed and included in the model using manufacturers' illumination data files (.ies files).

A short report will then be presented to the client in the form of a "LUX map" and lighting levels (compared to standards) of the streets and cul-de-sacs in scope.

2. Selection of LED luminaires to replace existing HPS cobra-head luminaires

It is anticipated that the client will require comparison of luminaires from three manufacturers in terms of performance, price and operating costs.

LMI SLP will select luminaires on the basis of light output, colour temperature and illumination type to match the requirements of the client for each location in scope. This will be done for each of the three selected manufacturers, resulting in three separate luminaire schedules; location, model number, wattage, lumen output and .ies data file, colour temperature and illumination type.

These data will then be incorporated into three separate CAD models. Analyses of these models will then allow fine tuning of the wattages and other data to determine the estimated illumination levels and uniformity of illumination offered by each of the manufacturers.

These data coupled with wattages for each location will allow estimation of operating costs as well as illumination performance. Pricing data will then allow payback periods to be estimated. These and other data will be presented in the form of a short report which will allow the client to select a suitable schedule of luminaires.

2.1 Optional: Light Trespass Assessments

The CAD models so developed allow for the estimation of light trespass into adjacent properties. This may allow identification of luminaire locations where the inclusion of a house-side shield or adjustment to tilt angle may reduce possible complaints from residents to a minimum.

2.2 Optional: LED Replacement Report

A key consideration in the selection of LED luminaires is often the anticipated failure rate and its impact on operating costs both in and out of warranty. Failure rates for LED luminaires are very low but not zero. Generally the LED emitters (so-called LED chips) will last for 100,000 hours or more in a well-designed housing. It is worth noting that the majority of luminaire manufacturers use emitters from a handful of reputable suppliers such as Phillips or CREE. More likely to fail are the drivers, but here again there are reputable driver manufacturers such as Meanwell and Phillips who are supplying a large segment of manufacturers. Another consideration is that LED emitters exhibit lumen depreciation; which means that light output declines over a number of years. Many authorities suggest that when output from an LED luminaire declines to 70% or less then it may be deemed to have failed. However this view may be more pertinent to busy highways and main thoroughfares than to quiet residential streets. In any event a review and analysis of the impact of luminaire failure rates and lumen depreciation on parts inventories and operating costs may assist in the final selection of manufacturer.

LMI SLP offers an optional assessment of LED luminaire replacement projections over 15 YRS based on estimated failure rates and the impact of operating costs and inventories. Additionally the report would include the impact of lumen depreciation on roadway LUX levels for each location; noting that in some locations a 30% drop in lumen output may be acceptable but in other locations not. Understanding the likely future LUX levels in the system can assist planning for eventual luminaire replacements.

3. Installation of the schedule of luminaires selected by the client

Installation of the selected luminaires and disposal of the displaced HPS luminaires would be carried out by Boileau Electric. LMI SLP would coordinate with the client and Boileau Electric to ensure a smooth and rapid deployment.

4. Post-installation assessment of illumination levels

Following deployment of the selected LED luminaires, LMI SLP would carry out a post-installation measurement of LUX levels. Based on this post-install measurement it may be practicable to adjust tilt angles or, in some cases, adjust luminaire wattages to fine tune the system. Noting that these costs may be mitigated by the optional light trespass assessment.

LOCATIONS IN SCOPE

STREETS	CUL DE SACS
Balsam Avenue	Angus Place
Chestnut Avenue	Clover Place
Cottonwood Avenue	Cottonwood Place
Driftwood Avenue	Fern Place
Eagle Street (Naismith to Naismith)	Hope Place
Hadway Drive	Juniper Place
McCombs Drive (Naismith to Chestnut Avenue)	Myng Cres
Miami River Drive	Ramona Place
Mount Street	
Naismith Avenue	
Poplar Street	
St. Alice Street (Cedar to Lillooet)	
St. Alice Street (Lillooet to Esplanade)	
Walnut Avenue	

