THE CITY OF DAWSON

AGENDA - COUNCIL MEETING #C20-21
WEDNESDAY, November 18, 2020 at 7:00 p.m.
Council Chambers, City of Dawson Office- Safe spacing rules apply

1. **CALL TO ORDER**

2. **ADOPTION OF THE AGENDA**
   a) Council Meeting Agenda #C20-21

3. **PUBLIC HEARING**
   a) Boundary Adjustment- Lots 1073-1, 1073-2, 1073-3 and 1073-4, Quad 116B/3
   b) Boundary Adjustment- Lots 14 & 15, Block 14, Government Reserve Addition

4. **DELEGATIONS & GUESTS**
   a) Introduction of new RCMP Officers

5. **ADOPTION OF THE MINUTES**
   a) Council Meeting Minutes #C20-17 of September 29, 2020
   b) Council Meeting Minutes #C20-19 of October 21, 2020
   c) Special Council Meeting Minutes #C20-20 of October 23, 2020

6. **BUSINESS ARISING FROM MINUTES**
   a) Council Meeting Minutes #C20-17 of September 29, 2020
   b) Council Meeting Minutes #C20-19 of October 21, 2020
   c) Special Council Meeting Minutes #C20-20 of October 23, 2020

7. **FINANCIAL AND BUDGET REPORTS**
   a) 2020 Accounts Payable Report #20-20 RE: Cheques #55488-55543
   b) 2020 Accounts Payable Report #20-21 RE: Cheques #55544-55592
   c) 2020 Accounts Payable Report #20-22 RE: Cheques #55593-55621 & Sept 1-30

8. **SPECIAL MEETING, COMMITTEE, AND DEPARTMENTAL REPORTS**
   a) IR- Lots 1073-1, 1073-2, 1073-3 and 1073-4, Quad 116B/3, Boundary Adjustment Application (20-096)
   b) IR- Lots 14 & 15, Block 14, Government Reserve Addition, Boundary Adjustment Application (20-098)
   c) RFD- Subdivision Application (20-085) Lots 9 & 9-1, Block C, Ladue Estate
   d) RFD- Dome Road Master Planning Project Deliverables
   e) RFD- AYC & KVA Appointments
   f) RFD- New Water Reservoirs
   g) RFD- True North Company Lease Agreement
   h) Humane Society Dawson Lease Agreement- Lot 8-2, Callison Dry Industrial Subdivision
   i) Humane Society Dawson Operating Lease Agreement- Leash Free Dog Park
   j) Farmer's Market Lease Agreement
   k) Crocus Bluff Soccer Field Operating Lease Agreement

9. **BYLAWS AND POLICIES**
   a) Zoning Bylaw Amendment No. 8 (Bylaw # 2020-08)

10. **CORRESPONDENCE**
    a) Monthly Mayor's/Chief's Policing Report- September 2020
    b) Yukon 2020 Mosquito Control Program Summary Report
    c) HAC 20-16 Minutes, HAC 20-17 Minutes, HAC 20-18 Minutes

11. **PUBLIC QUESTIONS**

12. **INCAMERA**
    a) Legal & Land related matter

13. **ADJOURNMENT**

MINUTES OF COUNCIL MEETING #C20-17 of the council of the City of Dawson held on Tuesday, September 29, 2020 at 7 p.m. City of Dawson Council Chambers

PRESENT:	Mayor	Wayne Potoroka
	Councillor	Bill Kendrick
	Councillor	Molly Shore
	Councillor	Natasha Ayoub
	Councillor	Stephen Johnson
REGRETS:		
ALSO PRESENT:	CAO	Cory Bellmore
	EA	Elizabeth Grenon

Agenda Item: Call to Order

The Chair, Mayor Potoroka called Council meeting #C20-17 to order at 7:00 p.m.

Agenda Item: Agenda

C20-17-01 Moved by Mayor Potoroka, seconded by Councillor Shore that the agenda for Council meeting #C20-17 of September 29, 2020 be adopted as amended.
Motion Carried 4-0

Add 11(a) Land related matter

Agenda Item: Special Meeting, Committee, and Departmental Reports

a) RFD- Heritage Advisory Committee Appointment

C20-17-02 Moved by Mayor Potoroka, seconded by Councillor Shore that Council appoint Patrik Pikalek and Megan Gamble to the Heritage Advisory Committee with terms ending September 30, 2022.
Motion Carried 4-0

Councillor Kendrick joined the meeting at 7:02 p.m.

b) CAO Salary

C20-17-03 Moved by Mayor Potoroka, seconded by Councillor Shore that Council advance our CAO's salary to Step 6, retroactive to the CAO's anniversary date.
Motion Carried 5-0

c) Dawson City Recreation Centre Communications Plan

C20-17-04 Moved by Mayor Potoroka, seconded by Councillor Shore that Council move to Committee of the Whole for the purposes of discussing the Dawson City Recreation Plan.
Motion Carried 5-0

C20-17-05 Moved by Mayor Potoroka, seconded by Councillor Kendrick that Committee of the Whole revert to an open session of Council to proceed with the agenda.
Motion Carried 5-0

C20-17-06 Moved by Mayor Potoroka, seconded by Councillor Shore that Council approve the Dawson City Recreation Centre Communication Plan.

C20-17-07 Moved by Mayor Potoroka, seconded by Councillor Shore that "Republic Architecture" be identified as the prime consultant on page 3. That Elders and gym and ancillary room users be listed as stakeholders throughout the document. That "Yukon Government" be identified as a standalone stakeholder and remove "Infrastructure Development Branch." And that Paul Robitaille be listed as the Recreation Manager in place of Marta Selassie.
Motion Carried 5-0

Agenda Item: In Camera

C20-17-08 Moved by Mayor Potoroka, seconded by Councillor Shore that Council move into a closed session of Committee of the Whole, as authorized by Section 213(3) of the Municipal Act, for the purposes of discussing a land related matter.
Motion Carried 5-0

C20-17-09 Moved by Councillor Shore, seconded by Mayor Potoroka that Committee of the Whole revert to an open session of Council to proceed with the agenda.
Motion Carried 5-0

C20-17-10 Moved by Councillor Shore, seconded by Councillor Kendrick that Council authorize administration to enter into a 5-year lease agreement with The Royal Canadian Legion with the term ending August 31, 2025.
Motion Carried 5-0

C20-17-11 Moved by Mayor Potoroka, seconded by Councillor Kendrick that Council postpone RFD RE: Operating Lease Agreement- Crocus Bluff Soccer Field to next Council meeting.
Motion Carried 5-0

Agenda Item: Adjourn

C20-17-12 Moved by Mayor Potoroka, seconded by Councillor Johnson that Council Meeting #C20-17 be adjourned at 8:12 p.m. with the next regular meeting of Council being October 21, 2020.
Motion Carried 5-0

THE MINUTES OF COUNCIL MEETING C20-17 WERE APPROVED BY COUNCIL RESOLUTION #C20-21-__ AT COUNCIL MEETING #C20-21 OF NOVEMBER 18, 2020.

_____ _____

Wayne Potoroka, Mayor Cory Bellmore, CAO

MINUTES OF COUNCIL MEETING #C20-19 of the Council of the City of Dawson held on Wednesday, October 21, 2020 at 7:00 p.m. City of Dawson Council Chambers

PRESENT:	Councillor	Bill Kendrick
	Councillor	Natasha Ayoub
	Councillor	Stephen Johnson
	Councillor	Molly Shore
REGRETS:	Mayor	Wayne Potoroka
ALSO PRESENT:	CAO	Cory Bellmore
	EA	Elizabeth Grenon
	A/PWM	Marc Richard

Agenda Item: Call to Order

The Chair, Deputy Mayor Shore called council meeting #C20-19 to order at 7:00 p.m.

Agenda Item: Agenda

C20-19-01 Moved by Deputy Mayor Shore, seconded by Councillor Ayoub that the agenda for Council meeting #C20-19 of October 21, 2020 be adopted as presented.
Motion Carried 4-0

Agenda Item: Public Hearing

a) Consolidation Application RE: Lots 9 & 9-1, Block C, Ladue Estate

The Chair called for submissions.
The Chair called for submissions a second time.
The Chair called for submissions a third and final time, and hearing none declared the Public Hearing closed.

Agenda Item: Delegations and Guests

a) Dawson Reservoirs

C20-19-02 Moved by Councillor Johnson, seconded by Deputy Mayor Shore that Council move to Committee of the Whole for the purposes of discussing the Dawson Reservoirs presentation.
Motion Carried 4-0

Representatives from Associated Engineers gave a presentation regarding the location and design of the new reservoirs. Two options were given for the location and design.

1. Current location of the reservoirs on Turner Street (recommended)
2. Crocus Bluff

C20-19-03 Moved by Deputy Mayor Shore, seconded by Councillor Kendrick that Committee of the Whole revert to an open session of Council to proceed with the agenda.
Motion Carried 4-0

Agenda Item: Minutes

a) Council Meeting Minutes #C20-16 of September 22, 2020

C20-19-04 Moved by Deputy Mayor Shore, seconded by Councillor Ayoub that the minutes of Council Meeting #C20-16 of September 22, 2020 be approved as presented.
Motion Carried 4-0

b) Council Meeting Minutes #C20-17 of September 29, 2020

C20-19-05 Moved by Deputy Mayor Shore, seconded by Councillor Kendrick that the minutes of Council Meeting #C20-17 of September 29, 2020 be approved as presented.

Resolution #C20-17-07- change Manger to Manager
There were questions about resolution #C20-17-04 and why it wasn't voted on. Council asked administration to investigate it and bring forward to the next Council meeting.

C20-19-06 Moved by Deputy Mayor Shore, seconded by Councillor Kendrick that the minutes of Council Meeting #C20-17 of September 29, 2020 be postponed until the next Council meeting.
Motion Carried 4-0

c) Special Council Meeting Minutes #C20-18 of October 1, 2020

C20-19-07 Moved by Deputy Mayor Shore, seconded by Councillor Johnson that the minutes of Council Meeting #C20-18 of October 1, 2020 be approved as amended.
Motion Carried 4-0

Change Councillor Kendrick's name from Kenrick to Kendrick.

Agenda Item: Business Arising from Minutes

a) Council Meeting Minutes #C20-16 of September 22, 2020

Resolution #C20-16-12: Council inquired if a date had been set for the townhall meeting.

- No date has been set yet but the Executive Assistant is working with YG Community Advisor, Kirsti De Vries to set a date and organize the meeting.

b) Council Meeting Minutes #C20-17 of September 29, 2020

Resolution #C20-17-11: Council asked why the Operating Lease Agreement-Crocus Bluff Soccer Field was not on the agenda.

- Administration is still working on it

c) Special Council Meeting Minutes #C20-18 of October 1, 2020

Council inquired on what was happening with the 5th Avenue rezoning.

- Administration is still working on it

Councillor Kendrick wanted it to be on record that meeting minutes will always state "Regrets" with regards to Council attendance at meetings.

Agenda Item: Special Meeting, Committee, and Departmental Reports

a) RFD- Recreation Board & Community Grants Committee Appointments

C20-19-08 Moved by Councillor Kendrick, seconded by Councillor Ayoub that Council appoints Megan MacDougall to the Recreation Board with a term expiring October 31, 2022 and reappoints Paul Derry to the Community Grants Committee with a term expiring October 31, 2022.
Motion Carried 4-0

b) RFD- Lot 15 (S¼), 16 and 17 (N½), Block J, Ladue Estate Consolidation Application (#20-089)

C20-19-09 Moved by Deputy Mayor Shore, seconded by Councillor Kendrick that Council grant subdivision authority to consolidate Lots 15 (S¼), 16 and 17 (N½), Block J, Ladue Estate, Consolidation Application #20-089, subject to the following conditions:

- The applicant submit a Stormwater Management Plan to the satisfaction of the CDO and Public Works Superintendent.
- The applicant submit an access plan to the satisfaction of the CDO and Public Works Superintendent.
- The applicant submits a plan of subdivision completed by a certified lands surveyor drawn in conformity with the approval.
- The applicant shall, on approval of the subdivision plan by the City of Dawson, take all necessary steps to enable the registrar under the Land Titles Act to register the plan of subdivision.
- The applicant shall not alter or move the existing historic shed located on Lot 17 (N½), Block J, Ladue without first consulting the CDO, Heritage Advisory Committee and Yukon Government.

Motion Carried 4-0

c) RFD- Rec Centre Functional Space Report and Draft Engagement Strategy

C20-19-10 Moved by Deputy Mayor Shore, seconded by Councillor Kendrick that Council move to Committee of the Whole for the purposes of discussing the Rec Centre Functional Space Report and Draft Engagement Strategy.
Motion Carried 4-0

- Ensure functional walking area is in the options
- Should the fitness centre be in Option 1?
- Functionality-which things can be put together, i.e. climbing wall in the gym, etc.
- Should the fitness centre and all rec staff be in the Option 1 planning?
- Option 1 should have a full gym
- Is a stage required in the gym? If yes, should it be built in or retractable?

C20-19-11 Moved by Deputy Mayor Shore, seconded by Councillor Ayoub that Committee of the Whole revert to an open session of Council to proceed with the agenda.
Motion Carried 4-0

C20-19-12 Moved by Deputy Mayor Shore, seconded by Councillor Ayoub that Council receives the final draft of the Dawson City Recreation Center Functional programming with comments attached and provides any final comments and receives the Dawson City Recreation Center Engagement Strategy draft and provides initial comments.
Motion Carried 4-0

C20-19-13 Moved by Councillor Ayoub, seconded by Deputy Mayor Shore that the Republic Architecture Inc.-Government of Yukon Dawson City Recreation Centre Revised Functional Space Program document include a gym in all options.
Motion Carried 4-0

C20-19-14 Moved by Deputy Mayor Shore, seconded by Councillor Ayoub that Council acknowledge receipt of the following correspondence:

a) Monthly Mayor's/Chief's Policing Report- August 2020
b) Curtis Shaw, President, Northwestel Inc.

for informational purposes.
Motion Carried 4-0

Agenda Item: In Camera

C20-19-15 Moved by Deputy Mayor Shore, seconded by Councillor Kendrick that Council move into a closed session of Committee of the Whole, as authorized by Section 213(3) of the Municipal Act, for the purposes of discussing a legal and land related matter.
Motion Carried 4-0

C20-19-16 Moved by Deputy Mayor Shore, seconded by Councillor Johnson that Committee of the Whole revert to an open session of Council to proceed with the agenda.
Motion Carried 4-0

C20-19-17 Moved by Deputy Mayor Shore, seconded by Councillor Ayoub that Council authorize administration to enter into a Staff Tenancy Agreement with Mike Masserey, as per the attached draft lease.
Motion Carried 4-0

C20-19-18 Moved by Councillor Johnson, seconded by Deputy Mayor Shore that Council Meeting #C20-19 be extended not to exceed one hour.
Motion Carried 4-0

C20-19-19 Moved by Councillor Johnson, seconded by Councillor Kendrick that Council move into a closed session of Committee of the Whole, as authorized by Section 213(3) of the Municipal Act, for the purposes of discussing a legal related matter.
Motion Carried 4-0

C20-19-20 Moved by Councillor Johnson, seconded by Deputy Mayor Shore that Committee of the Whole revert to an open session of Council to proceed with the agenda.
Motion Carried 4-0

Agenda Item: Adjourn

C20-19-21 Moved by Councillor Johnson, seconded by Deputy Mayor Shore that Council Meeting #C20-19 be adjourned at 11:00 p.m. with the next regular meeting of Council being November 18, 2020.
Motion Carried 4-0

THE MINUTES OF COUNCIL MEETING #C20-19 WERE APPROVED BY COUNCIL RESOLUTION #C20-21-__ AT COUNCIL MEETING #C20-21 OF NOVEMBER 18, 2020.

Molly Shore, Deputy Mayor

Cory Bellmore, CAO

MINUTES OF SPECIAL COUNCIL MEETING #C20-20 of the Council of the City of Dawson held on Friday, October 23, 2020 at 12:00 p.m. City of Dawson Council Chambers

PRESENT:	Mayor	Wayne Potoroka
	Councillor	Bill Kendrick
	Councillor	Natasha Ayoub
	Councillor	Stephen Johnson
	Councillor	Molly Shore
REGRETS:		
ALSO PRESENT:	CAO	Cory Bellmore
	EA	Elizabeth Grenon
	A/PWM	Marc Richard

Agenda Item: Call to Order

The Chair, Mayor Potoroka called council meeting #C20-19 to order at 12:00 p.m.

Agenda Item: Agenda

C20-20-01 Moved by Mayor Potoroka, seconded by Councillor Johnson that the agenda for Special Council meeting #C20-19 of October 23, 2020 be adopted as presented.
Motion Carried 5-0

Agenda Item: In Camera

C20-20-02 Moved by Mayor Potoroka, seconded by Councillor Ayoub that Council move into a closed session of Committee of the Whole, as authorized by Section 213(3) of the Municipal Act, for the purposes of discussing a legal related matter.
Motion Carried 5-0

Councillor Ayoub left the meeting at 12:55 p.m.

C20-20-03 Moved by Councillor Johnson, seconded by Councillor Shore that Council revert to an open session of council and proceed with the agenda.
Motion Carried 4-0

Agenda Item: Adjourn

C20-20-04 Moved by Mayor Potoroka, seconded by Councillor Johnson that Council Meeting #C20-20 be adjourned at 12:58 p.m. with the next regular meeting of Council being November 18, 2020.
Motion Carried 4-0

THE MINUTES OF SPECIAL COUNCIL MEETING #C20-20 WERE APPROVED BY COUNCIL RESOLUTION #C20-21-__ AT COUNCIL MEETING #C20-21 OF NOVEMBER 18, 2020.

