

# **AGENDA MATERIAL**

# **COMMITTEE OF THE WHOLE**

MEETING DATE: MONDAY, MARCH 2, 2020

LOCATION: S. H. BLAKE MEMORIAL AUDITORIUM

(Council Chambers)

TIME: 6:30 P.M.



**MEETING:** Committee of the Whole

**DATE:** March 2, 2020 Reference No. COW - 16/51

# CLOSED SESSION in the McNaughton Room at 5:00 P.M.

Committee of the Whole - Closed Session

Chair: Councillor Trevor Giertuga

Closed Session Agenda Items for March 2, 2020 will be distributed separately to Members of Council and EMT only.

# OPEN SESSION in S.H. Blake Memorial Auditorium at 6:30 P.M.

Committee of the Whole - Operations Session

Chair: Councillor Brian McKinnon

### **DISCLOSURES OF INTEREST**

### **CONFIRMATION OF AGENDA**

Confirmation of Agenda - March 2, 2020 - Committee of the Whole (Page 5)

With respect to the March 2, 2020 Committee of the Whole meeting, we recommend that the agenda as printed, including any additional information and new business, be confirmed.

### REPORTS OF COMMITTEES

# Clean, Green & Beautiful Committee (Page 6 - 15)

Minutes of Meeting No. 07-2019 and No. 01-2020 of the Clean, Green and Beautiful Committee held on November 17, 2019 and January 15, 2020 respectively, for information.

# REPORTS OF MUNICIPAL OFFICERS

# Capital Purchase One New Fire Pumper Truck (Pages 15 - 18)

Report No. R 22/2020 (Development & Emergency Services - Thunder Bay Fire Rescue) recommending the approval of one (1) new Pumper Fire Truck be awarded to Fort Garry Fire Trucks, which has secured the contract with TBFR through successful RFP for fire trucks required until 2021. Prices are to be negotiated from the 2016 awarded RFP.

With respect to Report No. R 22/2020 (Thunder Bay Fire Rescue), we recommend that one (1) new Pumper Fire Truck be awarded to Fort Garry Fire Trucks Ltd., which submitted the successful proposal for the supply of Fire Trucks for Thunder Bay Fire Rescue (TBFR) for the period 2016 through 2021;

AND THAT the Manager-Supply Management be authorized to issue a purchase order to award this contract;

AND THAT the Mayor and Clerk be authorized to sign any necessary agreements related to this purchase;

AND THAT any necessary By-laws be presented to City Council for ratification.

# Centennial Botanical Conservatory – Expanded Services Opportunity Evaluation and Facility Renewal Updates (Pages 19 - 101)

Report No. 23/2020 (Infrastructure & Operations - Parks and Open Spaces), recommending that Administration proceed with the replacement of the existing Seasonal Cold Frame Greenhouse.

With respect to Report No.23/2020 we recommend that Administration proceed with the replacement of the existing Seasonal Cold Frame Greenhouse in 2020;

AND THAT subject to the outcome of the Program and Service Review development of tender documents for the replacement of the Production Greenhouses proceed immediately and funds required for the replacement be included in the 2021 Capital Budget for consideration;

AND THAT Administration report back to Council with renewal options for the Centennial Botanical Conservatory (Tropical Display House and Wings) at the current site location and in alignment with the extended services opportunities including a multi-purpose room, educational programming, and a coffee bar;

AND THAT the Mayor and Clerk be authorized to execute all necessary documentation.

### PETITIONS AND COMMUNICATIONS

# Scheduling - Designated Truck Route By-Law (Pages 102 - 103)

Memorandum from Ms. K. Power, City Clerk, dated February 24, 2020, relative to the above noted.

With Respect to the presentation of the Designated Truck Route By-law, we recommend that the City Clerk poll for new dates for Council to receive the By-law on or before June 29, 2020;

AND THAT the City Clerk report back to Council with respect to scheduling a new date.

# Occupational Health and Safety (Pages 104 - 107)

Memorandum dated February 11, 2020 from Ms. K. Bernardi, Manager - Corporate Safety, relative to the above noted.

# **E-Scooters** (Pages 108 - 109)

Memorandum from Mayor B. Mauro, dated February 10, 2020, containing a motion to Review Ontario's Electric Kick Scooter Pilot Program.

With respect to the electric kick scooter (e-scooter) pilot program, we recommend that Administration including Engineering, Licencing and Enforcement, Parks and Open Spaces, and in consultation with the Thunder Bay Police Services and Accessibility Advisory Committee, report to Council recommendations to potentially introduce e-scooters in the City;

AND THAT all relevant legislation is reviewed and appropriate information is included within Administration's recommendation;

AND THAT the report contain a draft by-law for Council's consideration;

AND THAT Administration report to Council on or before June 1, 2020;

AND THAT any necessary by-laws be presented to City Council for ratification.

# Additional Funds for Capital Renewal and Maintenance (Pages 110 - 111)

At the January 29, 2020 and the February 10, 2020 City Council meetings respectively, Council directed Administration to report back on or before March 2, 2020 with respect to reallocation of funds from the 2020 Travel and Training Budget to capital renewal and/or maintenance of city infrastructure; and with respect to reallocation of funds from proposed expansion of .7 FTE in Infrastructure and Operations (Roads) to renewal and/or maintenance of city infrastructure.

Memorandum dated February 21, 2020 from Ms. K. Marshall, Manager- Infrastructure & Operations, relative to reallocation of funds with respect to the 2020 Operating Budget.

Endorsement of Nominating Terry Fox as the new face of \$5 bill (Pages 112 - 113)

Memorandum dated February 24, 2020 from Mayor Bill Mauro relative to the above noted.

With respect to the Bank of Canada's online campaign calling for nominations to replace former Canadian Prime Minister Wilfrid Laurier on the \$5 bill, we endorse the nomination of Terry Fox;

AND THAT letters be sent to Finance Minister Bill Morneau and Bank of Canada Governor Stephen Poloz to express the formal support of Thunder Bay City Council.

**NEW BUSINESS** 

**ADJOURNMENT** 



**MEETING DATE** 03/02/2020 (mm/dd/yyyy)

SUBJECT Confirmation of Agenda

# **SUMMARY**

Confirmation of Agenda - March 2, 2020 - Committee of the Whole

# **RECOMMENDATION**

With respect to the March 2, 2020 Committee of the Whole meeting, we recommend that the agenda as printed, including any additional information and new business, be confirmed.



*MEETING DATE* 03/02/2020 (mm/dd/yyyy)

SUBJECT Clean, Green & Beautiful Committee

# **SUMMARY**

Minutes of Meeting No. 07-2019 and No. 01-2020 of the Clean, Green and Beautiful Committee held on November 17, 2019 and January 15, 2020 respectively, for information.

# **ATTACHMENTS**

- 1. 2019-11-20 CGB Minutes (Nov)
- 2. 2020-01-15 CGB Final2



CLEAN, GREEN & BEAUTIFUL COMMITTEE **MEETING:** PAGE 1 OF 4

**MEETING NO. 07-2019** DATE: NOVEMBER 20, 2019

TIME: 10:00 A.M.

MCNAUGHTON ROOM, 3<sup>RD</sup> FLOOR, CITY HALL PLACE:

**CHAIR:** COUNCILLOR R. JOHNSON

**MEMBERS:** OFFICIALS:

Ms. K. Lewis, Director Corporate Strategic

Services Mayor B. Mauro, City Council Councillor R. Johnson, City Council Ms. K. Fazio, Planner II

Ms. P. Caland, Ministry of Tourism, Culture & Sport Ms. K. Hell, Administrative Assistant -

Ms. B. Baker, Local Artist Corporate Strategic Services

Ms. S. Costigan, EcoSuperior

Ms. S. Godwin, Thunder Bay Art Gallery

Ms. S. Levanen, Supervisor – Corporate Mr. K. Jessiman, Medium Business Representative

Communications / 50<sup>th</sup> Anniversary Mr. D. Hansen, Public Art Committee

Ms. D. Pallen, Heritage Advisory Committee Representative

Mr. S. Margarit – Large Business Representative Ms. P. Mader, Arts & Cultural

Development Coordinator, Recreation & Mr. A. Puiatti, Architecture

Culture

Mr. P. Mersch, Landscape Designer

Ms. K. Nadeau, Labour Representative Ms. L. Constanzo, Supervisor, Cultural Development & Events, Recreation &

Culture

**GUESTS** 

#### 1. WELCOME & DISCLOSURES OF INTEREST

The Chair, Councillor R. Johnson, called the meeting to order at 10:00 am. There were no disclosures of interest declared at this time.

#### 2 AGENDA APPROVAL

It was the consensus of the Committee that the agenda for Meeting No. 07-2019 of the Clean, Green & Beautiful Committee, held on November 20, 2019, including any additional information and new business, be confirmed.

### 3. MINUTES OF PREVIOUS MEETING

It was consensus of the Committee to confirm the Minutes of Meeting No. 06-2019 held on October 16, 2019, be confirmed.

### 4. PUBLIC ARTS COMMITTEE UPDATE

Ms. L. Constanzo and Ms. P. Mader updated the Committee on the 4<sup>th</sup> Gateway Project.

The structure installed within the next 30 days pending on an additional permit required from MTO.

Due to the timing and weather, the enhanced landscaping will be done in the spring of 2020.

A discussion was held in regards to having the launch for the 4<sup>th</sup> Gateway in May 2020 and to tentatively add the item to the Clean, Green & Beautiful Committee meeting agenda in April 2020.

# 5. <u>50<sup>th</sup> ANNIVERSAR</u>Y UPDATE

Ms. S. Levanan gave an update relative to the above. Sharing the theme of the upcoming 50<sup>th</sup> Anniversary is One City 50 Years.

The logo and website have been developed and will drive the creative moving forward. The  $\underline{50^{th}}$  Anniversary website identifies what the images in the logo represent.

The first event will be a celebration event held on January 1, 2020 at HMCs Griffon.

The Legacy projects will be discussed further with the Committee as the capital funding is within the Clean, Green & Beautiful budget 2019 and 2020.

### DOORS OPEN PLANNING COMMITTEE 2020

Ms. D. Pallen reached out to the Committee for a representative to join the Doors Open Planning Committee for 2020.

Councillor R. Johnson will send a note out to the Committee to request representation from the Clean, Green & Beautiful Committee.

# 6. BUDGET UPDATE

Ms. K. Lewis provided an update relative to the above.

A discussion was held in regards to the Clean, Green & Beautiful Committee and its 50<sup>th</sup> Anniversary Legacy Projects. It was decided that the discussion on the Legacy Project be deferred.

Ms. K. Lewis to send out the budget details to the Committee.

### 7. EARTHCARE COMMUNITY GREENING WORKING GROUP

Mr. K. Jessiman provided an informative power point presentation relative to the above.

A discussion was held in regards to a few additions to the presentation such as stewardship, adding image route sites and the Adelaide Monarch Garden.

Councillor R. Johnson suggested that Mr. K. Jessiman bring the presentation to Council with a few of the above stated enhancements.

Ms. K. Hell to schedule with Administration and the City Clerk.

# 8. FUTURE CLEAN, GREEN & BEAUTIFUL PROJECTS

Deferred to the Clean, Green & Beautiful Committee meeting on December 18, 2019 at the Thunder Bay Art Gallery.

# 9. SECONDARY SCHOOL PROJECT ALLOCATION

A discussion was held relative to the above and the consensus of the group was that the applications were ready to be sent to the high schools.

Ms. K. Hell to send the applications to the eight high schools, Dennis Franklin Cromarty, Westgate, Superior, Hammarskjold, St. Ignatius, St. Patrick's, LaVerendrye and Matawa within the week.

# 10. HERITAGE COMMITTEE UPDATE

Ms. D. Pallen reached out to the Committee to have a representative from the Clean, Green & Beautiful Committee join the Doors Open Planning Committee for 2020.

To view projects that have been protected visit the Heritage Committee website.

# 11. 15<sup>th</sup> ANNIVERSARY OF CLEAN, GREEN & BEAUTIFUL COMMITTEE UPDATE

A discussion was held relative to the Clean, Green & Beautiful Committee do an event in conjunction with the 4<sup>th</sup> Gateway Project and to add the past five years to the 10 year anniversary book and reprint.

### 12. CLEAN, GREEN & BEAUTIFUL TERMS OF REFERENCE

The Clean, Green & Beautiful Terms of Reference have been ratified by Council.

The next step will be to advertise for the additional Committee members, small business representative (1-10 employees), youth representative (29 and under) and an additional citizen representative.

# 13. <u>NEXT MEETING</u>

Committee meetings are held on the  $3^{rd}$  Wednesday of each month, except July and August, from 10:00 a.m. until 12:00 p.m. in the McNaughton Room,  $3^{rd}$  Floor of City Hall, unless otherwise notified.

• Wednesday, December 18, 2019 – (Noon to 2 pm) Thunder Bay Public Art Gallery

2020 Dates to be sent out to the Committee

- Wednesday, January 15, 2020
- Wednesday, February 19, 2020
- Wednesday, March 18, 2020
- Wednesday, April 15, 2020
- Wednesday, May 20, 2020
- Wednesday, June 17, 2020
- Wednesday, September 16, 2020
- Wednesday, October 21, 2020
- Wednesday, November 18, 2020
- Wednesday, December 16, 2020

# 14. <u>ADJOURNMENT</u>

The meeting adjourned at 11:45.



**MEETING:** CLEAN, GREEN & BEAUTIFUL COMMITTEE PAGE 1 OF 4

**MEETING NO. 01-2020 DATE:** JANUARY 15, 2020

TIME: 10:00 A.M.

PLACE: THUNDER BAY ART GALLERY

**CHAIR:** COUNCILLOR R. JOHNSON

OFFICIALS: **MEMBERS:** 

Ms. K. Lewis, Director Corporate

Strategic Services

Councillor R. Johnson, City Council Ms. K. Fazio, Planner II

Ms. P. Caland, Ministry of Tourism, Culture & Sport Ms. K. Hell, Administrative Assistant -

Ms. S. Costigan, EcoSuperior

Ms. K. Donahue, Citizen Representative

Ms. S. Godwin, Thunder Bay Art Gallery

Mr. K. Jessiman, Medium Business Representative

Mr. D. Hansen, Public Art Committee

Ms. D. Pallen, Heritage Advisory Committee

Mr. S. Margarit - Large Business Representative

Mr. A. Puiatti, Architecture

Mr. P. Mersch, Landscape Designer

Corporate Strategic Services

### **GUESTS**

Mr. G. Ritchie, Citizen

Mr. A. Viljoen, Brook McIlroy

#### 1. WELCOME & DISCLOSURES OF INTEREST

The Chair, Councillor R. Johnson, called the meeting to order at Noon. There were no disclosures of interest declared at this time.

#### 2. ELECTION OF CHAIR/VICE CHAIR FOR 2020

There was a call for nominations from the Members for the appointment of Chair.

MOVED BY: Ms. S. Costigan SECONDED BY: Mr. P. Mersch

THAT Councillor Rebecca Johnson be appointed Chair of the Clean, Green and Beautiful Committee for the remainder of the 2020 calendar year.

**CARRIED** 

There was a call for nominations from the Members for the appointment of Vice-Chair.

MOVED BY: Ms. D. Pallen SECONDED BY: Mr. S. Godwin

THAT Ms. S. Costigan be appointed Vice-Chair of the Clean, Green and Beautiful Committee for the remainder of the 2020 calendar year.

**CARRIED** 

# 3. AGENDA APPROVAL

It was the consensus of the Committee that the agenda for Meeting No. 01-2020 of the Clean, Green & Beautiful Committee, held on January 15, 2020, including any additional information and new business, be confirmed.

# 4. MINUTES OF PREVIOUS MEETING

It was consensus of the Committee to confirm the Minutes of Meeting No. 07-2019 held on November 20, 2019 be confirmed.

December 18, 2019 was an information meeting.

# 5. FINANCE/BUDGET REVIEW

A discussion was held relative to the above. Documents provided by Ms. K. Lewis were reviewed and approved by the committee.

A discussion was held relative to inviting EarthCare to attend one of the Clean, Green & Beautiful Committee meetings in the future to present.

### 6. EMERGING PROJECTS

A discussion was held relative to the above. The Committee agreed with the Emerging Project Review Committee's recommendations. List attached. (Page 11)

# 7. SECONDARY SCHOOL PROJECT ALLOCATION

A discussion was held relative to the above. The Committee agreed with the Review Committee's recommendations for the Secondary School allocation of grants. List attached. (Page 11)

Ms. K. Hell to inform the schools that they are receiving the grants through an emailed letter and coordinate the cheques to be sent within the next couple of weeks.

# 8. <u>50<sup>th</sup> ANNIVERSARY LEGACY</u> PROJECT

Ms. K. Lewis, Ms. P. Mader. Ms. L. Constanzo, Mr. W. Schwar and Mr. M. Vogrig are preparing the RFP to issue out for the Legacy Project. It will also include a call out to artists. The RFP will be shared with the Committee.

# 9. STRATEGIC PLANNING – FUTURE PROJECTS

A discussion was held relative to the above.

The consensus of the Committee is to plan a half day Image Route Bus Tour for our May 20 Committee meeting. Followed by a facilitated discussion. The Committee members expressed an interest in understanding what areas are planned for capital improvements in coming years to assist with planning Clean, Green & Beautiful enhancements.

As planning proceeds, public engagement will be considered.

A suggestion was made to invite the BIA to one of our future meetings within the next few months.

# 10. HERITAGE COMMITTEE UPDATE

Ms. D. Pallen reached out to the Committee in regards to sponsorship for the Doors Open Event, September 12, 2020 from the Clean, Green & Beautiful Committee and/or if anyone had any suggestions or recommendations.

To view updates and further information visit the Heritage Committee website.

# 11. CLEAN GREEN & BEAUTIFUL AWARDS IN PARTNERSHIP WITH CHAMBER

The Clean, Green & Beautiful Award working group consists of Ms. S. Godwin, Ms. B. Baker, Mr. A. Puiatti, Mr. K. Jessiman and Ms. S. Costigan.

Nominations have been submitted, the working group will follow up and review.

# 12. PUBLIC ART COMMITTEE UPDATE

Deferred to next meeting.

### 13. COMMITTEE MEMBERSHIP

The Committee positions available have been posted on the City of Thunder Bay Website.

### 14. ROUNDTABLE ANNOUNCEMENTS

Mr. P. Mersch shared that the 2020 Home and Garden Show will take place on April 3, 4 and 5 at the CLE Grounds.

Ms. S. Godwin stated that the new building for the Thunder Bay Art Gallery has already won an award before the construction begins.

Jake Black has donated \$800,000 towards the new site.

Ms. P. Caland shared that the Ministry of Tourism, Culture and Sport is in its planning stages for the year for new and improving infrastructure.

Ms. S. Costigan stated that ECOSuperior is planning Depave paradise again this year, an Ontario wide event, after last year's success. This involves removing pavement and planting in its place. ECOSuperior is also planning for Spring Up to Clean-Up and the cigarette litter campaign.

Ms. D. Pallen advised the Committee has the Fibre Art display on the third floor of the Thunder Bay Museum.

# 15. <u>NEXT MEETING</u>

Committee meetings are held on the  $3^{rd}$  Wednesday of each month, except July and August, from 10:00 a.m. until 12:00 p.m. in the McNaughton Room,  $3^{rd}$  Floor of City Hall, unless otherwise notified.

- Wednesday, March 18, 2020
- Wednesday, April 15, 2020
- Wednesday, May 20, 2020 9 am 1 pm
- Wednesday, June 17, 2020
- Wednesday, September 16, 2020
- Wednesday, October 21, 2020
- Wednesday, November 18, 2020
- Wednesday, December 16, 2020

### 16. ADJOURNMENT

The meeting adjourned at 1:50 PM.