77 luminaires

located on

14 streets and 8 cul de sacs



TECHNICAL NOTES

Example of CAD Modelling

LMI SLP provides this example solely for illustrative purposes. The client has installed four LED luminaires at the intersection of Harrison Hot Springs Road and Lillooet Avenue. Based on a preliminary assessment of the location, LMI SLP was able to generate a CAD model of the intersection based on the following luminaires and locations:

LOCATION	LUMINAIRE	WATTAGE
North West	AMERICAN ELECTRIC LIGHT ATBS	91 W LED
North West	ACUITY BRAND ACORN	150 W HPS
North East	AMERICAN ELECTRIC LIGHT ATBS	91 W LED
South East	AMERICAN ELECTRIC LIGHT ATBS	91 W LED
South East	BC HYDRO POLE	150 W HPS
South West	AMERICAN ELECTRIC LIGHT ATBS	91 W LED
South West	BC HYDRO POLE	150 W HPS

The model indicated a relatively uniform illumination pattern with an average illumination on the roadway of 23.4 LUX , a high of 40 LUX and minimum of 8 – 16 LUX.

For this intersection with medium pedestrian conflict the standard requirement would be 22 LUX and the ratio of average lux to minimum of 3:1. If the pedestrian conflict level were to be high then the average LUX standard would be 29 LUX. Pedestrian conflict levels are based on the number of pedestrians over the one hour period with the highest average annual nighttime pedestrian volume.

Luminaire Illumination types

Type I

The type I distribution is great for lighting walkways, paths and sidewalks. This type of lighting is meant to be placed near the center of the pathway. This provides adequate lighting for smaller pathways.

Type I is a two-way lateral distribution having a preferred lateral width of 15 degrees in the cone of maximum candlepower. The two principal light concentrations are in opposite directions along a roadway. This type is generally applicable to a luminaire location near the center of a roadway where the mounting height is approximately equal to the roadway width.

Type II

The type II distribution is used for wide walkways, on ramps and entrance roadways, as well as other long, narrow lighting. This type is meant for lighting larger areas and usually is located near the roadside. You'll find this type of lighting mostly on smaller side streets or jogging paths.

Type II light distributions have a preferred lateral width of 25 degrees. They are generally applicable to luminaires located at or near the side of relatively narrow roadways, where the width of the roadway does not exceed 1.75 times the designed mounting height.

Type III

The type III distribution is meant for roadway lighting, general parking areas and other areas where a larger area of lighting is required. Type III lighting needs to be placed to the side of the area, allowing the light to project outward and fill the area. This produces a filling light flow.

Type III light distributions have a preferred lateral width of 40 degrees. This distribution is intended for luminaires mounted at or near the side of medium width roadways or areas, where the width of the roadway or area does not exceed 2.75 times the mounting height.

Type IV

The type IV distribution produces a semicircular light meant for mounting on the sides of buildings and walls. It's best for illuminating the perimeter of parking areas and businesses. The intensity of the Type IV lighting has the same intensity at angles from 90 degrees to 270 degrees.

Type IV light distributions have a preferred lateral width of 60 degrees. This distribution is intended for side-of-road mounting and is generally used on wide roadways where the roadway width does not exceed 3.7 times the mounting height.

Type V

Type V produces a circular distribution that has the same intensity at all angles. This distribution has a circular symmetry of candlepower that is essentially the same at all lateral angles. It is intended for luminaire mounting at or near center of roadways, center islands of parkway, and intersections. It is also meant for large, commercial parking lot lighting as well as areas where sufficient, evenly distributed light is necessary

DLC Listing

Although there is a natural tendency to go with the big names and buy from only one source, organizations like the Design Lights Consortium (DLC <https://www.designlights.org/>) are opening

opportunities for municipalities to purchase quality luminaires with warranties equal to those offered by the big names at much lower prices. The DLC Qualified Products List (QPL) provides the necessary assurances that listed luminaires do indeed meet the standards they claim to. It may be worth noting that the BC Hydro e-catalogue relies on the DLC QPL for its technical assessments.