Wayne Potoroka, Mayor

Cory Bellmore, CAO

The City of Dawson
Cheque Run 20-20
9/25/2020

Cheque Number	Vendor Name	Cheque Amount	Detail	Dept	Description
55488	VOID				Misprint-Print Issues
55489	VOID				Misprint-Print Issues
55490	VOID				Misprint-Print Issues
55491	VOID				Misprint-Print Issues
55492	Assante Financial Management	$720.00		ADM	CR#20-178 RRSP Prog
55493	BMO Nesbitt Burns	$850.00		ADM	CR#20-179 RRSP Prog
55494	Bonanza Market	$837.36	$295.27	ADM	OffSupp w-Covid
			$481.79	PS	Promo-SpecEvt
			$60.30	PS	Covid Isolation Henry
			$837.36		
55495	Brenntag Canada Inc.	$831.92		PW	Chemicals
55496	Bureau Veritas	$156.92		PW	Water Sampling
55497	Chief Isaac Incorporated	$3,844.59	$362.25	REC-PW	SafetyLine - August
			$175.87	ADM	Janitorial Svs -Aug 9-22
			$984.91	REC	Janitorial Svs -Aug 9-22
			$1,618.06	REC	Janitorial Svs - Aug 23-Sep 5
			$703.50	ADM	Janitorial Svs - Aug 23-Sep 5
			$3,844.59		
55498	CIBC - Whitehorse	$720.00		ADM	CR#20-181 RRSP Prog
55499	Yukon Service Supply Co.	$894.28		REC	OpSupplies
55500	Yukon Energy Corporation	$24,248.97	$3,072.19	PW	YKN NRGY SEP10 LITES
			$21,176.78	ALL	YKN NRGY SEP17
			$24,248.97		
55501	WSP Canada Inc	$1,177.31	$304.50	REC	ProFees
			$872.81	PW	Water Licensing ProFees
			$1,177.31		
55502	Unbeatable Printing	$955.50		PS-REC	Signage
55503	Thyssenkrupp Elevator	$151.69		ADM	Annual Maintenance on Elevator
55504	The Chickweeders	$4,623.67		REC	ContSvs-Horticulture
55505	Tangerine	$200.00		ADM	CR#20-186 RRSP Prog
55506	Staples #251 Whitehorse	$125.99		ADM	OffSupplies
55507	Stantec Architecture Ltd.	$2,100.00		PL&D	Ladue Study
55508	Simplii Financial	$850.00		ADM	CR#20-184 RRSP Prog
55509	Selectcom Supply Inc	$1,606.12		CABLE	OpSupplies
55510	Scotia Securities	$2,100.00		ADM	CR#20-185 RRSP Prog
55511	911 Supply	$315.99		PS	Gear for New Bylaw Officer
55512	Colliers Project Leaders Inc.	$1,470.00		ADM	CBC Restoration
55513	Advance North Mechanical	$412.37	$82.91	PW	Tire Maintenance-Truck-Quigley
			$257.01	PW	Tire Maintenance-Passenger
			$72.45	REC	Service Call Out
			$412.37		

The City of Dawson
Cheque Run 20-20
9/25/2020

Cheque Number	Vendor Name	Cheque Amount	Detail	Dept	Description
55514	AGF Investments Inc.	$950.00		ADM	CR#20-177 RRSP Prog
55515	Arctic Inland Resources Ltd.	$2,064.50	$732.95	REC	OpSupp
			$371.41	PW	Materials & OpSupplies
			$100.09	PW	OpSupplies
			$156.59	REC	OpSupplies - Weatherproofing
			$56.65	PS	OpSupplies - Weatherproofing
			$200.17	REC	Bldg R&M
			$217.31	REC	Bldg R&M -Paint & Supplies
			$229.33	REC	OpSup Arena
			$2,064.50		
55516	Cotter Enterprises	$3,664.50		CABLE	ContSvs
55517	Conservation Klondike Society	$22,250.00		PW	2nd Quarter
55518	King, Amanda	$32.54		ADM	CR#20-192 Reimburse
55519	Investors Group Financial Services Inc	$1,738.64		ADM	CR#20-182 RRSP Prog
55520	Infosat Communications	$106.03		PS	Sat Phone
55521	Grenon Enterprises Ltd.	$7,693.89	$1,399.13	PW	Stm-LiftStn VacTk
			$1,176.00	PW	Quigley-Supply fill for Soft Spot
			$4,633.13	PW	Quigley Yard Maintenance - HvyEquip
			$485.63	PW	VacTrk-DomeLftStn
			$7,693.89		
55522	Graf Enviro Services Inc.	$3,622.50		PW	ContSvs
55523	Ed Repair & Services	$23,835.00		PW	ContSvs-August
55524	Dawson City Golf Course	$1,000.00		ADM	Promo-SpecEvt
55525	Dawson Hardware Ltd	$967.40	$132.88	PW	Pmphse OpSupplies
			$361.91	REC	OpSupplies
			$57.15	ADM	OpSupplies
			$258.68	PW	OpSupplies
			$10.36	PW	Quigley - OpSupplies
			$139.82	PW	NonCapEquip
			$6.60	PS	OpSupplies
			$967.40		
55526	Dawson Firefighters Association	$12,340.00		PS	2nd Qtr+COVID training
55527	Klondike Business Solutions	$841.02	$677.33	PW	OffSupp-Toner
			$49.17	ADM	Pcopycount
			$114.52	REC	Pcopycount
			$841.02		
55528	Dawson City General Store	$165.83	$20.32	PW	OpSupplies
			$16.99	REC	OpSupplies
			$86.60	ADM	Promo-SpecEvt
			$41.92	REC	ProgSupplies
			$165.83		
55529	Davis, Kirsten	$440.93		REC	CR#20-191 Reimburse
55530	Dancing Moose Gifts	$69.30		ADM	Promo-SpecEvt
55531	Royal Bank of Canada	$200.00		ADM	CR#20-183 RRSP Prog
55532	Richard, Marc	$9,406.95		PW	Plow
55533	Public Service Alliance of Canada	$2,293.24	$1,146.91	ADM	CR#20-187 Union Dues PP18
			$1,146.33	ADM	CR#20-187 Union Dues PP19
			$2,293.24		

The City of Dawson
Cheque Run 20-20
9/25/2020

Cheque Number	Vendor Name	Cheque Amount	Detail	Dept	Description
55534	Northwestel Inc	$5,563.34		ADM	Phone
55535	Northern Superior Mechanical	$160.14		PW	Vehicle R&M
55536	North 60 Petro	$4,115.79	$3,856.07	ALL	Vehicle Fuel
			$259.72	PW	Bldg Fuel
			$4,115.79		
55537	Nordique Fire Protection	$3,606.75		PW	Safety Gear
55538	Manitoulin Transport	$211.14		ADM	Freight
55539	Klondike Sun Newspaper	$635.25	$52.50	CABLE	Advertising
			$582.75	ADM	Advertising
			$635.25		
55540	Cambrian Credit Union	$1,109.60		ADM	CR#20-180 RRSP Prog
55541	Dawson Trading Post	$52.40		PS	Tools
55542	Air North	$220.11	$110.97	PW	Freight-WtrSamples
			$109.14	PW	Freight-WtrSamples
			$220.11		
55543	Alexander Holburn Beaudin Lang LLP	$7,960.37		ADM	Legal Fees

The City of Dawson
Cheque Run 20-21
10/9/2020

Cheque Number	Vendor Name	Cheque Amount	Detail	Dept	Description
55544	Acklands -Grainger Inc.	$352.44	$43.08	PW	NonCapEquip
	Acklands -Grainger Inc.	$352.44	$255.09	PW	Safety Gear
	Acklands -Grainger Inc.	$352.44	$54.27	PW	OpSupplies
			$352.44		
55545	Advance North Mechanical	$137.50		PS	ContSvs-Tow
55546	Arctic Inland Resources Ltd.	$1,919.85	$632.69	REC	WFBldg OpSupplies
			$197.82	PW	OpSupplies
			$684.31	ADM	Bldg R&M
			$405.03	ADM	8th Ave R&M
			$1,919.85		
55547	Arctech Circle Welding Services	$7,038.15		REC	Curling rink wall repair
55548	Associated Engineering (B.C.) Ltd	$481.95		PW	ProFees
55549	BHB Mini Storage	$107.10	$105.00	ADM	ArchiveStor
			$2.10	ADM	ContSvs
			$107.10		
55550	Bureau Veritas	$3,172.10		PW	Water Sampling
55551	Canadian Freightways	$552.35		PW	Freight
55552	Chilkoot Equipment Ltd.	$262.74		REC	EquipRental-Arena
55553	CIMCO	$4,311.56		REC	ContSvs-Arena
55554	Dawson City General Store	$403.75	$65.21	ADM	OffSuppies
			$65.86	PS	Travel&Accommodations-COVID
			$249.69	REC	ProgSupplies
			$22.99	PW	SpecEvt
			$403.75		
55555	Dawson City Minor Soccer	$699.45		REC	ContSvs-Pitch Maintenance
55556	Dawson Hardware Ltd	$2,477.05	$1,289.52	REC	OpSupplies
			$953.27	PW	OpSupplies
			$106.82	PW	NonCapEquip
			$58.87	PW	SafetySupplies
			$59.33	PW	WTR - OpSupplies
			$9.24	PS	OpSupplies
			$2,477.05		

The City of Dawson
Cheque Run 20-21
10/9/2020

Cheque Number	Vendor Name	Cheque Amount	Detail	Dept	Description
55557	Dawson City Slo-pitch Association	$1,700.00		REC	RG#20-003 REC Grant
55558	Dawson City Farmers Market	$1,904.00		REC	CR#20-193 REC Covid - Safety
55559	Finning (Canada) C3176	$970.97		PW	HvyEquip R&M
55560	Gammie Trucking Ltd.	$357.00		PW	EquipRental
55561	Grenon Enterprises Ltd.	$10,809.75	$315.00	PW	HvyEquip R&M
			$273.00	PW	ContSvs Rds Sep6-12
			$194.25	PW	ContSvs-RockDel
			$131.25	PW	ContSv - C4
			$9,896.25	PW	WaterDel-Sept
			$10,809.75		
55562	John Brooks Company Ltd	$930.95	$676.78	PW	ContSvs - System R&M
			$254.17	PW	Freight
			$930.95		
55563	Klondike Business Solutions	$153.66	$53.46	ADM	Pcopy count
			$100.20	PW	Pcopy count
			$153.66		
55564	The Literary Society of the Klondike	$2,740.50	$582.75	ADM	Advertising-Full Back Page
			$52.50	CABLE	Advertising-PrintChg
			$52.50	CABLE	Advertising-PrintChg
			$582.75	ADM	Advertising-Full Back Page
			$546.00	CABLE	Artwork-TV Listings-TVMedia-Saskatoon
			$546.00	CABLE	Artwork-TV Listings-TVMedia-Saskatoon
			$168.00	CABLE	Artwork-TV Listings-TVMedia-Saskatoon
			$210.00	CABLE	Artwork-TV Listings-TVMedia-Saskatoon
			$2,740.50		
55565	Klondike Metallic	$19.83		REC	OpSupplies (vendor formally NIS)
55566	Manitoulin Transport	$725.61	$691.67	PW	Freight
			$33.94	ADM	Freight
			$725.61		
55567	Maximillian's Gold Rush Eporium	$6.30		PW	SpecEvt
55568	Morrison Hershield	$53,810.97		PW	ProFees - Quigley Sampling
55569	Nordique Fire Protection	$2,382.40	$1,108.75	PW	FireExt- Ann Inspection
			$1,200.15	REC	FireExt- Ann Inspection
			$73.50	ADM	FireExt- Ann Inspection
			$2,382.40		

The City of Dawson
Cheque Run 20-21
10/9/2020

Cheque Number	Vendor Name	Cheque Amount	Detail	Dept	Description
55570	North 60 Petro	$4,177.40	$1,322.21	ALL	Vehicle Fuel
			$142.29	ADM	8th Ave - Stove Fuel
			$260.13	PS-ADM	City Hall - Stove Fuel
			$401.37	PW	Quigley - Stove Fuel
			$99.06	REC	WaterFront Bldg - Stove Fuel
			$1,952.34	REC	REC Centre - Stove Fuel
			$4,177.40		
55571	Northlands Water & Sewer Supplies Ltd.	$1,389.28		PW	Pumphouse R&M
55572	Pacific Northwest Moving	$84.46		PW	Freight
55573	Pacific Tier Solutions Inc.- Book King Sol.	$1,410.55		REC	ProgSupport
55574	Raven's Nook	$298.20		REC	Safety Gear
55575	Robitaille, Paul	$50.00		REC	CR#20-199 Reimbursement-RPAY Membership
55576	Selectcom Supply Inc	$1,188.28		CABLE	OpSupplies
55577	Spectrum Security - Sound Ltd.	$220.47		PW	ProFees
55578	St. Mary's Catholic Church	$1,700.00		REC	CG#20-011 - Replacing Brdwalks!!!
55579	Sunnydale Landscaping	$1,911.00		PW	ContSvs-Boardwalks
55580	Jason Biasetti	$1,554.00		REC	Arena - R&M
55581	Blanchard, Norma	$100.00		REC	CR#20-195 REC Fob&Mem Refund
55582	McLeod, George	$40.00		REC	CR#20-197 REC FobRtn
55583	Pankalla, Dr. Adam	$150.00		PS	ProFees
55584	Tennis Yukon	$270.00		REC	CR#20-194 REC Programs
55585	Total North Communications Ltd	$693.00	$582.75	ADM	ContSvs
			$110.25	PW	ContSvs
			$693.00		
55586	Trinus Technologies Inc.	$1,660.68		ADM	ContSvs - IT
55587	Triple J Hotel	$2,916.38		PS	COVID Accommodations-Henry
55588	Tr'ondδk Hwδch'in	$2,523.50		REC	Refund-Cancelled Event
55589	WSP Canada Inc	$689.06		PW	ProFees - Water Licensing
55590	Yukon University	$4,254.25	$2,504.25	PW	Training
			$375.00	REC	Training
			$125.00	REC	Training
			$1,250.00	PS	Training
			$4,254.25		
55591	Air North	$557.78		PW	Freight
55592	Northern Superior Mechanical	$409.00	$23.01	PW	OpSupplies
			$35.66	PW	NonCapEquip
			$18.38	PW	SafetySupplies
			$19.55	REC	OpSupplies
			$312.40	PW	OpSupplies
			$409.00		

The City of Dawson
Cheque Run 20-22
10/23/2020

Cheque Number	Vendor Name	Cheque Amount	Detail	Dept	Description
55593	911 Supply	$113.38		PS	Specialty Clothing-Bylaw
55594	Arctic Inland Resources Ltd.	$291.50	$184.63	PW	Materials
			$106.87	PW	OpSupp
			$291.50		
55595	Arctech Circle Welding Services	$2,026.63	$1,659.13	REC	Cont Svs
			$367.50	PW	HvyEq R&M
			$2,026.63		
55596	Bonanza Market	$157.92		REC	OpSupp
55597	Bramham Bros Ltd.	$1,971.29		PW	PW R&M-Pump
55598	Chief Isaac Incorporated	$131.25		PW-REC	Safety Line
55599	Conservation Klondike Society	$32,250.00		PW	Diverstion Credits
55600	Conuma Cable Systems Ltd	$3,095.40		CABLE	OpSupp
55601	Cotter Enterprises	$3,932.25		CABLE	Cont Svs
55602	Dawson Chamber of Commerce	$250.00		REC	Promo
55603	Dawson City General Store	$108.72	$35.98	REC	OpSupp
			$35.78	PW	SpecEvt
			$8.18	PW	OpSupp
			$28.78	PS	OpSupp-Bylaw
			$108.72		
55604	Dawson Hardware Ltd	$883.19	$131.38	PW	OpSupp
			$21.72	PW	SafetyGear
			$626.58	REC	OpSupp
			$11.32	PW	Pumphse OpSupp
			$11.31	PL&D	OpSupp
			$80.88	PL&D	SpecEvt - Covid
			$883.19		
55605	Ed Repair & Services	$23,910.64	$685.65	PW	VehR&M
			$649.99	PW	VehR&M
			$22,575.00	PW	ContSvs-Garbage PU
			$23,910.64		

The City of Dawson
Cheque Run 20-22
10/23/2020

Cheque Number	Vendor Name	Cheque Amount	Detail	Dept	Description
55606	Finning (Canada) C3176	$289.47		PW	HvyEqu R&M
55607	Giesbrecht, Dr. Sunshine	$150.00		PS	ProFees-Medical
55608	Greenwood Engineering Solutions	$9,975.00		PW	ProFees
55609	Grenon Enterprises Ltd.	$2,525.25		PW	Cont Svs
55610	The Literary Society of the Klondike	$635.25	$52.50	CABLE	Advertising
			$582.75	ADM	Advertising
			$635.25		
55611	Klondike Metallic	$434.62	$65.74	PW	SafetySupp
			$56.96	PW	OpSupp
			$139.81	PW	Phse OpSupp
			$106.05	REC	OpSupp
			$66.06	PS	SafetySupp
			$434.62		
55612	Mackenzie Petroleum Ltd	$60.00		PS	Promo-SpecEvt
55613	Maximillian's Gold Rush Eporium	$37.57		REC	Promo-SpecEvt
55614	Mayes Enterprises	$2,451.75		ADM	Bldg R&M
55615	Northern Superior Mechanical	$621.34	$280.18	REC	OpSupp
			$60.87	PW	VehR&M
			$280.29	PW	OpSupp
			$621.34		
55616	North of Ordinary Media	$5,439.00		ADM	Advertising
55617	Pacific Northwest Moving	$793.43		PW	Freight
55618	Raven's Nook	$1,370.25		PW	SafetyGear - 4 Crew Members
55619	Robitaille, Paul	$189.39		REC	Reimbursement supplies
55620	WSP Canada Inc	$556.50		REC	ProFees
55621	Yukon Energy Corporation	$38,409.22	$3,072.19	PW	Street Lights
			$35,337.03	ALL	Main Electrical Bill
			$38,409.22		

The City of Dawson
Cheque Run 20-22
10/23/2020

Cheque Number	Vendor Name	Cheque Amount	Detail	Dept	Description
Bank Withdrawals					
Sept 01	Meridian Lease	$1,973.11		PS	Breathing apparatus
Sept 01	Roynat Leases	$631.10		various	Photocopier leases
Sept 02	Great West Life	$12,878.28		various	July employee benefits
Sept 04	Payroll	$97,631.64		ALL	PP#18
Sept 17	Visa	$3,551.10		various	Bell Mobility/postage/course fees
Sept 21	CCSA	$9,732.89		CABLE	monthly cable charge
Sept 18	Payroll	$116,852.25		ALL	PP#19
Sept 28	CIBC Retirement	$1,900.00		various	RRSP for PP 18 and 19
Sept 30	Bank charges	$291.30		ADM	payroll/bank/Visa machine

Report to Council

☐ For Council Decision ☐ For Council Direction ☒ For Council Information

☐ In Camera

AGENDA ITEM:	Lots 1073-1, 1073-2, 1073-3 and 1073-4 Quad 116B/3 Boundary Adjustment Application (20-096)	
PREPARED BY:	Charlotte Luscombe, Planning Assistant	**ATTACHMENTS:** 1. Application & Supporting Documentation
DATE:	November 5, 2020	
RELEVANT BYLAWS / POLICY / LEGISLATION: Municipal Act Subdivision Bylaw Official Community Plan Zoning Bylaw		

RECOMMENDATION

THAT Council accept this report as information in regard to the public hearing.

ISSUE / PURPOSE

Subdivision Application 20-096 was received August 25th 2020; the applicants are requesting to adjust the boundaries of Lots 1073-1, 1073-2, 1073-3 and 1073-4 Quad 116B/3. The application was completed October 16th, 2020 and as required by the Municipal Act, a decision must be made by January 14th, 2020. The public hearing is scheduled for November 18th, 2020.

ANALYSIS / DISCUSSION

Comments

Department heads were asked to comment on this application for purposes of assessing operational requirements such as access, lot grading, and slope stability, and at the time of writing this report, no concerns have been raised.

The application was also circulated to every property owner within a 1km radius of this property, inviting comments and questions. No comments in opposition to this application were received at the time of writing this report. One adjacent property owner enquired about their continued access via 99-15 but Administration confirmed that no change to this road is being proposed.

The public hearing is scheduled for November 18th, 2020 at Council.

Subdivision Bylaw

Subdivision Control Bylaw S3.01 states that every subdivision of land must be made in accordance with the Municipal Act, the Official Community Plan, the Zoning Bylaw, and the Subdivision Control Bylaw. The Analysis/Discussion section of this report is intended to discuss the proposal's conformity with the provisions outlined in the relevant legislation, policies, and plans.

Municipal Act

The Municipal Act S. 314 details the requirements for any proposed plan of subdivision to have direct access to the highway to the satisfaction of the approving authority. The applicant's proposal does not alter

the access to Lots 1073-1 and Lots 1073-2 (City owned Road 99-15 will remain unchanged). Lots 1073-3 and 1073-4 will continued to be accessed as they are now but the road will be shortened (it is not City owned).