# Corporate Report

DEPARTMENT/ DIVISION	Development & Emergency Services - Thunder Bay Fire Rescue	REPORT NO.	R 22/2020
DATE PREPARED	02/11/2020	FILE NO.	
MEETING DATE	03/02/2020 (mm/dd/yyyy)		
SUBJECT	Capital Purchase One New Fire Pumper Truck		

### **RECOMMENDATION**

With respect to Report No. R 22/2020 (Thunder Bay Fire Rescue), we recommend that one (1) new Pumper Fire Truck be awarded to Fort Garry Fire Trucks Ltd., which submitted the successful proposal for the supply of Fire Trucks for Thunder Bay Fire Rescue (TBFR) for the period 2016 through 2021;

AND THAT the Manager-Supply Management be authorized to issue a purchase order to award this contract;

AND THAT the Mayor and Clerk be authorized to sign any necessary agreements related to this purchase;

AND THAT any necessary By-laws be presented to City Council for ratification.

### **EXECUTIVE SUMMARY**

The 2019 and 2020 Capital Budgets each include \$330,000.00 for a total of \$660,000.00 for the purchase of one (1) new Pumper Fire Truck.

Based on the awarded RFP 20/2016 Fort Garry Fire Trucks Ltd. was awarded the contract to provide up to an additional 4 units up to and including 2021.

### **DISCUSSION**

A public request for proposals for the supply and delivery of one (1) new Pumper Rescue Fire Truck was advertised in the Chronicle Journal on April 9, 2016 and on the City of Thunder Bay website for three weeks and three proposals were publically opened on May 5, 2016.

The call for proposals produced three (3) responses. One bid from Acres Industries Inc, of Wawanesa, MB, one bid was from Fort Garry Fire Trucks Ltd. of Winnipeg, MB., and one bid from Keewatin Truck Service Inc, of Winnipeg, MB. Fort Garry Fire Trucks Ltd. met all the requirements as outlined in the proposal document and was determined to be the best option when the scoring criteria was applied. Fort Garry Fire Trucks Ltd. was awarded the contract to provide additional trucks up to and including 2021.

To date TBFR has purchased a total of two units within this contract including a Pumper Rescue Fire Truck in 2016 and a Fire Tanker truck in 2018. This current purchase of a Fire Pumper would likely be the last under this contract as TBFR does not have a projected capital purchase within this scope for 2021 budget cycle.

### FINANCIAL IMPLICATION

The 2019 and 2020 Capital Budgets include \$330,000.00 in each year for the purchase of the apparatus as previously detailed and there are sufficient funds to proceed with the work based on the breakdown of costs as detailed below:

Contract Proposal Price Received 02/20/2020	\$648,000.00
HST @ 13%	\$ 84,240.00 \$732,240.00
HST rebate Net Cost	(\$72,835.80) \$659,404.80

#### **CONCLUSION**

It is concluded that TBFR should continue with the contract awarded in 2016 (Report 101/2016) and proceed with the purchase of one (1) New Fire Pumper Truck from Fort Garry Fire Trucks Ltd. of Winnipeg, MB.

### **BACKGROUND**

Capital funds are included in the 2019 and 2020 Capital Budgets for the purchase of one (1) new Pumper Fire Truck. On average, the Pumper would respond to approximately 1100 emergency incidents per year and the purchase of the new apparatus is necessary in order to replace one of the four existing front line Pumpers.

The Pumper being replaced, was purchased in 2005 and will remain in service as a reserve apparatus which is required to provide for the seamless delivery of service during periods of maintenance and repair to the existing front line Pumpers.

The recommended purchase of a new Pumper will be a continuation of the cyclical replacement of TBFR's earliest Pumpers that were originally purchased in 1998 and 2005. The 1998 pumper will be auctioned off. The replacement of the existing apparatus is critical to maintaining a reliable front line emergency response fleet.

ATTACHMENTS:

None

**PREPARED BY:** David Paxton, Deputy Fire Chief

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Mark J. Smith, GM Development & Emergency Services	February 21, 2020



# Corporate Report

DEPARTMENT/ DIVISION	Infrastructure & Operations	<b>REPORT NO.</b> R 23/2020	
DATE PREPARED	02/12/2020	FILE NO.	
MEETING DATE	03/02/2020 (mm/dd/yyyy)		
SUBJECT	Centennial Botanical Conservatory – Expanded Services Opportunity Evaluation and Facility Renewal Updates		

### **RECOMMENDATION**

With respect to Report No.23/2020 we recommend that Administration proceed with the replacement of the existing Seasonal Cold Frame Greenhouse in 2020;

AND THAT subject to the outcome of the Program and Service Review development of tender documents for the replacement of the Production Greenhouses proceed immediately and funds required for the replacement be included in the 2021 Capital Budget for consideration;

AND THAT Administration report back to Council with renewal options for the Centennial Botanical Conservatory (Tropical Display House and Wings) at the current site location and in alignment with the extended services opportunities including a multi-purpose room, educational programming, and a coffee bar;

AND THAT the Mayor and Clerk be authorized to execute all necessary documentation.

AND THAT any by-laws as necessary be presented for ratification;

### **EXECUTIVE SUMMARY**

To inform decisions regarding the operation of the Centennial Botanical Conservatory and the provision of services moving forward, a public input needs assessment, a technical plant assessment, and an expanded services evaluation has been completed. This report presents the findings of the evaluations, provides an update on the existing facility and operations, and outlines facility renewal options for both the Conservatory facility, the Production Greenhouses and the Seasonal Cold Frame Greenhouse.

Based on the Core Business Review completed in 2012 Council directed Administration to pursue restoration of the Conservatory facility and continue with existing greenhouse planting and maintenance operations. Further, Administration recommends proceeding with the

replacement of the existing Cold Frame Greenhouse in 2020 to support existing operations and the Engineering Division's Low Impact Development stormwater facility Capital program. Subject to the outcome of the Program and Service Review replacement of the Production Greenhouses is recommended with the installation of a new 9600 square foot aluminum frame twin walled polycarbonate glazed commercial greenhouse facility, however this will require additional funding to be secured based on the most recent cost estimates.

Expanded service opportunities including multi-purpose room rental, educational programming and installation of a coffee bar have been identified as options to increase revenues and attendance. Prior to finalizing recommended options and costs for the Conservatory facility renewal, planning and estimates for provision of these expanded services within the facility must be completed.

#### **DISCUSSION**

# **Needs Assessment Open House**

On May 9, 2017 an open house was held to gather input from the public regarding the Conservatory operations as well as ideas and suggestions regarding future uses of the Conservatory. Staff from the City and two Consultants were in attendance to answer questions and discuss items with the participants. Over one hundred comment sheets were submitted and all but one of the comment sheets provided were in favour of making improvements at the Conservatory, adding new uses both inside and outside the buildings.

When asked about the most favourite parts of the Conservatory answers included specific features and plants, the atmosphere and feeling, and that it is a unique community resource. The least favourite parts included the state of the buildings, limited access to the displays, and limited education and information provided regarding the plants. Many people commented on the significance of the plant collection and that plants had been donated by or had connection to themselves or family members. Many new ideas were submitted in relation to new or expanded opportunities with the facility.

The information obtained from the open house informed the "Expanded Services Opportunity Evaluation Report" (see Attachment 'A') and the detailed findings of the open house are included in Appendix 6 of that document.

# **Expanded Services Opportunity Evaluation Report**

A consultant was retained to review and assess other potential services, including but not limited to multi-purpose room rental; a coffee bar; market rental space; educational programming; and community greenhouse space usage. The evaluation looked not only at ways to increase revenues, but also the overall usage and benefit to the community. This work included the following:

1. Best practice review of other conservatories;

- 2. Market research to assess revenue generating opportunities;
- 3. Order of magnitude cost to renovate the facility to support proposed revenue lines;
- 4. Creation of an evaluation model that considers both the economic and social benefits.

The best practice review of other conservatories identified that the majority of botanical gardens and conservatories depend heavily on government funding and do not anticipate being self sustainable. Increased attendance and improved value to the community was found to be linked to provision of complementary services such as gift shops, restaurants and coffee shops, as well as integration of educational programming and events through collaboration with volunteers and academic and scientific community partners.

The evaluation model was based on three key objectives including Engage, Connect, and Sustain. Each of the opportunities were evaluated based on these weighted key objectives, their ability to achieve such results, and a total score of ten. The results of the evaluation model showed the multi-purpose room achieved the highest rating (7.6), followed by the educational programming (6.2) and the coffee bar (6.0).

The multi-purpose room, recommended as the re-purposing of one of the wings of the Conservatory, and the coffee bar will require an initial capital investment, however they will provide opportunities for new/expanded revenue as well as improved facility attendance. Estimated return on investment for these expanded services range from 8-16%.

The educational programming may not result in significant increased revenues, however it provides considerable value with respect to engaging and informing the community, as well as providing improved facility attendance. It is expected that volunteers and community partnerships will have to be integrated into the Conservatory operations in order to successfully develop and deliver educational programming and promote environmental stewardship through the facility.

The full Expanded Services Opportunity Evaluation Report is included as Attachment 'A'.

# **Plant Assessment**

In June of 2017, a horticulture assessment was undertaken of the existing tropical and cacti plants in the Conservatory. The initial on-site assessment was undertaken by horticulture consultants from Green Design Landscaping Inc. and Kernow Gardens Inc. Three hundred seventy one significant tropical plants, two hundred eighty-eight cacti and succulent plants, and numerous individual floor, wall, and hanging plants were assessed. The assessment process included details such as plant identification, inventory and number assignment, size, health, significance, life expectancy, and recommendations for transplant and re-propagation.

Initial observations of the plant collections and the facility were positive and noted that the Conservatory staff should be applauded for work well done. At the time of assessment the collection was noted as somewhat irreplaceable it terms of maturity for many of the original specimens. The collection is of economic and community value, however would not be considered a planting of unique horticulture significance at this time in terms of the rarity of the

plants. The cost to replace the plants in the tropical house alone with juvenile sized plant material is estimated to be over \$1 million. In terms of appraised replacement value, at their current size and maturity, the cost to replace the existing tropical house plants could represent a \$2-\$5 million investment

Generally the plants are in reasonable to good condition, although many are mature and require horticultural and corrective pruning to restore health and structure. Most of the existing plant material can be transplanted and/or transplanted and re-propagated, which provides options for maintaining the existing plant material should a renewal of the tropical display area involve major changes to the existing layout.

Considering the age of the facility and the level of technology supporting operational and environmental controls it is the opinion of the consultants that the Conservatory has served Thunder Bay well. The assessment also identified that the structure of the Conservatory is of notable historical significance and should be researched and evaluated to determine the structural viability, life expectancy, and restoration opportunities as the profile and silhouette provide a unique and elegant feature to Thunder Bay and the Botanical community.

The full Plant Assessment Report is included as Attachment 'B'.

# **Parks Horticulture Operations**

# **Core Operations**

Horticulture services are provided through the Parks Forestry & Horticulture unit, which include operation of the Conservatory and the production and installation of flowers for Parks planting beds. The group includes 0.5-Supervisor, 1-FT Leadhand, 2-FT Conservatory Park workers, and 5-Seasonal workers. Currently the Conservatory Tropical Display House remains open to the public, however the Cacti display and Seasonal room (East and West wings) remain closed to the public due to the condition of the structure.

In addition to operating the Conservatory facility, Horticulture staff also produce and install all of the flowers for 114 planting beds within City Parks. This includes production and planning completed by full time staff, and preparation, installation, watering, maintenance, and closures completed by seasonal staff May through October each year. Since 2015 the operation has been strategically moving away from annual flowers and has been planting more perennials. This reduces the amount of flowers required to be produced and planted each year, resulting in beds being finished sooner and allowing resources to be directed towards bed maintenance and other horticulture services. These annual and perennial plants are grown within the production greenhouses located adjacent the Conservatory beginning mid February each year. In 2020 this will include approximately 58,000 annual and 8,000 perennial plants.

The total operating budget for the Horticulture unit in 2019 was \$618,000. The Conservatory operations and the Parks planting operations each represent 50% of the overall cost, therefore each costs \$309,000 to operate annually. Parks planting operations can be broken down into plant production and bed installation/maintenance, with \$55,000 representing the cost to produce

the flowers and \$254,000 representing the costs to install and maintain the beds for the season. The estimated annual cost to contract out the purchase, installation and maintenance of the same amount of flowers and beds is \$392,000 (\$80,000 to purchase and \$312,000 for installation, watering, and maintenance of beds). Therefore providing this service internally results in a net savings of \$83,000 annually.

# **Recently Identified Opportunities**

The horticulture operations have started producing plants for use in the City's Low Impact Development (LID) stormwater retention sites. We expect to achieve Capital project savings of up to \$30,000 per site producing and installing these plants using internal horticulture staff as opposed to including this work in the construction contract. As a result we estimate savings to Capital LID projects will be \$120,000 annually. Maintenance services for existing LID sites will also be provided through the Horticulture unit when resources are available.

Horticulture operations have started assisting with remediation and removal of invasive plants found within Park land. Going forward having access to the knowledge and skills that the horticulture staff possess will be important to effectively respond to invasive plant locations and ensure that removals are done correctly and site impacts are minimized.

Horticulture operations have also developed and created new perennial/pollinator beds at Chapples golf course and two new butterfly milkweed beds at Strathcona golf course, which provide ecological value to the community. Similar opportunities will continue to be supported moving forward.

# **Facility Renewals**

### **Seasonal Cold Frame Greenhouse**

The Conservatory operations includes an existing 1290 square foot Seasonal Cold Frame Greenhouse that is used to support the Parks planting operations. The poly film exterior of this structure requires replacement and in 2019 quotes were obtained for a replacement 2880 square foot greenhouse that would support the requirements of the LID program, as opposed to replacing the poly on the existing structure. The cost to install the new Seasonal Cold Frame Greenhouse including services and concrete footing is estimated to be \$75,000. This project will be funded from capital carry-forwards in the Capital LID program with a 100% return on investment potentially within the first year. This space can also be leveraged during the Conservatory renewal to temporarily relocate plants from the Tropical Display House, or as a storage location for the annual tree plant program in Forestry.

### **Production Greenhouses**

The Conservatory operations includes three production greenhouses located adjacent to the Conservatory facility. They provide a total of 8,300 square feet of greenhouse space which supports the Conservatory operations as well as the production of all the annual and perennial plants for Parks. The production greenhouses are used to support the Conservatory operations as

well as grow flowers for Parks planting bed operations. The two operations combined create a balanced use of the facilities and workload throughout the entire year that leverages the specialized skills of the horticulture staff.

The production greenhouses require replacement due to the deteriorating condition of the structures. Replacement will reduce energy costs, and climate control automation improvements will eliminate overtime costs related to manual vent operation. These structures are not architecturally significant, and are in an advanced stated of disrepair in comparison to the Conservatory facility, and therefore restoring or retrofitting these greenhouse facilities is not recommended.

Implementation of a Conservatory facility renewal may require that the production greenhouses be replaced first, as the greenhouses can be used to re-locate and/or re-propagate existing plants from the Conservatory during the renewal. The cost to replace the Production Greenhouses including new concrete floors and foundations, automated venting and climate control, with aluminum frame construction and twin-wall Polycarbonate 6mm roof and wall glazing is estimated at \$1.6-1.8 million. The expected life span of this type of facility would be 30 years with proper maintenance.

The automated climate control and irrigation systems and would reduce overtime costs by \$12,000 annually.

Subject to the outcome of the Program and Service review Administration is recommending that the development of tender documents for the replacement of the Production Greenhouses start immediately and that the 2021 Capital budget include for the replacement Production Greenhouses.

# Conservatory Facility - Tropical House Display and East/West Wings

In 2019, the Heritage Advisory Committee identified the Centennial Botanical Conservatory as having cultural heritage in the community and recommended it be added to the Thunder Bay Municipal Heritage Register. This recommendation was presented and passed at the Committee of the Whole meeting September 30, 2019.

In order to fully open the facility to the public, meet accessibility requirements, realize efficiencies in operations, and eliminate the safety netting from the Tropical Display house the following minimum renewal improvements are recommended:

- 1. Re-inforce the East and West wing aluminum structures
- 2. Re-finish the existing steel structure of the Tropical Display House
- 3. Re-Glaze the entire facility
- 4. Add automated venting and irrigation systems
- 5. Replace the entire HVAC system of the facility
- 6. Remove existing asbestos material from the existing knee walls below the existing glazing.

- 7. Redevelop the existing Tropical Display House area layout, including fully accessible walkways
- 8. Replace the underground drainage systems in the display area
- 9. General refurbishment of the remaining public and workspaces in the facility.

The Asset Management Division working with Parks has developed a preliminary estimate of \$2.6M to \$3.1M for the scope of work on the Conservatory facility above. This work may be phased, but it is imperative that the first phase consist of the re-glazing to support the design of the new HVAC system.

Expanded service opportunities including multi-purpose room rental, educational programming and installation of a coffee bar have been identified as options to increase revenues and attendance. Administration will continue to investigate these opportunities and provide Council with the associated capital costs and benefits. A final renewal strategy will be presented to Council in late 2020 and will include both the total cost of a singular project and the costs associated with a phased approach.

Based on a recently updated energy audit, completion of the work noted in this report is expected to achieve approximately \$80K in annual energy savings.

Additional annual saving in the amount of \$10K can also be realized with the elimination of the current annual glass replacement and boiler maintenance.

### FINANCIAL IMPLICATION

The cost to install a new Seasonal Cold Frame Greenhouse including services and concrete footing is estimated to be \$75,000 and will be funded from capital carryforwards in the LID program

The cost to replace the Production Greenhouses including new concrete floors and foundations, automated venting and climate control, with aluminum frame construction and twin-wall Polycarbonate 6mm roof and wall glazing is estimated at \$1.6 -\$1.8 million. There is currently \$222,000 carry forward Parks Capital budget for the replacement of the Conservatory Production Greenhouses and \$67,000 for the Conservatory preliminary design. Energy costs are expected to be reduced by \$80K annually with the installation of the new Production Greenhouses and the renewed Conservatory facility.

Additional funding must be secured for both the Production Greenhouse replacements and the Conservatory renewal and Administration will continue to explore outside funding opportunities and report back with financing options in the 2021 budget.

### **CONCLUSION**

It is concluded that the replacement of the existing Seasonal Cold Frame greenhouse should proceed in 2020, and that subject to the outcome of the Program and Service review development of tender documents for the replacement of the Production Greenhouses begin immediately to inform the 2021 Capital budget.

It is also concluded that final options and estimates for the Conservatory renewal be completed and reported back to Council for consideration.

### **BACKGROUND**

The Conservatory has been open to the public in a limited capacity since February 2012. The main tropical display area was closed in 2012 as a precautionary measure after identified hazards related to breaking glass were deemed to present an unacceptable level of risk to the visitors. It was later re-opened after the installation of temporary netting to address the hazard concerns. The East and West wings have remained closed to the public since 2012 after an engineering assessment determined that they did not meet the snow and rain load requirements of the Ontario Building Code to allow public access.