Maintenance of LEDs

LEDs last for 15 years or more. Maintenance for LED luminaires is about 5% of the cost of HPS luminaires which require new bulbs every 4 or 5 years. Consequently there is no operating cost advantage for single source purchasing of LED luminaires; because there is no need for a municipality to carry more than a few spare LED luminaires in inventory sufficient to handle damage from motor vehicle accidents or lighting strikes.

When the impact of increasing efficacy of LED emitters on LED luminaire design is considered, it is evident that the luminaires for sale in 15 years will be quite different to the present design offerings. Note that in 2008 average LED luminaires on the market delivered less than 80 L/W; in 2012 the average had risen to around 100 L/W and by 2015 120 to 130 L/W were the norm. The highest performance LED emitters deliver over 300 L/W.

The trend is towards smaller, lower wattage higher efficacy luminaires such as the units offered by LMI's suppliers.

These factors are forcing a sea change in the way municipalities plan for street light operations.

Photopic/Scotopic Vision

New street lighting technologies, such as induction or LED lights, emit a white light that provides high levels of scotopic lumens allowing street lights with lower wattages and lower photopic lumens to replace existing street lights. Formal specifications around Photopic/Scotopic adjustments for different types of light sources enables municipalities and street departments to test, implement and benefit from this new technologies.

Photopic vision is the vision of the eye under well-lit conditions. In humans and many other animals, photopic vision allows color perception, mediated by cone cells, and a significantly higher visual acuity and temporal resolution than available with scotopic vision.

Scotopic vision is the vision of the eye under low light conditions. The term comes from Greek "skotos" meaning darkness and "opia" meaning a condition of sight. In the human eye cone cells are non-functional in low light – scotopic vision is produced exclusively through rod cells which are most sensitive to wavelengths of light around 498 nm (green-blue) and are insensitive to wavelengths longer than about 640 nm (red).

Colour Temperature and Uniformity of Street Lighting

High colour temperature LED illumination is much closer to daylight than low colour temperature yellowish HPS illumination, so we see much better in LED light than in yellowish HPS light. For most street lighting applications, this is a very positive attribute. However, lack of uniformity of lighting along a street will be much more noticeable with high colour temperature LEDs (5,000 to 6,000 deg. K) than with the existing HPS luminaires (1,900 to 2,800 deg. K).



And high colour temperature LEDs may be perceived as intrusive and can lead to public complaints; particularly in residential neighbourhoods. To address this issue LMI carefully tailors wattages of LED lights as well as colour temperature to each location.

LUX
MEASUREMENT INC.



www.streetlightprogram.com
keithmcperson@streetlightprogram.com

Unit 1 – 7056 Pioneer Avenue, Agassiz, B.C., V0M 1A0

Specifier Bulletin

for Dark Sky Applications

VOLUME 2: ISSUE 1 : 2009 — International Dark-Sky Association



A Classification System
for Lighting Zones

The BUG System—A New Way To Control Stray Light from Outdoor Luminaires

The BUG System

BUG STANDS FOR “Backlight”, “Uplight” and “Glare.” The acronym describes the types of stray light escaping from an outdoor lighting luminaire. “B” stands for backlight, or the light directed in back of the mounting pole. “U” stands for uplight, or the light directed above the horizontal plane of the luminaire, and “G” stands for glare, or the amount of light emitted from the luminaire at angles known to cause glare.

It is expected that BUG values will be published by luminaire manufacturers so lighting specifiers, designers or purchasers can tell at a glance how well a certain luminaire controls stray light or compares with other luminaires under consideration for an installation.

The BUG system was developed by the Illuminating Engineering Society (IES) to make comparing and evaluating outdoor luminaires fast, easy and more complete than older systems.

Work on the BUG system started in 2005 when the IES upgraded the roadway shielding classification system. The original system, which included the ratings full cutoff, cutoff, semi-cutoff and non cutoff, had been designed as a rating system solely for street lighting. However, increasing demand for control of glare and light trespass extended these terms to all types of outdoor lighting, and the IES realized that a more comprehensive system was needed.