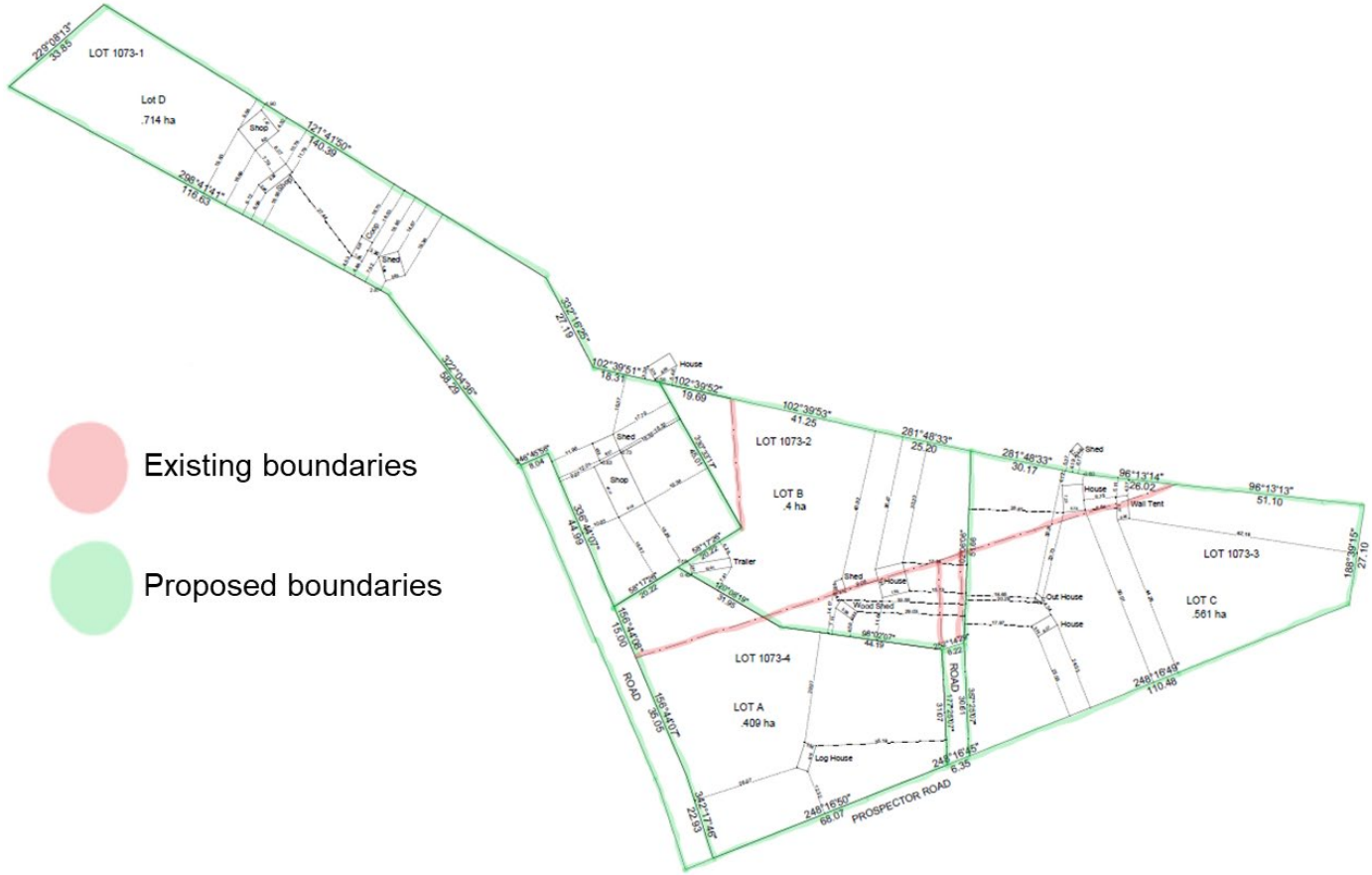

Figure 1: Existing and Proposed lot configuration

Figure 2: Context map showing location of current lots under consideration.

Official Community Plan

The existing titled property is currently designated as CR – Country Residential. Uses associated with this designation primarily include low-density residential uses that do not rely on being connected to municipal water and sewer. Therefore, the subdivided lot would be required to retain the same designation. Any new use or development on the proposed lots would be required to conform to the OCP designation.

Zoning Bylaw

The subject property is currently designated as Country Residential (R3). The Zoning Bylaw is intended to implement the goals of the OCP. Therefore, the R3 designation is intended to permit low-density single detached housing in a rural setting.

Heritage Bylaw

As the property is located in the Bowl Character Area, a Heritage Assessment and review by the Heritage Advisory Committee is not required.

APPROVAL		
NAME:	Stephanie Pawluk, CDO	**SIGNATURE:**
DATE:	November 9, 2020	
NAME:	Cory Bellmore, CAO	**SIGNATURE:**
DATE:	November 12, 2020	

THE CITY OF DAWSON
Box 308 Dawson City, YT Y0B 1G0
PH: 867-993-7400 FAX: 867-993-7434
www.cityofdawson.ca

NOTICE OF PUBLIC HEARING: SUBDIVISION APPLICATION

Boundary Adjustment: #20-096

Subject Property: Lots 1073-1, 1073-2, 1073-3 and 1073-4 plus Road Quad 116 B/3
Date: November 18th, 2020
Time: 7:00pm
Location: Council Chambers, City Hall
Listen to Public Hearing: Radio CFYT 106.9 FM or cable channel #11
As per the *Municipal Act*, S. 319.4, upon receiving an application for subdivision, Council must give public notice of the application. Therefore, the City of Dawson is now requesting input from the public regarding the Boundary Adjustments for Lots 1073-1, 1073-2, 1073-3 and 1073-4 plus Road Quad 116 B/3.

For more information, to view the application details, or to provide your input prior to the public meeting, please contact the Community Development and Planning Officer or Planning Assistant using the following contact information

Stephanie Pawluk
Community Development & Planning Officer
Box 308, Dawson City YT Y0B1G0
cdo@cityofdawson.ca
867-993-7400 ext. 414

Charlotte Luscombe
Planning Assistant
Box 308, Dawson City YT Y0B1G0
planningassist@cityofdawson.ca
867-993-7400 ext. 438

THE CITY OF DAWSON
Box 308 Dawson City, YT Y0B 1G0
PH: 867-993-7400 FAX: 867-993-7434
www.cityofdawson.ca

OFFICE USE ONLY	
APPLICATION FEE:	105 + 9ST
DATE PAID:	25/8/20
RECEIPT #:	36329
PERMIT #:	20-096

SUBDIVISION APPLICATION

PLEASE READ THE ATTACHED INSTRUCTIONS, GUIDELINES AND SUBMISSION REQUIREMENTS PRIOR TO COMPLETING FORM.

PROPOSED DEVELOPMENT

☑ Subdivision ☐ Consolidation ☑ Boundary Adjustment

CIVIC ADDRESS: _____ **VALUE OF DEVELOPMENT:** _____

LEGAL DESCRIPTION: LOT(S) 1073-1, 1073-2 **BLOCK** 1073-3 **ESTATE** 1073-4 & Road, Quad 116 **PLAN#** B/3 2015-0061

PROPOSED DEVELOPMENT: Please provide a brief description of the proposed development, including the number of proposed lots and their sizes.

All 4 lots and Road from Plan 2015-0061 to have boundaries adjusted.

APPLICANT INFORMATION

APPLICANT NAME(S): Michel Vincent, Simon Vincent, Kim Bouzane,

MAILING ADDRESS: Box 548, Dawson City, YT, Y0B 1G0 **POSTAL CODE:** _____

EMAIL: _____ **PHONE #:** _____

OWNER INFORMATION (IF DIFFERENT FROM APPLICANT)

OWNER NAME(S): _____

MAILING ADDRESS: _____ **POSTAL CODE:** _____

EMAIL: _____ **PHONE #:** _____

It is the responsibility of the applicant to ensure that all plans conform to the provisions of the City of Dawson Zoning Bylaw and applicable territorial and federal legislation.

FURTHER INFORMATION

ACCESS: Does the proposed development require additional access to any public road or highway? If yes, please name the road and describe the location of the proposed access.

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www.cityofdawson.ca

OFFICE USE ONLY	
PERMIT #:	20-096

WATER: Is the land situated within 0.5 miles of a river, stream, watercourse, lake or other permanent body of water, or a canal or drainage ditch? If yes, please name the body of water and describe the feature.

Klondike River

TOPOGRAPHY: Describe the nature of the topography of the land (flat, rolling, steep, mixed), the nature of the vegetation and water on the land (brush, shrubs, tree stands, woodlots, etc, & sloughs, creeks, etc.), and the kind of soil on the land (sandy, loam, clay, etc.).

Tailings, some brush

EXISTING BUILDINGS: Describe any buildings, historical or otherwise, and any structures on the land and whether they are to be demolished or moved:

As shown on plan

DECLARATION

- I/WE hereby make application for a Development Permit under the provisions of the City of Dawson Zoning Bylaw No. 2018-19 and in accordance with the plans and supporting information submitted and attached which form part of this application.
- I/ WE have reviewed all of the information supplied to the City of Dawson with respect to an application for a Development Permit and it is true and accurate to the best of my/our knowledge and belief.
- I/WE understand that the City of Dawson will rely on this information in its evaluation of my/our application for a Development Permit and that any decision made by the City of Dawson on inaccurate information may be rescinded at any time.
- I/WE hereby give my/our consent to allow Council or a person appointed by its right to enter the above land and/or building(s) with respect to this application only.

I/WE HAVE CAREFULLY READ THIS DECLARATION BEFORE SIGNING IT.

Aug. 23, 2020
DATE SIGNED

SIGNATURE OF APPLICANT(S)

DATE SIGNED

SIGNATURE OF OWNER(S)

1073-1/A

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Zoning Assessment

File Number: 20-096 **Date:** 9th November 2020
Zone: R3- Country Residential **Assessment completed by:** C. Luscombe

1. Application Type

☐	OCP Amendment	☐	Variance
☐	Zoning Amendment	☐	Development
☒	Subdivision	☐	Other:

2. Official Community Plan Designation: Country Residential
Does the proposed development meet OCP requirements? __ yes __no
If no, OCP amendment is required.

3. Zoning By-Law Designation: R3-Country Residential
Does the proposed development meet ZBL requirements? __ yes __no
If no, ZBL amendment is required.

4. Heritage Management Plan Designation:
Klondike Valley
Does the proposed development require HAC review? __ yes __no ✓
If yes, fill out Heritage Assessment form.

5. Zone Specific Regulations:

Provision	Permitted	Proposed	Compliant	Variance Required
Permitted Use			Y / N	
Minimum Parcel Size	0.4ha | 1acre	0.714ha	(Y) / N	
Maximum Parcel Size	1.62ha | 4acres	0.714ha	(Y) / N	
Minimum Parcel Width	/	/	Y / N	
Minimum Setback (Front)	4.57m / 15ft		Y / N	
Minimum Setback (Side)	4.57m / 15ft		Y / N	
Minimum Setback (Side)	4.57m / 15ft		Y / N	
Minimum Setback (Rear)	4.57m / 15ft		Y / N	

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Provision	Permitted	Proposed	Compliant	Variance Required
Minimum Floor Area	83.61m²/900ft²		Y / N	
Maximum Height (Principal)	10.67m/35ft		Y / N	
Maximum Height (Accessory)	6.10m/20ft		Y / N	
Maximum Parcel Coverage	—	—	Y / N	
Maximum Floor Area Ratio (FAR)	—	—	Y / N	
Minimum Off-Street Parking Spaces			Y / N	
Minimum Setback (Principal and Accessory)	4.57m/15ft.		Y / N	
Zone Specific:			Y / N	
Zone Specific:			Y / N	

6. Notes:

- 20% parcel coverage for accessory ~~suites~~ buildings
- Accessory buildings may not be used as a sleeping unit
-

1073-2/B

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Zoning Assessment

File Number: 20-096 **Date:** 9th November 2020
Zone: R3-Country Res **Assessment completed by:** C. Luscombe

1. Application Type

☐	OCP Amendment	☐	Variance
☐	Zoning Amendment	☐	Development
☒	Subdivision	☐	Other:

2. Official Community Plan Designation: Country Residential
Does the proposed development meet OCP requirements? __ yes __no
If no, OCP amendment is required.

3. Zoning By-Law Designation: R3 - Country Residential
Does the proposed development meet ZBL requirements? __ yes __no
If no, ZBL amendment is required.

4. Heritage Management Plan Designation:
Klondike Valley
Does the proposed development require HAC review? __ yes ✓ no __
If yes, fill out Heritage Assessment form.

5. Zone Specific Regulations:

Provision	Permitted	Proposed	Compliant	Variance Required
Permitted Use			Y / N	
Minimum Parcel Size	0.4ha/1acre	0.4ha	(Y) / N	
Maximum Parcel Size			Y / N	
Minimum Parcel Width			Y / N	
Minimum Setback (Front)			Y / N	
Minimum Setback (Side)			Y / N	
Minimum Setback (Side)			Y / N	
Minimum Setback (Rear)			Y / N	

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Provision	Permitted	Proposed	Compliant	Variance Required
Minimum Floor Area			Y / N	
Maximum Height (Principal)			Y / N	
Maximum Height (Accessory)			Y / N	
Maximum Parcel Coverage			Y / N	
Maximum Floor Area Ratio (FAR)			Y / N	
Minimum Off-Street Parking Spaces			Y / N	
Minimum Setback (Principal and Accessory)			Y / N	
Zone Specific:			Y / N	
Zone Specific:			Y / N	

6. Notes:

1073-3/C

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Zoning Assessment

File Number: 20-096 **Date:** 9th November 2020
Zone: R3 - Country Residential **Assessment completed by:** C. Luscombe

1. Application Type

☐	OCP Amendment	☐	Variance
☐	Zoning Amendment	☐	Development
☒	Subdivision	☐	Other:

2. Official Community Plan Designation: CR - Country Residential
Does the proposed development meet OCP requirements? ✓ yes __no
If no, OCP amendment is required.

3. Zoning By-Law Designation: R3 - Country Residential
Does the proposed development meet ZBL requirements? __ yes __no
If no, ZBL amendment is required.

4. Heritage Management Plan Designation:
Klondike Valley
Does the proposed development require HAC review? __ yes __no ✓
If yes, fill out Heritage Assessment form.

5. Zone Specific Regulations:

Provision	Permitted	Proposed	Compliant	Variance Required
Permitted Use			Y / N	
Minimum Parcel Size	0.4ha / 1acre	0.561 ha	(Y) / N	
Maximum Parcel Size			Y / N	
Minimum Parcel Width			Y / N	
Minimum Setback (Front)			Y / N	
Minimum Setback (Side)			Y / N	
Minimum Setback (Side)			Y / N	
Minimum Setback (Rear)			Y / N	

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Provision	Permitted	Proposed	Compliant	Variance Required
Minimum Floor Area			Y / N	
Maximum Height (Principal)			Y / N	
Maximum Height (Accessory)			Y / N	
Maximum Parcel Coverage			Y / N	
Maximum Floor Area Ratio (FAR)			Y / N	
Minimum Off-Street Parking Spaces			Y / N	
Minimum Setback (Principal and Accessory)			Y / N	
Zone Specific:			Y / N	
Zone Specific:			Y / N	

6. Notes:

1073-4/D

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Zoning Assessment

File Number: 20-096 **Date:** 9th November 2020
Zone: R3 - Country Residential **Assessment completed by:** C. Luscombe

1. Application Type

☐	OCP Amendment	☐	Variance
☐	Zoning Amendment	☐	Development
☑	Subdivision	☐	Other:

2. Official Community Plan Designation: CR - Country Residential
Does the proposed development meet OCP requirements? ✓ yes __no
If no, OCP amendment is required.

3. Zoning By-Law Designation: R3 - Country Residential
Does the proposed development meet ZBL requirements? __ yes __no
If no, ZBL amendment is required.

4. Heritage Management Plan Designation:
Klondike Valley
Does the proposed development require HAC review? __ yes __no ✓
If yes, fill out Heritage Assessment form.

5. Zone Specific Regulations:

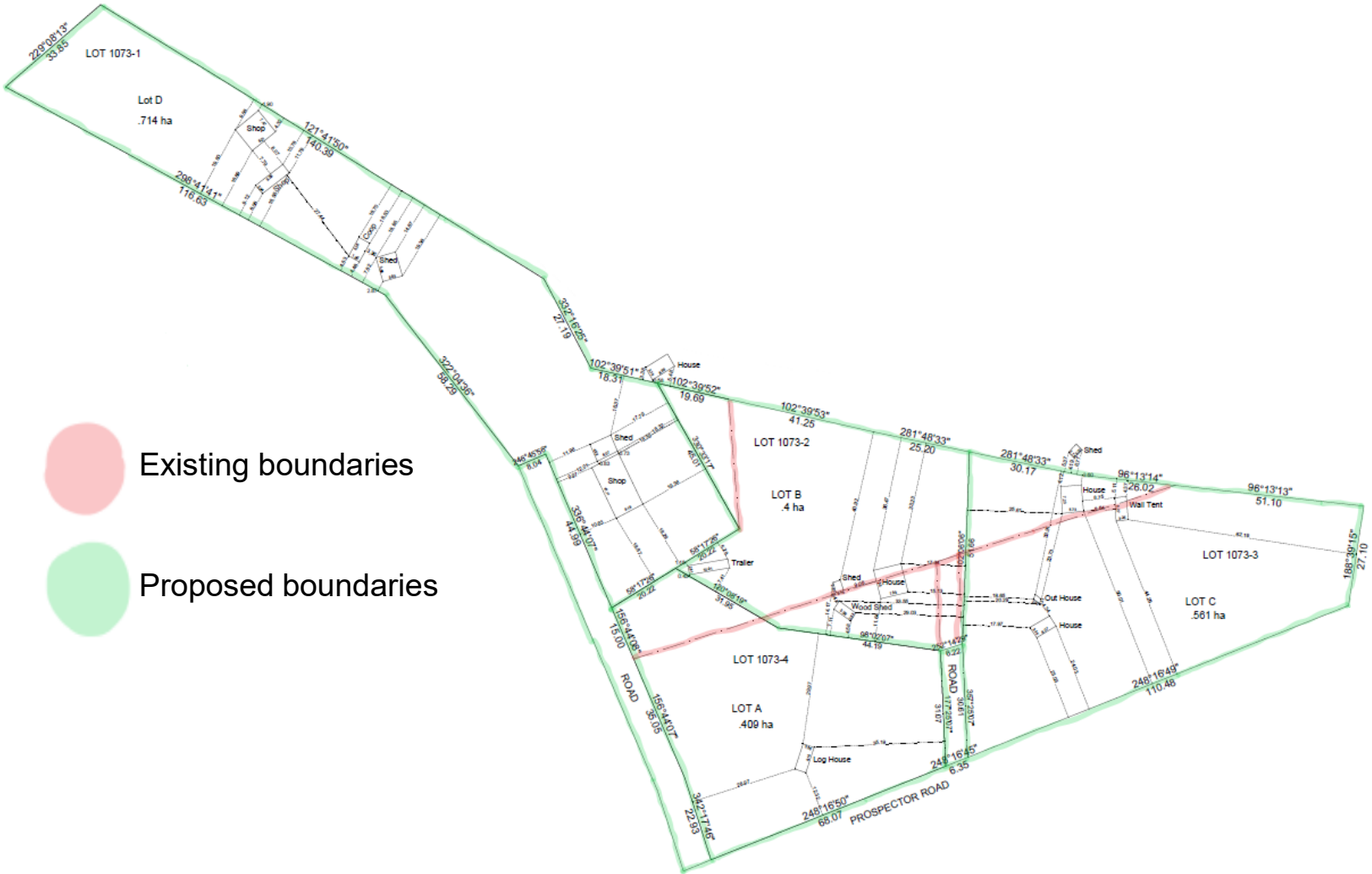
Provision	Permitted	Proposed	Compliant	Variance Required
Permitted Use			Y / N	
Minimum Parcel Size	0.4 ha / 1 acre	0.409 ha	(Y) / N	
Maximum Parcel Size			Y / N	
Minimum Parcel Width			Y / N	
Minimum Setback (Front)			Y / N	
Minimum Setback (Side)			Y / N	
Minimum Setback (Side)			Y / N	
Minimum Setback (Rear)			Y / N	

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Provision	Permitted	Proposed	Compliant	Variance Required
Minimum Floor Area			Y / N	
Maximum Height (Principal)			Y / N	
Maximum Height (Accessory)			Y / N	
Maximum Parcel Coverage			Y / N	
Maximum Floor Area Ratio (FAR)			Y / N	
Minimum Off-Street Parking Spaces			Y / N	
Minimum Setback (Principal and Accessory)			Y / N	
Zone Specific:			Y / N	
Zone Specific:			Y / N	

6. Notes:


Existing boundaries
Proposed boundaries
LOT 1073-1
Lot D
.714 ha
Shop
Shed
Coop
LOT 1073-2
LOT B
.4 ha
House
Shed
Shop
Trailer
LOT 1073-3
LOT C
.561 ha
Wall Tent
Out House
Wood Shed
LOT 1073-4
LOT A
.409 ha
Log House
ROAD
PROSPECTOR ROAD
229°08'13"
35.85
121°41'50"
140.39
296°41'41"
116.63
322°16'26"
27.19
322°04'36"
58.29
102°39'51"
18.31
102°39'52"
19.69
102°39'53"
41.25
281°48'33"
25.20
281°48'33"
30.17
96°13'14"
26.02
96°13'13"
51.10
188°39'15"
27.10
335°44'07"
44.39
156°44'08"
15.00
156°44'07"
35.05
98°12'07"
44.19
248°16'49"
110.48
248°16'45"
6.35
342°17'45"
22.93
248°16'50"
68.07

Report to Council

☐ For Council Decision ☐ For Council Direction ☒ For Council Information

☐ In Camera

SUBJECT:	Lots 14 & 15, Block 14, Government Reserve Addition Boundary Adjustment (#20-098)	
PREPARED BY:	Charlotte Luscombe, Planning Assistant	**ATTACHMENTS:** 1. Application & Supporting Documentation
DATE:	October 23, 2020	
RELEVANT BYLAWS / POLICY / LEGISLATION: Municipal Act Subdivision Bylaw Official Community Plan Zoning Bylaw Heritage Bylaw		

RECOMMENDATION

THAT Council accept this report as information in regard to the public hearing.