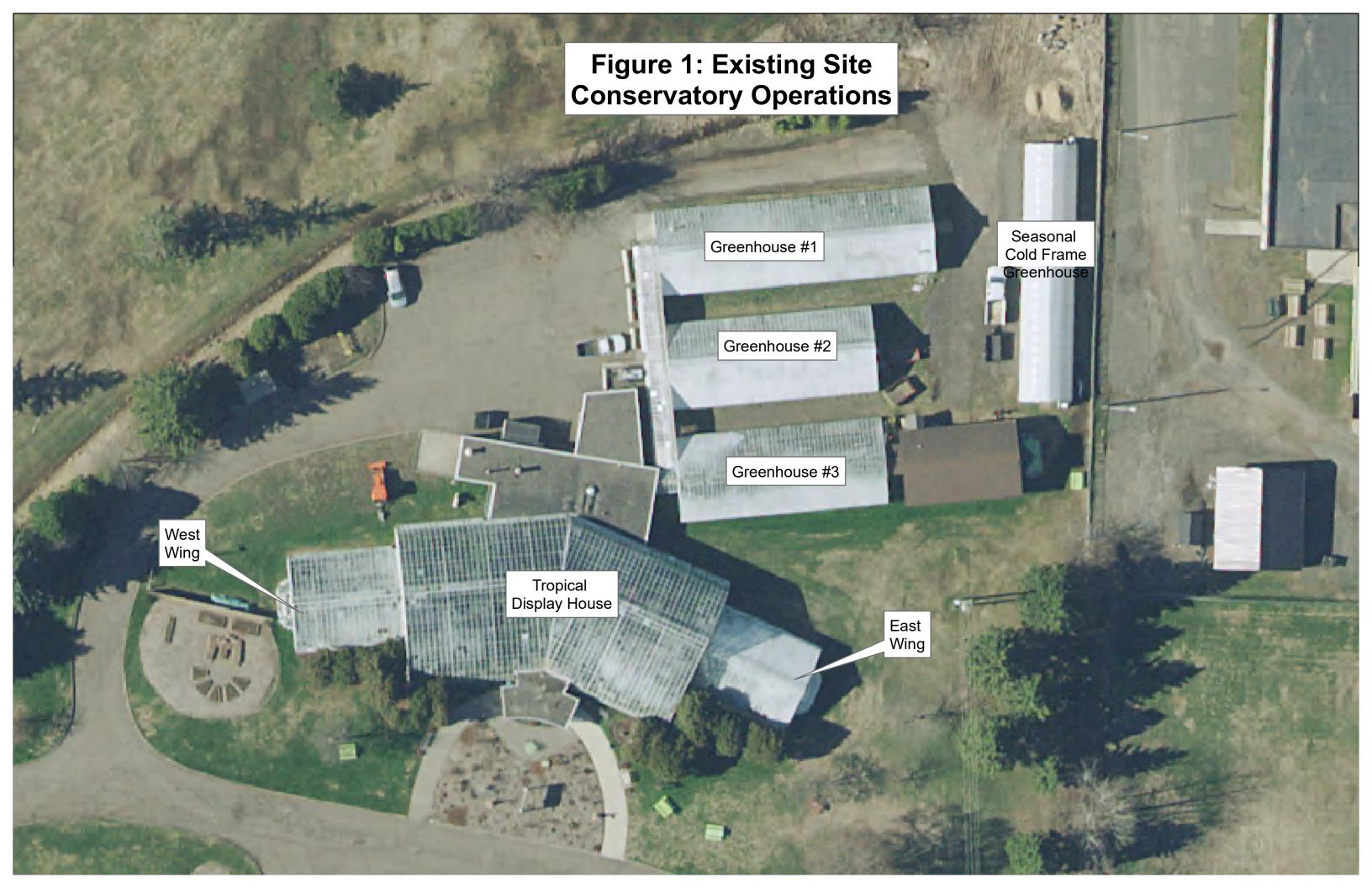
Report No. 2012.079 Conservatory Update Requirements and Report No. 2012.135 Core Business Review – Phase 2 Report were presented at August 27, 2012 and the September 24, 2012 Committee of the Whole meetings. The resulting Resolutions directed Administration to proceed with the installation of the netting in the Tropical Display House to facilitate public access, and to proceed with an interim capital redevelopment strategy for the Conservatory in keeping with Option #1 of the Core Business review, which included restoring the existing Conservatory and continuing with greenhouse, planting and maintenance operations.

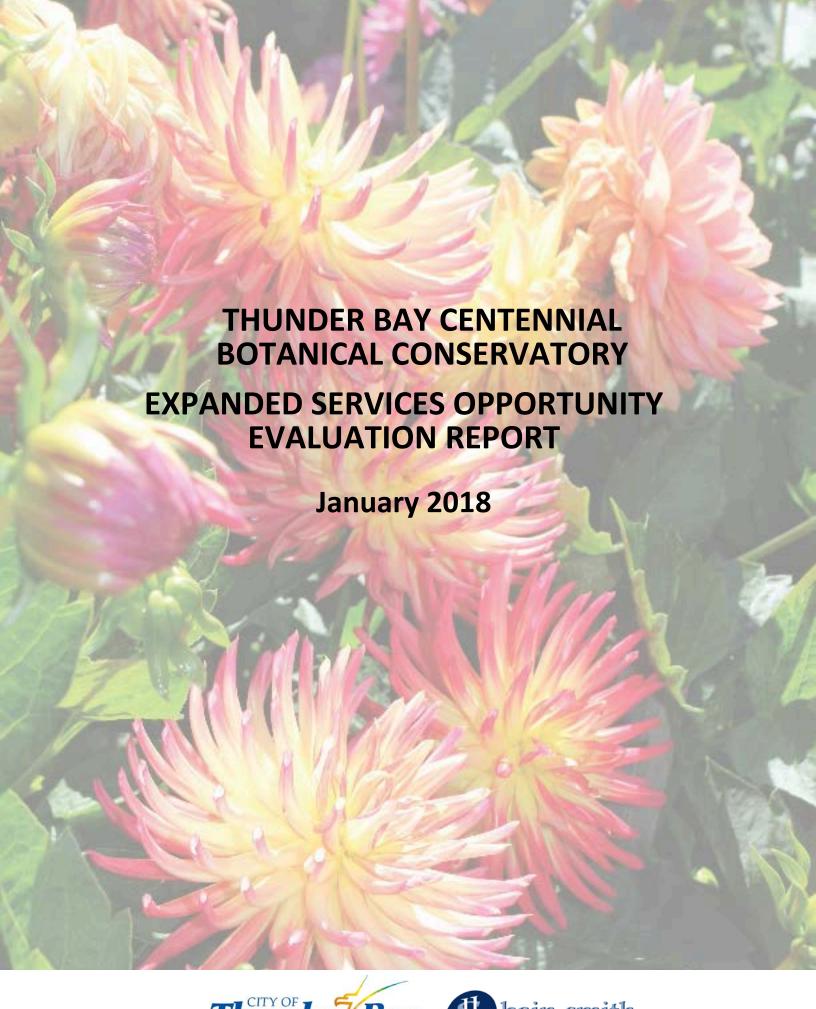
# REFERENCE MATERIAL ATTACHED:

Figure 1 - Existing Site Conservatory Operations Attachment 'A' - 124103 BC Final Mar 2018 Attachment 'B' - Conservatory Plant Assessment Final Report July 2017

# **PREPARED BY:** Cory Halvorsen, C.E.T. – Manager, Parks & Open Spaces

THIS REPORT SIGNED AND VERIFIED BY: (NAME OF GENERAL MANAGER)	DATE:
Kerri Marshall, General Manager – Infrastructure & Operations	February 21, 2020









# THUNDER BAY CENTENNIAL BOTANICAL CONSERVATORY EXPANDED SERVICES OPPORTUNITY EVALUATION TABLE OF CONTENTS

1.0	Executive Summary	1
2.0	Introduction	3
3.0	Thunder Bay Centennial Botanical Conservatory	5
	Visitors	
	Programs and Services	
	Management, Staff and Volunteers	7
	Facility Overview	8
	SWOT Analysis Derived from Community Consultations	9
4.0	Conservatory Best Practice Review	12
5.0	Review of Existing City Plans	14
	City of Thunder Bay Strategic Plan	14
	Recreation and Facilities Master Plan	14
	Chapples Park Master Plan	14
6.0	Preliminary Findings	17
7.0	Expanded Services Evaluation Model	18
	Key Markers	18
	New Service Opportunities	18
	Evaluation of Potential New Services	24
8.0	Recommendations	27

# **APPENDICES**

One Market Review

Two Summary of Select Conservatories
Three Opportunity Evaluation Matrix

**Four** End Notes

Five Staff and Stakeholder Discussions

Six Public and Stakeholder Consultation, prepared by Anneliese Grieve

### 1.0 EXECUTIVE SUMMARY

Over the past year or so, the City has been working with community members and stakeholder groups to identify opportunities to not only increase revenues at the Conservatory but also its overall usage and benefit to the community. In October, the consultant team was retained to review and assess other potential services, previously identified through stakeholder and public consultation. The potential new services included: multi-purpose room rental; coffee bar; market rental space; educational programming; and community greenhouse space usage.

In addition to reviewing the opportunities related to the above services, the consultant team also performed the following:

- Best practice review of other conservatories;
- Market research to assess the need for the proposed revenue generating opportunities;
- Order of magnitude cost to renovate the facility for those particular revenue lines; and
- Creation of an evaluation model, which considers both economic and social benefits of the potential services.

# **Preliminary Findings**

The Thunder Bay Conservatory is located on a dead end street and is not well integrated in the Community. But for providing plants to the City parks, it does not have any significant partnerships or relationships with other City departments or organizations. As part of the Chapples Recreation Area, there are many opportunities to better integrate the facility into the community. Its abilities and opportunities to try new things or expand operations have been limited by existing staff levels and funding. In many ways, the Thunder Bay Conservatory is not much different than other conservatories across Canada: it is not self-sustainable, it seeks relevance in today's society and needs to pursue alternate services.

While City staff and Council have been trying to best determine next steps in revitalizing the Conservatory, the City's strategic and recreation master plans best speak for the true opportunities: engaging and connecting the community; being proud of diversity and unique culture; creating accessible services that meet the needs of people of all ages and of course, doing this in a cost-efficient, affordable manner.

# **Expanded Services Evaluation Model Results**

The potential new service opportunities identified above will create a number of benefits for the Conservatory. In assessing these potential opportunities, both the economic and social benefits were considered. In creating this evaluation model, key goals or objectives were identified that the City will want to achieve by repairing the facility and providing new services within the Conservatory. These key objectives include: to allow community members to **engage** and **connect**; and to **sustain** the facility by increasing third party revenue sources.

Each of the opportunities were evaluated based on weighted key objectives, their ability to achieve such results and a total score of ten (10). Based on the evaluation matrix, the multi-purpose room achieves the highest ratings, followed by educational programming and the Coffee Bar. While the greenhouse space rental may be an opportunity, it is not clear if there will be sufficient demand for this type of space. There is sufficient supply of market days and craft type events in the community, but periodic markets to be held on the grounds of the Conservatory



may be an optional fundraising activity put on by the Friends of the Conservatory.

### **Recommendations**

Based on the evaluation matrix results, it is recommended that the East Wing be upgraded to a multi-purpose room, and a coffee bar be added near the front entrance of the Conservatory. Around the same time, it is further recommended that the City work with the Friends of the Conservatory to better engage its volunteers and develop an itinerary of additional events to host over the next year or two; seek out partnerships and to prepare a business plan that better develops the key strategies of the Conservatory to engage and connect with the Community; identifies a plan to restore the facility over the long term and develops a staffing model that will meet the City's planting needs and strategies developed.

Over the long term, it may be very beneficial to be better integrate the Conservatory in the City's parks and recreation plans, including the extension of trails past the Conservatory, extension of Dease Street to Chapples Park opening traffic past the Conservatory, and locating children's or older adult's outdoor equipment near the facility.

### 2.0 INTRODUCTION

Since its inception, Thunder Bay Centennial Botanical Conservatory operations have been generally funded by the City of Thunder Bay, similar to many other cultural or recreational community assets. Celebrating its 50<sup>th</sup> birthday in 2017, the Conservatory is in need of significant upgrades with its two display wings closed to the public for safety reasons.

Over the past year or so, the City has been working with community members and stakeholder groups to identify opportunities to not only increase revenues at the Conservatory but its overall usage and benefits to the community. In October, the consultant team was retained to review and assess other potential services, previously identified by a number of stakeholders. The potential new services included:

- Multi-purpose room rental;
- Coffee Bar;
- Market rental space;
- Educational programming; and
- Greenhouse space rental.

# Study Approach

In addition to reviewing the opportunities related to the above new services, the consultant team also performed the following:

- Market research to assess the community need for the proposed services (Appendix One);
- Best practice review of three other conservatories (Appendix Two);
- Order of magnitude cost to renovate the facility for those particular revenue lines;
- Development of projected revenues and expenses associated with the proposed new services; and
- Creation of an evaluation model, which considers both economic and social benefits of the potential services (Appendix Three).

As a result of discussions with various stakeholders, the consultant team performed additional steps in order to provide better information to the management team, City Council and community members. This will create more fruitful conversation while making strategic decisions related to the future of the Conservatory. These steps included:

- Development and release of Survey to identify the interest of volunteers to assist in various capacities related to the Conservatory;
- Visit to three conservatories in the Greater Toronto area, and discussions with representatives of additional conservatories; and
- Review of the City's other plans, including its Strategic Plan, Recreation and Facilities Master Plan, and the Chapples Park Master Plan.

# **Expanded Services Evaluation Model**

The potential opportunities, such as a multi-use room and Coffee Bar identified above, will create a number of benefits for the Conservatory. In assessing these potential opportunities, both the economic and social benefits were considered. Based on research conducted, there are a number of existing models that have attempted to quantify the value of social benefits. While "valuing" the social benefits from an economic perspective is out of the scope of this assignment, the concept behind comparing the benefits and impacts of each of the opportunities is essentially the core of the model developed.

In creating this evaluation model, key goals or objectives were identified that the City will want to achieve by repairing the facility and providing new services within the Conservatory. These key objectives include: to allow community members to **engage** and **connect**; and to **sustain** the facility by increasing third party revenue sources. The developed model is discussed further in the body of this Report.

### 3.0 THUNDER BAY CENTENNIAL BOTANICAL CONSERVATORY

As its name suggests, Thunder Bay Centennial Botanical Conservatory was opened to the public in 1967 as a Centennial project to Canada's commemorate 100<sup>th</sup> birthday 1. The Thunder Bay Conservatory is owned by the City of Thunder Bay and is operated under its Parks Division. Currently there are three full time employees who work through the year, and five seasonal staff who work from April to November.



Source: City of Thunder Bay

### **Visitors**

There are more than 30,000 people who visit the Conservatory each year, averaging 100 visitations per day. In the 2016/17 season, the minimum number of visitors was 14 people per day while the maximum was 529. Scheduled events include special events hosted by Friends of the Conservatory, school tours and weddings.

The largest visitor groups are families with young children and older adults. Representatives of the Friends of Conservatory indicated that in their review of the Log Book, visitors come from all over the world. Unfortunately however, full statistics are not tracked.

### **Young Families**

Many conservatories in Ontario, like Toronto Centennial Park Conservatory and Burlington Royal Botanical Gardens, spend a lot of time to create a child-friendly environment by having children playgrounds and displays that will appeal directly to young families. It is considered a long-term investment for the Conservatory to attract more young visitors, who when they grow up, will then bring their families to visit and share the same fond memories.

### **Older Adults**

According to the Deloitte 2009 Impact of Ornamental Horticulture on Canada's Economy Report, baby boomers are spending more on horticultural related products and services that improve their quality of life<sup>2</sup>. According to a U.S. study reported by the Wall Street Journal's Market Watch, gardening was cited as the fourth most desired retirement leisure activity choice for baby boomers<sup>3</sup>. Many adults visit the Thunder Bay Conservatory to enjoy the lush greenery, solitude and peacefulness.

With a growing interest in gardening and the baby boomers aging, there may be increased interest in the horticultural activities that may be offered at the Conservatory.

# **Programs and Services**

The Thunder Bay Conservatory provides a wide range of amenities and services, many of which are free of charge. Other than weddings and other special events, all visits are free, unless the patron chooses to give a donation to the facility. There are some school visits through the year, where elementary school children will learn about growing plants, generally in the Spring time. In addition, other organizations will offer summer camp days at the Conservatory.



# **Bedding Plant and Hanging Basket Production**

For many years, the Conservatory staff have been growing and providing most of the City's annual bedding plants and hanging baskets used throughout its parks and streets. Recently, City Parks is starting to change its display gardens to perennial plants, which may change the use of the Conservatory greenhouses and the role of the Conservatory staff in the future.

### **Seasonal Display**

The Conservatory also grows a number of seasonal plants, such as poinsettias and lilies, that it displays at the facility but also through City service facilities.

Over time, the Conservatory has amassed a large collection of plants which have not been sold.

#### PROGRAMMING AND SERVICES CURRENTLY AVAILABLE

- Tropical arboretum filled with flowering plants, exotic trees and shrubs from around the world
- Park benches
- Waterfall and wishing pond
- Washroom facilities
- Limited wheelchair accessibility
- Guided tours of conservatory, upon request or booking

- Exterior activities, including:
  - Community and children's gardens
  - Picnic tables
  - Shade trees
  - Pollinator garden
  - Horticultural society perennial garden
  - Bee hives
- Wedding rentals
- Monthly events, hosted by Friends of the Conservatory

## Management, Staff and Volunteers

The Thunder Bay Centennial Botanical Conservatory currently employs eight people. Five are seasonal employees who work from the end of April to the end of November. The Thunder Bay Conservatory's management consists of a part-time supervisor and a Leadhand, while there are two other full-time employees. At this time, other than the Leadhand, the employees do not require any special education to work in the Conservatory, although there are several recommended courses in which they could enrol.



Volunteers also play an important role and are mostly made up of the "Friends of the Conservatory".

## Friends of the Conservatory

The Conservatory maintains a positive relationship with the Friends of the Thunder Bay Conservatory. The Friends' current mission is "to promote and educate the community in the stewardship of natural environment through the growth, appreciation and preservation of the Conservatory's collections and activities."

The objectives of the Friends of Thunder Bay Conservatory are:

- to facilitate a variety of educational activities;
- to encourage public participation;
- to celebrate the Conservatory's heritage;
- to promote the enhancement and continued growth of the Conservatory;
- to advocate for environmental stewardship, protection, conservation and interaction with natural sustainable practices; and
- to promote the natural therapeutic benefits of the Conservatory for the health and well-being of the community<sup>4</sup>.

## **Volunteer Survey Results**

Through this study, a short volunteer survey was released for a period of ten days and completed by 69 people. The survey was not advertised and heavy reliance was placed on the Friends of the Conservatory and other stakeholder groups for release. The survey results are as follows:

- Just over 80% of respondents said they would volunteer at the Conservatory;
- Over 20% would volunteer in each of either the weekdays, weekends or any day;
- Less than 10% would volunteer in the evenings;
- Almost 60% would volunteer between one and five hours per month;

- About 4% and 4% indicated they would volunteer between 10 to 15 hours, and over 15 hours per month respectively;
- Persons were interested in volunteering in a number of ways:
  - Organizing and hosting events (24 persons);
  - Fundraising (16);
  - Teaching classes or workshops (16);
  - Assisting in guided tours (25);
  - Assisting in outdoor activities (31); and
- The age of those who responded was quite evenly spread between the ages of 35 and 74 years.

## Facility Overview

Opened to the public as a floral conservatory in 1967, Thunder Bay Centennial Botanical Conservatory consists of a large tropical house and two smaller wing houses. With a total area of 7,000 square feet, the surrounding area of tropical house is landscaped with exotic flowers, trees, shrubs, ponds and a bridge that provides a pleasing and relaxing environment to visitors. There are two identical winghouses each with an area of 1,516 square feet. The west wing house is home to a cactus garden. The east wing was originally set up as a



seasonal display house. Both the west and east wings are currently closed to the public for safety reasons and are waiting for upgrades prior to reopening.

