

Preliminary Action Plan  
Storm Debby: torrential rain and floodings  
August 9 and 10, 2024

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BEACONSFIELD

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## Content

About this Action Plan .....	1
1. Partnerships.....	2
2. Infrastructures .....	2
3. Communications.....	3
4. Compliance .....	4
5. Annexes .....	4
5.1 Weather forecast for August 9, 2024.....	4
5.2 Hydrometric station readings .....	5
5.2.1 Environment Canada – Sainte-Anne-de-Bellevue .....	5
5.2.2 Beaconsfield – Public Works and Heights Pool.....	7
5.3 Lake Saint-Louis water level (Pointe-Claire hydrometric station).....	8
5.4 Calls to the Fire Department and DDO dispatch.....	9
5.5 Calls to vulnerable persons .....	9
5.6 Visits to Public Works drop-off site.....	9
5.7 Collections.....	9
5.8 Claims .....	9
5.9 Communications .....	9
5.10 Works executed from 2019 to 2024 .....	10
5.11 Maintenance program for sewer and stormwater network executed by Public Works staff .....	12
5.12 Pumping reports.....	12

## About this Action Plan

Following the floodings of August 9, 2024, the City of Beaconsfield is committed to implementing an action plan to strengthen our community’s resilience to extreme weather events. This multi-phased plan is based on an in-depth analysis of the most vulnerable areas, raising public awareness, and implementing sustainable solutions to protect our infrastructure and homes. The steps outlined below demonstrate our commitment to act quickly while planning in an intelligent and collaborative manner.

The City of Beaconsfield’s drainage system is divided into 39 drainage basins that drain into Lake Saint-Louis. They are extremely varied in shape and size and have a number of special features. The torrential downpour of August 9 put our climate resilience to the test with a record amount of rainfall on several levels, such as the volume resulting from more than 150mm of rain, in addition to an extreme portion of around 50mm in just one hour. This storm showed that climate change does not respect borders or the responsibilities of third parties. In this context, it is important to bear in mind that some of our drainage basins receive water from neighbouring towns, that our towns are an integral part of the Agglomeration for certain environmental responsibilities such as streams, that emergency services are managed by the Agglomeration, such as the Montréal Fire Department

which intervened in our territory during storm Debby, and the public utility company Hydro-Québec which also intervened in our territory.

We feel it is imperative to call on all these parties to identify and understand the roles they played during Debby and the resulting flooding. Beyond these respective roles, the financial issue will undoubtedly occupy an important place in our future discussions. With this in mind, we need to be diligent and take action that will ultimately enable us to improve our climate resilience.

Below is a list of proposed actions under various headings and with a preliminary timetable. This plan may be revised as the collected data, discussions with our partners, technical analysis and information evolve.

## 1. Partnerships

### 1.1 Fall 2024 – winter 2025

- a. Communicate with City of Kirkland
- b. Communicate with City of Pointe-Claire
- c. Communicate with City of Montréal
  - i. Water Department
  - ii. Fire Department
- d. Communicate with Hydro-Québec

## 2. Infrastructures

### 2.1 Fall 2024

- a. Amend the mandate to NHC LaSalle (resolution 2023-08-545) for the preparation of the Master Drainage Plan for the north and Rockhill sectors to take account of the drainage basins most affected by the torrential rain on August 9
- b. Award by mutual agreement to one or more contractors the correction of specific drainage works to be financed by the infrastructure reserve (see recommendation to Council on September 23, 2024)
- c. Develop and implement the “Plan municipal des gestion des actifs (PGA)” for drinking water, waste water and storm water (see recommendation to Council of September 23, 2024)
- d. Return to call for tenders to improve safe access to Meadowbrook Creek
- e. Take account of available information to include projects in the 2025-2027 Capital Investment Plan

### 2.2 Winter – spring 2025

- a. Analyse the recommendations of NHC LaSalle
- b. Evaluate the costs of the recommendations
- c. Research and submit grant applications where applicable
- d. Determine a schedule for the execution of the works

### 2.3 Spring – summer 2025

- a. Plan and prepare calls for tenders to improve the hydraulic capacity of drainage infrastructures according to schedule

## **2.4 Summer – fall 2025**

- a. Issue calls for tenders for professional services to prepare calls for tenders for major works
- b. Obtain funding for projects
- c. At the end of fall, revise action plan