The Lighting Research Center, acting as an IES contractor, developed a new classification concept that addresses light emitted from the luminaire in all directions, not just up into the sky. This system, released to the public as IES Technical Memorandum TM-15, technically replaced the old system. It divides the sphere around a luminaire into zones assigning values according to expected environmental impact. This rating system offers the most complete evaluation of the total light emitted from luminaires to date. A point to

For more information on FSA approved luminaires please visit the IDA Web site www.darksky.org.

remember, however, is that while the values assigned by the new system are good indicators, they may not in all cases directly correlate to light pollution. *It still depends upon the site, the application and how the luminaire is installed.*

A fundamental component of the Model Lighting Ordinance (MLO), currently under public review, divides lighting requirements into lighting zones according to environmental impact. **See Appendix A.** The joint IDA/IES task force in charge of drafting the MLO reviewed TM-15 and realized that it could be modified to serve as a key measure of all forms of light pollution related to shielding and the direction of light, becoming an important tool to determine which luminaires are appropriate for each zone. Modifications were made, including subdividing the TM-15 uplight zone to better address artificial sky glow, and subdividing the upper downlight zone to better address glare. The IES accepted these adjustments and released TM-15-07 (revised). **See Figure 1.**

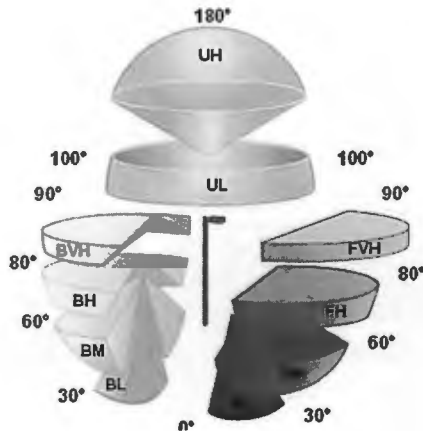


Figure 1: the revised outdoor luminaire distribution measuring system from TM-15-07 (revised)

After reviewing hundreds of candidate luminaires, the MLO task force established the three composite (BUG) ratings based on TM-15-07 (revised):

Backlight, which creates light trespass onto adjacent sites. The B rating takes into account the amount of light in the BL, BM, BH and BVH zones, which are direction of the luminaire OPPOSITE from the area intended to be lighted.

Uplight, which causes artificial sky glow. Lower uplight (zone UL) causes the most sky glow and negatively affects professional and academic astronomy. Upper uplight (UH) is mostly energy waste. The U rating accounts the amount of light into the upper hemisphere with greater concern for the lower uplight angles in UL.

Glare, which can be annoying or visually disabling. The G rating takes into account the amount of frontlight in the FH and FVH zones as well as BH and BVH zones.

Appendix A:

Lighting Zone Definitions: The Lighting Zone shall define the limitations for outdoor lighting as specified in this ordinance. The policymaking body is able to designate areas according to the following descriptions, thereby creating a custom lighting plan according to local needs, functions, and geography.

LZ0: No ambient lighting Areas where the natural environment will be seriously and adversely affected by lighting. Impacts include disturbing the biological cycles of flora and fauna and/or detracting from human enjoyment and appreciation of the natural environment. Little or no lighting is expected. When not needed, lighting should be extinguished.

LZ1: Low ambient lighting Areas where lighting might adversely affect flora and fauna or disturb the character of the area. The vision of human residents and users is adapted to low light levels. Lighting may be used for safety, security and/or convenience but it is not necessarily uniform or continuous. After curfew, most lighting should be extinguished or reduced as activity levels decline.

LZ2: Moderate ambient lighting Areas of human activity where the vision of human residents and users is adapted to moderate light levels. Lighting may typically be used for safety, security and/or convenience but

it is not necessarily uniform or continuous. After curfew, lighting may be extinguished or reduced as activity levels decline.

LZ3: Moderately high ambient lighting Areas of human activity where the vision of human residents and users is adapted to moderately high light levels. Lighting is generally desired for safety, security and/or convenience and it is often uniform and/or continuous. After curfew, lighting may be extinguished or reduced in most areas as activity levels decline.

LZ4: High ambient lighting Areas of human activity where the vision of human residents and users is adapted to high light levels. Lighting is generally considered necessary for safety, security and/or convenience and it is mostly uniform and/or continuous. After curfew, lighting may be extinguished or reduced in some areas as activity levels decline.