There are also three greenhouses adjacent to the Conservatory, used for raising bedding plants and hanging baskets for Thunder Bay's community parks and streets. The three greenhouses, with a total area of 8,300 square feet, are 2,528 square feet, 2,528 square feet and 3,224 square feet in size. All greenhouses are linked by a long hallway. In addition to this, there is a boiler room, storage room and a storage building at the back of the Conservatory, providing work space up to 2,724 square feet for the staff.

## Use of the Facilities

While the capacity of the greenhouse facility or a calendar of the greenhouse uses was not available, the greenhouse facilities are fully used for the City bedding plants and hanging baskets

starting in the spring, prior to planting. In fact, there is not enough space for an additional 60 to 80 baskets required by the City.

Additional work would be required to determine whether the greenhouse facilities could be used during the off season, since grow lights and higher temperatures would be needed. There is concern that increasing temperatures may result in insect infestations.

## **Order of Magnitude Capital Cost Estimate**

The estimated costs shown below for updating facilities at the Conservatory was prepared by Gord Wickham, Vice President of Colliers International Projects Leaders.

	<b>Total Capital</b>	-
Facilities	Costs	Details
Renovate and Restore	\$600,000	Demolition
Greenhouses		New structural and frame
		Doors and frames
		Winter lighting in one greenhouse
Renovation to Create Multi-	\$137,000	Partial demolition
Purpose Room		Compaction and concrete slab
(East Wing)		New structural and frame
		Exterior link and patio space
		Electrical and lighting
		New door and access
Coffee Bar	\$22,000	Partial demolition, as required
		Furniture, equipment and fixtures
Outside Play and Picnic Area	\$95,000	Site landscaping
		Furnishings and play equipment
		<ul> <li>Access and routing</li> </ul>
Restore Closed Exhibit Area	\$97,000	Partial demolition
(West Wing)		New structural and frame
		Doors and frames

## **SWOT Analysis Derived from Community Consultations**

Over the past year, the City has conducted a number of community consultations and surveys where 185 persons participated. A summary of the perceived strengths, weaknesses, opportunities and threats are below:

## Strengths

- Uniqueness: it is an oasis in the winter
- Free admission
- Diversity of plant life: different kinds of plants from various countries
- Good atmosphere: many people enjoy the peaceful and therapeutic atmosphere
- Capacity: there is potential space for education
- Good performance: average 100 people come to visit per day

## Weaknesses

- Lack of visibility and integration in the community: visitors can be confused about the location given it is at the end of dead-end road
- Lack of space: no room for events, gift shop, plant sale, tea room etc., narrow pathway, limited parking space
- Outdated and aged facilities: unsafe glass roof; no electrical and lighting outside and outdated electrical and lighting on the inside; not energy efficient; not accessible; no air circulation
- Inefficient layout: a lot of space is unused
- Not enough variety: people feel like there is no reason to return

## **Opportunities**

- Catering: visitors want to have a café or teahouse that they can sit down; a farmers' market
- Increased space: people want it to be big enough to hold different events
- Partnerships: Non-profit groups, such as Roots to Harvest, Horticultural society, Tree Canada, Ontario Master Naturalists Program; the Private sector for room and space rental; and First Nation organizations, where a Spirit, meditative or indigenous garden could be established.
- Gift shop: a gift shop could be run to generate income based on the large number of visitors
- Longer hours: people like to have extended hours for visiting
- Multi-purpose room: many participants identified a number of benefits of a multi-purpose room
- Volunteers: expand opportunities for volunteers and increase number of people involved
- Educational demonstration gardens: many visitors prefer have garden and plants demonstrations.

#### **Threats**

- Lack of resources: the conservatory needs more revenue and appropriate staff; staff with expertise in applying for grants is also needed
- Poor advertising: advertisements only reach people who are already involved; no Conservatory brochures or plant guides exist
- Lack of community involvement
- Uncertainty: the uncertain future makes potential partners leery to collaborate with the conservatory

## 4.0 CONSERVATORY BEST PRACTICE REVIEW

Canada hosts a number of different botanical gardens and conservatories, many of which have been around for over a century. A summary of the Conservatories reviewed is set out in Appendix Two. Here are the highlights:

- Most conservatories are located in a park offering outdoor active or passive recreation activities and gardens;
- Most botanical gardens and conservatories are public and funded by municipal and provincial governments;
- Admission fees, memberships, event rentals and donations are the most common sources of revenue, outside of government monies;
- Many botanical gardens include greenhouses, butterfly conservatories and historic sites.
   Generally they are located on larger properties and as such, can provide both indoor and outdoor facilities and a variety of visitor experiences;
- There are many garden related festivals or events that take place throughout the year. Festivals and events such as the Canadian Tulip Festival in Ottawa, Canada Blooms in Toronto and the Lilac Festival at the Royal Botanical Gardens attract hundreds of thousands of visitors and have been recognized in the America Bus Association's top 100 events listing<sup>5</sup>. They are led by the Conservatories and municipalities but expand beyond the Conservatory and into the cities;
- Educational programming is offered by many conservatories, providing an academic and scientific resource to the public and education institutions;
- Each botanical garden or conservatory has its own plant collections, and produces new plants through the year;
- Excess plants and some productions are sold to the public;
- Volunteers are heavily engaged in the operations;
- Where restaurant or coffee shop services are offered, attendance is at least 100,000 per year;
- Where gift shops are open, attendance is generally at least 70,000 per year;
- Some events and activities held in botanical gardens and conservatories are eligible for funding support, which can offset a portion of the operating costs; and
- The majority of botanical gardens and conservatories depend heavily on government funding and do not anticipate being self-sustainable.

## **Allan Gardens**

Allan Gardens Conservatory is widely recognized as a significant heritage and cultural public venue in downtown Toronto. Over the years, the Conservatory has suffered from inadequate maintenance. To help to determine the extent of necessary repairs, the study group has visited seven conservatories across North America of similar physical and operational characteristics. Facilities, collections, programming, governance and funding models have been examined and

documented. As a result, a plan to renovate and recognize the facility has been developed. The plan has incorporated models of park revitalization from other successful conservatories.

The key strategies in Allan Gardens Conservatory's refreshing plan include: promoting horticultural excellence; maintaining and enhancing heritage qualities of the park, conservatories and collections; and providing new opportunities for people to enjoy, participate and take stewardship.

The work completed by Allan Gardens was very informative. Based on the best practices review, revitalization, relevance and overall sustainability are key themes for many conservatories across Canada.

## 5.0 REVIEW OF EXISTING CITY PLANS

In developing the evaluation model, a number of other City plans were reviewed, including the City's Strategic Plan, the 2017 Recreation and Facilities Master Plan and the 2017 Chapples Park Master Plan. In assessing the key goals and objectives that each opportunity may achieve, the following key points were derived from the existing plans.

## City of Thunder Bay Strategic Plan

In its 2015 to 2018 Corporate Strategic Plan, the City of Thunder Bay identified a number of goals in achieving its commitment to a high quality of life, including:

- Goal 1: Unified city of strong, active and vibrant neighbourhoods, building civic pride, neighbourhood capacity and implementing initiatives that support physical, emotional and mental health;
- Goal 3: Proud of its diversity and unique culture, recognizing the contributions of Aboriginal Peoples, celebrating arts and heritage as a key contributor to quality of life in Thunder Bay;
- Goal 6: Leader in accessible recreation and services for all people, investing in revitalized recreational facilities and affordable, accessible programs that meet the needs of people of all ages in their neighbourhoods and improving services and programs to enhance the quality of life of seniors.
- In its commitment to the Environment, the City identified goals to invest in programs to beautify facades and private properties, and beautification of public areas; and be a leader in climate change adaptation and protecting and preserving public green space.

## Recreation and Facilities Master Plan

The vision of the City of Thunder Bay's Recreation and Facilities Master Plan, released in 2017, was: "Thunder Bay is a vibrant City providing positive and animated places and opportunities for residents and visitors to recreate, engage and connect." The pillars of the plan include:

- City serving and neighbourhood focus;
- An inclusive city;
- Age friendly and accessible recreation;
- Positive places and animated spaces;
- Core and evolving partnerships;
- Services for evolving needs of the 21<sup>st</sup> century; and
- Affordable plan.

## **Chapples Park Master Plan**

Although located on a currently dead end Dease Street, the Conservatory is considered to be within the boundaries of Chapples Park. The vision of the Chapples Park Master Plan, released in 2017, was: "Chapples Park is a city-wide destination for year round recreation, wellness and

open space. It is a hub that celebrates equity, inclusiveness, community and recreation in a safe and fun environment. Through sound stewardship of assets and a focus on sustainability, the park will become a central hub for premier sports facilities, access to nature and open space that can be enjoyed for generations".

The key themes included: high quality, multi-use centralized sports hub; access to nature; safety and connectivity; field condition improvements and year-round opportunities. Its goals and guiding principles were:

- Dynamic and diverse;
- Accessible to all users;
- Fosters community engagement;
- A destination;
- Celebrate and enhance ecological character; and
- Flexibility.

## **Preferred Option**

In its Master Plan, the consultants identified a Preferred Option for the City Wide Sports Park in the Chapples Recreation Area. In the image below, the Conservatory is around the middle in yellow, next to Dease Street, where a new road running through Chapples Park would provide a second entrance to the recreation area. While there are no recommended changes to the Conservatory other than the location of new maintenance facility in the area, there may be some additional options to consider moving some of the passive recreation and/or golf facilities closer to the conservatory in order to create more activities in close proximity to each other.



PREFERRED OPTION: City Wide Sports Park, derived from Chapples Park Master Plan 2017

## 6.0 PRELIMINARY FINDINGS

Based on staff and stakeholder discussions and review of available materials, there are a number of preliminary findings that will impact both the evaluation model and recommendations in this Report.

- There is no conservatory that is currently self-sustainable. As a community asset, there is a
  focus on providing a sanctuary, education, access to nature and gathering space for
  community members to engage and participate;
- Many of the conservatories are located either within or near the City providing access to not
  only its facilities but a park like atmosphere. An example is Thunder Bay's sister
  conservatory in Etobicoke which is located in Centennial Park, where there are seven soccer
  fields, five softball fields and children's play equipment;
- The Thunder Bay Conservatory is tucked away on Dease Street, a dead end street and is not well integrated into the community or its activities;
- The Conservatory is centrally located and considered to be part of the Chapples Park;
- There are many opportunities for the integration of the Conservatory into the community by adding or extending existing amenities around the facility over the long term. Examples include: extending Dease Street to add an entrance to Chapples Recreation Area; enhancing the trail system; and combining food services in a central location at the park;
- There are a number of opportunities to better integrate the Conservatory into the community with smaller capital projects, including better signage along the walking and bike trails, and at the Friendship Centre and older adult facilities; extending the walking and bike trails directly past or into the Conservatory property; and adding children's and/or older adults play equipment on the properties;
- Restaurants, coffee and/or gift shops are added only when there are significant visitors to the Conservatory;
- Many different sources of revenues are added to supplement government funding, but the more sources of revenue, the more management and staffing required to manage those other services;
- Over 80% of the respondents to a volunteer survey, completed by 69 people, said they would volunteer at the Conservatory in a number of different roles;
- Over 60% of those who said they would volunteer indicated that they would volunteer one
  to five hours per month, while many of the remaining volunteers would work for more
  hours;
- Adding one service may not require additional staff, but adding several new services would likely require additional staff; and
- Older adults spend a significant amount on gardening. This interest in horticulture may extend to involvement or participation at the Conservatory if programming becomes more relevant.

## 7.0 EXPANDED SERVICES EVALUATION MODEL

The potential new service opportunities will create a number of benefits, both economic and social, for the Conservatory. In developing an evaluation model for these opportunities, the City's strategic and master plan priorities were considered, along with the overall needs of the Conservatory. The key markers used to evaluate the revenue generating opportunities, along with an analysis of the revenue generating opportunities are set out below.

## **Key Markers**

In evaluating the revenue generating streams, key markers were derived from the goals and principles that the City wanted to achieve in its strategic and recreational master plans, and of course, the identified objectives of this study, improving the overall sustainability of the Conservatory.

**Engage** 1. Increase attendance

2. Educate residents and tourists

3. Create a facility that has multiple purposes

4. Promote environmental awareness

**Connect** 1. Encourage spiritual connections

2. Include activities for all generations to enjoy

3. Provide access to nature

4. Foster diversity

Sustain 1. Overall viability

2. Revenue generation

3. Employment impact

4. Tourism impact

## **New Service Opportunities**

There were a number of new service opportunities identified by community members and stakeholders, and many services that other conservatories across Canada are providing in order to help sustain their facilities. While some may be successful in other communities, these same opportunities may not achieve a high level of benefits in Thunder Bay.

## **Multi-Purpose Room Rental**

A multi-purpose room available for rent at the Conservatory would suit many community members' needs. This room, 1,516 square foot with a room occupancy of 50 persons, could be used for multiple purposes, including but not limited to:

- Small weddings;
- Business meetings;
- Seminars;
- Family or friends gatherings;

- Yoga lessons;
- Horticultural therapy classes; and
- Fundraising events.

## Financial Sustainability

Order of Magnitude Capital Cost estimate	
to upgrade the East Wing to a multi-	
purpose room:	<u>\$140,000</u>
Estimated annual revenues generated	\$ 16,000
Incremental annual expenses incurred	<u>5,000</u>
Annual net incremental income	<u>\$ 11,000</u>
Return on investment	7.9%

For the purposes of the above, the following assumptions were made:

- The multi-purpose room rental prices would be dependent on its use, however for the purposes of these projections, it is assumed that rental prices would be \$100 per half day and \$150 for a full day;
- Repeated rentals would be available at a discounted price, but have not been considered in this analysis;
- Current rate charged by the Conservatory for weddings is \$124.30 per hour;
- The current customer service representative would be able to manage any incremental volume in calls to support increased usage;
- Room cleaning can be managed by current staffing levels;
- Annual maintenance and capital replacement cost of 10% will be incurred;
- The facility would be rented an average of three half days per week. Attendance at the Conservatory could increase by more than 10% per year; and
- Additional advertising costs of \$3,000 per year would be incurred to let people know about the facility. Overall, there would still be a heavy reliance on referrals and social media.

## Benefit and Risk Analysis

Benefit and risk analysis is to assess the benefits and risks associated with the implementation of proposed services.

Benefits Risks

- Overall, increased attendance and usage of the facility
- As more attend various events, they may return for other events and visits
- The visitor demographics may expand depending on the type of events held in the facility
- Central location

- Strong competition from local hotels, community centres and other organizations (see Appendix One Market Review)
- Relatively unknown facility and without word of mouth and/or advertising, it may not be rented often

## **Coffee Bar**

It is anticipated that a caterer, perhaps the same caterer who would run the arena canteen, would be contracted out to be available during event days. Event days may include Conservatory events, Friends of the Conservatory events or other special events, where community members or organization rent the Conservatory or multi-purpose room. While a full-time restaurant or coffee shop were considered, the low volume achieved would likely result in incremental annual operating losses. Therefore, the Coffee Bar will include a tea and coffee machine, fridge and serving bar, where beverages and snacks can be purchased during event days.

## Financial Sustainability

Order of Magnitude Capital Cost estimate to add a small Coffee Bar and equipment:	\$ 22,000
Estimated annual revenues generated	\$ 4,000
Incremental annual expenses incurred	400
Annual net incremental income	<u>\$ 3,600</u>
Return on investment	16.3%

For the purposes of the above, the following assumptions were made:

- The Conservatory would not incur any direct costs of the Coffee Bar but the small costs to retain a caterer;
- The conservatory would earn a "rental fee" or percentage of total revenues each time the Coffee Bar was open for business;
- The conservatory would earn \$80 each time the Coffee Bar was open;
- Annual maintenance and equipment replacement costs of 10% will be incurred; and
- Conservatively, the Coffee Bar will be used 50 times each year.

### Benefit and Risk Analysis

Benefit and risk analysis is to assess the benefits and risks associated with the implementation of proposed services.

#### **Benefits**

- Increased events if Coffee Bar services available
- Visitors may stay longer if Coffee Bar open
- Minimal operating risks if third party operator responsible for Coffee Bar services
- Opportunities for regular activities, including snacks and beverages, with nearby residents, such as the long term care facility residents

#### Risks

- Strong competition from nearby Coffee Bars and restaurants (see also Appendix One – Market Review)
- Demand low on an everyday basis given current low attendance
- While there appears to be interest, actual usage is unknown until services are offered

## **Educational Programming**

As the only science-related facility open to the public in Thunder Bay, the Conservatory could provide an educational experience to its visitors. The Conservatory can play a role in educating the public about plants, ecology, and cultivation in different climates. Focuses may be on cultivation of plants in Northwestern Ontario and/or indigenous and medicinal plants. Educational programming can be developed to raise the awareness in horticulture, biodiversity, and environmental issues by carrying out series of short courses, day camps, workshops or through information boards. This program would benefit a diverse group of community members, including students, Indigenous peoples and older adults.

#### Financial Sustainability

### Order of Magnitude Capital Costs

No capital costs would be required directly for education programming, but the facility would need to be upgraded as identified in past reports, to allow this program to run effectively.

#### Incremental Net Income

Education programs generally do not reap a significant amount of incremental net income. Education program revenues can be derived from government funding, partnership development and student participation fees.

- If there is government funding available, there may be cost recovery of a portion of the facility operating costs or additional administrative costs, such as management time.
- If the Conservatory partnered with another organization, such as EcoSuperior, or Science North, there may be a rental fee that could be earned. Often, these types of organizations utilize the facility on a no-charge basis, simply offering a community service.

 Alternatively, if the Conservatory runs its own programs, it may charge a student participation fee, which can range between \$6 to \$10 per student depending on the program. A week long summer camp could be \$150 to \$250 per child. This will supplement the staffing and supply costs but will likely not cover the full operating cost of the program.

A summary of potential revenues and costs is below:

Incremental Revenue:	Government Funding	Rental Income (Partners Run Programming)	Student Participation Fee
Potential Incremental Expenses:	Management and Administrative Costs	Management and Administrative Costs	Management and Administrative Costs
	Education Programming Staff		Education Programming Staff
	Supplies		Supplies

It is expected that the revenues will come from government funding, rental income, student participation fees or a combination thereof. However, depending on how the education program is developed and operated, expenses may differ. For example, if the City entered into a partnership, another organization may actually provide the staffing, ie Science North, but the City would still incur operational costs.

#### Benefit and Risk Analysis

Benefit and risk analysis is to assess the benefits and risks associated with the implementation of proposed services.

Benefits	Risks		
<ul> <li>Increased attendance by schools, groups and individuals</li> </ul>	Staff with relevant skills and education required to run programs		
	, , , ,		
<ul> <li>Improved environmental awareness</li> </ul>	<ul> <li>Low participation rate</li> </ul>		
<ul> <li>Increased tourism if relevant programming, ie, indigenous and medical plants</li> </ul>			

## **Greenhouse Rental**

Utilizing the current greenhouses on site may be another cost-efficient way to generate revenue. With a total area of 8,300 square feet, the greenhouses can be opened to businesses, organizations, or the public for gardening purposes. Rolling benches, a drying oven, potting area and storage facilities are available. Due to Thunder Bay's long cold winters, there may be business opportunities for floral and vegetable growing and transplanting.