## **2.5 2026**

- a. Proceed with calls for tenders for the execution of the works
- b. At the end of fall, revise action plan

## **2.6 2027 and following years**

- a. As the situation evolves, issue calls for tenders for professional services
- b. Obtain funding for projects
- c. Proceed with calls for tenders for the execution of the projects
- d. At the end of fall 2027, revise action plan

## **3. Communications**

### **3.1 Fall 2024**

- a. The citizens
  - i. Create an information sheet on how to make a property resilient
  - ii. Provide information on good maintenance practices for the architectural and mechanical components of a house
  - iii. Encourage vulnerable population groups to get registered on our Vulnerable Persons List
  - iv. Promote CONNECTONS
- b. The City
  - i. Dedicate a web page to information on flooding, how to prepare, develop good reflexes, etc.
  - ii. Explain the City's maintenance practices for sanitary and storm water networks
  - iii. Add a section in Info-Flash and CONTACT
  - iv. Promote information on the maintenance of submersible pumps

### **3.2 Fall 2025**

- a. Prepare an Open House with themes on how to improve citizen resilience

### **3.3 Spring 2025**

- a. Repeat relevant communications to inform residents about good resilience practices in their homes
- b. Continue to stimulate citizen resilience through CONNECTONS

### **3.4 Summer 2025**

- a. Use student teams to raise awareness directly with residents at various municipal and community events

### **3.5 Fall 2025**

- a. Poll citizens on their capacity for climate resilience

Note: Many of the communications will be repeated periodically and enhanced as new information becomes available.

## 4. Compliance

### 4.1 Spring – fall 2025

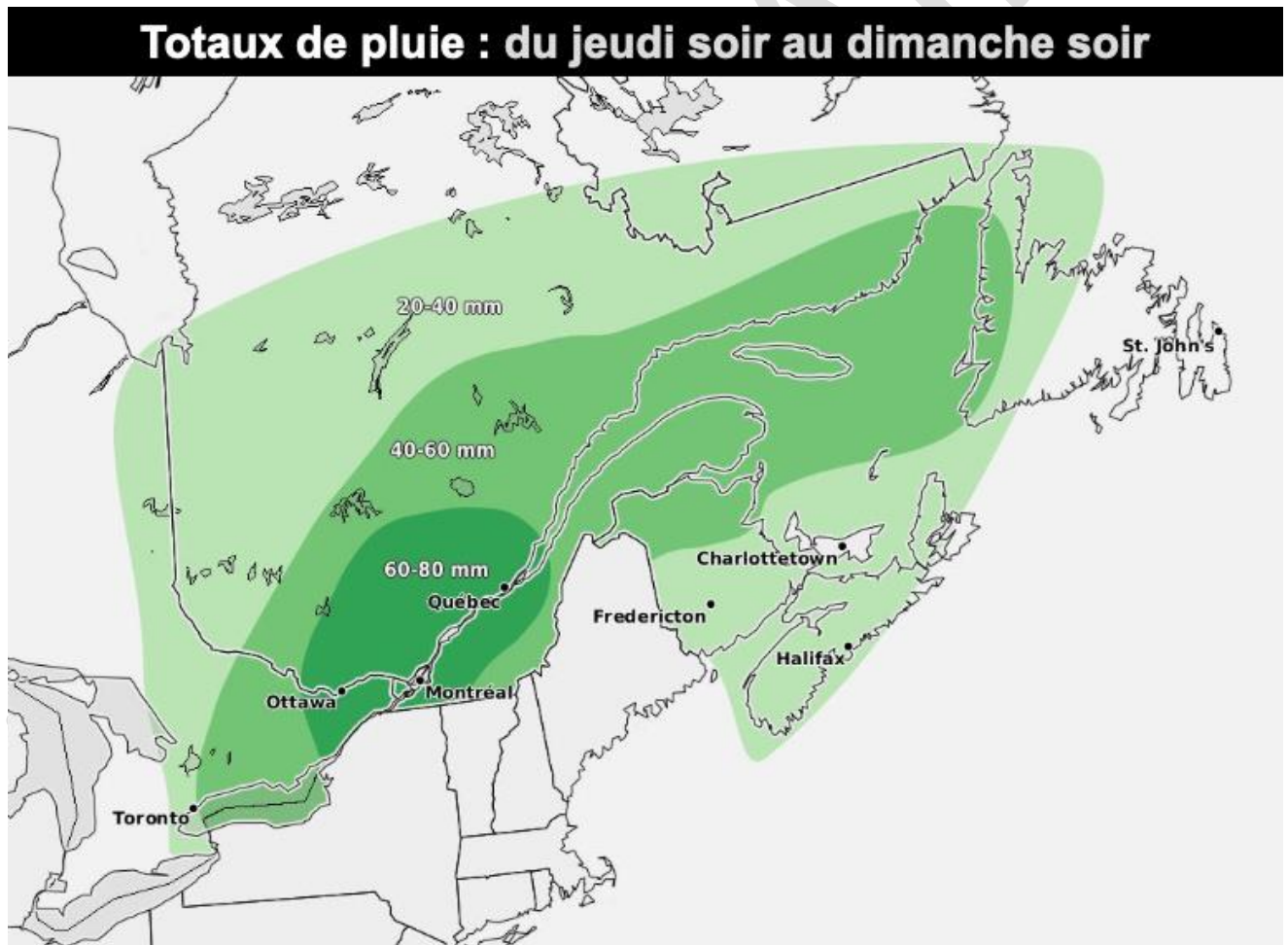
- a. Inspect homes to correct cross-connection deficiencies
- b. Adjust regulations, where necessary, to take account of new bio-retention trends, for example