Figure 1: the revised (or BUG) outdoor luminaire distribution measuring system from TM-15-07 (revised)

The resulting rating system, called BUG for obvious reasons, is a comprehensive system that takes into account uplight shielding, glare shielding and backlight shielding as well as limiting lamp lumens to values appropriate for the lighting zone. BUG is a simple system consisting of a table of consensus acceptable values against which any luminaire having photometric data can be judged. A luminaire's numerical rating is the LOWEST light zone number in which it can be used. BUG will be part of the latest IES outdoor lighting system update.

The BUG rating system is a principal component of the Model Lighting Ordinance (MLO). The MLO is also a simple system that considers BUG ratings in the context of total lumens allowed per site, which the total site lumens are restricted. Use of the BUG system as the measuring tool for the MLO creates a straightforward system of controlling light pollution that can be implemented by persons having minimal experience or education in outdoor lighting design.

BUG FAQs

Are BUG luminaire ratings better than using the old full cut off, semi cut off, non cut off, etc. designations for shielding?

Yes, because BUG ratings provide backlight and glare information as well as how well the luminaire controls uplight. These additional measurements provide a much more accurate picture of lumen distribution and the overall efficiency of a luminaire.

Does BUG allow any uplight?

BUG requires downlight only with low glare (better than full cut off) in lighting zones 0, 1 and 2, but allows a minor amount of uplight in lighting zones 3 and 4. In lighting zones 3 and 4, the amount of allowed uplight is enough to permit the use of very well shielded luminaires that have a decorative drop lens or chimney so that dark sky friendly lighting can be installed where in places that traditional-appearing fixtures are required.

Will all outdoor lighting manufacturers rate their luminaires according to BUG?

Not at first. Since BUG is designed to prevent bad lighting practices, a lot of current outdoor products won't pass BUG, so there will be no point in rating them. But it is expected that manufacturers will rate their "good" luminaires and make changes to current products to improve BUG ratings.

Will BUG apply to residential lighting?

No. BUG can't be used for residential luminaires because they generally are not photometrically tested. The IDA Fixture Seal of Approval Program can be used to rate residential outdoor luminaires.

Is BUG as strict as the toughest anti-light pollution ordinances in effect today?

BUG, by itself, is a luminaire rating tool. It can easily be applied more stringently by using the zonal factors in response to community choices of lighting zones. While lighting zone determinants are clearly outlined in the MLO, the community decides upon zone placement. If a community adopts the MLO and chooses all lighting zones LZ0 and LZ1, the MLO with BUG is actually more restrictive than any of the toughest ordinances. However, zone assignment will always remain at the discretion of the community.

Addendum A for IES TM-15-07: Backlight, Uplight, and Glare (BUG) Ratings

Text, charts, and photograph from IES TM-15-07:

<http://www.iesna.org/PDF/Erratas/TM-15-07BUGRatingsAddendum.pdf>

The following **Backlight**, **Uplight**, and **Glare** ratings may be used to evaluate luminaire optical performance related to light trespass, sky glow, and high angle brightness control. These ratings are based on a zonal lumen calculations for secondary solid angles defined in TM-15-07. The zonal lumen thresholds listed in the following three tables are based on data from photometric testing procedures approved by the Illuminating Engineering Society for outdoor luminaires (LM-31 or LM-35).

Notes to Tables **A-1**, **A-2**, and **A-3**:

1. Any one rating is determined by the maximum rating obtained for that table. For example, if the BH zone is rated B1, the BM zone is rated B2, and the BL zone is rated B1, then the backlight rating for the luminaire is B2.
2. To determine BUG ratings, the photometric test data must include data in the upper hemisphere unless no light is emitted above 90 degrees vertical (for example, if the luminaire has a flat lens and opaque sides), per the IES Testing Procedures Committee recommendations.
3. It is recommended that the photometric test density include values at least every 2.5 degrees vertically. If a photometric test does not include data points every 2.5 degrees vertically, the BUG ratings shall be determined based on appropriate interpolation.
4. A "quadrilateral symmetric" luminaire shall meet one of the following definitions:
 - a. Type V luminaire is one with a distribution that has circular symmetry, defined by the IES as being essentially the same at all lateral angles around the luminaire.
 - b. Type VS luminaire is one where the zonal lumens for each of the eight horizontal octants (0-45, 45-90, 90-135, 135-180, 180-225, 225-270, 270-315, 315-360) are within ± 10 percent of the average zonal lumens of all octants.