## Financial Sustainability

Order of Magnitude Capital Cost estimate to upgrade production greenhouses:	\$ 600,000
Estimated annual revenues generated Incremental annual expenses incurred Annual net incremental income Return on investment	\$ 18,000 <u>10,000</u> <u>\$ 8,000</u> 1.3%

For the purposes of the above, the following assumptions were made:

- Cost savings as a result of the Conservatory providing the City plants has not been included in this calculation:
- Capital costs to upgrade production greenhouses similar to what currently exists, but for upgraded technologies. It is assumed that one greenhouse, approximately 2,500 square feet, would be equipped with lighting to allow for winter production;
- There is not a lot of increased staff time to accommodate renters in the facility;
- There is demand for greenhouse space in the non-growing season;
- There is sufficient space in at least one greenhouse to allow for use in the non-growing season;
- The rental rate for greenhouse would be an average of \$2/square foot/month and may fluctuate depending on the type of organization renting the facility;
- The total rental area would be 1,500 square feet;
- Utility costs would increase when facility is in use during the winter months; and
- The annual rental period would be six months.

#### Benefit and Risk Analysis

Benefit and risk analysis is to assess the benefits and risks associated with the implementation of proposed services.

Benefits	Risks
<ul> <li>Increased revenues</li> </ul>	Staff shortage
	Low participation rate
	Impacts on its own production
	<ul> <li>Insufficient work completed to</li> </ul>
	determine most likely utility costs
	to run greenhouses in winter
	Existing greenhouses for rent in the
	community are not utilized (see
	Appendix One – Market Review)

## Market Space Rental

Given the existing farmer's market and craft events during holiday season, market space rental is likely not a significant revenue generator. However, special event market days during the summer may capture increased traffic and overall familiarity with the Conservatory. An example may be a market day during the Canada Day weekend to be held the day before or the morning of the other events being held in the community.

## Financial Sustainability

Order of Magnitude Capital Cost estimate for market space rental:	<u>\$ nil</u>
Estimated annual revenues generated	\$ 4,000
Incremental annual expenses incurred	nil
Annual net incremental income	<u>\$ 4,000</u>

For the purposes of the above, the following assumptions were made:

- The market booth fee would be between \$50 and \$100 per booth;
- Two events would be held each year; and
- Additional revenue sources may include snack and beverage revenues and/or plant sale revenues through the day.

## Benefit and Risk Analysis

Benefit and risk analysis is to assess the benefits and risks associated with the implementation of proposed services.

Benefits	Risks
<ul> <li>Increased attendance</li> <li>Increased diversity of visitors</li> <li>Some revenue generation, would need to be run by volunteer group</li> </ul>	<ul> <li>Timing of event may be difficult given many other community events held through the summer</li> <li>Limited parking for an outside event</li> <li>Insufficient number of volunteers available to run the event</li> </ul>

## **Evaluation of Potential New Services**

An evaluation model based on three key markers mentioned above is developed to reflect the economic and social benefits of proposed services. The weightings of Engage, Connect and Sustain are 40%, 40% and 20% respectively. Each of the opportunities were evaluated based on the key markers, their ability to achieve such results and a total score of ten (10). The evaluation mark may be considered subjective and may vary depending on each person's own perceptions.

The detailed evaluation results are set out in Appendix Three. Based on the evaluation matrix, the multi-purpose room achieves the highest ratings, followed by educational programming and the Coffee Bar.

Revenue Generating Opportunity	Evaluation Result	Comments Regarding Evaluation
Coffee Bar	6.0	<ul> <li>Has potential to earn a higher return on a smaller investment;</li> </ul>
		Opening only during events or high visitation will result in lower operating costs;
		<ul> <li>Will not result in increased attendance on its own, but may increase the number of multi- use room rentals as a result of it being available for use.</li> </ul>
Multi-use Room	7.6	Has potential to earn a reasonable return on investment to upgrade the East wing;
		Will attract a more diverse group of people seeking out a unique venue for special events or meetings, yoga or therapeutic classes;
		Will result in increased usage during the events, but may also result in returning visitors.
Greenhouse Space Rental	3.0	<ul> <li>May be considered at a later date when greenhouses upgraded and greenhouse use is better tracked through the year;</li> </ul>
		<ul> <li>Potential for use during winter months but lighting and heating would need to be updated, which may not make sense in existing facilities;</li> </ul>
		<ul> <li>Does not achieve other key objectives to connect and engage the community unless key partnerships are developed for shared use;</li> </ul>
		Low rate of return based on investment needed.
Educational Programming	6.2	Encourages large groups of visitors to attend workshops, classes etc.;
		Enhances the relevance of the Conservatory to the community members and tourists;
		Staff with specialized education would be required to manage and teach the programs;

		<ul> <li>Requires full facility renovation;</li> <li>Community engagement and connection is more significant if educational programming added;</li> <li>Unless government funding received for educational programming, or another organization runs the programming, costs may exceed revenues earned.</li> </ul>
Market Space Rental	4.6	<ul> <li>Minor source of revenue;</li> <li>Increase the diversity of the visitors to the Conservatory;</li> <li>Costs to achieve revenue are minimal, but the Friends of Conservatory would need to host the event in order to reduce the associated staff time.</li> </ul>

## 8.0 RECOMMENDATIONS

In determining how to move forward, the City recognized that these decisions need to be based on both the social and economic benefits to the community. In reviewing the potential revenue generating opportunities and assuming that the City is going to incur costs to upgrade portions or all of the facility, the following is recommended:

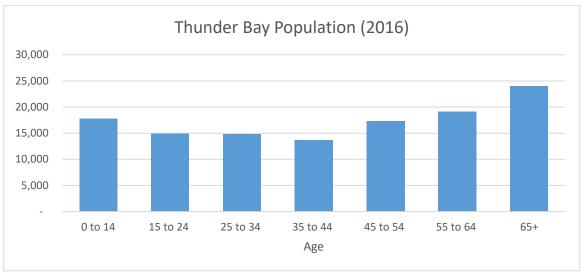
- 1. Upgrade the East Wing to accommodate a multi-purpose room;
- 2. Use a small space around the front entrance to build a coffee bar;
- 3. Work with the Friends of the Conservatory to better engage its volunteers and develop an itinerary of additional events to host over the next year or two, and monitor to identify the most attractive events and activities;
- 4. Hire a summer or intern student to help build a plan to rent the multi-use facility; seek out partnerships and reach a greater number of potential users;
- 5. Work with partners to sell extra plants on an annual basis;
- 6. Establish a better tracking system for visitors;
- 7. Prepare a business plan for the Conservatory, which would include some Strategic development including, but not limited to:
  - a. vision and mission statements and guiding principles;
  - b. overarching strategies and identification of niche horticultural objectives, ie, remain the same, focus on native species, focus on indigenous and medical plants of interest;
  - c. staffing model and new job descriptions required to achieve the above;
  - d. operation of the plant production facilities, including types of plants to propagate and grow, space usage, partnerships etc.; and
  - e. marketing of the facility.
- 8. Through the business plan and aligned with existing plans and the needs assessment report, develop a long-term timeline for the restoration of the remaining facility, considering new changes to the City's planting needs as well as the overarching strategies of the Conservatory developed above;
- 9. Seek out partnerships to improve utilization of the Conservatory facilities and property, reducing or sharing in costs where possible; and
- 10. While discussing City parks and recreation improvements, consider better integration of the Conservatory in all plans, including the extension of trails past the Conservatory, extending Dease Street to Chapples Park opening traffic past the Conservatory, and locating children's or older adult's outdoor equipment near the facility.

**APPENDIX ONE: MARKET REVIEW** 

## THUNDER BAY CENTENNIAL BOTANICAL CONSERVATORY APPENDIX ONE: MARKET REVIEW

## **Thunder Bay Demographics**

Located in the centre of Canada, Thunder Bay is the largest municipality in Northwestern Ontario with a census metropolitan area population of 121,621 (Census 2016) <sup>6</sup>. The median age was 44 years, based on 2016 Census data. Of those residents, 49% and 51% were male and female respectively<sup>7</sup>. Between 2011 and 2016, the population change was nil in comparison to Ontario's population increase of 4.6% during the same period<sup>8</sup>. Based on 2016 Census data, Thunder Bay's children and youth between the ages of 0 and 24 years represented 25% of the total population while people between 55 years old and above made up about 35% of the total population<sup>9</sup>.



Source: Statistic Canada, 2016 Census for Thunder Bay.

The education levels of Thunder Bay residents are slightly lower than the average provincial level. Based on the 2011 National Household Survey, 23% of the citizens over the age of 15 had no certificate, diploma or degree, 25% completed High School while 52% attained post-secondary certification.

## Spending in Thunder Bay

Based on data and available statistics, relevant expenditures by local residents are as follows:

Recreational		<b>Food Purchased</b>		
Services	Coffee and Tea	from Restaurant	Gardening	
\$93 million	\$5 million	\$127 million	\$16 million	

## **Local Agriculture**

According to a recent market study of Thunder Bay area, 84% of Country Market customers and 65% of grocery store customers reported that buying locally produced food items is important to them<sup>10</sup>. A majority of Country Market customers (70%) and grocery store customers (60%) are willing to pay more for locally grown or harvested foods relative to non-local food<sup>11</sup>. The study also showed that most of greenhouse production in Thunder Bay District is dedicated to flower production (309,000 square feet), followed by vegetables (25,000 square feet)<sup>12</sup>. From 2006 to 2016, the production of flowers in greenhouse increased by 14% while the production of vegetables decreased by 22%<sup>13</sup>.

## **Tourism**

Tourism plays an important role in Ontario's economy. According to Ministry of Tourism, Culture and Sport, there were over 128 million domestic visitors to Ontario in 2015, generating over \$16 billion revenues<sup>14</sup>. Among the tourists, about 1.15 million or 1% visited zoos, aquariums or botanical gardens<sup>15</sup>. In addition, Ontario welcomed 11 million American visitors. 4.3% or 0.5 million of the U.S. visitors showed interest in zoos, aquariums or botanical gardens<sup>16</sup>.

Tourism in Thunder Bay is worth an estimated \$160 million to the local economy annually<sup>17</sup>. With over 550,000 visitors annually, approximately one half are drawn to the city for leisure experiences that include paddle sports, cycling, camping, hiking, power sports, winter sports, angling, hunting, visiting friends and families and festivals. <sup>18</sup> Most visitors come from Northwestern Ontario, southern Ontario, Manitoba, Quebec, and Minnesota. <sup>19</sup>.

Another study from Ministry of Tourism, Culture and Sport in 2015 reports that about 0.3% of Northwestern Ontario visitors, or 10,500 persons would like to visit zoos, aquariums, or botanical gardens<sup>20</sup>. Those interested in visiting gardens are between 45 and 54 years old<sup>21</sup>.

## **Competitive Analysis**

In reviewing the potential source of new revenues, a competitive analysis was completed for opportunities where others provided similar services.

## **Multi-Purpose Room Rental**

There are many community centres, hotels, restaurants and campuses that provide multipurpose room rental services around Thunder Bay. Most of the services include full banquet catering services as well as catering for luncheons, teas, showers, etc.

	Services	Prices	Features
Current River Community Centre	Board room rental Meeting room rental	\$150 (up to 4 hours)	Rental fee waived for over 100 guests Full catering services
North End Community Centre	Hall rental	\$85 (afternoon or evening) \$150 (full day)	Fully equipped kitchen
North McIntyre Community Centre	Room rental Hall rental	\$100 and \$150 (up to 4 hours and full day, Room) \$200 and \$250 (up to 4 hours and full day, Hall)	Fully equipped kitchen
Vickers Heights Community Centre	Hall rental	\$125 (no alcohol) \$250 (with alcohol)	Lunch/coffee available Fully equipped kitchen
West Thunder Community Centre	Board room rental Multipurpose rooms rental Hall rental	\$110 (up to 4 hours, Hall) \$195 (up to 4 hours, Multipurpose room 1) \$175 (up to 4 hours, Multipurpose room 2)	Fully wheelchair accessible Catering services
Thunder Bay 55 Plus Centre	Auditorium rental Multipurpose room rental Kitchen rental Dish Rental	\$193.74 and \$129.16 (up to 4 hours, Auditorium, Profit and Non-profit) \$80.74 and \$53.79 (up to 4 hours, Multipurpose room, Profit and Non-profit)	Drink catering only
Lakehead University	Conference rooms rental	\$35 - \$340 per day	Over 90 rooms available – classroom to gymnasium Catering services Accommodations from May to August
Thunder Bay Museum	Meeting room rental Galleries rental	\$120 - \$340	Registered not-for- profit organizations receive 30% discount

## **Restaurants and Coffee Shops**

Thunder Bay has numerous restaurants and coffee shops around the community. The closest competitors near the Conservatory are Tim Hortons, Persian Man and Robin's Donuts located on Waterloo Street South.

## **Wedding Facility Rental**

There are many available places that host wedding ceremonies and receptions in Thunder Bay. Fort William Historical Park, golf course facilities and hotels are the most popular choices for both large and small weddings. These facilities offer a full range of services including receptions and catering. There are no other facilities that offer an indoor location full of lush and beautiful greenery on a year round basis.

#### **Greenhouse Rental**

Greenhouse rental is a unique less competitive and less demanded services. The only other organization that offers greenhouse rental options within the city is Lakehead University. Key features of the Lakehead University greenhouse facilities include:

- five single gable greenhouses, four growth chambers, a cooler, drying oven, potting area, classroom and associated storage facilities;
- additional lighting for winter growing;
- combined available growing space of all greenhouses is about 1,900 square feet;

The greenhouse rental business is managed by a part-time manager. Currently, there are ten users, all of whom are university faculty and students. The greenhouse facilities have received a number of updates recently as a result of a successful Canada Foundation for Innovation funding.

	Teaching and Research by Faculty and Students	External Research and Personal Use	Commercial Uses
<b>Greenhouse Bench Space</b>	\$10/m²/month	\$30/m²/month	\$40/m²/month
4' Growth Chamber	\$35/month	\$75/month	\$100/month
8' Growth Chamber	\$50/month	\$100/month	\$125/month

Overall, there is little rental of the Lakehead University Greenhouse facility. Its rental availability is not advertised and as such, many may not know about it.

Another facility that has a greenhouse is the Roots to Harvest program. While they do not rent out facilities, they are currently developing a greenhouse model that may be delivered to remote communities in order to increase the availability of fresh produce.

APPENDIX TWO: SUMMARY OF SELECT CONSERVATORIES
Thunder Bay Centennial Botanical Conservatory

## THUNDER BAY CENTENNIAL BOTANICAL CONSERVATORY APPENDIX TWO: SUMMARY OF SELECT CONSERVATORIES

## **Toronto Centennial Park Conservatory**

## Features

Toronto Centennial Park Conservatory is Thunder Bay Conservatory's sister conservatory, located in Etobicoke Centennial Park.

- Three display greenhouses of 12,000 square feet, similar to that in Thunder Bay
- Eight additional greenhouses for production only

#### **Annual Visitors**

- Between 70,000 and 110,000 visitors per year
- Film production and social activities for clubs and associations

## **Operations**

- Open to the public 365 days a year
- Typical hours: 10 am to 5 pm
- Number of staff: six full-time employees and five part-time seasonal workers
- Number of volunteers: 150 plus
- Role of volunteers: assist in fundraising, social events, educational programs, space rental and other daily routines
- Minimal advertising, including radio, TV, newspaper, poster and website update

## **Programming**

- Rich collection of plants, changing the display plants about six times per year
- Most popular season is the holiday season in December, where the entire conservatory is decorated and filled with thousands of poinsettias
- Other winter holiday season festivities include: horse and wagon rides, carolers, hot apple cider and a visit from Santa

## **Funding Sources**

- Mainly funded by the City of Toronto
- Private donations
- Minimal direct revenue generation

#### **Revenue Generation**

- No admission fees or membership fees
- Space rental for wedding ceremonies or photo shoots
- Extra plants sold by the Friends of Conservatory or given to the public to encourage donations
- Pictures of the conservatory taken and sold as postcards



## **Royal Botanical Gardens**

## **Features**

Royal Botanical Gardens is located in Burlington with extensive natural areas and garden lands in Hamilton, Ontario.

- Largest botanical garden in Canada with 2,422 acres
- National Historic Site
- Registered charitable organization
- Extensive system of nature trails, more than 20 kilometers in length
- Four distinct formal gardens
- Rich outdoor plant and art collections
- Various conservation projects
- More than 270,000 visitors per year
- Open to the public year round
- Typical hours: 10 am to 5 pm
- An organized volunteer group of 296 members called the RBG Auxiliary supports the efforts of the RBG
  - Significant fundraising activities
  - Donates over 35,000 hours in such roles as tour guides, staffing the RBG Library and RBG Archives, and assisting with the gardening operations
- Large number of staff
  - Spring and summer: 103 full-time, 136 part-time
  - Off season: 95 full-time, 37 part-time

# Annual Visitors Operations

## Advertising including radio, TV, newspaper, poster, social medias and website update

## **Programming**

- Holiday traditions including North Pole Experiences, Holiday Entertainment, Displays and Exhibits
- Over 200 courses and workshops for families, kids and adults in the areas of gardening, nature, botanical arts and wellness
- Various festivals and events year round
- Discovery Day camps providing hands-on, environmentalbased programs for kids

### **Funding Sources**

- Primarily funded by the Province of Ontario, City of Hamilton and Region of Halton (40% of budget)
- Remainder or 60% is classified as 'self-generated revenue'
- 2016 annual revenue was \$15,744,000
- Not financially sustainable but its goal is to be self-sustainable by 2020
- Many funders support the operation of the Royal Botanical Gardens, including but not limited to:
  - Private businesses
  - Various Business and Family Charitable Foundations
  - Government agencies including: Environment and Climate Change Canada, Ontario Trillium Foundation, Ministry of Tourism, Culture and Sport, Canadian Heritage, Ministry of Natural Resources and Forestry, Ministry of the Environment and Climate Change, Natural Resources Canada

## **Revenue Generation**

- Visitor Experience fees (16% of total revenues):
  - Admission fees and special events (43% of visitor experience fees)
  - Memberships fees (11%)
  - Wedding and meeting room rental (18%)
  - Gift shop (28%)
- Horticultural activities, research, education and school programs (21% of total revenues)
- Cafeteria and restaurant rental income



Source: Website of Royal Botanical Gardens

## **Allan Gardens Conservatory**

## Features

Located in downtown Toronto, Allan Gardens Conservatory is a historical landmark in one of the city's oldest parks.

- Six greenhouses covering over 16,000 square feet
- One outdoor playground
- Two fenced off-leash areas for dogs

## **Annual Visitors**

 Not available, started counting the number of visitors last November

## **Operations**

- Open to the public 365 days a year
- Typical hours: 10 am to 5 pm
- Number of volunteers: more than 300
- Roles of volunteers: assist in fundraising, grant application, space rental, gardening and other daily routines
- Advertising including radio, TV, newspaper, poster, social medias and website update

## **Programming**

Rich collection of plants, changing the display plants about five

times per year

- Most popular season is the holiday season in December, where the entire conservatory is decorated and filled with thousands of poinsettias
- Other winter holiday season festivities include: horse and wagon rides, carolers, hot apple cider and a visit from Santa
- Future plans to establish art programs, Indigenous gardens, demonstration gardens and gardening events

## **Funding Sources**

- Mainly funded by the City of Toronto
- Private donations
- University and corporate donations
- Minimal direct revenue generation

#### Revenue Generation

- No admission fees or membership fees
- Space rental for wedding ceremonies or photo shoots
- Extra plants sold to the public
- Future plans to create a café and develop education programs





#### **Bloedel Conservatory**

## **Features**

Bloedel Conservatory is located in Queen Elizabeth Park in Vancouver and is jointly operated by the Vancouver Park Board and the Vancouver Botanical Gardens Association.