ISSUE

The applicant is requesting to adjust the boundary between Lots 14 and 15 because the duplex on Lot 14 is currently encroaching on Lot 15. The adjustment will bring both properties into compliance with the City of Dawson Zoning Bylaw 2018-19 and will allow Lot 15 to be redeveloped, it is currently vacant. The new area for Lot 14 will be 548m^2 and for Lot 15 685m^2; the new lot sizes are compliant with the Zoning Bylaw. The application was received in full on September 28, 2020, and as required by the Municipal Act, a decision must be made by December 27, 2020. The public hearing is scheduled for November 18, 2020. Figure 1 and Figure 2 show the existing and proposed lot configurations.

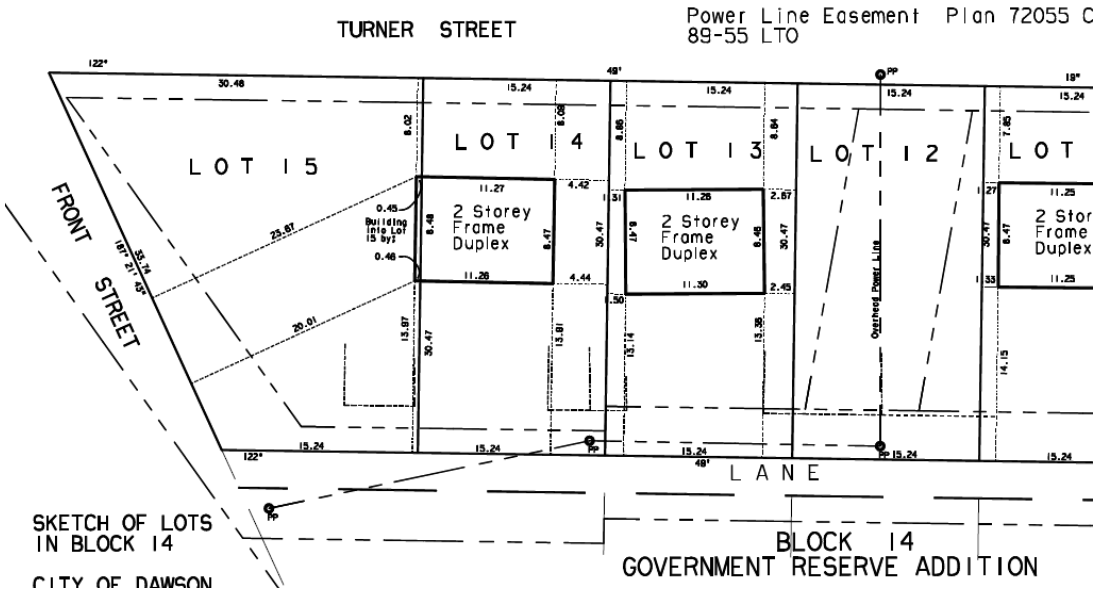


Figure 1 Existing Configuration of Lots 14 and 15

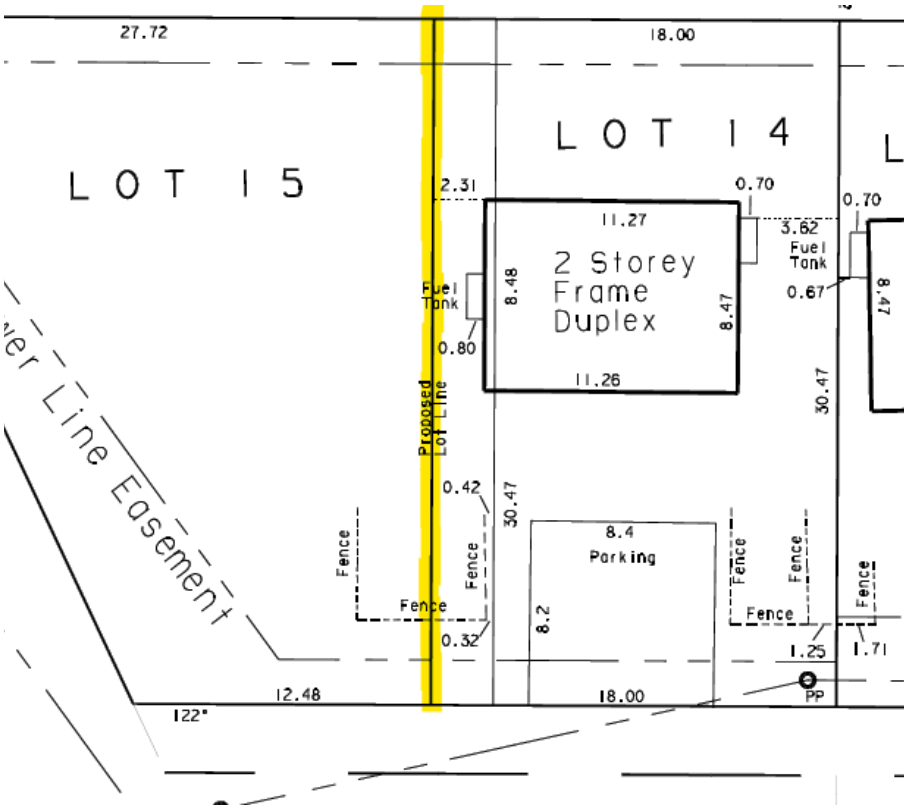


Figure 2 Proposed Configuration for Lots 14 and 15

ANALYSIS / DISCUSSION / ALIGNMENT TO OCP & STRATEGIC PRIORITIES

Comments

Department heads have been asked to comment on this application for the purposes of assessing operational requirements such as access, lot grading, and slope stability, and at the time of writing this report, some comments have yet been received. Public Works are satisfied with the proposed stormwater management and with the application overall. Bylaw and Protective Services had no comments.

The application was also circulated to every property owner within a 100m radius of this property, inviting comments and questions. No comments in opposition to this application were received at the time of writing this report. The public hearing is scheduled for 18 November 2020 at the Committee of the Whole.

Subdivision Bylaw

Subdivision Control Bylaw s. 3.01 states that every subdivision of land must be made in accordance with the Municipal Act, the Official Community Plan, the Zoning Bylaw, and the Subdivision Control Bylaw. The Analysis/Discussion section of this report is intended to discuss the proposal's conformity with the provisions outlined in the relevant legislation, policies, and plans.

Municipal Act

The Municipal Act s. 314 details the requirements for any proposed plan of subdivision to have direct access to the highway to the satisfaction of the approving authority. The applicant's proposal shows existing driveway access for Lot 14 via the rear lane and will not require any new access. Access points are circled in red on Figure 1. The development of Lot 15 has not been finalized but like the other lots in Block 14, access will be required via the rear lane (ZBL 9.4.3) and will need to be designed to the satisfaction of the City (ZBL S5.2.1). Current access is shown in Figure 3.

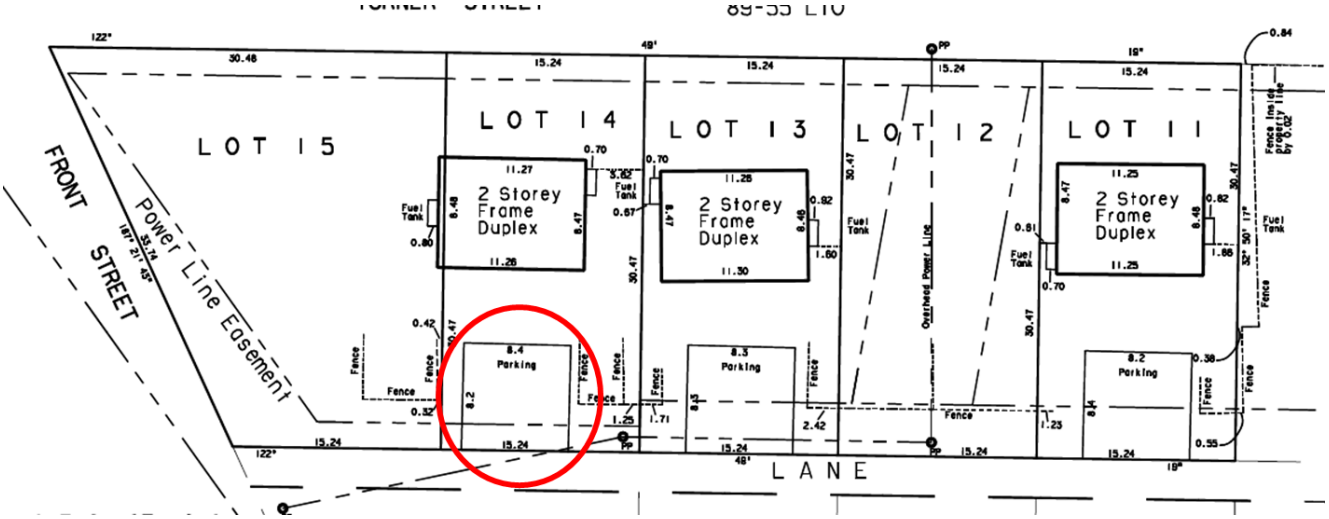


Figure 3 Current access via rear laneway

Official Community Plan

The land use designation for the subject property is Downtown Core, which is intended to support a broad range of uses, including low- density residential. S. 6.2 states that "while the area will predominately consist of commercial and institutional uses, high- and low- density residential uses are also acceptable". The current use and structure is not contradictory to the OCP. Any new use or development on the proposed lot would be required to conform to the OCP designation. Further, it will support the long-term OCP goal to reduce encroachment issues by removing an existing encroachment.

Zoning Bylaw

The lots under consideration are zoned as R1: Single Detached and Duplex Residential in the 2018 ZBL. The boundary adjustment will remove the current encroachment of the Lot 14 duplex and therefore will allow new residential development on Lot 15 as both lots will be in compliance and able to meet all the required setbacks.

Heritage Bylaw

The property is located in the Downtown Transitional Character Area, which is comprised of a mix of institutional, commercial, and residential buildings. No new development is currently being proposed as part of this application but when Lot 15 is developed, all proposals will be subject to Heritage Advisory Committee review.

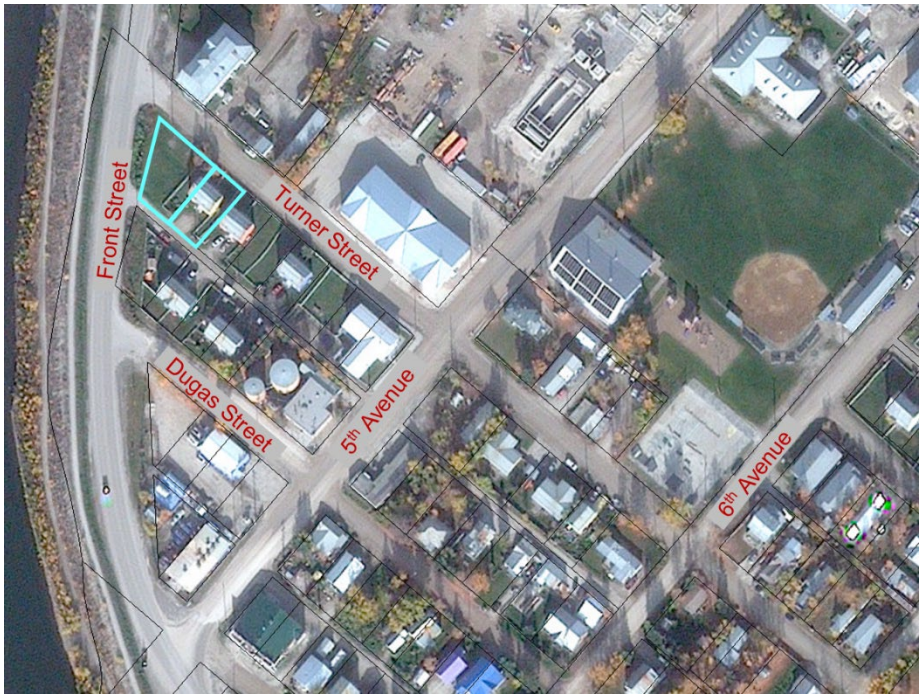
APPROVAL		
NAME:	Stephanie Pawluk, CDO	**SIGNATURE:**
DATE:	November 9, 2020	
NAME:	Cory Bellmore, CAO	**SIGNATURE:**
DATE:	November 12, 2020	

THE CITY OF DAWSON
Box 308 Dawson City, YT Y0B 1G0
PH: 867-993-7400 FAX: 867-993-7434
www.cityofdawson.ca

NOTICE OF PUBLIC HEARING: SUBDIVISION APPLICATION

Subdivision Application: #20-098

Subject Property: Lots 14 and 15 Block 14 Government Reserve Addition
Date: November 18th, 2020
Time: 7:00pm
Location: Council Chambers, City Hall
Listen to Public Hearing: Radio CFYT 106.9 FM or cable channel #11



As per the *Municipal Act*, S. 319.4, upon receiving an application for subdivision, council must give public notice of the application.

Therefore, the City of Dawson is now requesting input from the public regarding the boundary adjustment of Lots 14 and 15 Block 14 Government Reserve Addition.

For more information, to view the application details, or to provide your input prior to the public meeting, please contact the Community Development and Planning Officer or Planning Assistant using the following contact information:

Stephanie Pawluk
Community Development & Planning Officer
Box 308, Dawson City YT Y0B1G0
cdo@cityofdawson.ca
867-993-7400 ext. 414

Charlotte Luscombe
Planning Assistant
Box 308, Dawson City YT Y0B1G0
planningassist@cityofdawson.ca
867-993-7400 ext. 438

THE CITY OF DAWSON
Box 308 Dawson City, YT Y0B 1G0
PH: 867-993-7400 FAX: 867-993-7434
www.cityofdawson.ca

OFFICE USE ONLY	
APPLICATION FEE:	$105
DATE PAID:	28/10/20
RECEIPT #:	36716
PERMIT #:	20-098

SUBDIVISION APPLICATION

PLEASE READ THE ATTACHED INSTRUCTIONS, GUIDELINES AND SUBMISSION REQUIREMENTS PRIOR TO COMPLETING FORM.

PROPOSED DEVELOPMENT

☐ Subdivision ☐ Consolidation ☑ Boundary Adjustment

CIVIC ADDRESS: 314 Turner Street (Lot 15) **VALUE OF DEVELOPMENT:** $ 5, 000

LEGAL DESCRIPTION: LOT(S) 15 **BLOCK** 14 **ESTATE** Gov Reserve Addition **PLAN#** 8395 CLSR

PROPOSED DEVELOPMENT: Please provide a brief description of the proposed development, including the number of proposed lots and their sizes.

The subdivision application is for adjusting the boundary between lot 14 and lot 15. The duplex on lot 14 is encroaching on lot 15 and this adjustment is necessary to be in compliance with the City of Dawson bylaw and to enable for future development on lot 15.

APPLICANT INFORMATION

APPLICANT NAME(S): Land Development Branch (Pierre Marchand)

MAILING ADDRESS: P.O Box. 2703 **POSTAL CODE:** Y1A 2C6

EMAIL: pierre.marchand@gov.yk.ca **PHONE #:** 867 332 1578

OWNER INFORMATION (IF DIFFERENT FROM APPLICANT)

OWNER NAME(S): Commissioner of Yukon (Susan Antpoehler, Land Management Branch)

MAILING ADDRESS: P.O Box. 2703 K 320 **POSTAL CODE:** Y1A 2C6

EMAIL: Susan.Antpoehler@gov.yk.ca **PHONE #:** 867-667-5882

It is the responsibility of the applicant to ensure that all plans conform to the provisions of the City of Dawson Zoning Bylaw and applicable territorial and federal legislation.

FURTHER INFORMATION

ACCESS: Does the proposed development require additional access to any public road or highway? If yes, please name the road and describe the location of the proposed access.

no

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www.cityofdawson.ca

OFFICE USE ONLY	
PERMIT #:	20-098

WATER: Is the land situated within 0.5 miles of a river, stream, watercourse, lake or other permanent body of water, or a canal or drainage ditch? If yes, please name the body of water and describe the feature.

yes, Yukon and Klondike rivers.

TOPOGRAPHY: Describe the nature of the topography of the land (flat, rolling, steep, mixed), the nature of the vegetation and water on the land (brush, shrubs, tree stands, woodlots, etc, & sloughs, creeks, etc.), and the kind of soil on the land (sandy, loam, clay, etc.).

The site is generally flat with a downward grade towards the west. The elevation of the site is 319 m above sea level. The site is mostly cleared with a few small trees (poplars and willows) and a power line along the northern boundary of the site.

EXISTING BUILDINGS: Describe any buildings, historical or otherwise, and any structures on the land and whether they are to be demolished or moved:

The site is currently unoccupied and does not contain any buildings.

DECLARATION

- I/WE hereby make application for a Development Permit under the provisions of the City of Dawson Zoning Bylaw No. 2018-19 and in accordance with the plans and supporting information submitted and attached which form part of this application.
- I/ WE have reviewed all of the information supplied to the City of Dawson with respect to an application for a Development Permit and it is true and accurate to the best of my/our knowledge and belief.
- I/WE understand that the City of Dawson will rely on this information in its evaluation of my/our application for a Development Permit and that any decision made by the City of Dawson on inaccurate information may be rescinded at any time.
- I/WE hereby give my/our consent to allow Council or a person appointed by its right to enter the above land and/or building(s) with respect to this application only.

I/WE HAVE CAREFULLY READ THIS DECLARATION BEFORE SIGNING IT.

August 20, 2020
DATE SIGNED

Pierre Marchand
SIGNATURE OF APPLICANT(S)

Aug 25/20
DATE SIGNED

(for Shawn Antoniuk)
Director, Land Management Branch
SIGNATURE OF OWNER(S)

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Zoning Assessment

File Number: 20-098 **Date:** 26 August 2020
Zone: R1- Single family/Duplex **Assessment completed by:** C. Luscombe

1. Application Type

☐	OCP Amendment	☐	Variance
☐	Zoning Amendment	☐	Development
☑	Subdivision	☐	Other:

2. Official Community Plan Designation: INT - INSTITUTIONAL
Does the proposed development meet OCP requirements? ✓ yes __ no
If no, OCP amendment is required. Yukon Govt. Housing

3. Zoning By-Law Designation: R1 - Single Family & Duplex
Does the proposed development meet ZBL requirements? ✓ yes __ no
If no, ZBL amendment is required.

4. Heritage Management Plan Designation:
Downtown Heritage Management
Does the proposed development require HAC review? __ yes ✓ no __ Not development
If yes, fill out Heritage Assessment form.