Table A-1: Backlight Ratings (maximum zonal lumens)

		Backlight Rating					
Secondary Solid Angle		B0	B1	B2	B3	B4	B5
Backlight / Trespass	BH	110	500	1000	2500	5000	>5000
	BM	220	1000	2500	5000	8500	>8500
	BL	110	500	1000	2500	5000	>5000

Table A-2: Uplight Ratings (maximum zonal lumens)

Changes in red are based on addendum A for IES TM-15-11. A copy is attached.

		Uplight Rating					
Secondary Solid Angle		U0	U1	U2	U3	U4	U5
Uplight/ Skyglow	UH	0	10	50	500	1000	>1000
	UL	0	10	50	500	1000	>1000
	FVH	10	75	150	>150		
	BVH	10	75	150	>150		

Table A-3: Glare Ratings (maximum zonal lumens)

		Glare Rating for Asymmetrical Luminaire Types (Type I, Type II, Type III, Type IV)					
Secondary Solid Angle		G0	G1	G2	G3	G4	G5
Glare / Offensive Light	FVH	10	100	225	500	750	>750
	BVH	10	100	225	500	750	>750
	FH	660	1800	5000	7500	12000	>12000
	BH	110	500	1000	2500	5000	>5000
		Glare Rating for Quadrilateral Symmetrical Luminaire Types (Type V, Type V Square)					
Secondary Solid Angle		G0	G1	G2	G3	G4	G5
Glare / Offensive Light	FVH	10	100	225	500	750	>750
	BVH	10	100	225	500	750	>750
	FH	660	1800	5000	7500	12000	>12000
	BH	660	1800	5000	7500	12000	>12000

"BUG" RATING EXAMPLE:

A 250-watt MH area luminaire, Type IV forward throw optical distribution. Based on the photometric test data, the luminaire has the following zonal lumen distribution:

	Lumens	% Lamp Lumens
Forward Light		
FL (0–30 degrees)	1618	5.9%
FM (30–60 degrees)	6093	22.2%
FH (60–80 degrees)	3748	13.6%
FVH (80–90 degrees)	27	0.1%
Backlight		
BL (0–30 degrees)	985	3.6%
BM (30–60 degrees)	930	3.4%
BH (60–80 degrees)	136	0.5%
BVH (80–90 degrees)	16	0.1%
Uplight		
UL (90–100 degrees)	0	0.0%
UH (100–180 degrees)	0	0.0%

**Backlight Rating:**

Determine the lowest rating where the lumens for all of the secondary solid angles do not exceed the threshold lumens from **Table A-1**. In this example the backlight rating would be B2 based on the BL lumen limit.

Uplight Rating:

Determine the lowest rating where the lumens for all of the secondary solid angles do not exceed the threshold lumens from **Table A-2**. In this example the uplight rating would be U0 based on the UL and UH lumen limits.

Glare Rating:

Determine the lowest rating where the lumens for all of the secondary solid angles do not exceed the threshold lumens from **Table A-3** for a Type IV distribution. In this example, the glare rating would be G2 based on the FH lumen limit.

Therefore, the BUG rating for this luminaire would be: **B2 U1 G2**

Addendum A for IES TM-15-11: Backlight, Uplight, and Glare (BUG) Ratings

This Addendum replaces Addendum A in IESNA TM-15-07.

The following Backlight, Uplight, and Glare ratings may be used to evaluate luminaire optical performance related to light trespass, sky glow, and high angle brightness control. These ratings are based on a zonal lumen calculations for secondary solid angles defined in TM-15-11. The zonal lumen thresholds listed in the following three tables are based on data from photometric testing procedures approved by the Illuminating Engineering Society for outdoor luminaires (LM-31 or LM-35).