- Accessible by a number of public transit routes
- Home to a resident population of more than 100 free-flying birds
- Canada's largest single-structure conservatory at 140 feet in diameter and 70 feet high

## **Annual Visitors**

More than 72,000 visitors per year

## **Operations**

- Open to the public year round
- Typical hours: 10 am to 8 pm
- More than 1,600 volunteers from Vancouver Botanical Gardens Association assist both at VanDusen Botanical Garden and Bloedel Conservatory
- Roles of volunteers: garden guides, seed collectors, fundraisers, special event and school program volunteers, etc.

## **Programming**

- Tour buses and group tours
- Guided tours (VanDusen Botanical Garden)
- School programs (VanDusen Botanical Garden)
- Educational programs (VanDusen Botanical Garden)
- A library (VanDusen Botanical Garden)
- Event programs (VanDusen Botanical Garden)
- While VanDusen Botanical Garden has provided many programs and services, Bloedel has limited capacity in these areas currently.

## **Funding Sources**

- Primarily funded by the City of Vancouver
- Private and corporate donations

## **Revenue Generation**

- Admission fees and events rental (54%)
- Gift shop sales (46%)

#### **Regina Floral Conservatory**

## **Features**

The Regina Floral Conservatory is located in Regina, Saskatchewan.

- Permanent collection includes trees, cacti, succulents, tropical plants and orchids
- Wheelchair-accessible and stroller-friendly

## **Annual Visitors**

#### **Operations**

- More than 11,000 visitors per year
- Open to the public from September to June
- Typical hours: 1 pm to 4:30 pm
- Number of staff: Unknown
- Number of volunteers: more than 160
- Roles of volunteers: assist in gardening, school programs, rental and other routines

## **Programming**

- Rich collection of plants, changing the display plants about four to six times per year
- Educational programs for children from preschool to grade

## eight

- Tea services
- **Funding Sources**
- Primarily funded by the City of Regina
- Private donations
- **Revenue Generation**
- No admission fees
- Space rental for wedding ceremonies and social events (28%)
- Tea service (17%)
- Memberships (5%)
- Educational programs (24%)
- Donations (26%)
- 2013 annual visitor experience revenues were \$44,075

APPENDIX THREE: OPPORTUNITY EVALUATION MATRIX
Thunder Bay Centennial Botanical Conservatory

# CITY OF THUNDER BAY CENTENNIAL BOTANICAL CONSERVATORY APPENDIX THREE: OPPORTUNITY EVALUATION MATRIX

	Weighting	$^ ^{Coff}_{ee}$ $_{ba}$	Multi-use	$=\frac{100}{6}$	Educations	Market sp.
Attendance improvement						
Horticultural and aboricultural education	40%	6.0	0.0	2.0	0.0	2.0
Multiple uses of the facility	40%	6.0	8.0	3.0	8.0	3.0
Environmental awareness						
Diversity						
Generations	40%	5.0	8.0	3.0	6.0	6.0
Access to nature	40%	3.0	8.0	3.0	0.0	0.0
Spiritual connections						
Overall viability						
Revenue generation	20%	8.0	6.0	3.0	3.0	5.0
Employment impact	20/6	8.0	0.0	3.0	3.0	3.0
Tourism impact						

**APPENDIX FOUR: END NOTES** 

# THUNDER BAY CENTENNIAL BOTANICAL CONSERVATORY APPENDIX FOUR: END NOTES

<sup>1</sup> City of Thunder Bay, Botanical Conservatory, Retrieved from: http://www.thunderbay.ca/Living/recreation\_and\_parks/Parks/Botanical\_Conservatory.htm

<sup>&</sup>lt;sup>2</sup> Brain Trust Marketing and Communications, Ontario Garden Tourism Strategy, dated July 8, 2011

<sup>&</sup>lt;sup>3</sup> Brain Trust Marketing and Communications, Ontario Garden Tourism Strategy, dated July 8, 2011

<sup>&</sup>lt;sup>4</sup> Friends of the Thunder Bay Conservatory, Mission, vision and objectives of the Friends of the Thunder Bay Conservatory, Retrieved from: http://www.friendstbconservatory.com/

<sup>&</sup>lt;sup>5</sup> Brain Trust Marketing and Communications, Ontario Garden Tourism Strategy, dated July 8, 2011

<sup>&</sup>lt;sup>6</sup> Thunder Bay Community Economic Development Commission, Supporting and Enhancing Business in Thunder Bay, 2017 Community Profile

<sup>&</sup>lt;sup>7</sup> Statistics Canada, Census Profile, 2016 Census Thunder Bay

<sup>&</sup>lt;sup>8</sup> Statistics Canada, Census Profile, 2016 Census Thunder Bay

<sup>&</sup>lt;sup>9</sup> Statistics Canada, Census Profile, 2016 Census Thunder Bay

<sup>&</sup>lt;sup>10</sup> Harry Cummings and Associates, Thunder Bay and area food and agriculture market study, October 2017

<sup>&</sup>lt;sup>11</sup> Harry Cummings and Associates, Thunder Bay and area food and agriculture market study, October 2017

<sup>&</sup>lt;sup>12</sup> Harry Cummings and Associates, Thunder Bay and area food and agriculture market study, October 2017

<sup>&</sup>lt;sup>13</sup> Harry Cummings and Associates, Thunder Bay and area food and agriculture market study, October 2017

<sup>&</sup>lt;sup>14</sup> Ministry of Tourism, Culture and Sport, Regional Tourism Profiles Data Compilation—Ontario, 2015

<sup>&</sup>lt;sup>15</sup> Ministry of Tourism, Culture and Sport, Regional Tourism Profiles Data Compilation—Ontario, 2015

<sup>&</sup>lt;sup>16</sup> Ministry of Tourism, Culture and Sport, Regional Tourism Profiles Data Compilation—Ontario, 2015

<sup>&</sup>lt;sup>17</sup> Thunder Bay Community Economic Development Commission, Supporting and Enhancing Business in Thunder Bay, 2017 Community Profile

<sup>&</sup>lt;sup>18</sup> Thunder Bay Community Economic Development Commission, Supporting and Enhancing Business in Thunder Bay, 2017 Community Profile

<sup>&</sup>lt;sup>19</sup> Thunder Bay Community Economic Development Commission, Supporting and Enhancing Business in Thunder Bay, 2017 Community Profile

<sup>&</sup>lt;sup>20</sup> Ministry of Tourism, Culture and Sport, Regional Tourism Profiles Data Compilation—Region 13c, 2015

<sup>&</sup>lt;sup>21</sup> Ministry of Tourism, Culture and Sport, Regional Tourism Profiles Data Compilation—Region 13c, 2015

APPENDIX FIVE: STAFF AND STAKEHOLDER DISCUSSIONS	
ALLENDIATIVE. STATE AND STAREHOLDER DISCUSSIONS	
Thunder Bay Centennial Botanical Conservatory	_

# THUNDER BAY CENTENNIAL BOTANICAL CONSERVATORY APPENDIX FIVE: STAFF AND STAKEHOLDER DISCUSSIONS

- 1. Kayla Dixon, Director of Engineering and Operations, City of Thunder Bay
- 2. Sharon Sidlar, Chair, Friends of the Thunder Bay Conservatory
- 3. Doug Murray, CEO, Thunder Bay Community Economic Development Commission
- 4. Ryan Moore, Development Officer, Thunder Bay Community Economic Development Commission
- 5. Aaron Halcovitch, Community Grower, Roots to Harvest
- 6. Karen Nadeau, Leadhand, Thunder Bay Conservatory
- 7. Mike Dixon, Supervisor of Forestry and Horticulture, City of Thunder Bay
- 8. Werner Schwar, Supervisor of Parks and Open Spaces Planning, City of Thunder Bay
- 9. Michelle Giordano, Clerk, City of Thunder Bay
- 10. Paul Pepe, Tourism Manager, City of Thunder Bay
- 11. Arefaine Gebreselassie, Foreperson, Toronto Centennial Park Conservatory
- 12. Curtis Evoy, Foreperson, Allan Gardens Conservatory
- 13. Ema Tanaka, Business Team Lead, VanDusen Botanical Garden and Bloedel Conservatory
- 14. Bernice Wilson, Reception Coordinator, Regina Floral Conservatory
- 15. Keri Pidgen, Greenhouse Manager, Lakehead University
- 16. Terry Lang, Supervisor, City of Thunder Bay
- 17. Joanne Scerba, Supervisor, City of Thunder Bay
- 18. Representatives, Royal Botanical Gardens, Burlington
- 19. Marilyn Stinson, Friends of the Thunder Bay Conservatory
- 20. Sandra Nunn, Friends of the Thunder Bay Conservatory

Α	APPENDIX SIX: PUBLIC AND STAKEHOLDER CONSULTATION	

Thunder Bay Centennial Botanical Conservatory

## Conservatory Needs Assessment Open House #1 Report

On May 9,2017 a public open house was held from 4:30 pm to 7:30 pm at the DaVinci Centre with respect to potential future uses of the City of Thunder Bay Centennial Conservatory. The Conservatory, including the display area and greenhouses, is in need of renewal so the City has taken the opportunity to investigate whether additional uses should be and can be incorporated into the renewal project.

## **Open House Logistics**

The Open House was held from 4:30 pm to 7:30 pm at the DaVinci Centre. Staff from the City of Thunder Bay and two consultants, Anneliese Grieve and Sally Harvey, were available to answer questions and discuss the Conservatory with participants. Sixty-one members of the public attended the open house and 41 comment sheets were submitted at the event. The display panels were posted on-line immediately following the open house and a further 73 comment sheets were provided online after the event. A copy of the comment form is provided in Appendix A.

The Open House was advertised by the City of Thunder Bay in local newspapers and through social media.

A series of display panels were provided that summarized the history of the Centennial Conservatory, the issues with the buildings and the ideas for new opportunities that were identified during the previous stakeholder workshop. These panels are included in Appendix A.

## **Summary of Comments Received**

A review of the comments received shows that all but one commenter is in favour of making improvements to the Conservatory including adding new uses both inside and outside the Conservatory buildings. The following is a summary of the input received organized by question from the comment form.

## 1. What is your favourite part of the Conservatory?

The favoured parts of the Conservatory fell into three categories as detailed below. Note that the aspects are simply listed without consideration of the number of comments received.

## a. The features of the Conservatory

- Waterfalls and pools; bridge
- Cactus display with desert artifacts

ANNELIESE GRIEVE

- Exotic plants
- Tropical plant collection
- The new garden beds outside (i.e. pollinator bed, vegetable beds)
- Seasonal displays which are now closed

## b. How visiting the Conservatory makes you feel

- Flowers and Plants-Visuals and the smell of growing things and earth (it effects all the senses)
- Has a lot of nostalgia from when I was young
- Going there on a cold day; a break from winter; warm and humid air-especially in the winter

## c. The Conservatory as a community resource

- The wonderful fact that in a small, isolated City we have a Conservatory
- The greenhouses to raise plants to keep the entire city beautiful
- No/low cost
- Accessible evening/weekends
- Overall site (i.e. adjacent to a golf course –making it a peaceful place to walk around/visit a lovely tropical house.
- Great place for children and seniors

## 2. What is your least favourite part of the Conservatory?

The least favoured parts of the Conservatory fell into three categories:

## a. The state of the buildings

- No multi-purpose or meeting room
- Lack of space at the entrance and walkways: The front area-the whole door doesn't open, people in wheelchairs have problems
- The overall size and the closed off cactus garden and seasonal display room. Would like to see those spaces utilized again.
- The state of the Conservatory i.e. maintenance, tired look/state of the building
- Lack of long term maintenance planning that have led to larger issues over timeneed a plan and supported funding structure for the future to avoid this happening again.
- Baby change table in the washroom would be very helpful
- Coat rack keeps coming apart

**ANNELIESE GRIEVE** 

- Not AODA
- Difficult to get around with a walker
- No open areas
- No coffee/tea or food
- No washrooms, poor washrooms, access to washrooms
- Lack of lighting outside

## b. The state of displays, plant collection and access to displays

- Not much in terms of education signage
- The ramp over the pond is poorly designed, too steep, and sometimes slippery
- Seems the same every time we go. Need an educator position and the person should create new events and educational materials each month
- The pathways are dead ended and narrow
- Closed wings for cacti and seasonal displays
- Ground cover plants lack diversity reducing all plant diversity and great plant opportunities
- Plants are unlabeled
- Lacks research
- Lacks exotic "attraction" plants

## c. Other

- Missing opportunities for collaboration
- Need to utilize the space around Conservatory
- Area around the Conservatory could be used for vegetables or flowers.
- Limited awareness of the facility

## 3. Is any part of the plant collection significant to you and why?

In general, parts of the plant collection which have personal significance are those plants that were donated by individuals or were placed as a memorial, and those plants related to milestone lifetime events.

- When my brother died he had huge plants which the Conservatory put into use so that is special to me to see them thrive
- Beautiful birds of paradise and the mature exotic trees
- The tropical plants that I grew up with in Australia
- The lemon tree- I watch them grow...what happens to the lemons?

- The plants that were donated by individuals (e.g. avocado and orange trees)
- The cactus trees, bananas and fig
- The green house providing plants for old folk's homes and city parks should remain
- I love the Buddha tree-fig.
- Birds of paradise- I knew the gentleman who started them
- Yes, my father donated the Valencia Orange Tree
- Plants that have been donation in memorial.
- Bird of Paradise; my husband and I got engaged at the Conservatory and had our wedding pictures taken there 10 years ago.

# 4. What opportunities do you think the City should examine with respect to new uses at the Conservatory and the area outside around the Conservatory?

- a. New uses at the Conservatory
  - multipurpose room: could be used for special events, tea room, education, master gardeners, yoga, meditation, etc.
  - tropical bird, butterfly or bug room
  - Café/Coffee shop on site
  - Plant sale for tropical and surplus plants grown for parks
  - Educational programs for school children
  - Programming for people with disabilities
  - Improve parking lots to make open and more/improved accessible spaces
  - Available space for growing food
  - Seasonal displays inside and outside; e.g. Christmas lights, fall lanterns, etc.
  - Incorporate an ethno-botanical aspect of the rich history of First Nations plants use in this area
  - Research-often, botanical gardens are paired with a research aspect (Kew and Missouri for example); the opportunity exists with Lakehead-there's a sizeable collection of plants kept there as preserved, as well as a curator and small amount of students researching.
  - The herbarium suffers from a few problems as does the Conservatory (lack of knowledge, under-utilization); a partnership would be beneficial to both institutions. Additionally, there are a number of botany courses offered in the Biology Department; including the Conservatory either as a field trip or lab would be great. The Conservatory is so rich with possibility in this respect (Full disclosure: I am the acting curator of the herbarium at Lakehead)

- As the only science related facility in Thunder Bay the Conservatory has the market for all school botany field trips that should be provided as a curriculum based program by charismatic educators for which a partnership with the local school boards would be imperative.
- Growing endangered species and a seed collection program while sharing with other
  institutions around the world would connect Thunder Bay with the global efforts to
  preserve biological diversity and educate the public in the significant role of the
  botanical Conservatory in safe guarding our future.

## b. New uses outside around the Conservatory

- Outside extend gardens that are separated from each other, such as zones (boreal, savannah, prairie) that have a sense of privacy/isolation
- "Nature" themed playground (that is accessible to ALL).
- Involve Master Gardeners and Roots to Harvest in Community gardens
- Growing vegetables and education
- Experimental gardens on the grounds
- Sculpture garden on grounds
- Lilac grove and Edible forest
- Community gardening
- Area focussed on native plants and trees; medicinal garden
- Grow veggies for local services (i.e. Shelter House and Food Bank/Soup Kitchen)
- The use of the surrounding area connecting the greenhouse could be developed with a collection of regional specific plant specimens, First Nations economic garden and Food Security.
- Northern vegetation and lichens collections.

# 5. Which of the "Fresh Ideas" do you like and why? Would you use the Conservatory more if these ideas were implemented?

There was general support for the potential future uses or 'fresh ideas' put forward for consideration. Most commenters indicated that they thought the fresh ideas would increase their use of the Conservatory and its use by other members of the community and others. Some additional suggestions were made which have been added to the following list:

- ✓ Multi-purpose space which could be used for:
  - o Education
  - Rented for special events (meetings, parties, yoga/meditation)
  - o Tea room

**ANNELIESE GRIEVE** 

- o Craft or farmer's market
- o Pop-up shop by local businesses (coffee, dessert, restaurant market vendors)
- ✓ Creative partnerships with private sector for the following:
  - Catering of tea room
  - o Rental of bench space for growing
  - Other services for special events
- ✓ Creative partnerships with the not-for profit sector with respect to:
  - o Community gardening with Roots to Harvest
  - o Friends of the Conservatory and Master Gardeners for education. Partnership is very important to Thunder Bay Master Gardeners. Each year our group develops a plan for teaching events that will allow us to meet our mandate of sharing horticultural knowledge with the public. If we could come to the Conservatory and make use of a multipurpose space, we could offer many more workshops and demonstrations. This kind of MG/Conservatory partnership strengthens the public presence of both organizations. We are keen to partner in a sustained way and to help with the horticultural teaching aspect of other initiatives at the Conservatory. We are responding to growing interest in urban agriculture and see a role for the Conservatory and Master Gardeners in supporting this local movement.
  - Creating more volunteer opportunities
  - Partnership with Lakehead University Herbarium for research and to improve utilization
- ✓ Building improvements:
  - AODA accessible
  - o Coat storage
  - o Appropriate washrooms
  - o Appropriate space for staff to work with enough space for small workshops
  - Energy efficiency and environmental controls for energy, water and waste;
     make Conservatory a demonstration for the use of rain harvesting, solar energy,
     vermiculture, etc.
  - More efficient use of space including outdoor space and parking
- ✓ Better use of outdoor space for:
  - Special events such as seasonal displays
  - Community gardening
  - o Demonstration gardens including an 'edible schoolyard' type opportunity
  - Education
  - o Northern plants and trees garden; northern medicinal garden

ANNELIESE GRIEVE

- Edible forest
- o Nature themed play space which is fully accessible
- Incorporate an ethno-botanical aspect of it a rich history of First Nations' plants used in this area
- ✓ Additional uses for indoor space:
  - Gift shop
  - o Incorporate an ethno-botanical aspect of the rich history of First Nations' plants used in this area
  - o My kids would love a "Harry Potter" theme collection of plants brought in.
  - Exhibition space to display insects and have visiting exhibits (e.g. reptiles), a turtle and some fish in the pond.
  - o A live bee hive with an acrylic conduit entrance would be popular.
  - o Night plants are novel.
  - Butterfly program for hatch and release Monarchs.
  - O What about an area set aside for a Culpepper's Garden a display explaining the relationship between astrology/astronomy and plant medicine in old times. You could have displays co-ordinated with the observatory for explanations of the planetary movements necessary for each plant for it to be medicinally effective. Done right, it would be a terrific attraction for the community and tourists.