## 5. Annexes

### 5.1 Weather forecast for August 9, 2024

Excerpt from the article « Pluies abondantes au Québec et en Ontario : La tempête Debby faiblit, mais laissera beaucoup de pluie » published by La Presse on August 8, 2024

« ...Cela n'empêchera pas Debby de laisser sur son sillage de fortes quantités de pluie dans le sud de l'Ontario et du Québec, selon les prévisions d'Environnement Canada. À Montréal, on pourrait recevoir de 60 à 80 mm de pluie à partir de ce vendredi, au petit matin, jusque tard en soirée... »



Source : Environment and Climate Change Canada

## 5.2 Hydrometric station readings

### 5.2.1 Environment Canada – Sainte-Anne-de-Bellevue

Si vous avez sélectionné l'heure normale locale (HNL), ajoutez 1h pour convertir l'heure locale en heure avancée, s'il y a lieu.

**STE-ANNE-DE-BELLEVUE 1**  
**QUÉBEC**  
**Opérateur de station opérationnelle : ECCC - SMC**

<b>Latitude :</b>	45°25'38,000" N
<b>Longitude :</b>	73°55'45,000" O
<b>Altitude :</b>	39,00 m
<b>ID climatologique :</b>	702FHL8
<b>ID de l'OMM :</b>	71377
<b>ID de TC :</b>	WVQ

HEURE HNL	Temp.	Point de rosée	Hum. rel.	Hauteur de précip.	Dir. du vent	Vit. du vent	Visibilité km	Pression à la station	Hmdx	Refr. éolien	Météo
	°C °F	°C °F	% %	mm mm	10's deg deg	km/h km/h		kPa kPa			
00:00	18,7	17,6	93	0,9	14	14		101,15			ND
01:00	18,4	17,7	95	1,6	13	14		101,12			ND
02:00	18,5	17,7	95	0,7	13	12		101,06			ND
03:00	18,4	17,9	97	5,2	13	15		101,00			ND
04:00	18,5	18,0	97	8,4	15	11		100,97			ND
05:00	18,5	18,0	97	23,2	13	12		100,93			ND
06:00	18,4	18,0	98	22,8	13	16		100,92			ND
07:00	18,5	17,8	96	0,5	12	17		100,86			ND
08:00	18,7	17,9	95	0,0	13	18		100,87			ND
09:00	19,2	18,4	95	0,6	13	15		100,85			ND
10:00	19,8	19,0	95	1,0	11	15		100,75			ND
11:00	20,2	19,6	96	0,6	12	16		100,65	27		ND
12:00	20,5	19,9	96	2,2	10	16		100,54	28		ND
13:00	20,5	20,0	97	7,5	12	13		100,42	28		ND
14:00	20,8	20,1	96	2,6	12	16		100,31	28		ND
15:00	20,4	19,6	95	1,8	10	12		100,18	28		ND
16:00	20,3	19,7	97	5,4	7	13		99,94	28		ND
17:00	20,2	19,9	98	22,6	1	21		99,51	28		ND
18:00	19,7	19,5	99	54,8	34	33		99,51			ND
19:00	20,5	20,2	98	8,8	32	22		99,52	28		ND