5. Zone Specific Regulations:

Provision	Permitted	Proposed	Compliant	Variance Required
Permitted Use	DUPLEX	NO CHANGE	(Y) / N	
Minimum Parcel Size	232.3m² / 2500ft²	464.7m²	(Y) / N	
Maximum Parcel Size	—	—	Y / N	
Minimum Parcel Width	7.6m / 25ft	15.24 m	(Y) / N	
Minimum Setback (Front)	3.05m / 10ft	13.91m	(Y) / N	
Minimum Setback (Side)	1.52m / 5ft	2.31m	(Y) / N	
Minimum Setback (Side)	1.52m / 5ft	4.44m	(Y) / N	
Minimum Setback (Rear)	1.5m / 5ft	8.09m	(Y) / N	

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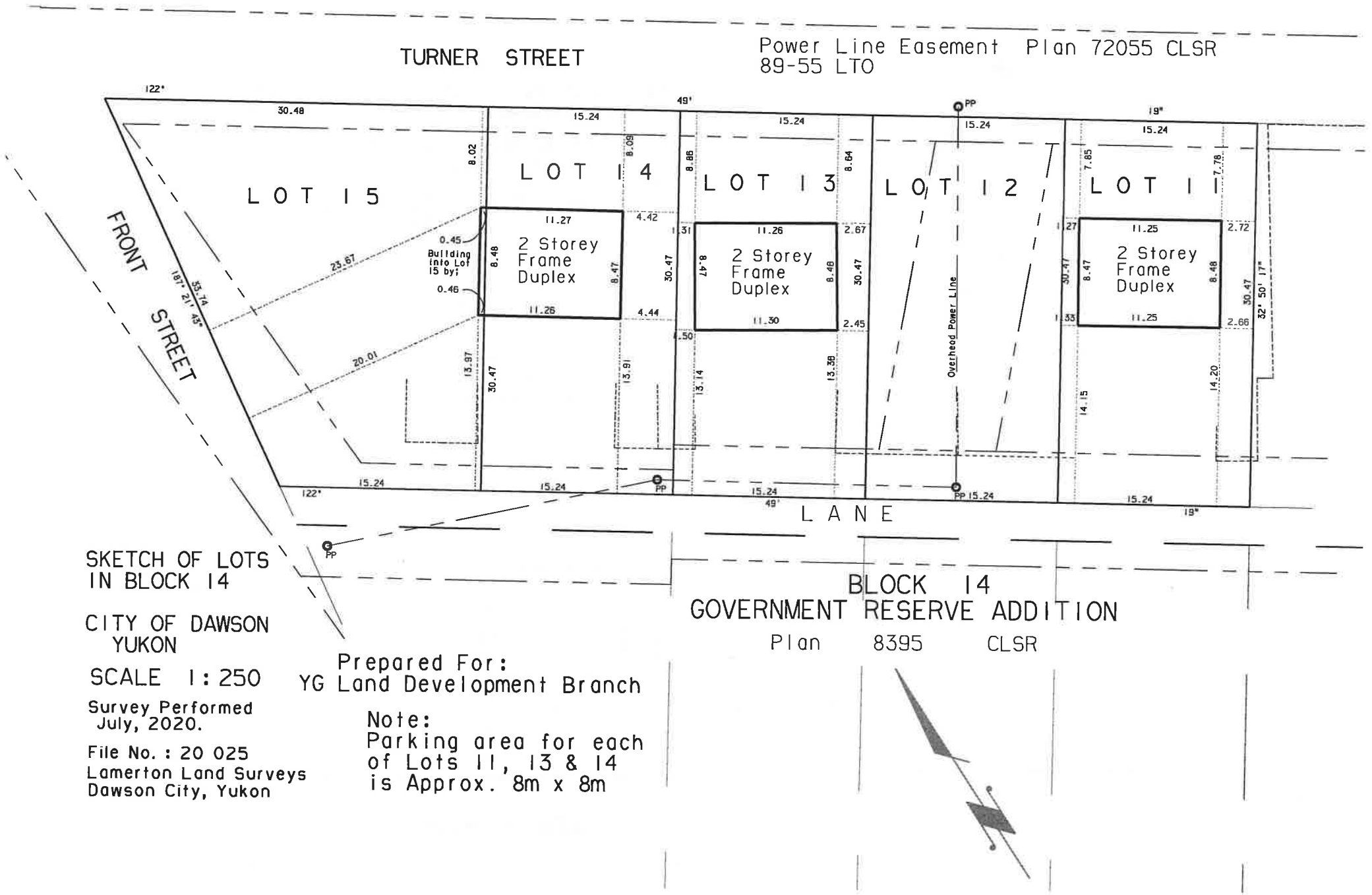
PH: (867) 993-7400, FAX: (867) 993-7434

Provision	Permitted	Proposed	Compliant	Variance Required
Minimum Floor Area	$23.8m^2$ / $256ft^2$	$190.7m^2$ ①	(Y) / N	
Maximum Height (Principal)	10.67m / 35ft	≈6m	(Y) / N	
Maximum Height (Accessory)	—	—	Y / N	
Maximum Parcel Coverage	50%	20.6%	(Y) / N	
Maximum Floor Area Ratio (FAR)	—	—	Y / N	
Minimum Off-Street Parking Spaces	2	2	(Y) / N	
Minimum Setback (Principal and Accessory)	—	—	Y / N	
Zone Specific:			Y / N	
Zone Specific:			Y / N	

6. Notes:

① Floor area = 11.27(w) x 8.47(d) multiplied by 2; duplex is 2 storeys



SKETCH OF LOTS
IN BLOCK 14

CITY OF DAWSON
YUKON

SCALE 1:250

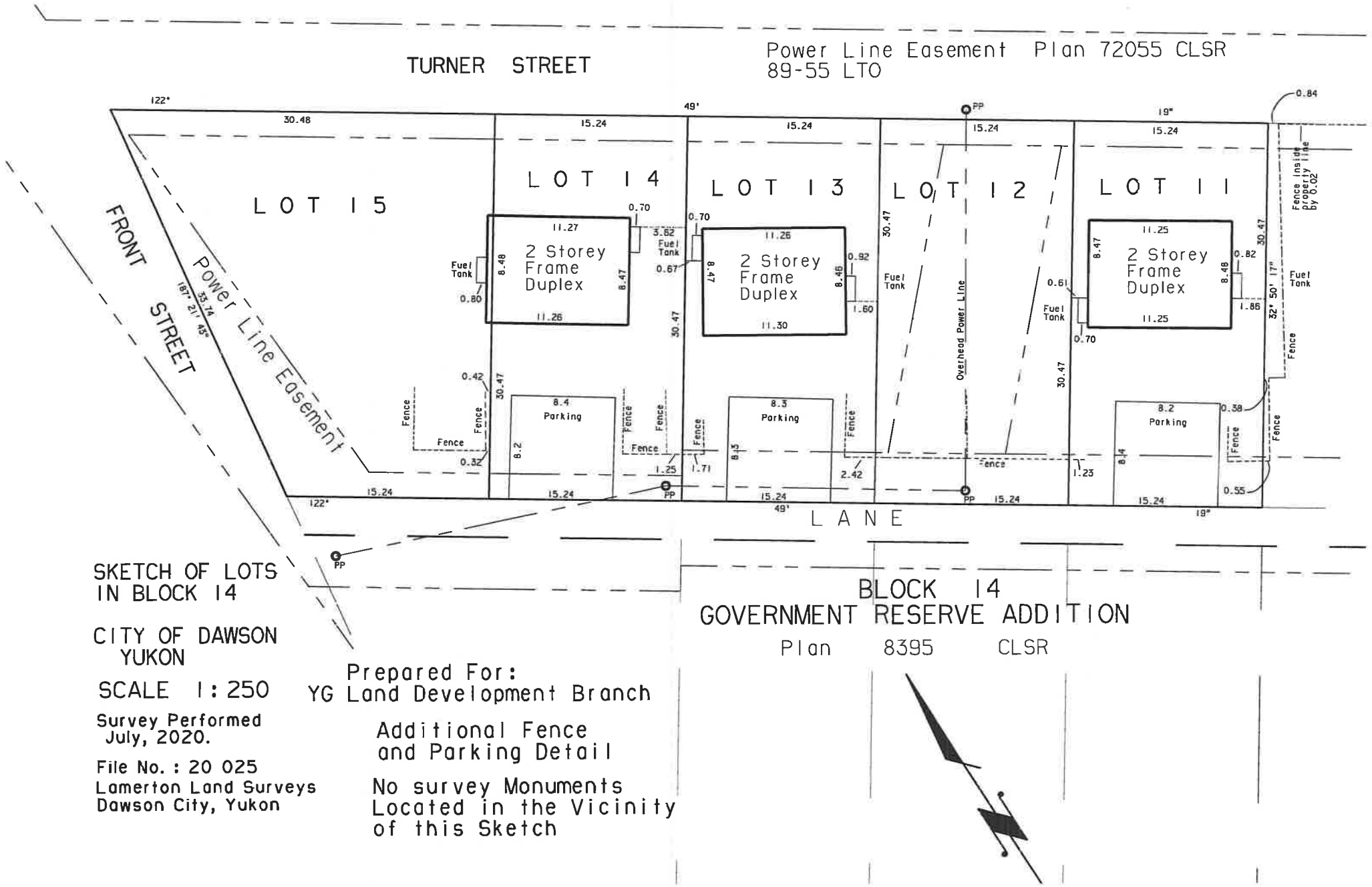
Survey Performed
July, 2020.

File No. : 20 025
Lamerton Land Surveys
Dawson City, Yukon

Prepared For:
YG Land Development Branch

Note:
Parking area for each of Lots 11, 13 & 14 is Approx. 8m x 8m

BLOCK 14
GOVERNMENT RESERVE ADDITION
Plan 8395 CLSR



SKETCH OF LOTS IN BLOCK 14

CITY OF DAWSON
YUKON

SCALE 1 : 250

Survey Performed
July, 2020.

File No. : 20 025
Lamerton Land Surveys
Dawson City, Yukon

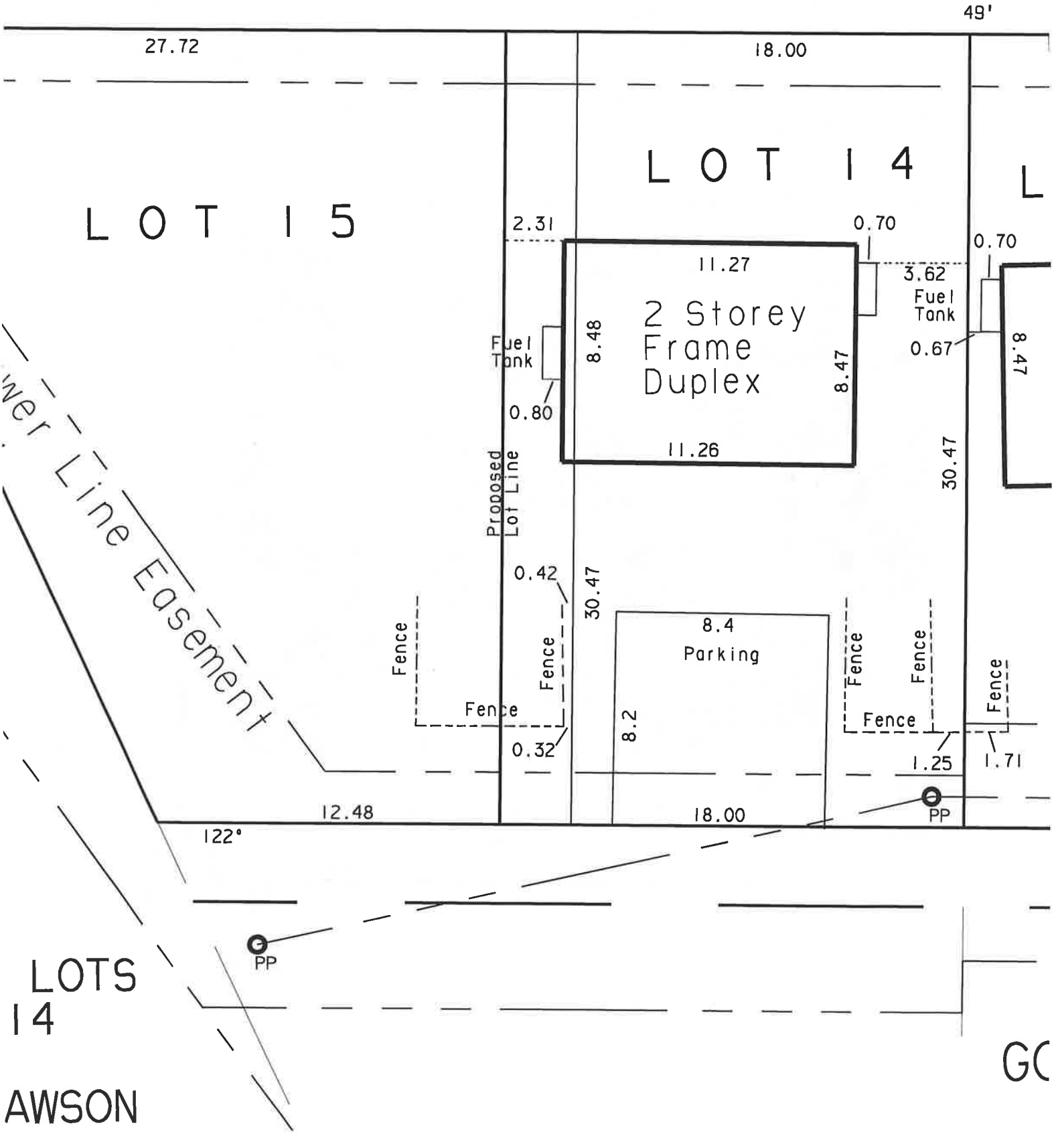
Prepared For:
YG Land Development Branch

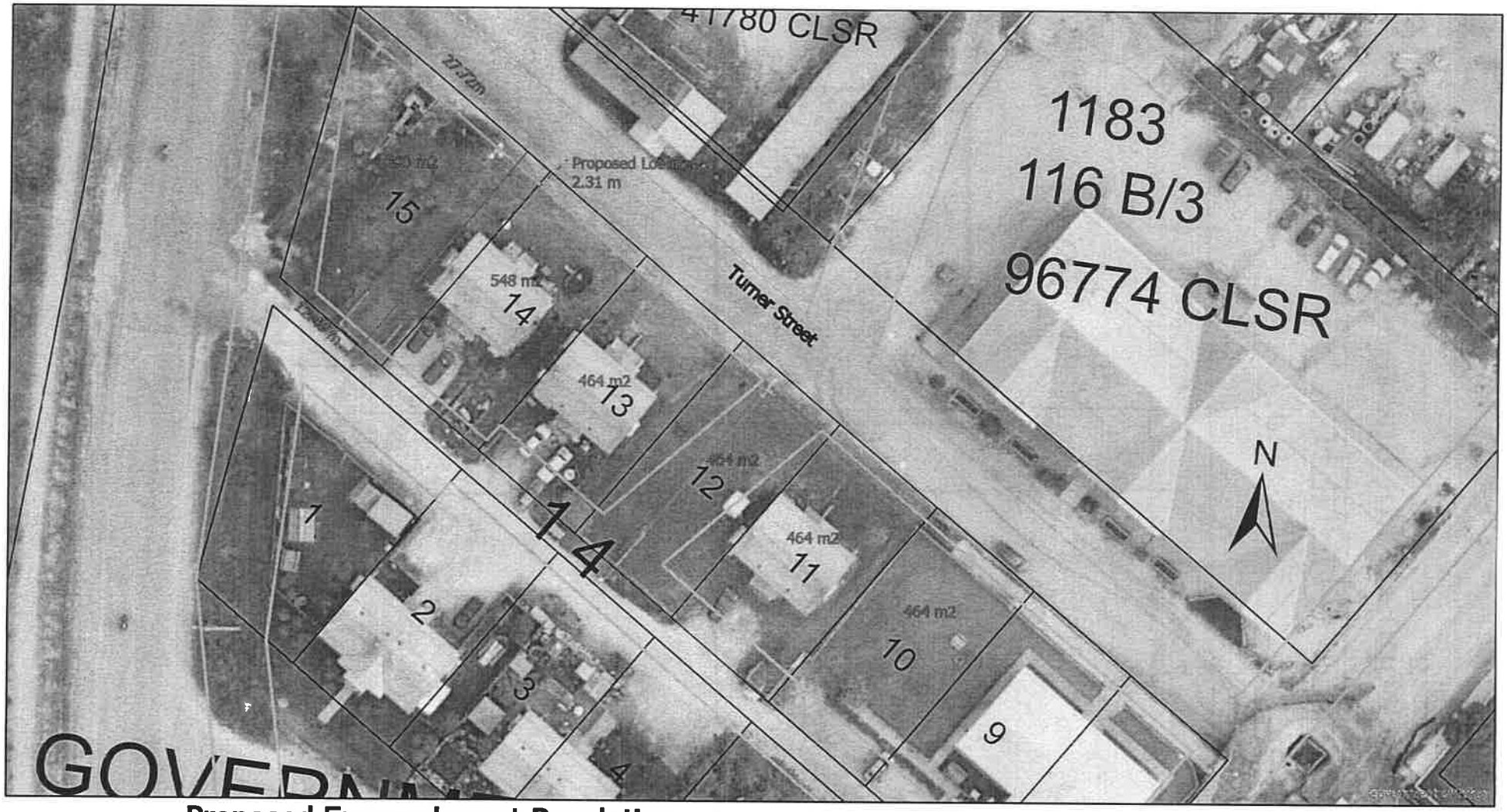
Additional Fence
and Parking Detail

No survey Monuments
Located in the Vicinity
of this Sketch

BLOCK 14
GOVERNMENT RESERVE ADDITION
Plan 8395 CLSR

Proposed Lot line modification





Proposed Encroachment Resolution
Lot 15 Turner Street
Dawson City

Yukon

Report to Council

[X] For Council Decision [ ] For Council Direction [ ] For Council Information

[ ] In Camera

AGENDA ITEM:	Lot 9 and 9-1 Block C Ladue Estate	
PREPARED BY:	Charlotte Luscombe, Planning Assistant	**ATTACHMENTS:** 1. Application & Supporting Documentation
DATE:	November 13, 2020	
RELEVANT BYLAWS / POLICY / LEGISLATION: Municipal Act Subdivision Bylaw Official Community Plan Zoning Bylaw Heritage Bylaw		

RECOMMENDATION

It is respectfully recommended that Council grant subdivision authority to subdivide Lots 9 and 9-1 Block C Ladue Estate, as per Subdivision Application #20-085, subject to the following conditions:

1.1. The application successfully passes through a public hearing.
1.2. The applicant submit a Stormwater Management Plan to the satisfaction of the CDO and Public Works Superintendent.
1.3. The applicant submit an access plan to the satisfaction of the CDO and Public Works Manager
1.4. The applicant submits a plan of subdivision completed by a certified lands surveyor drawn in conformity with the approval.
1.5. The applicant shall, on approval of the subdivision plan by the City of Dawson, take all necessary steps to enable the registrar under the Land Titles Act to register the plan of subdivision.

ISSUE / PURPOSE

Subdivision Application 20-085 was received 31 July 2020; the applicant is requesting to subdivide and reconfigure two city-owned lots into three lots. A public hearing was held 21st October 2020 and passed successfully. The applicant for this subdivision is the City of Dawson, and the intention is to eventually release and sell the newly created Lot B via lottery. The current lot configuration can be seen in Figure 1, the proposed in Figure 2). Lot 9 contains the KVA building (1102 Front Street) as well as the new Lift Station (also 1102 Front Street), and 9-1 is currently empty following demolition of old Lift Station in September 2020.

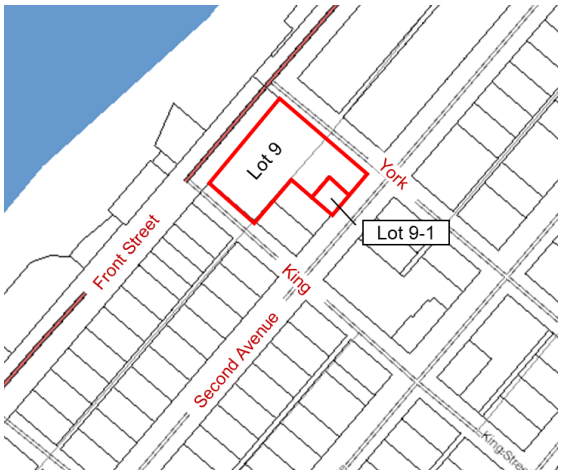


Figure 1 Context map showing location of lots under consideration

ANALYSIS / DISCUSSION

Subdivision Bylaw

Subdivision Control Bylaw S3.01 states that every subdivision of land must be made in accordance with the Municipal Act, the Official Community Plan, the Zoning Bylaw, and the Subdivision Control Bylaw. The Analysis/Discussion section of this report is intended to discuss the proposal's conformity with the provisions outlined in the relevant legislation, policies, and plans.

Municipal Act

The Municipal Act S. 314 details the requirements for any proposed plan of subdivision to have direct access to the highway to the satisfaction of the approving authority. Access to Lot A will be via Front Street and access to Lot B and Lot C will be via Second Avenue. There is no rear laneway.