## **Conservatory Needs Assessment Meeting Notes**

**Stakeholder Group Meeting Attendance:** Friends of the Conservatory (Marilyn, Kevin, Sharon and Sandra), Master Gardeners (Ralph and Holly), Economic Development Commission (Doug Murray), Eco Superior (Julia), Roots to Harvest (Cherry) and Barb (Conservatory Staff Member)

## Suggestions:

- Having "travelling" plants to keep people coming back and keep up the interest, as well as adding a more interesting online presence
- People want to know how much money we are putting into the Conservatory before they want to "dream big"
- WE NEED MORE SPACE!!! To make people interested/make money
- Partnering with temporary First Nations housing and the treatment centre (Spirit Garden?
   Meditative Gardening?)
- Big Take Away is that people want a multi-purpose space, educational space, eating space and outdoor space PLUS a new parking lot and outdoor lighting
- Make a Conservatory Boucher and Plant Guide/ update the plant signage (online? Or smart phone app?)
- When applying to Northern Ontario Fund make sure to use key words like tourism and education!
- Could we partner with Delany arena to upgrade to cogenerate electricity and heat
- Everyone wants to see it become fully AOD accessible
- Need to try to get a regional/national reach
- People REALLY REALLY REALLY want the wings open!!!
- Way finding is needed
- Upgrade the greenhouse automation

#### Opportunities

- Renting bench space to grow food
- Educational Program
- Tourism
- Community Garden Plots
- Commercial Space to increase revenue (create synergy)
- Multi-purpose spaces
- Growing food for the less fortunate
- Use of biomass for power
- Garden and Planting demonstrations
- Growing out own native plants for LIDs
- Having growing space for "public"/private use
- Gift Shop

- Grow pollinator plants to sell to establish bees/pollinators
- Rain Garden Example
- "Bug" or Butterfly room on rotation (partner with businesses)
- Tea Room
- Picnic Space
- More special events (liquor licence)/private function
- Live bug cam for bug hatching
- "Travelling" plants and plants that only bloom every couple of years etc
- Better use of the outdoor space
- Partnering with DJs and Musicians
- Meditation Garden
- Working with First Nations, the elderly and other groups

## Other Things to Consider

- Look up the Community Garden Network
- Roots to Harvest would like to collaborate with the Conservatory and help to promote/run new community gardens
  - Expanding their gardens to more people than just at risk youth (and teaching people to grow food in Northern ON)
- People want more chances to volunteers and participate in gardening
- People want more summer programming and later business hours
- A place for seed production (Superior Seed Producers)
- Keeping it local and northern
- Need a trained horticulturalist/more staff in general
- Need someone to apply for grants and need to coordinate more with the rest of the City of Thunder Bay
- Ontario Master Naturalist Program-Run a Herbarium?
- Need to find a way to turn all of these ideas into REVENUE
- Is the demand for programming sustainable?
- Is there any money available to make this happen? Grants? City? Province?
- Link everything to tourism so we can apply for economic development grants
- Host annual festivals to draw people in continually from across the region?
- We need new signage! Better Way finding!!
- Appropriate staffing
- We need to make sure that we don't conflict with the union
- Make better relationships between the stakeholder groups and The City of Thunder Bay
- The uncertainly of the future of the Conservatory and the greenhouses make potential partners leery of contacting/collaborating with us
- People want to the Conservatory to have a plan before they "by into" the Conservatory
- Rent outdoor space to food trucks

- Continual Programing
- Install a smart board and projector in a multi-purpose room
- Catering high tea instead of building a kitchen
- Have a bus route go through/past the Conservatory to enhance visibility and walkability
- Hands on events/tours/programs/demonstrations
- Could science north use the space for tours/educational space for their summer camps?
- Friends or Master Gardeners mentoring people/classrooms?
- Could we put fish in a new pond?

#### **Anneliese's White Board Notes**

## Responses from the Staff

#### How it's used

- School Tours
- Weddings
- PR announcements
- Photography (Plants and Events)
- People Meet there for coffee etc
- Gathering Place
- Special Events 1-2 a month
- Residents from homes for the aged
- University
- Slow day has 40 attendance
- Average 100 people per day
- The highest days 459

#### **New Requests**

- Meetings
- PR
- Liquor licence
- Baby or Wedding Showers
- Bug Rooms (for Education)
- Tours
- Cactus Room is the most important
- People want to changing displays back (Seasonal Room)
- Food Plants for the Homeless
- LU already rents out greenhouse space...could we do that
- Tea House
- Summer Picnics (people also request to eat inside)

## Who Uses It

- Starting to expand
- Mostly the old and young
- Used for Engagements and for DJ'ing by the younger crowd
- Church Groups
- Musicians (
- People who already know about it

#### **Problems**

- Not a big enough social media presence
- People do not know about the conservatory
- Advertisements only reaches people who are already involved
- Need better relations with the community

## **Existing Partnerships**

- Hospital
- Schools
- Churches
- Homes for the Aged
- Eco Superior (day camp)

## Skills

- Advice on Plants
- Plant Identification
- Gardening Advice (Seminars, Canning, Drying)

## Strengths

Cactus Room

#### Weaknesses

- Width of paths
- Not AODA
- Bridge not accessible
- Building is old and tired
- Poor lighting Outside –Safety Issue
- Outside landscape is lacking and has too much grass
- Needs a gathering place

- Entrance is old and small and congested
- No place for coats
- Washrooms are not AODA
- Not change tables
- Location at the end of dead end road (confusion due to address and no wayfinding)
- 5 acres of mostly unused space
- Relationships with neighbours
- In a lower income neighbourhood
- No specific programming
- Hours need to be longer
- Parking lot needs replacement
- Shortage of staff
- Not enough staff space
- Not enough growing space
- Water Features Need Replacing
- Drainage System
- Roof Leaks
- No Air Circulation (Hand cranks instead of automation)
- No misting in the grow houses
- Layout is not efficient
- Need new work benches (ie. Need more than one)
- Need a proper sink with a soil trap
- Noise from the boilers
- No room for transplanting
- No sanitary controls
- No environmental controls
- The grounds need fencing/security

## Opportunities

- Food
- Education
- Events
- Butterfly/bug Space
- Farmers Market
- Craft Shows
- Potential Partners
  - Horticultural society
  - Tree Canada (edible tree grant etc)

#### **Threats**

- Resources
  - o Staff
  - o Finances
- City is not a business
  - Ability to be collaborative and creative with partnerships
- No payment for access
- Payment for events
- No charge for non-profit

#### **Future Uses**

- Farmers Market
- Gazebo- gather place for outdoor events
- Bug space
- Special event space
  - o Weddings
  - o Educations
  - o Tea Room
  - o Associate Groups
- Community Garden Plots
- Commercial Garden Plots
- Birders

## Responses from the Stakeholders

## Strengths

- Versatile indoor/outdoor
- Free admission
- Oasis in the winter
- Used by many socio economic groups
- Grounds are starting to be integrated with the conservatory
- Unique features bridge/water feature
- Weddings/special events
- Soil attributes
- Location
- The grounds have 5 acres
- Capacity and potential for educational space
- Used by visitors
- Linked with growing houses interaction with staff
- Collaboration
- Diversity and maturity of plant collection

- Tons of collection
- Unique to Northern Ontario

#### Weaknesses

- Way finding
- Online presence
- No reason to come back (people feel like they've seen it all)
- Closed wings
- Lack of integration with surrounding area
- State of the buildings
- No space for events
- No electrical outside and out dated electrical on the inside
- Pathways are too narrow
- No room for a gift shop, plant sale or tea room
- No multipurpose room
  - Need better space for education
- Need guide materials in the conservatory
  - o Hand out or online
- Need new signage for plants
- Not energy efficient
- Poor lighting inside and no lighting outside
- Limited/weird parking
- No opportunities for making memorials (memorial plants)
- Not AODA accessible
- Lack of events and festivals

#### Opportunities

- Demand for greenhouse space
- Permanent edible demonstration garden
- Balance need for plants with other uses
- Commercial partnerships
- Use of biomass for power
- Pollinators
- Naturalization
- Rain garden
- Different types of demonstration gardens
- Butterfly/ bugs (hatching events)
- Special Events indoor and outdoor
- Better transportation and intersection with Chapel's Complex
- Medicinal Garden

- Expanding opportunities for volunteers
- Champignon all things horticultural
- Roots to Harvest interested in collaboration around community gardening
- Community demand for growing space
- Seed production (specific to the North)
- Ontario Master Naturalists Program Partnership with LU
- Seed Vault
- Charitable status for the COTC?

#### Weakness

• Need more expertise/ a coordinator to apply for grants and run programs

#### Threats

- Money
- Poor advertising of Conservatory
- Need more APPROPRIATE staff
- Better relationship with City administration
- Uncertainty around future plans

## Fresh Ideas

- Special Events Space (inside and outside)
- Technological outfitting
- Catering Concession
- Better Transit Access
- Edible Schoolyard type program

## City of Thunder Bay Centennial Botanical Conservatory Plant Assessment Report







July 2017

In June of 2017, a horticultural assessment was undertaken of the existing tropical and cacti plant material in the City of Thunder Bay's Centennial Botanical Conservatory (CBC). The CBC was conceived by the Fort William Board of Parks Management as a centennial project to commemorate Canada's 100<sup>th</sup> birthday in 1967 and opened in 1968. The CBC was designed by Lord & Burnham, a renowned greenhouse manufacturer and builder of major public conservatories throughout North America.

The Conservatory is a 932 m<sup>2</sup> indoor tropical plant display which includes a tropical plant collection, a water feature, walking paths, a bridge, and two wings, with the west wing housing the cacti collection, while the east wing was once home to a seasonal display, however is no longer used for that purpose.

The Conservatory has provided a place of tropical refuge year-round. The residents of, and visitors to the City of Thunder Bay have enjoyed the tropical oasis through many winters thanks to this rare and lush, colourful and tropical indoor space as noted by the comments in the visitor's book.

Based on feedback from public and stakeholder consultations, the facility has served the community well and there is clear direction by the public that the facility should continue to do so, perhaps with some updates that could expand user space, activities and events. This year as Canada celebrates Canada<sub>150</sub>, the City of Thunder Bay is prudently undertaking an assessment of the Conservatory structure and with that is respectfully undertaking a plant assessment to inform the design of the facility/space in future.

## **Plant Assessment Process**

The initial on-site horticultural assessment was undertaken by horticultural consultants from Green Design Landscaping Inc. and Kernow Gardens Inc. from June 8-11, 2017. Three hundred seventy one (371) significant tropical plants, two hundred and eighty-eight (288) cacti and succulent plants and numerous individual floor, wall and hanging plants were assessed.

The assessment recorded the following information:

- Plant Identification;
- Inventory and number assignment;
- Size and evaluation in terms of current health condition, significance, life expectancy/viability, and recommendations for transplant, re-propagation, protection, overbuild and / or disposal (to support transition and future facility).
- In addition, several hundred, notable understory (U/S) plants worthy of transplant or repropagation were noted in each bed area.

All data and information collected was recorded for future use by the City of Thunder Bay. A copy of the detailed Plant Assessment and Inventory for the Tropical House is provided in Appendix A, and the Cactus and Succulent House is provided in Appendix B.

## Observations

Initial observations of the plant collections and the facility are positive and the CBC staff should be applauded for work well done. The plants in the Tropical House and the Cacti and Succulent House, although mature in terms of specimen and canopy cover is incredibly lush considering age. At the time of assessment, the collection was noted as somewhat irreplaceable in terms of maturity for many of the original specimens. The collection is of economic and community value, however would not be considered a planting of unique horticultural significance at this time in terms of the rarity of the plants. Having said that, the City of Thunder Bay and visitors to the CBC are very fortunate to have such a gem in their community!

Considering the age of the facility and the level of technology supporting operational and environmental controls, it is the opinion of the consultants that the CBC has served Thunder Bay well. The plant collections identified in the Needs Assessment Consultation Report are important as they provide significant community value in terms of providing a place for connection with community and nature, as well as a space that has provided many memories of significant life moments including school trips, family excursions, weddings, memorial plants, donations, photo moments and multiple passive use opportunities. In addition, the community identified their connection with the edible and ornamental plants as important in terms of education and nostalgic connection with their ancestry. The users of the space as observed during our site assessment visit in June were of all ages, abilities and represented diverse cultures.

The structure of the Conservatory is of notable historical significance and should be researched and evaluated to determine structural viability, life expectancy and restoration opportunities. The profile and silhouette provide a unique and elegant feature to the Thunder Bay and Botanical community.

The plants and growing media are showing their age, which was confirmed by a third-party laboratory; SGS Canada Inc. based on samples taken on June 9, 2017. Samples were taken from Bed areas 2, 3 and 8, in the tropical house and the garden bed in the cactus house. Growing media sample locations were selected based on plant performance. Bed areas 2, 3 and 8 are home to more of the unique, mature and likely original specimens, and in some cases exhibited higher levels of pest population and lower levels of overall performance. The samples were selected to verify overall health of the growing media and to identify opportunities for rejuvenation.

Results are found in the detailed report provided in Appendix C, and Appendix C1, and are summarized as follows:

- pH of the samples taken from the tropical house were within an acceptable range
- pH of the sample taken from the Cactus and Succulent House was slightly high at 7.29
- All macronutrients (Nitrogen, Phosphorous, Potassium, Calcium and Magnesium) were low

- Sulphate reading in the Cactus and Succulent House exceeds the acceptable and optimal ranges
- Micronutrients were generally acceptable with the exception of Zinc and Manganese in all bed areas.
- Iron exceeds the optimum range
- Molybdenum in the Cactus and Succulent House slightly exceeded the optimum range.

In general, these results are not unexpected considering the maturity level of the growing media and plant material and based on the typically alkaline irrigation water supply in this region. The current growing media does not require removal, however requires a growing media leaching/flushing program that will re-balance it to an optimal range. Supplementation of the growing media should be undertaken on a regular and rotational basis based on plant performance and compaction levels. Following the leaching/ flushing program, the ideal macro and micro nutrients will be restored and maintained by development of a nutrient plan specific to the plant material and season. The established and responsive nutrient plan will ultimately be supported by the introduction of an automatic watering and fertilization system. Certain products perform better in some environments than others, and thus nutrient product selection, scheduling and application will be key to success.

Soil moisture in the tropical house was sufficient while the media moisture in the Cactus and Succulent House was observed as less than ideal at the time of assessment.

Irrigation water was also tested and analyzed. The indicator sample was taken from hose bib in Bed Area #1 as a representative sample to identify any concerns with the water supply. The water supply used for plant material throughout the Conservatory (Tropical/Cacti and Succulent and Seasonal houses), is non-potable as identified at source. Results from the third-party laboratory; SGS Canada Inc., indicate a high pH typical to the region, however no anomalies were noted. A copy of the laboratory report is provided in Appendix D.

Generally, plants are in reasonable to good condition, albeit many are mature and require horticultural and corrective pruning to restore health and structure. Most of the existing plant material can be transplanted and / or transplanted and re-propagated. As at June 11, 2017, there were nine (9) tropical plants identified for immediate disposal which are identified in Appendix E due to poor form, pest infestation and / or disease beyond control, in which case we do not recommend such plants be re-propagated. Special care in sanitization of tools, clothing and equipment during removal and disposal of these plants should be undertaken to prevent cross contamination. As of June 11, 2017, there are no cacti or succulents recommended for disposal.

Numerous plants have been identified to be preserved to serve as stock plants for repropagation of new plants provided pest and disease control and nutrient programs are implemented to restore vigour. An ongoing re-propagation program can provide a steady supply of replacement plants, and support plant/ seed and cutting exchange with other

Conservatory's to expand the plant collection diversity. Extra plant material can also support educational outreach and volunteer partner group sales and activities such as Friends of the Conservatory, Master Gardeners etc.

## Recommendations

The following recommendations assume that the tropical display area will be renewed and updated. It is also assumed that the west and east wings will be rebuilt with the intention that the original iconic profile will be duplicated. Furthermore, and very important to the long term success of this facility, it is assumed that all environmental systems and controls will be updated with new conservatory and greenhouse technologies that support an optimal environment for the plant material and users including but not limited to: light, temperature, irrigation, air exchange, humidity, nutrition/fertilization, and accessibility etc.

## Recommendations for Existing Plant Collections

- 1) Identify and align the CBC short term and long term plan with operating budget and budgetary guidelines.
- 2) Remove plants identified for immediate disposal. See Appendix E.
- 3) Develop and implement a short term planting plan and transitional re-propagation plan based on the new long term planting plan of the renewed and rebuilt areas of the facility. (To be prepared by a Landscape Architect and Horticulture Consultants, specializing in tropical plants and cacti).
- 4) Develop a Collections Policy & Procedure to maintain the integrity of the collections, to support biosecurity and to respect the memorial plant dedications and public plant donations. (To be prepared by Horticulture Consultant.) Current staff will be trained to maintain the established policy and procedure.
- 5) Develop the new facility design to integrate and leverage trusted and proven automatic operational technologies that will support the CBC in maximizing energy and labour efficiencies and user experience.
- 6) Develop the new planting plan to support the Collections Policy and Procedure and respects the identified themes and values such as edible, origin, medicinal, and function, to ensure that we have the right plant in the right place. (To be prepared by a Landscape Architect and Horticulture Consultants, specializing in tropical plants and cacti).

## Future Re-design considerations:

- The Tropical House collection should be designed with consideration of theme(s) and cultural plant requirements to enhance diversity, and interest.
- b. Include interactive, themed and seasonal displays (plants of special interest and bi-monthly rotating displays throughout.
- c. The Cactus and Succulent collection should be themed using the large open planting area for large species but include more groundcover species to increase interest and diversity.

- d. The bench collections in the Cactus and Succulent Collection should include diverse smaller species (*Mammallaria*), in bench settings (plunged in sand, gravel mulch with glass sided benches).
- 7) Develop and implement a strategic growing media renewal program based on a Master Planting Plan, and to support healthy plant life as required by collections. (To be prepared by Horticulture Consultant). It is not necessary to remove current growing media if the following actions are taken:
  - Plan and implement a growing media leaching/flushing program to re-balance to an optimal range.
  - Supplement the existing growing media on a regular and rotational basis based on plant performance and compaction levels.
- 8) Develop and manage a responsive nutrient management program to restore and prepare plants for improved success immediately, during transition and in future. Attention to product selection, scheduling and application will be key to success. (To be prepared by Horticulture Consultant).
- 9) Develop and implement a customized Integrated Pest Management Plan that includes strategic media and nutrient management best practices and biological pest control. (To be prepared by Horticulture Consultant).
- 10) Control/restrict identified invasive plants by transplanting into closed containers and then direct planting into bed areas to provide desired coverage.
- 11) Develop a strategic Re-propagation Plan as prescribed in the Plant Assessment Matrices provided in Appendix A and B, and to support next generation of existing plant material in renewed and rebuilt spaces. The plant collection currently holds many duplicates. Propagation of duplicates should cease until a direction is finalized (To be prepared by Horticulture Consultant).
- 12) Upon completion of the facility renewal and re-build, plan for a dedicated production greenhouse to support the tropical, cacti and succulent houses and plant renewal/seasonal display to reduce plant replacement and new introduction costs.
- 13) Rotate collections for seasonal interest. Introduce plants as per plan and specific themed collections to expand diversity and reduce over re-production of certain plants. (i.e. too many Holly Ferns/Jade plants etc.) To be prepared/supported by Horticulture Consultant).
- 14) Develop labelling, interpretation and communication policy and procedures to enhance visitor education and experience. (To be prepared/supported by Horticulture Consultant).
- 15) Build relationships with other public gardens, conservatories, universities and colleges, to increase plant diversity at minimal to no cost for young stock.

## **Facility and Site Recommendations**

- 1) Remove the existing cedar trees located at the front of the conservatory to increase air circulation.
- 2) Develop and Design the facility renewal and re-build plan to:
  - a) Provide for spatial requirements of the new planting plan, the users, and sufficient workspace for staff and community partners.
  - b) Design and procure materials that are conducive to creating a safe space for staff and visitors. (Non-slip floors, positive grades and drainage to reduce water pooling etc.).
  - c) Support a healthy and safe work environment (consideration for Working from heights, slips trips and falls, working alone, musculoskeletal disorders, violence and harassment exposure etc.
  - d) Incorporate and create awareness around Green Energy and environmentally sustainable best practices as a demonstration model to the community.
  - e) Invest in new glass material to enhance community visibility, enhance light transmission and to eliminate labour intensive need to whitewash glass panes.
  - f) Integrate and leverage trusted and proven automatic climate controls and operational technologies to maximize energy and labour efficiencies, and enhance user experience.
  - g) Update environmental climate and operation controls to support the Green Energy Plan and leverage proven automated technology to reduce operational, and provide ideal control mechanisms for temperature, shading, air circulation (fans and venting), humidity, light transmission, supplementary lighting, irrigation etc.
- 3) Assign sufficient Capital Budget for the facility renewal and re-build phases and align with long term Operating Budgets to ensure long term success.
- 4) Develop community awareness strategy that includes investment in presenting the Conservatory to residents, educators and tourists as a year round destination/ attraction. Consideration should be given to city wide way-finding signage and on site signage etc.
- 5) Maintain and develop partnerships with the Friends of the Conservatory and local garden clubs, Horticultural Societies, Master Gardeners, schools, college and university programs, Community service providers to engage and explore next generation opportunities.