Table A-1: Backlight Ratings (maximum zonal lumens)

		Backlight Rating					
		Secondary Solid Angle	B0	B1	B2	B3	B4
Backlight / Trespass	BH	110	500	1000	2500	5000	>5000
	BM	220	1000	2500	5000	8500	>8500
	BL	110	500	1000	2500	5000	>5000

Table A-2: Uplight Ratings (maximum zonal lumens)

		Uplight Rating					
		Secondary Solid Angle	U0	U1	U2	U3	U4
Uplight / Skyglow	UH	0	10	50	500	1000	>1000
	UL	0	10	50	500	1000	>1000

Notes to Tables A-1, A-2, and A-3:

- (1) Any one rating is determined by the maximum rating obtained for that table. For example, if the BH zone is rated B1, the BM zone is rated B2, and the BL zone is rated B1, then the *backlight rating for the luminaire* is B2.
- (2) To determine BUG ratings, the photometric test data must include data in the upper hemisphere unless no light is emitted above 90 degrees vertical (for example, if the luminaire has a flat lens and opaque sides), per the IES Testing Procedures Committee recommendations.
- (3) It is recommended that the photometric test density include values at least every 2.5 degrees vertically. If a photometric test does not include data points every 2.5 degrees vertically, the BUG ratings shall be determined based on appropriate interpolation.
- (4) A "quadrilateral symmetric" luminaire shall meet one of the following definitions:
 - a. A Type V luminaire is one with a distribution that has circular symmetry, defined by the IESNA as being essentially the same at all lateral angles around the luminaire.
 - b. A Type VS luminaire is one where the zonal lumens for each of the eight horizontal octants (0-45, 45-90, 90-135, 135-180, 180-225, 225-270, 270-315, 315-360) are within ± 10 percent of the average zonal lumens of all octants.

Table A-3: Glare Ratings (maximum zonal lumens)

**Glare Rating for
Asymmetrical Luminaire Types (Type I, Type II, Type III, Type IV)**

	Secondary Solid Angle	G0	G1	G2	G3	G4	G5
		Glare / Offensive Light	FVH	10	100	225	500
	BVH	10	100	225	500	750	>750
	FH	660	1800	5000	7500	12000	>12000
	BH	110	500	1000	2500	5000	>5000

**Glare Rating for
Quadrilateral Symmetrical Luminaire Types (Type V, Type V Square)**

	Secondary Solid Angle	G0	G1	G2	G3	G4	G5
		Glare / Offensive Light	FVH	10	100	225	500
	BVH	10	100	225	500	750	>750
	FH	660	1800	5000	7500	12000	>12000
	BH	660	1800	5000	7500	12000	>12000

“BUG” RATING EXAMPLE:



A 250-watt MH area luminaire, Type IV forward throw optical distribution.

Based on the photometric test data, the luminaire has the following zonal lumen distribution:

Forward Light	Lumens	% Lamp Lumens
FL (0 - 30 degrees)	1618	5.9%
FM (30 - 60 degrees)	6093	22.2%
FH (60 - 80 degrees)	3748	13.6%
FVH (80 - 90 degrees)	27	0.1%
Back Light		
BL (0 - 30 degrees)	985	3.6%
BM (30 - 60 degrees)	930	3.4%
BH (60 - 80 degrees)	136	0.5%
BVH (80 - 90 degrees)	16	0.1%
Uplight		
UL (90 - 100 degrees)	0	0.0%
UH (100 - 180 degrees)	0	0.0%

Backlight Rating:

Determine the lowest rating where the lumens for all of the secondary solid angles do not exceed the threshold lumens from **Table A-1**. In this example the backlight rating would be **B2** based on the BL lumen limit.

Uplight Rating:

Determine the lowest rating where the lumens for all of the secondary solid angles do not exceed the threshold lumens from **Table A-2**. In this example the uplight rating would be **U0** based on the ~~FVH~~ and ~~BVH~~ lumen limits.