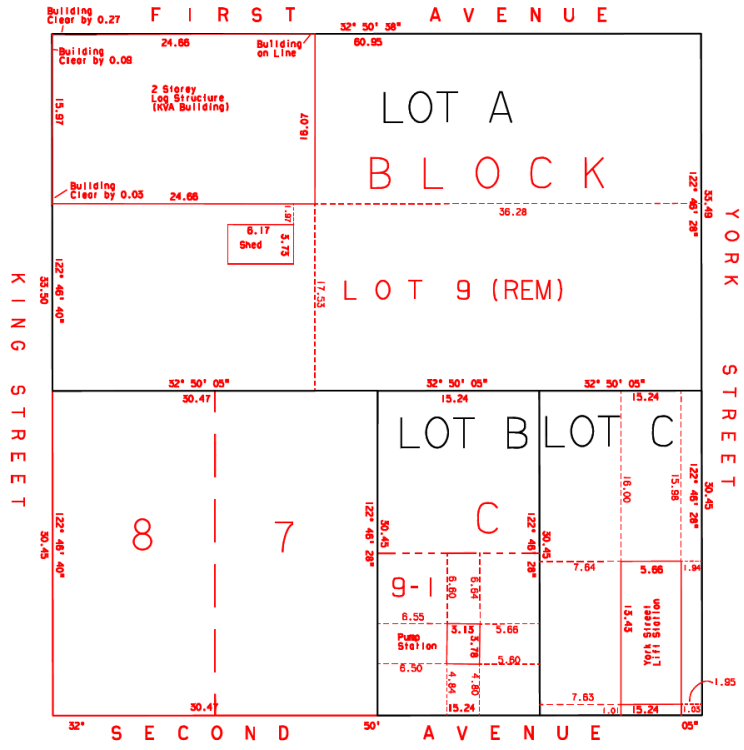


Figure 2: Proposed lot configuration, including existing buildings. Note: 9-1 Pump Station since demolished.

Official Community Plan

Lots 9 and 9-1 are currently designated DC – Downtown Core. Uses associated with this designation are single or multi-unit buildings (residential or commercial), and the historic character of building facades defines the streetscape. There are minimal setbacks, services are oriented toward the public street, and the area is recognized as the heart of Dawson City. The three new lots would be required to retain the same designation. Any new use or development on the proposed lots would be required to conform to the OCP designation.

The new configuration would offer the following benefits:

- A simpler block configuration that would offer a new commercial lot to be developed as it would bring a currently undersized lot into conformity
- It would bring vacant land in the Downtown Core into use by offering up a new commercial lot for redevelopment

Zoning Bylaw

The Zoning Bylaw is intended to implement the goals of the OCP. Both lots are currently zoned C1 – Core Commercial and following the reconfiguration, the zoning would remain unchanged. The C1 designation is to permit and promote a mixture of commercial and residential uses, and to promote a vibrant commercial core. The Klondike Visitors Association (KVA) building is located on Lot 9 (see Figure *2*) and this use would not change. The new Lift Station is also located on Lot 9 but would be the primary structure on the newly created Lot C and public utilities are permitted in all city zones (S8.7). Lot 9-1 was the site of the old Lift Station and eventually will become part of the newly created Lot B which will be a standard 100ft x 50ft commercial lot. The future usage has not been determined as this will depend on the buyer's intentions.

Heritage Bylaw

The property is in the Downtown Heritage Management area and any new development will need to be approved by the Heritage Advisory Committee.

Comments

Department heads were asked to comment on this application for the purposes of assessing operational requirements such as access, lot grading, and slope stability. The Recreation Manager advised that the KVA building is owned by the Yukon Government and is managed by Highways and Public Works. The KVA were added to the public mailers but no comments were received.

No other departmental comments were received.

OPTIONS

1. Council grant subdivision authority to subdivide Lots 9 and 9-1 Block C Ladue Estate Application 20-085, subject to the following conditions:

1.1. The application successfully passes through a public hearing.
1.2. The applicant submit a Stormwater Management Plan to the satisfaction of the CDO and Public Works Superintendent.
1.3. The applicant submit an access plan to the satisfaction of the CDO and Public Works Manager
1.4. The applicant submits a plan of subdivision completed by a certified lands surveyor drawn in conformity with the approval.
1.5. The applicant shall, on approval of the subdivision plan by the City of Dawson, take all necessary steps to enable the registrar under the Land Titles Act to register the plan of subdivision.

2. Council does not approved subdivision authority to subdivide Lots 9 and 9-1 Block C Ladue Estate Application 20-085.

APPROVAL		
NAME:	Stephanie Pawluk, CDO	**SIGNATURE:** 
DATE:	November 9, 2020	
NAME:	Cory Bellmore, CAO	**SIGNATURE:** 
DATE:	November 12,2020	

THE CITY OF DAWSON
Box 308 Dawson City, YT Y0B 1G0
PH: 867-993-7400 FAX: 867-993-7434
www.cityofdawson.ca

OFFICE USE ONLY	
APPLICATION FEE:	Waived
DATE PAID:	—
RECEIPT #:	—
PERMIT #:	20-085

SUBDIVISION APPLICATION

PLEASE READ THE ATTACHED INSTRUCTIONS, GUIDELINES AND SUBMISSION REQUIREMENTS PRIOR TO COMPLETING FORM.

PROPOSED DEVELOPMENT

☑ **Subdivision** ☐ **Consolidation** ☐ **Boundary Adjustment**

CIVIC ADDRESS: _____ **VALUE OF DEVELOPMENT:** _____

LEGAL DESCRIPTION: LOT(S) 9 & 9-1 **BLOCK** C **ESTATE** Ladue **PLAN#** 8338A

PROPOSED DEVELOPMENT: Please provide a brief description of the proposed development, including the number of proposed lots and their sizes.

Currently tourism, old lift station & new lift station. Proposed is continued tourism, lift station and a vacant lot

APPLICANT INFORMATION

APPLICANT NAME(S): Glen Lamerton

MAILING ADDRESS: Box 928, Dawson City **POSTAL CODE:** Y0B 1G0

EMAIL: glamerton@gmail.com **PHONE #:** 867-334-7233

OWNER INFORMATION (IF DIFFERENT FROM APPLICANT)

OWNER NAME(S): Commissioner of Yukon, City of Dawson

MAILING ADDRESS: Lands Branch K-320,Govt of Yukon, Box 2703 Whitehorse YT **POSTAL CODE:** Y1A 2C6

EMAIL: _____ **PHONE #:** _____

It is the responsibility of the applicant to ensure that all plans conform to the provisions of the City of Dawson Zoning Bylaw and applicable territorial and federal legislation.

FURTHER INFORMATION

ACCESS: Does the proposed development require additional access to any public road or highway? If yes, please name the road and describe the location of the proposed access.

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OFFICE USE ONLY	
PERMIT #:	20-085

WATER: Is the land situated within 0.5 miles of a river, stream, watercourse, lake or other permanent body of water, or a canal or drainage ditch? If yes, please name the body of water and describe the feature.

Yes - Yukon River

TOPOGRAPHY: Describe the nature of the topography of the land (flat, rolling, steep, mixed), the nature of the vegetation and water on the land (brush, shrubs, tree stands, woodlots, etc. & sloughs, creeks, etc.), and the kind of soil on the land (sandy, loam, clay, etc.).

Flat with very little vegetation; ground is gravel and Dawson soils

EXISTING BUILDINGS: Describe any buildings, historical or otherwise, and any structures on the land and whether they are to be demolished or moved:

KVA Building and new lift station to remain

DECLARATION

- I/WE hereby make application for a Development Permit under the provisions of the City of Dawson Zoning Bylaw No. 2018-19 and in accordance with the plans and supporting information submitted and attached which form part of this application.
- I/ WE have reviewed all of the information supplied to the City of Dawson with respect to an application for a Development Permit and it is true and accurate to the best of my/our knowledge and belief.
- I/WE understand that the City of Dawson will rely on this information in its evaluation of my/our application for a Development Permit and that any decision made by the City of Dawson on inaccurate information may be rescinded at any time.
- I/WE hereby give my/our consent to allow Council or a person appointed by its right to enter the above land and/or building(s) with respect to this application only.

I/WE HAVE CAREFULLY READ THIS DECLARATION BEFORE SIGNING IT.

July 31, 2020
DATE SIGNED

SIGNATURE OF APPLICANT(S)

July 31/2020
DATE SIGNED

SIGNATURE OF OWNER(S)

RECEIVED AUG 0 8 2020

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Box 308 Dawson City, YT Y0B 1G0
PH: 867-993-7400 FAX: 867-993-7434
www.cityofdawson.ca

OFFICE USE ONLY	
PERMIT #:	20-085

COMPLETE APPLICATION SUBMISSION REQUIREMENTS

As per the Municipal Act s. 320(1), a subdivision will be granted, granted with conditions, or refused within 90 days of receipt of a complete application. An application is not deemed complete until the following information is submitted to the satisfaction of a Development Officer.

- ☐ Application Form (completed in full)
- ☐ Application Fee as per City of Dawson Fees and Charges Bylaw & Zoning Bylaw
- ☐ Site Plan that includes:
  - a north arrow and scale
  - property lines shown and labelled as per the most recent legal survey
  - dimensions and areas of all proposed lots
  - all easements and rights of way shown and labelled
  - the location and labelling of all abutting streets, lanes, highways, road rights of way, sidewalks, water bodies, and vegetation
  - the topography and other physical features of the subject land
  - the location, size, type, and dimensions of all existing buildings and/or structures on the subject land, as well as the distance of the buildings and/or structures from the proposed property lines
  - the location of retaining walls and fences (existing and proposed)
  - the location, dimensions, and number of onsite parking areas
  - the location of loading facilities
  - the date of the plan
- ☐ Certificate of Title (if owner does not match Assessment Roll)
- ☐ Stormwater management plan
- ☐ Other as required by the CDO: _____

OFFICE USE ONLY

LEGAL DESCRIPTION: LOT(S) 9 & 9-1 **BLOCK** C **ESTATE** LANUE **PLAN#** 8338A

ZONING: C1 - Core Commercial **DATE COMPLETE APPLICATION RECEIVED:** _____

TYPE OF APPLICATION: Subdivision

APPLICANT NAME(S): Glen Lamerton

OWNER NAME(S): City of Dawson

☐ **APPLICATION REJECTED**

☐ **APPLICATION APPROVED / PERMIT ISSUED**

A letter [ ] has OR [ ] has not been attached to this permit explaining reasons and/or permit conditions. If a letter is attached, it constitutes a valid and binding component of this permit.

DATE: _____ **SIGNATURE:** _____

THE CITY OF DAWSON
Box 308 Dawson City, YT Y0B 1G0
PH: 867-993-7400 FAX: 867-993-7434
www.cityofdawson.ca

OFFICE USE ONLY	
PERMIT #:	

INSTRUCTIONS AND GUIDELINES

IT IS IMPORTANT TO READ AND UNDERSTAND THE FOLLOWING INSTRUCTIONS PRIOR TO COMPLETING THE APPLICATION FORM. THESE GUIDELINES ARE FOR REFERENCE ONLY. IN THE EVENT OF A DISCREPANCY WITH THE ZONING BYLAW OR OTHER BYLAWS/LEGISLATION, THE BYLAW/LEGISLATION PREVAILS.

1. Council shall not approve any application for the subdivision of any land within any zone or on any site where the parcels do not meet the minimum requirements prescribed for that zone.
2. At the sole discretion of Council, parcels with a pre-existing legally non-conforming use or structure may be subdivided so long as the subdivision does not increase the legally non-conforming nature of the use or structure.
3. Spot land applications and parcel enlargements can be approved at the sole discretion of Council and will not be approved by Council unless the application conforms to the long-term plan for those lands, as described in the OCP or other applicable approved plans.
4. Notwithstanding the above, Council may approve an application for the subdivision of any land within the historic townsite into lots that do not meet the minimum site area requirements prescribed for the underlying zoning district as a heritage conservation incentive, provided:
    a. that subdivision is in keeping with the heritage integrity of the community; and
    b. the development proposed for those lots meets the heritage management policies and guidelines of the OCP and the Zoning Bylaw
5. Prior to final approval, Council shall hold a public hearing to hear and consider all submissions respecting the proposed subdivision. The public hearing shall be held no earlier than seven days after the last date of publication of the notice.
6. The notice must be circulated, in a method approved by Council, once a week for two successive weeks.
    a. Methods of notice circulation may include posting on the City website, in local newspapers, and/or on the City and Post Office Bulletin Boards, as well as sending written notification.
    b. The notice shall:
        i. describe the area affected by the proposed subdivision
        ii. state the date, time, and place for the public hearing respecting the proposed subdivision
        iii. include a statement of the reasons for the subdivision and an explanation of it
7. Written notification letters shall be mailed prior to the public hearing to all properties within the following radii of the subject property:
    a. 100 m (328.1 ft.) for properties within the historic townsite
    b. 1 km (3,280.1 ft.) for properties outside the historic townsite
8. A notification sign shall be placed on the subject property for a minimum of seven days.
    a. The sign shall state the details of the subdivision and the date, time, and place of the public hearing, as well as the City's contact information.
    b. The sign shall be provided by the City and shall be returned to the City on the day following the public hearing.
    c. Signs not returned will be subject to an advertising fee equal to the replacement of the sign materials.
9. Every applicant who applies for subdivision of land shall provide to each lot created by the subdivision direct access to a highway satisfactory to the approving authority.
10. On receipt of a completed application for subdivision, Council will, within 90 days, approve it, refuse it, or approve it with conditions. Approval of an application shall be valid for a period of 12 months and may be subject to renewal for one more period of 12 months at the discretion of Council.
11. If Council refuses an application for subdivision, no subsequent unaltered application for approval of a proposed subdivision of land that provides for the same use of the land shall be made by the same or another person within six months of the date of the refusal.
12. If an application for a proposed subdivision of land is approved with or without conditions the applicant shall:
    a. submit to the CDO a plan of subdivision or an instrument drawn in conformity with the approval; and
    b. on approval of the subdivision plan, take all necessary steps to enable the registrar under the Land Titles Act to register the plan of subdivision.
13. If approval of an application for subdivision is refused, the applicant may, within 30 days after the date on which the notice was mailed to the applicant, appeal in writing to the Yukon Municipal Board.

LOT A

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Zoning Assessment

File Number: 20-085 **Date:** 10th August 2020

Zone: C1 - Core Commercial **Assessment Completed By:** C. Luscombe

1. Application Type

☐ OCP Amendment	☐ Variance
☐ Zoning Amendment	☐ Development
☑ Subdivision	☐ Other _____

2. Official Community Plan Designation: Downtown Core
Does the proposed development meet OCP requirements? ✓ yes __no
If no, OCP amendment is required.

3. Zoning By-Law Designation: Core Commercial
Does the proposed development meet ZBL requirements? __ yes __no
If no, ZBL amendment is required.

4. Heritage Management Plan Designation: Downtown Heritage Management
Does the proposed development require HAC review? __ yes __no __
If yes, fill out Heritage Assessment form.

5. Zone Specific Regulations:

Provision	Permitted	Proposed	Compliant	Variance Required
Permitted Use	KVA Building	No change	(Y) / N	
Minimum Parcel Size	464.5m²		Y / N	
Maximum Parcel Size	—	—	Y / N	
Minimum Parcel Width	—	—	Y / N	
Minimum Setback (Front)	0	0.27m	(Y) / N	
Minimum Setback (Side)	0	0.9m	(Y) / N	
Minimum Setback (Side)	0	36.28m	(Y) / N	
Minimum Setback (Rear)	1.52m	17.53m	Y / N	

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Minimum Floor Area	—	—	Y / N	
Maximum Height (Principal)	13.72m		Y / N	
Maximum Height (Accessory)	—	—	Y / N	
Maximum Parcel Coverage	—	—	Y / N	
Maximum Floor Area Ratio (FAR)	3		Y / N	
Minimum Off-Street Parking Spaces			Y / N	
Minimum Setback (Between Principal and Accessory)	3.05m	1.97	Y / (N)	Existing structure, can make applicant aware but no change required at this time
Zone Specific: _____			Y / N	
Zone Specific: _____			Y / N	

6. Notes:

LOT C

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Zoning Assessment

File Number: 20-085 **Date:** 10th August 2020
Zone: C1 - Core Commercial **Assessment completed by:** C. Luscombe

1. Application Type

☐	OCP Amendment	☐	Variance
☐	Zoning Amendment	☐	Development
☒	Subdivision	☐	Other:

2. Official Community Plan Designation: Downtown Core
Does the proposed development meet OCP requirements? ✓ yes __no
If no, OCP amendment is required.

3. Zoning By-Law Designation: C1 - Core Commercial
Does the proposed development meet ZBL requirements? __ yes __no
If no, ZBL amendment is required.

4. Heritage Management Plan Designation:
Downtown Heritage Management
Does the proposed development require HAC review? __ yes __no __
If yes, fill out Heritage Assessment form.

5. Zone Specific Regulations:

Provision	Permitted	Proposed	Compliant	Variance Required
Permitted Use	Lift Station		Y / N	
Minimum Parcel Size	464.5m²	464.058m²	Y / (N)	0.1% Difference...
Maximum Parcel Size	—	—	Y / N	See note ①
Minimum Parcel Width	—	—	Y / N	
Minimum Setback (Front)	0	1.03m	(Y) / N	
Minimum Setback (Side)	0	7.63m	(Y) / N	
Minimum Setback (Side)	0	1.95m	(Y) / N	
Minimum Setback (Rear)	1.52m	15.98m	(Y) / N	

THE CITY OF DAWSON

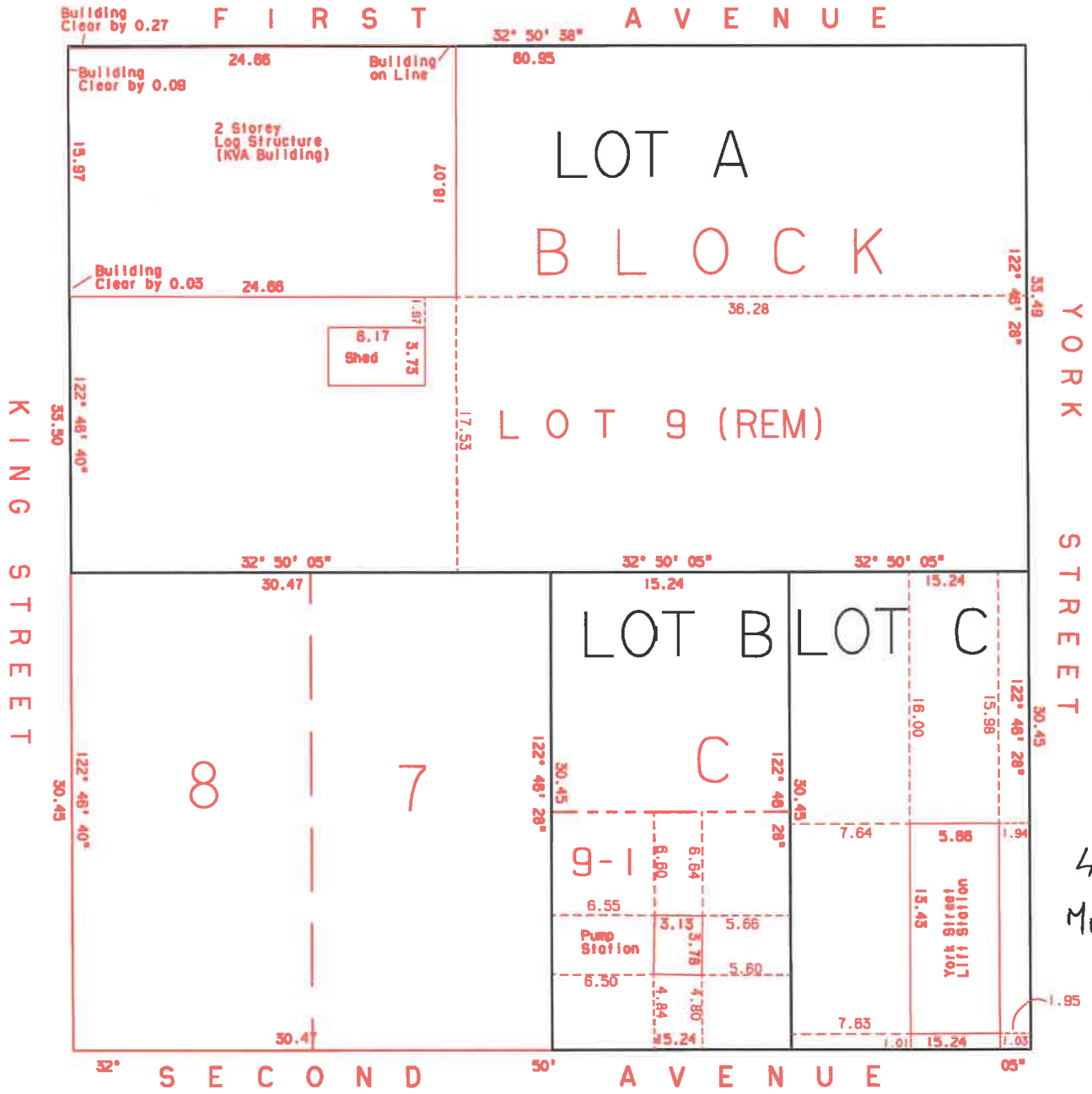
P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Provision	Permitted	Proposed	Compliant	Variance Required
Minimum Floor Area	—	—	Y / N	
Maximum Height (Principal)	13.72m		Y / N	
Maximum Height (Accessory)	—	—	Y / N	
Maximum Parcel Coverage	—	—	Y / N	
Maximum Floor Area Ratio (FAR)	3		Y / N	
Minimum Off-Street Parking Spaces			Y / N	
Minimum Setback (Principal and Accessory)	—	—	Y / N	
Zone Specific:			Y / N	
Zone Specific:			Y / N	

6. Notes:

① Public utilities exempt from minimum lot size

RECEIVED AUG 0 8 2020



Sketch of Proposed
Subdivision of Block C
Ladue Estate
Dawson City, YT

Scale: 1:250

July 2020

464.058m² = B&C

Minimum is 464.5m²

The City of Dawson

P.O Box 308, Dawson City, Yukon Y0B 1G0

PH: (867) 993-7400, Fax: (867) 993-7434

NOTICE OF PUBLIC HEARING: SUBDIVISION APPLICATION

Subdivision Application: #20-085

Subject Property: Lots 9 and 9-1 Block C Ladue Estate
Date: 21st October 2020
Time: 7:00pm
Location: Council Chambers, City Hall
Listen to Public Hearing: Radio CFYT 106.9 FM or cable channel #11

As per the *Municipal Act*, S. 319.4, upon receiving an application for subdivision, council must give public notice of the application.