## Interim Transitional Holding/Growing Requirements

The following recommendations assume that the current and/or the proposed new production houses used by the City of Thunder Bay to support internal plant production requirements could potentially support the plants as a hold-over facility during the transition with some strategic and logistical coordination.

It is noted that the transition is anticipated to be less of a burden in terms of labour and operations if initiated once the new production greenhouses are installed as it is assumed that all environmental systems and controls will be updated with new but proven automated greenhouse production and climate control technologies that support efficient operations for both staff, production and temporary transitional requirements.

It is anticipated that the new production house(s) will be designed with automated production in mind and include but not be limited to the following: automated rolling benches, seeding and potting machines and automated climate control, irrigation, nutrition/fertilization. This investment is expected to support and advance the transitional Holding and Growing Requirements.

Interim transitional holding requirements for the plant material will also depend on the time of year, duration of transition requirement, weather, space, and health of plant material at the time of renewal or re-build.

It is important to initiate an ongoing re-propagation program as mentioned in the short term to ensure that the legacy of the original planting is carried on genetically. The Assessment report identifies whether an existing plant should be Transplanted (T), Re-propagated (RE), Protection (P), Overbuild (O), and Disposal (D). It should be noted that no plants were identified that require overbuild or protection, however most plants were recommended to be either, or a combination of Transplant and/or Re-propagation. The transplant and re-propagation plan should conform to the proposed Planting Plan and Plant Collection Policy in order to guide the future development of the collection.

Most plants were suggested for re-propagation for the following reasons:

- Maintain genetics,
- Reduce plant replacements,
- Support the current community connection,
- Provide contingency in case plants fail during transition,
- Support potential partner entrepreneurial opportunities,
- Support education, curriculum and community programs.

It is important to note that transplanting of plant material should be overseen by Certified Interior Landscape Horticulturists (or equivalent), and would occur by hand, and/or machine, while larger specimens will require transplant by tree spade.

The minimum amount of space required for the transitional holding facility is projected at approximately 2500-3000 m² to allow for growth, quarantine (biosecurity), and to support strategic acclimation and horticultural care to prepare plants for their renewed / re-built home. Many of the original specimens will require height reduction to fit in the production greenhouse, which if drastic may compromise them, however this could be resolved by the strategic re-propagation plan that should be well underway. In addition, it will be important to incorporate new specimens in the new facility to provide increased diversity (as per the recommended planting plan) and also to create some new interest. Using the production houses as the interim transitional holding facility could be the most cost-effective solution and simpler in terms of the environmental and maintenance infrastructure required to undertake this step well and without concern for weather and timelines etc.

Alternatively, a taller 25'/ 7.6m tall temporary shade house type structure/ poly house could be constructed on site or rental of an industrial warehouse to support plant material as a temporary solution if required, however this will require investment in infrastructure to the area which could include the need for grading and drainage, supplemental lighting, stability for grow pots and canopy (blocks and ties to maintain upright), irrigation water and system, temperature and climate control etc. Such a facility may be re-usable after the build for other production requirements.

Regardless of the transitional facility, the following conditions will need to be provided to support best success:

- Spatial requirements: 2500-3000 m<sup>2</sup> is recommended to allow for quarantine, horticulture procedures and maintenance including pest control
- Light:
  - o 1000 fc minimum for maintenance and rejuvenation of existing plant material
  - o 2000-5000 fc to support re-propagation plan
- Soil/media: Maintain native media and implement a strategic nutrient and amendment renewal program to support long term success.
- Watering regime- ideally an irrigation system- drip line or bubblers
- Temperature and air circulation regulation: 18-25C
- Humidity: 50-70%

## **Staff Capacity & Development**

The following recommendations assume that the current and/or the proposed new production houses used by the City of Thunder Bay to support internal plant production requirements could potentially support the display plant material as identified for transition as a hold-over facility during the transition with some strategic and logistical coordination.

There is a current staff complement of four (4) full time staff assigned to the production greenhouses and the public tropical and cacti houses/ display areas. It is anticipated and based on current knowledge, that this staff complement would be sufficient to support the new production houses and newly identified city wide plant requirements along with the maintenance of the display area plant material if they have the required horticultural knowledge and skills and/or direction.

With the amount of change anticipated, it is prudent of the City of Thunder Bay to support professional development/training opportunities for the CBC supervisory staff, to support the long- term preservation of the current and future interior landscape asset, and provide focus on horticulture best practices and standards for growing, installing, and maintaining diverse collections of edible and ornamental tropical plants, cacti and succulents, and the city wide plants required.

Immediately it will be important to provide training on the completed plant assessment digital data base and record of the current collection and inventory and how this tool can support the staff and how to maintain these important records going forward. The City invested significantly to undertake this inventory and it is recommended that it be maintained and evolved as required.

It is expected that the current staff team will require additional technical training and/or support to undertake the transitional recommendations as per recommendations above once the display areas are renewed/re-built. The current staff team will require training and oversight to become skilled at operations of the new facilities and automation processes and technologies, however it is anticipated that they will do well based on their current skill set if the appropriate training is provided. It is recommended that current job descriptions be reviewed and additional experience or education in terms of horticultural production, interior landscaping, cacti and outdoor plants be required.

It should be noted that is it anticipated that the staff will benefit from training to achieve the recommended competencies outlined above. There are several horticultural trade associations that host professional development programs and events located nearby in Ontario, Winnipeg and Minnesota that can support training plans. Several post-secondary programs also host night classes and on-line courses as well that may be beneficial.

It may be advantageous to gain expertise from Horticulture Consultants from time to time as identified in the recommendations above and to bridge gaps throughout the transition and establishment of the display and plants in their new home.

## Conclusion

The Centennial Botanical Conservatory in Thunder Bay is a unique infrastructure asset that is not well known, but has great potential to serve the community for years to come. Over the last fifty years, the CBC's design of the interior and exterior landscape has changed and adapted. Use has definitely changed within that time frame as well.

Although this assessment identified no plants as unique or of particular horticultural significance, it is clear that this collection, in its entirety, holds great value to the community. The cost to replace plants in the tropical house alone, with juvenile sized plant material is projected to be over \$1 million (fluctuating with U.S. exchange rate). In terms of appraised replacement value, at their current size and maturity, the cost to replace the existing tropical plants could represent a \$2-\$5 million investment.

It is apparent that this facility is very important to the community and it is known that green infrastructure is instrumental in providing health and wellness benefits to users. As many expressed in the public consultation, it is important that this facility, or one like it, with expanded use and space, continue to serve Thunder Bay as a garden and tourism, and health and wellness destination.

The City of Thunder Bay is applauded for its progressive thinking in undertaking this assessment and exploring opportunities and solutions that are relevant to the community and are sustainable in the future. This forward- thinking approach will enable the community to enjoy and use this space for years to come, and make it a relevant city landmark through to Canada's 200<sup>th</sup> birthday.

Respectfully Submitted by: Green Design Landscaping Inc., Kernow Garden Inc.



*MEETING DATE* 03/02/2020 (mm/dd/yyyy)

Scheduling - Designated Truck Route By-Law

## **SUMMARY**

Memorandum from Ms. K .Power, City Clerk, dated February 24, 2020, relative to the above noted.

## **RECOMMENDATION**

With Respect to the presentation of the Designated Truck Route By-law, we recommend that the City Clerk poll for new dates for Council to receive the By-law on or before June 29, 2020;

AND THAT the City Clerk report back to Council with respect to scheduling a new date.

## **ATTACHMENTS**

1. Memo - DTR presentation - COW - Mar 2



## Memorandum

Office of the City Clerk Fax: 623-5468 Telephone: 625-2230

**TO:** Members of Council

**FROM:** Krista Power, City Clerk

**DATE:** February 24, 2020

SUBJECT: Committee of the Whole – March 2, 2020

Scheduling - Designated Truck Route By-law

As a follow up to the previous memo provided at the January 27, 2020 Committee of the Whole meeting, polling has been completed for presentation of the Designated Route By-law.

It is my request that Council consider moving this item forward to a future meeting. At this time, my office was unable to achieve a date between March 2 and March 23 where all members of council indicated that they were able to attend.

It is my intention to poll for April, May and June for availability and report back to Council upon achieving a successful date for presentation unless alternate direction is received.

With Respect to the presentation of the Designated Truck Route By-law, we recommend that the City Clerk poll for new dates for Council to receive the By-law on or before June 29, 2020;

AND THAT the City Clerk report back to Council with respect to scheduling a new date.

cc:

Mr. N. Gale, City Manager

Ms. K. Marshall, General Manager - Infrastructure & Operations

Mr. M. Grimaldi, Solicitor - Legal Services

Ms. K. Dixon, Director – Engineering & Operations



*MEETING DATE* 03/02/2020 (mm/dd/yyyy)

SUBJECT Occupational Health and Safety

## **SUMMARY**

Memorandum dated February 11, 2020 from Ms. K. Bernardi, Manager - Corporate Safety, relative to the above noted.

## **ATTACHMENTS**

1. K. Bernardi Memo to Council - Safety Report Information



# Human Resources & Corporate Safety

Tel: (807) 625-2427 Fax: (807) 684-2186

## **MEMORANDUM**

TO: Mayor Mauro and Members of City Council

FROM: Kerri Bernardi, Manager of Corporate Safety

**DATE:** February 11, 2020

**RE:** Reporting of safety information to Council

This memorandum is in response to the discussion at the September 30, 2019 COW meeting regarding the frequency and nature of safety updates to council. Three areas are discussed in this memo: 1) Reporting Regimen; 2) Leading vs Lagging Indicators; and, 3) Days Since Lost Time Injury.

## Reporting Regimen

Corporate Safety currently provides a comprehensive annual report on the previous year's safety activities and occurrences. The report covers injury and accident statistic, analysis of data, legislative updates, Ministry of Labour (MOL) initiatives and visits, and Workplace Safety and Insurance Board (WSIB) information. This annual report is an overview of the safety activities and occurrences for the previous year. The collection of the data for the report is currently cumbersome as the information is not yet easily accessible and includes a manual collation of information from different systems with inconsistent formats.

With the implementation of the recently approved Safety Management System (SMS) and supporting Intelex software, data collection and reporting will become progressively easier over the next few years. The SMS will introduce standardization of reporting, review and auditing of safety activities that will assist in the coordination of the information from across the five (5) departments, 23 divisions as well as the 19 joint health and safety committees and 15 health and safety representatives that serve the divisions and departments. In light of the work that will result from the implementation, Corporate Safety proposes bi-annual reports for the next two years and thereafter with the progression of the SMS, a move to quarterly reports for Council.

WSIB reporting timelines and the workload resulting from year-end reconciliation does not allow sufficient time for a report to be brought forward prior to May, therefore administration recommends that the timing of the bi-annual reports would be May and November. The May report would include information similar to previous Corporate Safety Reports to council as discussed above. The November

report would provide year to date statistics and include priority items that may have an impact on City budget or operations.

At this point in the implementation of the Safety Management System (SMS) and supporting Intelex software, quarterly reports to Council would only include basic statistics such as lost time, health care and first aid incidents, but would not include an explanation on fluctuations in statistics, as this would require a detailed manual review and analysis of each incident report.

## **Leading vs Lagging Indicators**

Prior to 2017, Corporate Safety reports to Council focused on Lost Time Injury (LTI) and Lost Time Injury Frequency (LTIF) statistics as safety performance measures. As stated by The Canadian Centre for Occupational Health and Safety (CCOHS), these types of measurements are considered 'lagging' indicators and are not necessarily indicative of a safety program or culture<sup>1</sup>. Through the approval by Council of the 2017 Corporate Safety Report (No. R 125/2018) it was agreed that the Corporation would instead focus on 'leading' indicators as a more effective measure of performance. Leading indicators such as number of employees trained, hazard assessment and controls, safety talks and workplace inspections provide a better indication of the proactive work undertaken to improve workplace safety by an employer. Lagging indicators such as lost time continue to be included in the report for reference and tracking. Measurements such as lost workdays and number of incidents do not accurately reflect how an employer is preventing incidents and may provide a false sense of performance.

## **Days Since Lost Time Injury**

The City of Thunder Bay provides a diversity of programs and services and our employees work in a wide variety of environments and encounter a variety of hazards in their work. Focused reporting on number of days since the last lost time injury is not effective as a safety performance indicator and in fact may be demotivating to workers such as paramedics or long-term care workers who may incur lost time for factors that are difficult to control. While the Corporation cannot control all environments or factors that every employee may encounter, we can offer programs to better prepare and support employees to respond to these variable working conditions such as peer support programs, implementation of the Psychological Health and Safety Standard (Well at Work), situational awareness and responsive behaviour training.

In summary, it is recommended that for the next two years a bi-annual report be presented to Council, allowing time for Corporate Safety to establish a more efficient method of monitoring and tracking information before moving towards a quarterly report. And that the corporation continues to implement the SMS and use leading indicators to measure performance.

Kerri Bernardi Manager of Corporate Safety

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<sup>&</sup>lt;sup>1</sup> CCOHS, On Topic: Lead and Lag to Measure Safety Performance", *The Health & Safety Report*, Volume 14, Issue 4.

cc: EMT

Krista Power, City Clerk Dana Earle, Deputy City Clerk



**MEETING DATE** 03/02/2020 (mm/dd/yyyy)

**SUBJECT** E-Scooters

#### **SUMMARY**

Memorandum from Mayor B. Mauro, dated February 10, 2020, containing a motion to Review Ontario's Electric Kick Scooter Pilot Program.

#### **RECOMMENDATION**

With respect to the electric kick scooter (e-scooter) pilot program, we recommend that Administration including Engineering, Licencing and Enforcement, Parks and Open Spaces, and in consultation with the Thunder Bay Police Services and Accessibility Advisory Committee, report to Council recommendations to potentially introduce e-scooters in the City;

AND THAT all relevant legislation is reviewed and appropriate information is included within Administration's recommendation;

AND THAT the report contain a draft by-law for Council's consideration;

AND THAT Administration report to Council on or before June 1, 2020;

AND THAT any necessary by-laws be presented to City Council for ratification.

## **ATTACHMENTS**

1. Memo - Mauro - COW - Mar 2 - E-scooters



## Memorandum

Office of the City Clerk Fax: 623-5468

Telephone: 625-2230

**TO:** Ms. Krista Power, City Clerk

FROM: Mayor Bill Mauro

**DATE:** February 10, 2020

SUBJECT: Motion to Review Ontario's Electric Kick Scooter Pilot Program

Committee of the Whole – March 2, 2020

On January 1, 2020, the provincial government launched a pilot to permit electric kick scooter (escooters) on Ontario's roads. The province has introduced rules and requirements for e-scooters and is allowing municipalities to pass by-laws to allow their use and determine where they can operate most safely.

I present the following motion for City Council's consideration,

With respect to the electric kick scooter (e-scooter) pilot program, we recommend that Administration including Engineering, Licencing and Enforcement, Parks and Open Spaces, and in consultation with the Thunder Bay Police Services and Accessibility Advisory Committee, report to Council recommendations to potentially introduce e-scooters in the City;

AND THAT all relevant legislation is reviewed and appropriate information is included within Administration's recommendation;

AND THAT the report contain a draft by-law for Council's consideration;

AND THAT Administration report to Council on or before June 1, 2020;

AND THAT any necessary by-laws be presented to City Council for ratification.



**MEETING DATE** 03/02/2020 (mm/dd/yyyy)

**SUBJECT** Additional Funds for Capital Renewal and Maintenance

## **SUMMARY**

At the January 29, 2020 and the February 10, 2020 City Council meetings respectively, Council directed Administration to report back on or before March 2, 2020 with respect to reallocation of funds from the 2020 Travel and Training Budget to capital renewal and/or maintenance of city infrastructure; and with respect to reallocation of funds from proposed expansion of .7 FTE in Infrastructure and Operations (Roads) to renewal and/or maintenance of city infrastructure.

Memorandum dated February 21, 2020 from Ms. K. Marshall , Manager- Infrastructure & Operations, relative to reallocation of funds with respect to the 2020 Operating Budget.

## **ATTACHMENTS**

1. Memo-Budget – K. Marshall Feb 21 2020



## Memorandum

Infrastructure & Operations Engineering & Operations

**TO:** Members of Council

FROM: Kerri Marshall, General Manager-Infrastructure & Operations

**DATE:** February 21, 2020

SUBJECT: Additional Funds for Capital Renewal and Maintenance

Administration was directed to report back regarding the reallocation of funds to capital renewal and/or maintenance of City infrastructure totaling \$140,100.

This memorandum is to advise that Administration will report back on May 4, 2020.

Kerri Marshall, General Manager Infrastructure & Operations



*MEETING DATE* 03/02/2020 (mm/dd/yyyy)

**SUBJECT** Endorsement of Nominating Terry Fox as the new face of \$5 bill

## **SUMMARY**

Memorandum dated February 24, 2020 from Mayor Bill Mauro relative to the above noted.

## **RECOMMENDATION**

With respect to the Bank of Canada's online campaign calling for nominations to replace former Canadian Prime Minister Wilfrid Laurier on the \$5 bill, we endorse the nomination of Terry Fox;

AND THAT letters be sent to Finance Minister Bill Morneau and Bank of Canada Governor Stephen Poloz to express the formal support of Thunder Bay City Council.

## **ATTACHMENTS**

1. Memo - Support for Terry Fox



## **MEMORANDUM**

**TO:** Krista Power, City Clerk

**FROM:** Mayor Bill Mauro

**DATE:** February 24, 2020

**RE:** Endorsement of Nominating Terry Fox as the new face of \$5 bill

Committee of the Whole – March 2, 2020

In January 2020, the Bank of Canada announced an online campaign calling for nominations to replace former Canadian Prime Minister Wilfrid Laurier, who has been on the \$5 bill since 1972.

I am requesting that City Council fully support the nomination of Terry Fox as the next iconic Canadian on the \$5 bill.

Fox's hometown of Port Coquitlam, B.C. is also campaigning to get him on the bill. Mayor Brad West wrote to Finance Minister Bill Morneau and Bank of Canada Governor Stephen Poloz to express the formal support of Port Coquitlam. I am requesting Council's support to also endorse the nomination through letters to the Finance Minister and Bank of Canada Governor.

Canadians have until March 11 2020 to nominate. A link is provided on the City's homepage.

Although there are so many deserving candidates being nominated, the impact that Terry Fox has had on our community, and the legacy he has left, inspires me and I'm sure many local residents to nominate him for this honour.

Please place the following resolution on the Committee of the Whole agenda for March 2, 2020:

With respect to the Bank of Canada's online campaign calling for nominations to replace former Canadian Prime Minister Wilfrid Laurier on the \$5 bill, we endorse the nomination of Terry Fox;

AND THAT letters be sent to Finance Minister Bill Morneau and Bank of Canada Governor Stephen Poloz to express the formal support of Thunder Bay City Council.