U0 UL UH

Glare Rating:

Determine the lowest rating where the lumens for all of the secondary solid angles do not exceed the threshold lumens from **Table A-3** for a Type IV distribution. In this example, the glare rating would be **G2** based on the FH lumen limit.

Therefore, the BUG rating for this luminaire would be: **B2 U0 G2**



VILLAGE OF HARRISON HOT SPRINGS

REPORT TO COUNCIL

TO: Mayor and Council **DATE:** April 26, 2017
FROM: Community Services Manager **FILE:** 1855-03
SUBJECT: UBCM Gas Tax Strategic Priorities Fund

ISSUE:

In May 2014, the Federal Government and UBCM signed the renewed Gas Tax Agreement (GTA) which provides a ten-year commitment of federal funding for investments in Local Government infrastructure and capacity building projects in British Columbia.

One of the key funding programs established through the GTA is the Gas Tax Strategic Priorities Fund (SPF). The SPF is an application based funding program, which pools approximately \$30 million of the \$265 million annual federal Gas Tax Fund for strategic investments that are considered large in scale, regional in impact, or innovative and support the Gas Tax Strategic Priorities Funding.

BACKGROUND:

The SPF national objectives include productivity and economic growth, a clean environment and strong cities and communities. The SPF program also provides grant funding for Local Government capacity building projects, including asset management, long term infrastructure planning and sustainability planning that support the national objectives.

Local governments are eligible to apply for funding under the SPF and the deadline for applications is June 1, 2017. The SPF grant can fund up to 100% of eligible costs. Each applicant is eligible to apply for up to two applications under the SPF – Capital Infrastructure Fund Project Stream and one application under the SPF – Capacity Building Stream. Staff is currently seeking Council's approval to apply for two initiatives.

SPF – Capital Infrastructure Fund Project Stream: Community Energy Systems

As one of Council's 2017 goals and objectives, the Village is currently in the process of replacing Village light standards to a more sustainable LED lighting option. This transition will have a lasting impact on energy consumption throughout the Village which will result in lower costs associated with lighting. This funding stream has the ability to fund costs associated with this environmentally sustainable initiative.

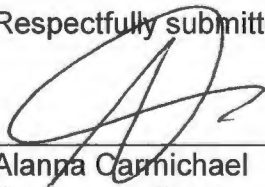
SPF – Capacity Building Stream: Long-term Infrastructure Plans

Moreover, the Village has identified a need for an Active Transportation Plan which will help guide the development of a continuous and safe active transportation network throughout the community. Developing a plan like this will also help guide any future infrastructure improvements, such as sidewalks, trails and pathways, throughout the Village.

RECOMMENDATION:

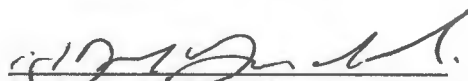
THAT approval be given to staff to submit two applications for funding through the Gas Tax Strategic Priorities Fund (SPF) which includes the SPF – Capital Infrastructure Fund Project Stream for Community Energy Systems and for the SPF – Capacity Building Stream for a Long-term Infrastructure Plan.

Respectfully submitted:



Alanna Carmichael
Community Services Manager

REVIEWED BY:



Madeline McDonald
Chief Administrative Officer

Debra Key

Subject: FW: Overnight parking issue

From: Sonja Reyerse [<mailto:sreyerse@bbharrison.com>]
Sent: Wednesday, April 26, 2017 10:06 AM
To: Debra Key
Subject: RE: Overnight parking issue

Mayor and Council

At the request of the Village we have consulted our members located on Esplanade Avenue regarding the issue of overnight parking and whether it has a negative effect on their business. Of our 10 members located on the Esplanade only 2 have an issue with overnight parking. The remainder see this as a non-issue or believe it would be negative to the tourist experience to place yet another restriction on parking. Accordingly, the Harrison Agassiz Chamber of Commerce does not support the introduction of signage to curtail overnight parking on the Esplanade.

Regards,

The Executive Team
Harrison Agassiz Chamber of Commerce



Debra Key

Deputy Chief Administrative Officer/Corporate Officer

Municipal Office:

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