Therefore, the City of Dawson is now requesting input from the public regarding the subdivision of Lots 9 and 9-1 Block C Ladue Estate (1102 Front Street).

For more information, to view the application details, or to provide your input prior to the public meeting, please contact the Community Development and Planning Officer or Planning Assistant using the following contact information:

Stephanie Pawluk
Community Development & Planning Officer
Box 308, Dawson City YT Y0B1G0
cdo@cityofdawson.ca
867-993-7400 ext. 414

Charlotte Luscombe
Planning Assistant
Box 308, Dawson City YT Y0B1G0
planningassist@cityofdawson.ca
867-993-7400 ext. 438

Report to Council

[X] For Council Decision [ ] For Council Direction [ ] For Council Information

[ ] In Camera

AGENDA ITEM:	Dome Road Master Planning Project Deliverables	
PREPARED BY:	Stephanie Pawluk, CDO	**ATTACHMENTS:**
DATE:	November 9, 2020	Dome Road Draft Engagement Plan
RELEVANT BYLAWS / POLICY / LEGISLATION: N/A		Covid-19 Response Plan Project Schedule

RECOMMENDATION

It is respectfully recommended that Council approve the Dome Road Master Planning Draft Engagement Plan and the Covid-19 Response Plan.

ISSUE / PURPOSE

The City has partnered with YG on the Dome Road Future Subdivision Master Planning Project. Stantec, the consultant, is seeking Council approval of the draft deliverables including the Engagement Plan, which outlines how engagement for this project will be conducted and where decision making points rest with Council, and the Covid-19 Response Plan that is up to date with current standards and guidelines.

BACKGOUND SUMMARY

The Draft Engagement Plan, Covid-19 Response Plan, and Project Schedule were presented to Committee of the Whole on November 4, 2020. At this meeting, it was suggested that a joint meeting between Tr'ondëk Hwëch'in Chief and Council and City Council be organized so that both councils have an opportunity to collaborate in discussions and feedback with the consultant. The consultant is currently coordinating with Tr'ondëk Hwëch'in about the possibility of a joint meeting scheduled for the second week of January when the consultant plans to be in Dawson to present the draft planning brief.

ANALYSIS / DISCUSSION

Administration reviewed these deliverables and provided initial feedback to the consultants. The deliverables have since been updated by the consultant to reflect feedback from both City Administration and YG. Administration is now seeking Council approval.

APPROVAL		
NAME:	Cory Bellmore, CAO	**SIGNATURE:** C Bellmore
DATE:	November 11, 2020	

Stantec

Memo

To:	Ben Campbell/Stephanie Pawluk	From:	Stantec Consulting Ltd.
File:	Dawson – Dome Road Subdivision	Date:	October 28, 2020

Reference: Dawson Dome Road Subdivision: Engagement Plan

INTRODUCTION

PURPOSE OF THIS PROJECT

Design a residential subdivision along Dome Road that is supported by the local community while carefully considering how to develop the site in the most appropriate way, maximizing development efficiencies and evaluating servicing options to responsibly manage infrastructure.

What will the Final Deliverable look like?

A comprehensive Master Plan document with proposed land use concept plan and preliminary engineering.

How will the final deliverable by approved?

Ultimately, Dawson City Council will approve the Master Plan document and land use concept; to be constructed by the Yukon government.

PURPOSE OF ENGAGEMENT

- Foster collaboration between Yukon government and City of Dawson, as partners.
- Identify priorities of the City of Dawson, Yukon government, and Tr'ondëk Hwëch'in and determine how this development can meet their goals.
- Enhance awareness of the realities of land development, including how design can drastically impact affordability to property owners and the City of Dawson through increased servicing and infrastructure maintenance costs.
- Gain local community support for the project through the incorporation of past and future feedback on the design.
- Allow for a range of in-person and online opportunities for community members and stakeholders to provide input into this project.

DESIRED OUTCOMES

- The final Master Plan meets the objectives of Yukon government and the City of Dawson and the land use concept is adopted by City Council.
- Yukon government, City of Dawson, Tr'ondëk Hwëch'in, Dawson City residents, and other stakeholders understand the purpose of the project and how design can impact goals of the development.
- Yukon government, City of Dawson, and Tr'ondëk Hwëch'in have an opportunity to influence the development's design.

Reference: **Dawson Dome Road Subdivision: Engagement Plan**

- The public understand how previous feedback gathered through the Slinky West Visioning Charrette, and current-day feedback has influenced the Dome Road subdivision design.

COMMUNICATION PRINCIPLES

This DRAFT Engagement Plan is being guided by the following principles:

Inclusivity	We will encourage participation by those who will be affected by the planning process and those interested in the outcomes. This means we will provide a range of ways to engage.
Trust and Respect	We will engage in an open and respectful way that fosters understanding between diverse views and interests.
Transparency and Accountability	We will design open and clear engagement activities. Those participating will understand their role, the level of engagement, how their input will be used, and the overall process.
Open and Timely Communication	We will strive to provide information that is timely, accurate, objective, easily understood, accessible, and balanced.
Equity	The processes will include a range of events and tools to allow all community members a reasonable opportunity to contribute, as well as hear and understand other views.

REVIEW OF ENGAGEMENT LEVELS

Project Team

- Dome Road Technical Advisory Working Group
  - City of Dawson Representatives
  - Government of Yukon Representatives
- Stantec
- In-person and online meetings

Governments

- City of Dawson
  - Mayor and Council
  - Administration
- Yukon government
  - Administration
- Tr'ondëk Hwëch'in
  - Chief and Council
  - Administration
- In-person and online meetings

Dawson City Residents

- Mailed letter from Dawson City Mayor and Council

Reference: **Dawson Dome Road Subdivision: Engagement Plan**

- Online informational videos
- In-person and Microsoft Teams public information sessions
- Online survey

Tr'ondëk Hwëch'in Citizens

- Information package sent by Tr'ondëk Hwëch'in
- Online informational videos
- In-person and online meetings
- Online survey
- Community information packages

Reference: **Dawson Dome Road Subdivision: Engagement Plan**

PROPOSED ENGAGEMENT TOOLS

The following lists each of the proposed engagement tools.

Engagement Activity	Proposed Date
ON-GOING	
Dome Road Technical Advisory Working Group Meetings	**Ongoing**
• Due to COVID-19 protocol, Stantec will be hosting all Technical Advisory Working Group meetings online using Microsoft Teams. • Group members from the Yukon government and City of Dawson are welcome to meet in-person within their offices to join the online meetings. Every effort will be made to group meetings together when the project team is in the City of Dawson. • The Stantec office is currently closed to visitors.	
PHASE 1: PROJECT START-UP	
Project Start up meeting	October 19, 2020
• Due to COVID-19 protocol, meeting with be online using Microsoft Teams. • Group members from the Yukon government and City of Dawson are welcome to meet in-person within their offices to join the online meetings. • The Stantec office is currently closed to visitors.	
Dawson City Council	November 18, 2020
• Request approval for the COVID plan and Engagement Plan. COW is on November 4 and Council is Nov 18, 2020. This resolution will not impact the timing of the next stage.	
PHASE 2: REVIEW OF DATA AND LAND SUITABILITY ANALYSIS	
Introductions with Tr'ondëk Hwëch'in	Week of Nov 2, 2020
• This meeting will also be held remotely using Microsoft Teams **Purpose:** • Introduce the project and our team, review relevant background information and gather feedback with Tr'ondëk Hwëch'in. Understand how the First Nation would like us to engage with them. • Review values document provided and ask questions to get any clarification or add detail as needed.	
Development Potential Workshop with Dome Road Technical Advisory Working Group	November 25, 2020
• This workshop will be held virtually, but with small groups in person where possible. • We will use Microsoft Teams, or similar platform to connect. **Purpose:** • Review the background information and outcomes of the land suitability analysis. • Highlight the community feedback received through previous engagement, and development challenges as previously studied – with the goal of coming to a shared understanding of the site's opportunities, constraints, and development potential.	

Reference: **Dawson Dome Road Subdivision: Engagement Plan**

Engagement Activity	Proposed Date
Dawson City Council	December 9, 2020
• Present the Development Potential Brief to City Council. COW on December 2 and Council on December 9, 2020.	
PHASE 3: COMPLETION OF THE 2019 VISIONING CHARRETTE EXERCISE AND ENGAGEMENT	
Planning Brief Engagement with Tr'ondëk Hwëch'in	January 12, 2021
• In-person meeting, held at Tr'ondëk Hwëch'in offices. • Meeting can be with staff, leadership or citizens. • This meeting will also be broadcasted using Microsoft Teams for those unable to attend in-person. **Purpose:** • Introduce the project and our team, review relevant background information as outlined in the Planning Brief, gain an understanding of leadership's objectives, and gather feedback.	
Planning Brief Engagement with the Community	January 7 to 15, 2021
Purpose: • To present the Planning Brief and gather feedback.	
Advertising Materials	
• Project notice posters: project name, website location. • Project notification letters for City of Dawson residents: mail-outs to all property owners from Mayor and Council. • Tr'ondëk Hwëch'in information package • Local radio announcement for in-person engagement opportunity. • Klondike Sun advertisement for in-person engagement opportunity. • City of Dawson website and/ or social media posts for in-person engagement opportunity.	
Tool 1: Public Online Video	
• Short presentation video (PowerPoint presentation with voice-over) to describe the project, its purpose, and review the background information as outlined in the Planning Brief. • Video will be posted on the City of Dawson website and advertised on social media pages. **Direct viewers of the video to complete the short public survey to provide feedback.**	
Tool 2: Public Online Survey (Hosted through Survey Monkey)	January 7 to 15, 2021
Will be used to gather questions and comments about the project. Examples of the types of questions that will be asked are listed below. • Do you have any questions about the purpose of this project? • Do you have any questions about the background information presented in the Planning Brief? • Are there any other things that need to be considered during the design of the development?	
Tool 3: Public Information Session – In-Person	January 13, 2021
• In-person public engagement event held at TBD. • To be designed using COVID-19 protocol (see attached for Sample COVID Event Plan). **Yukon First Nation Training:**	

Reference: **Dawson Dome Road Subdivision: Engagement Plan**

Engagement Activity	Proposed Date
• We will rely on a Tr'ondëk Hwëch'in youth to assist with the event planning, set-up, contact tracing, and note taking. **Purpose:** • Review the background information as outlined in the Planning Brief with stakeholders and the public. • During this session, key staff will be present to explain the information, answer questions, and gather feedback. **Direct attendees of the session to complete the short public survey to provide feedback.**	
Tool 4: Public Information Session – Online Broadcasting	January 15, 2021
• We will broadcast the public information session live through Microsoft Teams, and record the event to be posted online following the meeting. • Online attendees will also have the opportunity to ask questions in real time. **Direct attendees of the session to complete the short public survey to provide feedback.**	
Dawson City Council	Feb 10, 2021
• Present the Final Planning Brief to City Council for approval. Also present the draft design concepts and get feedback on these prior to public engagement.	
PHASE 4: DRAFT CONCEPT PLAN	
Draft Concept Plans Engagement with Tr'ondëk Hwëch'in	March 1, 2021
• In-person meeting, held at Tr'ondëk Hwëch'in offices • This meeting will also be broadcasted using Microsoft Teams for those unable to attend in-person. **Purpose:** • Walk through each of the proposed development concepts and review the strengths and weaknesses of each; as well as how each relates to their previously-identified goals/ priorities. • As a result of this meeting, we hope to gain feedback about which concept, if any, Tr'ondëk Hwëch'in prefers and any modifications that may be required.	
Draft Concept Plans Engagement with the Community	March 1 to 10, 2021
Advertising Materials	
• Local radio announcement for in-person engagement opportunity • Posters a key locations and community notice boards around town • Klondike Sun advertisement for in-person engagement opportunity • City of Dawson website and/ or social media posts for online video and in-person engagement opportunity • Tr'ondëk Hwëch'in information package	
Tool 1: Public Online Video	
• Short presentation video (PowerPoint presentation with voice-over) to present the draft concept plans to explain the strengths and weaknesses of each and how each relates to the community's previously-identified priorities. • Video will be posted on the City of Dawson website and advertised on social media pages. • Direct viewers of the video to complete the short public survey to provide feedback.	

Reference: **Dawson Dome Road Subdivision: Engagement Plan**

Engagement Activity	Proposed Date
Tool 2: Public Online Survey (Hosted through Survey Monkey)	March 1 to 10, 2021
Will be used to gather feedback on the draft concept plans. Examples of the types of questions to be asked are listed below. • Concept A and short description – How would you rate Concept A (sliding-scale) – Do you have any comments or questions about Concept A? • Concept B and short description – How would you rate Concept B (sliding-scale) – Do you have any comments or questions about Concept B? • Concept C and short description – How would you rate Concept C (sliding-scale) – Do you have any comments or questions about Concept C? • Do you have any other thoughts that should be considered?	
Tool 3: Public Information Session – In-Person	March 2, 2021
• In-person public engagement event held at TBD • To be designed using COVID-19 protocol (see attached for Sample COVID Event Plan) **Yukon First Nation Training**: • We will rely on a Tr'ondëk Hwëch'in youth to assist with the event planning, set-up, contact tracing, and note taking. **Purpose:** • Present the draft concept plans to explain the strengths and weaknesses of each and how each relates to the community's previously-identified priorities. **Direct attendees of the session to complete the short public survey to provide feedback.**	
Tool 4: Public Information Session – Online Broadcasting	March 3, 2021
• We will broadcast the public information session live through Microsoft Teams, and record the event to be posted online following the meeting. • Online attendees will also have the opportunity to ask questions in real time. • Direct attendees of the session to complete the short public survey to provide feedback.	
PHASE 5: SUBDIVISION MASTER PLAN REVIEW AND APPROVAL	
Dawson City Council	Early April, 2021
• Present Preferred Concept and Draft Master Plan to City Council for feedback.	
Present the Draft Dome Road Master Plan to Tr'ondëk Hwëch'in	Late April, 2021
• Present Master Plan to Tr'ondëk Hwëch'in and get feedback.	
Draft Dome Road Master Plan – Public Review	Late April, 2021
Advertising Materials	
• Local radio announcement for in-person engagement opportunity • Posters a key locations and community notice boards around town • Klondike Sun advertisement for in-person engagement opportunity	

Reference: **Dawson Dome Road Subdivision: Engagement Plan**

Engagement Activity	Proposed Date
• City of Dawson website and/ or social media posts for online materials and in-person engagement opportunity • Tr'ondëk Hwëch'in information package	
Tool 1: Posting of Master Plan Online	Late April, 2021
• We will post both the Final Concept Plan and Final Dome Road Subdivision Master Plan online for two weeks so community members can review both at their own pace.	
Tool 2: Public Online Survey (Hosted through Survey Monkey)	Late April, 2021
Will be used to gather feedback on the final concept plan and master plan. Examples of the types of questions to be asked are listed below. • Concept Plan and short description – How would you rate the final Concept Plan (sliding-scale) – Do you have any comments or questions about the concept plan? • Master Plan [link] – Do you have any comments or questions about the Master Plan? **Do you have any other thoughts that should be considered?**	
Tool 3: Public Information Session – In-Person	Late April, 2021
• In-person public engagement event held at TBD • To be designed using COVID-19 protocol (see attached for Sample COVID Event Plan) **Yukon First Nation Training:** • We will rely on a Tr'ondëk Hwëch'in youth to assist with the event planning, set-up, contact tracing, and note taking. **Purpose:** • Showcase the Final Concept Plan to stakeholders and the public. • During this session, key staff will be present to explain the information, answer questions, and gather feedback. **Direct attendees of the session to complete the short public survey to provide feedback.**	
Tool 4: Public Information Session – Online Broadcasting	Late April, 2021
• We will broadcast the public information session live through Microsoft Teams, and record the event to be posted online following the meeting. • Online attendees will also have the opportunity to ask questions in real time. **Direct attendees of the session to complete the short public survey to provide feedback.**	
Dawson City Council	May, 2021
• Present the Final Mater Plan to City Council for approval.	
Present the Final Dome Road Master Plan to Tr'ondëk Hwëch'in	May, 2021
• Present Final Master Plan to Tr'ondëk Hwëch'in.	

Reference: **Dawson Dome Road Subdivision: Engagement Plan**

Engagement Activity	Proposed Date
PHASE 6: YESAB Submission	
Dawson City Council	June, 2021
• Present YESAB application update for information.	

Stantec

Memo

To:	Ben Campbell/Stephanie Pawluk	From:	Stantec Architecture Ltd.
File:	Dawson City - Dome Rd Future Subdivision Master Plan	Date:	October 23, 2020

Reference: COVID-19 Plan for Public Gathering

In accordance with the guidelines outlined by the Yukon government regarding holding a gathering, Stantec has prepared the following COVID-19 Plan to assist staff in hosting a safe public event.

This Plan has been developed based on the current COVID-19 situation and the current restrictions and guidelines provided by Yukon government. It is understood that if the situation in the territory changes before the planned events, this Plan may need to be updated.

GOALS

- Prevent the spread of illness by restricting attendance from those who may be infected with COVID-19, enhancing sanitation standards for those in attendance, and maintaining physical distancing between all attendees and staff.
- Accommodate all safety protocols which may vary by location, organization (Stantec, Yukon government, City of Dawson, stakeholder/ venue organization), personal comfort level, and may change as the project goes along.
- Showcase Stantec, the Yukon government, and City of Dawson as leaders in safety and professionalism.
- Support both in-person and physically-distanced engagement as appropriate.

COVID PRECAUTIONS, BY ENGAGEMENT ACTIVITY

IN-PERSON, SMALL GROUP MEETINGS

About

- The Technical Advisory Working Group (i.e. representatives from Stantec, Yukon government, and City of Dawson) will be meeting on an on-going basis to discuss the project.
- Representatives from the Project Team will also be meeting with Tr'ondëk Hwëch'in and stakeholders on an as-needed basis to discuss the project.

Safety Precautions Taken Before the Event

- All meetings will be held using the online platform Microsoft Teams.
  - Participants will be encouraged to join online using video if possible.
- Based on the safety protocols held at the time of each meeting, in-person gathering may be permitted to supplementary the online meeting.
- All participants will be given the option to join meetings either in-person or online.