<b>HEURE</b> <b>HNL</b>	<b>Temp.</b> <b>°C</b> <b>°F</b>	<b>Point de</b> <b>rosée</b> <b>°C</b> <b>°F</b>	<b>Hum.</b> <b>rel.</b> <b>%</b> <b>°/h</b> <b>°F</b>	<b>Hauteur de</b> <b>précip.</b> <b>mm</b> <b>°F</b>	<b>Dir. du</b> <b>vent</b> <b>10's deg</b>	<b>Vit. du</b> <b>vent</b> <b>km/h</b> <b>°F</b>	<b>Visibilité</b> <b>km</b> <b>°F</b>	<b>Pression à la</b> <b>station</b> <b>kPa</b> <b>°F</b>	<b>Hmdx</b>	<b>Refr.</b> <b>éolian</b>	<b>Météo</b>
<b>20:00</b>	20,3	19,8	97	0,0	28	15		99,89	<b>28</b>	<b>ND</b>	
<b>21:00</b>	20,3	19,7	97	0,0	25	14		100,02	<b>28</b>	<b>ND</b>	
<b>22:00</b>	20,8	20,2	97	0,0	25	11		100,05	<b>29</b>	<b>ND</b>	
<b>23:00</b>	21,1	20,6	97	0,2	20	5		100,07	<b>29</b>	<b>ND</b>	

PRÉLIMINAIRE

5.2.2 Beaconsfield – Public Works and Heights Pool

STATION MÉTÉO **SUD**  
(TRAVAUX PUBLICS)

Heure	mm	Diff.
0:00	0	
		0
1:00	0	3
2:00	3	1
3:00	4	12
4:00	16	8
5:00	24	21
6:00	45	21
7:00	66	1
8:00	67	1
9:00	68	1
10:00	69	2
11:00	71	1
12:00	72	4
13:00	76	15
14:00	91	3
15:00	94	3
16:00	97	7
17:00	104	21
18:00	125	50
19:00	175	10
20:00	185	0
21:00	185	0
22:00	185	0
23:00	185	0
24:00	185	

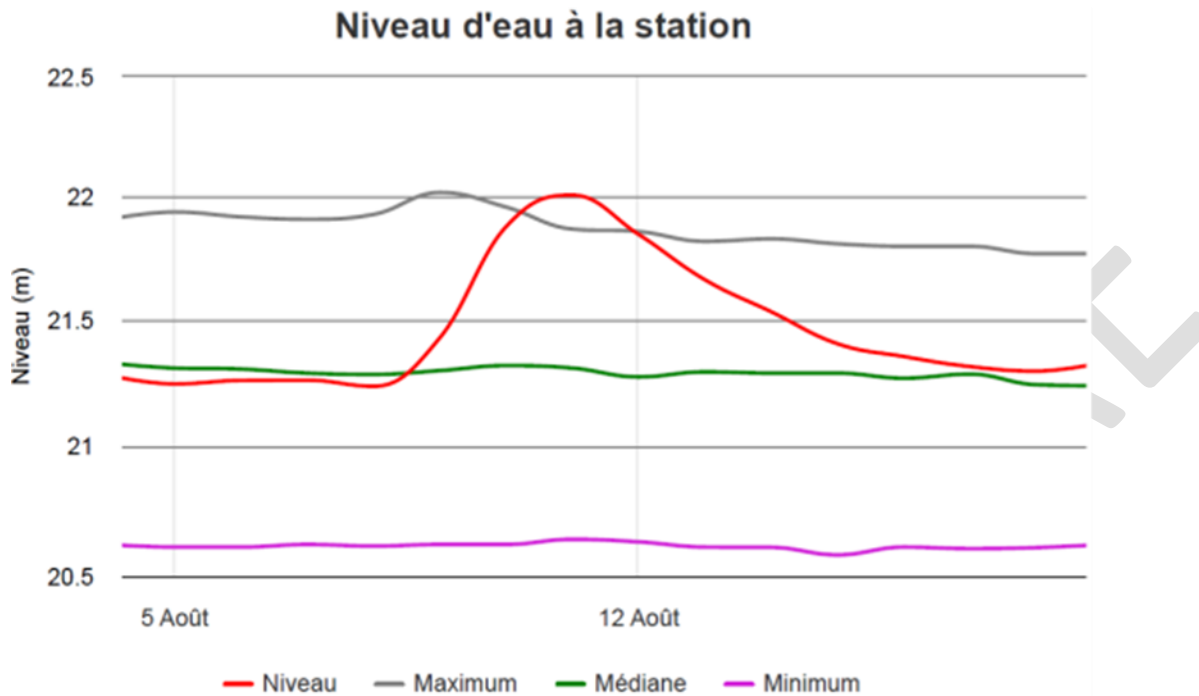
STATION MÉTÉO **NORD**  
(PISCINE HEIGHTS)

Heure	mm	Diff.
0:00	0	
		0
1:00	0	3
2:00	3	1
3:00	4	11
4:00	15	7
5:00	22	15
6:00	37	17
7:00	54	1
8:00	55	0
9:00	55	1
10:00	56	2
11:00	58	0
12:00	58	2
13:00	60	10
14:00	70	1
15:00	71	2
16:00	73	5
17:00	78	11
18:00	89	40
19:00	129	9
20:00	138	0
21:00	138	0
22:00	138	0
23:00	138	0
24:00	138	



### 5.3 Lake Saint-Louis water level (Pointe-Claire hydrometric station)

It seems that the level of Lake Saint-Louis was normal during the torrential rain of August 9.



<b>2024-08-07 00:00:00</b>	21.262	21.91	21.29	20.62
<b>2024-08-08 00:00:00</b>	21.238	21.93	21.285	20.614
<b>2024-08-09 00:00:00</b>	21.431	22.02	21.3	20.62
<b>2024-08-10 00:00:00</b>	21.88	21.96	21.32	20.62
<b>2024-08-11 00:00:00</b>	22.009	21.87	21.31	20.64
<b>2024-08-12 00:00:00</b>	21.848	21.86	21.275	20.63
<b>2024-08-13 00:00:00</b>	21.664	21.82	21.295	20.61

#### 5.4 Calls to the Fire Department and DDO dispatch

The Fire Department recorded 13 calls from Beaconsfield homes.  
DDO dispatch recorded more than 300 calls from Beaconsfield addresses.

#### 5.5 Calls to vulnerable persons

Our staff made 126 calls to the persons registered in our Vulnerable Persons List.

#### 5.6 Visits to Public Works drop-off site

363 loads of flood debris transported by private individuals were recorded.

#### 5.7 Collections

- 18 days of systematic collections took place from August 14 to September 4.
- 5 days of targeted collections took place between September 10 to 19 and are still ongoing.

Total trucks (rear loader, 6 wheels, 12 wheels)	<b>95</b> E360s: 31 trucks Ricova: 36 trucks Déneigement N.J.: 20 trucks Public Works: 8
Trips to the Raylobec site in Vaudreuil-Dorion	<b>230</b>
Overall tonnage	<b>1 233 tons<sup>1</sup></b>

These data are evolving and are subject to change.

#### 5.8 Claims

432 claims, including 27 late claims, were filed.

#### 5.9 Communications

From August 10 to September 6, 2024:

Website	13
BVI	13
bciti+	10
Facebook	7
Total	43

<sup>1</sup> For comparison: the City's annual tonnage in 2023 was 3,604 tons.

## 5.10 Works executed from 2019 to 2024

1. Travaux ponctuels de drainage	2019	2020	2021	2022	2023	2024
Octroi du contrat 627-23-GC concernant les travaux de construction pour le bassin pluvial Tower et Elm						783 175.25 \$
Octroi du contrat 656-24-GC concernant les travaux ponctuels sur le réseau d'égout pluvial						547 779.63 \$
Octroi du contrat 646-23-GC concernant la gestion des eaux pluviales du débarcadère du centre Récréatif					316 008.74 \$	88 094.44 \$
Travaux ponctuels d'égout pluvial 601755 Travaux routiers Métropole Inc. 618-23-GC Rés 2023-06-459					711 927.26 \$	
Travaux ponctuels d'égout pluvial 601250 ENTREPRISES J. PICCIONNI 596-22-GC Rés 2022-07-279					250 521.87 \$	
Travaux ponctuels sur le réseau d'égout pluvial 600497 PAVAGES D'AMOUR INC 573-21-GC Rés. 2021-05-042					36 621.25 \$	
Travaux ponctuels d'égout pluvial 601250 ENTREPRISES J. PICCIONNI 596-22-GC Rés 2020-07-279				735 107.48 \$		
Travaux ponctuels sur le réseau d'égout pluvial 600497 PAVAGES D'AMOUR INC 573-21-GC Rés. 2021-05-042			768 400.43 \$			
travaux ponctuels sur le réseau d'égout pluvial		373 886.79 \$				
grille de protection ruisseau Meadow réso 2019-03-071		94 684.03 \$				
travaux ponctuels sur le réseau d'égout pluvial	422 655.13 \$					
grille de protection ruisseau Meadow réso 2019-03-071	215 912.57 \$					
	<u>638 567.70 \$</u>	<u>468 570.82 \$</u>	<u>768 400.43 \$</u>	<u>735 107.48 \$</u>	<u>1 315 079.12 \$</u>	<u>1 419 049.32 \$</u>
						<u>5 344 774.87 \$</u>
2. Travaux de réhab de réseaux d'égouts	2019	2020	2021	2022	2023	2024
Octroi du contrat 652-24-GC concernant la réhabilitation structurale de conduite d'égout sanitaire						386 641.64 \$
Rehab structurale de conduites sanitaires					549 745.68 \$	
Réhabilitation structurale des conduites d'égout 601644 Services infraspec 568-21-GC Rés. 2021-03-072				28 046.36 \$		
Travaux ponctuels d'aqueduc et d'égout sanitaire 601417 EXCAVATION GRICON, 3286916 CANADA INC 590-22-GC Portion égout des travaux				121 147.13 \$		
Gainage structural des conduites d'égout sanitaire 601417 CWW CLEAN WATER WORKS 589-22-GC				434 563.54 \$		
Travaux ponctuels d'égout sanitaire 601417 EXCAVATION GRICON 3286916 CANADA INC 569-21-GC				93 997.88 \$		
Réhabilitation structurale de conduites d'égout sanitaire 568-21-GC rés. 2021-03-072			203 673.64 \$			
Travaux ponctuel sur le réseau d'égout sanitaire 601417 EXCAVATION GRICON 569-21-GC Rés. 2021-03-073			905 328.42 \$			
Travaux ponctuel sur le réseau d'égout sanitaire 601417 EXCAVATION GRICON 569-21-GC Rés. 2021-07-275			580 287.34 \$			
ajout de regards sanitaire à l'intersection de Claude et Sweetbriar réso 2019-10-373		70 083.03 \$				
réhabilitation égout sanitaire	100 000.00 \$					
	<u>100 000.00 \$</u>	<u>70 083.03 \$</u>	<u>1 689 289.40 \$</u>	<u>677 754.91 \$</u>	<u>549 745.68 \$</u>	<u>386 641.64 \$</u>
						<u>3 473 514.66 \$</u>

PREL

<b>3. Contrat annuel de nettoyage et inspection télévisée</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Nettoyage et l'inspection télévisée de conduites d'égout sanitaire (02-415-00-417)	71 155.63 \$	67 419.32 \$	84 655.66 \$	65 325.47 \$	84 889.99 \$	93 526.02 \$ 466 972.09 \$
<b>4. Nettoyage des conduites sous l'autoroute (Ce printemps par SANIVAC)</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
BC24-11084 : contrat gré à gré pour le nettoyage du ponceau sous Elm Intersection Tower (ruisseau)						31 936.37 \$
Nettoyage de conduites d'égouts (02-415-00-499)	40 586.95 \$	40 026.47 \$	36 745.39 \$	30 411.94 \$	34 139.26 \$	8 965.92 \$
	40 586.95 \$	40 026.47 \$	36 745.39 \$	30 411.94 \$	34 139.26 \$	40 902.29 \$ 222 812.30 \$
<b>5. Mandats en lien avec les réseaux : NHC LaSalle</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>
Octroi du mandat 23-SP-182 concernant l'élaboration d'un Plan directeur du réseau pluvial					39 217.62 \$	126 373.92 \$ 165 591.54 \$
<b>Grand total :</b>	<b>850 310.28 \$</b>	<b>646 099.64 \$</b>	<b>2 579 090.88 \$</b>	<b>1 508 599.80 \$</b>	<b>2 023 071.67 \$</b>	<b>2 066 493.18 \$ 9 673 665.45 \$</b>

PRÉLIMINAIRE

- 5.11 Maintenance program for sewer and stormwater network executed by Public Works staff  
To follow.
- 5.12 Pumping reports  
To follow.

PRÉLIMINAIRE