Reference: **COVID-19 Plan for Public Gathering**

In-Person Safety Precautions

Selection of venue

- Venues for in-person gatherings will be selected based on their capacity to accommodate applicable safety protocols in place at the time of the meeting and their technical capacity to join the online Microsoft Teams meeting.
  - Safety regulations requirements may include:
    - 2m physical-distancing between each attendee
    - Access to the washrooms by attendees
    - Work with venue staff to sanitizing of all surfaces before and after use

Travel

- Attendees travelling to an in-person meeting will be required to consider National, Territorial/ Provincial, local, or employer travel regulations at the time of the meeting.
  - Air travel may be discouraged
  - Self-isolation upon arrival may be required
  - Carpooling may be restricted or require face coverings

Determining suitability for attendance

- All attendees of in-person meetings must complete their own applicable safety forms (e.g. Fit for Duty forms) to confirm they are able to attend the meeting:
  - are not experiencing any symptoms of COVID-19,
  - have not travelled outside of Yukon, NWT, Nunavut, or BC within the last 14 days, or
  - have not come into contact with someone who is suspected or confirmed to have COVID-19 within the last 14 days

In-person meeting protocols

- Host venues will be responsible for providing hand sanitizer containing a minimum of 60% alcohol for attendees' use.
- Host venue will be responsible for gathering contact information for all attendees, which will be submitted to Stantec who will keep it a paper record for a minimum of 21 days, for the purposes of contract-tracing. Contact information not to be shared and is destroyed after the 21 days.
- Host venues will be responsible for informing attendees if they are required/ encouraged to wear face coverings.
  - This requirement will be based on local/ venue/ or employer regulations with the strictest regulation being used.
  - Disposable masks will be provided to participants, but will be optional
- No shared food or drink should be consumed during the meeting. Packaged food may be provided.
- Host venues will be responsible for cleaning and sanitizing the meeting area and any other spaces which were used.

Reference: **COVID-19 Plan for Public Gathering**

IN-PERSON, LARGE GROUP MEETINGS

About

- Three in-person, large group meeting (ie. public information session) will be held for this project which is regulated by Yukon government.
- Because the event will be open to the general public, attendees will not be members of the same social bubble.
  - In accordance with YG's COVID regulations, attendance will be limited to 50 persons, including staff, provided that physical distancing can be maintained.

Safety Precautions Taken Before the Event

- Each public information session may broadcasted (on a separate date) using the online platform Microsoft Teams.
  - The event will be recorded and posted online for those who were unable to attend.
- All members of the public will be given the option to attend an in-person public information session or join the online broadcast.
- Sign up to each session will be required to anticipate the number of participants and ensure that the venues are appropriate.

Selection of Venue

- The selection of a venue for indoor in-person public information sessions will require the project team to make assumptions on the number of participants, objectives of each session and potential activities. Venues will be selected to ensure COVID capacity is appropriate for each session.

Inside the venue

Set-up

- Chairs will be arranged to promote physical distancing.
  - Chairs will be arranged in sets of 2 or 4, to allow attendees to sit together in family groupings, with a minimum of 2m surrounding each set of chairs.
- All surfaces will be wiped down and sanitized.
- Tape will be placed on the floor to indicate one-way traffic movement through the room.

Washrooms

- Washrooms will be checked for liquid soap, paper towel, toilet paper, and warm running water
- Signs will be posted in the washrooms reminding users to properly wash their hands
  - Will use the poster as prepared by Yukon government (attached)

At the entrance

- A sign will be posted at the entrance advising guests to physically distance themselves from other attendees.
  - Will use the poster as prepared by the Yukon government (attached)
- Hand sanitizer containing a minimum of 60% alcohol will be provided for attendees' use

Reference: COVID-19 Plan for Public Gathering

Outside

- A sign will be posted on the exterior of the entrance advising guests who arrive with symptoms to return home.
  - Will use the poster as prepared by Yukon government (attached)
- If possible, tape will be used outside the entrance to mark 2m spacing; encouraging physical distancing while attendees wait in line to get into the venue

Safety Precautions as Attendees Arrive

Screening

- All guests will be greeted by a staff member at the entrance of the venue.
- Attendees will be asked by a staff member if they:
  - are experiencing any symptoms of COVID-19,
  - have travelled outside of Yukon, NWT, Nunavut, or BC within the last 14 days, or
  - have come into contact with someone who is suspected or confirmed to have COVID-19 within the last 14 days
- If the answer to any of the questions is yes, guest will not be permitted access into the event.
- Those permitted into the venue will be asked for their name and phone number, to allow for contact tracing. Records will be kept for a minimum of 21 days. Contact information not to be shared and is destroyed after the 21 days.

Entry guidance

- Guests will be asked to apply hand sanitizer prior to entry into the venue.
- Guests will then be asked to find a seat in the venue, sit, and stay seated during the event.
- Guests will be told that no mingling will be permitted; as such, if they would like to mingle, please remain outdoors until the event begins.

Safety Precautions Taken During the Event

- No shared food or drink will be provided. Packages foods may be provided.
- A microphone will not be used.
- All attendees will be seated during the event.
- A formal presentation will be given by staff, standing at the front of the room, at least 2m away from the nearest person.
  - Tape will be placed on the floor to indicate where presenters should stand to maintain physical distancing.
- Following a question and answer period, guests will be asked to leave the venue while maintaining physical distance.

Safety Precautions Taken After the Event

- Staff will wear gloves while taking down the venue, cleaning, and emptying garbage containers.
- Work with the venue to ensure that all surfaces will be wiped down and sanitized.

Reference: **COVID-19 Plan for Public Gathering**

Resources Required

- 1 Entry pre-screening poster, printed (attached)
- 3 Hand-washing posters, printed (attached)
- 3 Physical distancing posters, printed (attached)
- 1 roll of scotch tape
  To be used to hand posters

- 1 roll of masking tape
  To be used to mark out 2m spacing outside, inside for presenters, and one-way traffic

- 1 bottle of hand sanitizer, containing at least 60% alcohol
- Box of disposable masks
- 1 Contact-tracing form (attached)
- 2 pens

- Bucket
- Hot water
- Cleaning agent
- Cloths
- Disposal gloves
  To be used during venue clean-up

Attachment: COVID-19 regulation posters, COVID-19 Contact Tracing

Stantec

COVID-19 Contact Tracing Form

Event description			
Date		**Time**	
Location			

Attendee Name – Must Include All Staff Members	Phone #

Phase	Task	Description	Project Schedule (Completion Date)	Hr	Status	Deliverables / Milestone	Meeting/Event	Client Support	Client/Stake holder time requirement (hours)
Phase 1 Project Start-Up	Task 1.1	Transfer of Data and Background Information	October 23, 2020	30	Partial	Base plan		Provide access to all available documents	4
	Task 1.2	Project Kick-off Meeting	October 19, 2020	10	Meeting 1 – complete Meeting 2	Meeting agenda and notes, Draft/Final Dome Road Technical Advisory Working Group Terms of Reference	DRTAWGM #1	Meeting Attendance	1.5/per attendee
	Task 1.3	COVID-19 Response Memo	October 2, 2020	8	Completed	COVID-19 response plan		Review /Approval Deliverable	2
	Task 1.4	Communications and Engagement Plan	October 2, 2020	16	Completed	Communication and Engagement Plan	Meet with Tr'ondëk Hwëch'in	Review /Approval Deliverable, Meeting Attendance	3/per attendee, 4 for review
Phase 2 Review of Data and Land Suitability Analysis	Task 2.1	Review of Relevant Policies and Plans	October 23, 2020	32	Partial	Summary of relevant Policies and Plans		Review /Approval Deliverable	4
	Task 2.2	Land Suitability Analysis	October 31, 2020	34	Partial	Opportunities and Constraints/ Development Suitability Map	Golder Associates Tetra Tech	Review /Approval Deliverable, Meeting Attendance	2/per attendee, 8 for review
	Task 2.3	Offsite Engineering and Servicing Review	November 15, 2020	48	Partial	Tech memo		City of Dawson to provide access to all available information	16
	Task 2.4	Development Potential Workshop	November 25, 2020	32		Dome Road Technical Advisory Working Group workshop	DRTAWGM #2 in Dawson /Site visit	Workshop Attendance, Site Visit, Meeting Attendance	3/per attendee plus travel
	Task 2.5	Development Potential Briefing	November 30, 2020	36		Development Potential Brief		Review /Approval Deliverable	
Phase 3 Completion of the Visioning Charrette and Engagement	Task 3.1	Draft Planning Brief	December 16, 2020	40		Draft Planning Brief		Review /Approval Deliverable	8
	Task 3.2	Tr'ondëk Hwëch'in Engagement on Planning Brief	January 12, 2021	22		Meeting agenda and notes	Meet with Tr'ondëk Hwëch'in	Meeting Attendance	3/per attendee
	Task 3.3	Community Engagement on the Planning Brief	January 13, 2021	22		Meeting presentation materials and meeting summary	Engagement Session 1	Session Attendance	

	Task 3.4	Finalize the Planning Brief	January 22, 2021	40		Final Planning Brief		Review /Approval Deliverable	24
	Task 3.5	Presentation of the Final Planning Brief	February 4, 2021	12		Planning Brief presentation, meeting notes	Presentation	Meeting Attendance	2/per attendee
Phase 4 Draft Concept Plan	Task 4.1	Draft Neighbourhood Design Option(s)	February 5, 2021	30		Draft neighbourhoods design option(s)		Review /Approval Deliverable	8
	Task 4.2	Internal Review of Draft Neighbourhood Design Option(s)	February 18, 2021	8		High-level design options(s)	DRTAWGM #3	Meeting Attendance	4/per attendee
	Task 4.3	Begin the Draft Dome Road Master Plan and Pre-Design Report	November – March1, 2021	160		Table of Contents		Answer questions and provide advice	8
	Task 4.4	Tr'ondëk Hwëch'in Engagement on the Draft Concept Plans	March 1, 2021	22		Meeting agenda and notes	Meet with Tr'ondëk Hwëch'in	Meeting Attendance	2/per attendee
	Task 4.5	Community Engagement on the Draft Concept Plans	March 2, 2021	22		Meeting presentation materials and meeting summary	Engagement Session 2	Session Attendance	3/per attendee plus travel
	Task 4.6	Selection of Preferred Design Concept	March 12, 2021	8		Workshop agenda and materials, workshop notes, Preferred Concept Plan	DRTAWGM #4	Review /Approval Deliverable	8
	Task 4.7	YESAB Project Familiarization Meeting	February, 2021	8		YESAB Project Proposal annotated table of contents	Meeting with YESSA	Meeting Attendance	1/per attendee
	Task 4.8	Completion of the Draft Dome Road Subdivision Master Plan and Pre-Design Report	March 30, 2021	120		Draft Dome Road Subdivision Master Plan and Economic and Market Analysis		Review /Approval Deliverable	8
Phase 5 Subdivision Master Plan Review and Approval	Task 5.1	Draft Dome Road Subdivision Master Plan Presentation	Early April, 2021	32		Presentation materials	DRTAWGM #5	Review /Approval Deliverable	2/per attendee
	Task 5.2	Yukon Government and City of Dawson Review	March 30-April 10, 2021			Draft Dome Road Subdivision Master Plan		Review /Approval Deliverable	60
	Task 5.3	Draft Dome Road Subdivision Master Plan Revisions	Late April, 2021	60		Draft Dome Road Subdivision Master Plan v2		Review /Approval Deliverable	24

	Task 5.4	Public Review of the Draft Dome Road Master Plan	Late April, 2021	32		Online survey, meeting presentation, and summary	Engagement Session 3		3/per attendee plus travel
	Task 5.5	Finalize Master Plan	May, 2021	30		Final Dome Road Subdivision Master Plan	DRTAWGM #6	Approval Deliverable	1/per
PHASE 6 YESAB Submission	Task 6.1	Prepare YESAB submission	March – April, 2021	94		Draft and Final YESAB submission		Review /Approval Deliverable	4
	Task 6.2	YESAB Review Support	Late April – June, 2021	88		Application support		Meeting Attendance	4
	Task 6.3	Final Project Submission	June 15, 2021	40		Final documents and maps in requested format			4

Report to Council

[X] For Council Decision [ ] For Council Direction [ ] For Council Information

[ ] In Camera

SUBJECT:	KVA & AYC Appointments	
PREPARED BY:	Cory Bellmore, CAO	**ATTACHMENTS:**
DATE:	November 10, 2020	
RELEVANT BYLAWS / POLICY / LEGISLATION:		

RECOMMENDATIONS

That Council

- Reappoint Councillor Kendrick as Council's representative for the Klondike Visitors Association (KVA) Board for a one-year term.

- Reappoint Councillor Shore as Council's representative for the Association of Yukon Communities (AYC) Board for a one-year term.

ISSUE / PURPOSE

To review Council appointments for representatives to the KVA and the AYC.

BACKGROUND SUMMARY

Resolution passed by Council at the November 20, 2019 Council meeting:

C19-23-11 Moved by Mayor Potoroka, seconded by Councillor Ayoub that council hereby
- reappoints Councillor Kendrick as council's representative for the Klondike Visitors Association (KVA) Board for a one-year term;
- reappoints Councillor Shore as council's representative for the Association of Yukon Communities (AYC) Board for a one-year term;

Motion Carried 4-0

APPROVAL		
NAME:	Cory Bellmore, CAO	**SIGNATURE:** C Bellmore
DATE:	November 10, 2020	

Report to Council

[X] For Council Decision [ ] For Council Direction [ ] For Council Information

[ ] In Camera

AGENDA ITEM:	New Water Reservoirs	
PREPARED BY:	Marc Richard, Public Works Manager	**ATTACHMENTS:**
DATE:	October 22, 2020	Associated Engineering – Technical Memo Reservoir Replacement
RELEVANT BYLAWS / POLICY / LEGISLATION:		

RECOMMENDATION

That Council approve the location of the new reservoirs at the Turner Street location (old pump house) as per the recommendation from Associated Engineering.

ISSUE / PURPOSE

The City of Dawson requires new reservoirs. Associated Engineering was contracted to conduct conceptual design with the following goals:

1. Identify a new reservoir location that minimizes capital and ongoing operational costs
2. Identify infrastructure needs to service future lots on Dome Road.

Approval of the location recommended by Associated Engineer at the Turner Street location triggers the project to move forward to design in the winter of 20/21 and site preparation in the summer of 2021.

BACKGOUND SUMMARY

New reservoirs are needed to provide adequate storage for population growth and fire flow as well as increased disinfection contact time. The current reservoirs are under sized and are at the end of their lifecycle. This was an expected capital project following the construction of the new Water Treatment Plant.

Administration worked with Yukon Government Infrastructure Development Branch on moving this project forward. Associated Engineering was contracted and provided the following scope of work:

- Review background information;
- Update City of Dawson Water CAD model to include upgrades since 2016;
- Conduct water modelling of Klondike Valley and Dome Road servicing;
- Identify potential sites for new reservoirs at either the Pump house site or Crocus Bluff;
- Identify major infrastructure upgrades for new reservoirs and Dome Road servicing;
- Prepare process flow diagrams and site layouts of proposed reservoir locations and Dome Road; and Prepare Class “D” cost estimates.

Associated Engineering provided the Reservoir Replacement Conceptual Design and presented this to Council in October, 2020.

Following the presentation, Council requested clarification on potential additional alternate options/locations and impact on Capital and Operating costs. Administration and YG went back to Associated Engineering for clarification and their perspective on other options.

A technical memo (attached) provides a response on the other potential options as well as confirmation of the recommended option.

ANALYSIS / DISCUSSION

Option 1 : approve the location of the new reservoirs at the Turner Street location (old pump house)

Option 2 : to approve the location of1 reservoir on Crocus Bluff and refurbish an existing reservoir at the Turner Street location (current reservoirs) for a clear well .

Associated Engineering recommends option 1 for both long term Operation and Maintenance costs as well as Capital construction costs.

APPROVAL		
NAME:	Cory Bellmore	**SIGNATURE:** 
DATE:	November 12, 2020	

Associated Engineering | GLOBAL PERSPECTIVE. LOCAL FOCUS.

TECHNICAL MEMORANDUM

Issue Date:	November 9, 2020	File No.:	Work/Advice
To:	Rick Kent	Previous Issue Date:	None
From:	Matt Lozie, P.Eng.	Project No.:	2019-2794-00
Client:	Yukon Government		
Project Name:	City of Dawson Reservoir Replacement		
Subject:	Reservoir Location		

Associated Engineering (AE) presented findings of the City of Dawson Reservoir Replacement Conceptual Design to City Council on October 21st, 2020. AE recommended the existing Pumphouse Site for the location of the new reservoirs. Following the meeting, council responded with a request to re-consider the Crocus Bluff location and alternative pipeline routes to service the Klondike Valley and Dome Road area. The following memo re-iterates the rationale behind AE's recommendation to locate the new reservoirs at the Pumphouse site.

The main benefit of a reservoir at Crocus Bluff is to reduce the City's reliance on mechanical equipment in an emergency scenario; however, many communities across Canada, including in Yukon, rely on pumps to meet demand during emergency situations. Both the Village of Mayo and the Town of Faro have backup distribution pumps that operate during a fire scenario. Water towers have traditionally been used in many communities but are slowly being replaced by fire pumps as they are proving more reliable with backup power and regular maintenance. The Fire Underwriters Survey recognizes both gravity and pumps with backup power as acceptable means for fire protection. The City of Dawson identified that minimizing operation and maintenance (O+M) costs was a top priority for this project and water heating is the largest contributor to O+M costs. The Crocus Bluff reservoir configuration requires additional water heating because a clearwell at the Pumphouse Site and additional 1 km of watermain is required. AE's WaterCad modeling estimated an additional 1°C heat loss for Crocus Bluff configuration compared to the Pumphouse site. The average cost of fuel to heat water over the 20-year design life is over $91,000 per year.

In AE's report, there were two options outlined for servicing the Dome Road and Klondike Valley. Option 1 included a booster station and reservoir, while Option 2 included a distribution pumphouse only. Option 2 was recommended due to the lower 20-year Net Present Value (NPV). Council has requested investigation into an alternate pipeline route from Crocus Bluff to a Moose Mountain reservoir located near the proposed reservoir location in Option 1. This new alignment requires the construction of the Crocus Bluff reservoir with a pump station at the reservoir to lift water to the Moose Mountain reservoir where the Dome road area would be fed by gravity flow from the reservoir. While this new route reduces the length of pipeline required to service the Dome Road area it has the following drawbacks:

1. Relying on an additional reservoir increases the ongoing heating costs due to the heat lost through the reservoir walls and roof. For this reason, Option 2 was recommended over Option 1 in the original analysis and the same reasoning applies for Council's proposed alignment.
2. Building a reservoir of this size requires the reservoir to be sized for the ultimate development buildout, as future expansions as buildout expands would not be practical. If the Dome Road service area is built out in stages with minimal demand in the earlier stages this leads to potential water stagnation issues in the reservoir as well as higher O&M costs in the winter since the water will sit in the reservoir for longer without being used.

3. The proposed options 1 and 2 in the report include infrastructure along the Klondike Highway that would allow for increased fire flow to be supplied towards the end of the Callison line due to higher pressures being available from the Dome Road service area that could feed the Callison line in the event of a fire. These proposed options eliminate the current fire flow deficiencies in the Klondike Valley area, but the proposed alignment from Crocus Bluff to Dome Road would not have a connection to the Callison line and therefore not allow for increased fire flow to that area.

The capital cost savings associated with Council's proposed alignment would be from eliminating approximately 500m of twinned watermain when compared to the alignment running up Dome road. The alternate alignment would also eliminate just over 1km of 100mm diameter return pipe along the highway. The additional costs associated with this proposed alignment include the costs of installing the infrastructure for the Crocus Bluff reservoir which include the watermains between Crocus bluff and the water treatment plant (WTP), reservoir building, reservoir access road, reservoir site services, overflow piping, WTP tie-ins. It is assumed in both cases that the old pumphouse would be demolished and the bolted steel tanks are not included as they would be required regardless of the location selected.

Overall, the capital cost savings of the proposed alignment do not outweigh the increased capital costs of installing a reservoir at Crocus Bluff rather than at the old pump house. The yearly O&M costs would be greater for the alternate alignment and it would not allow for the fire flow upgrades along the highway.

Alternative watermain alignments proposed by Council from the Dome Road pump station up to the Dome road service area should be considered at later planning stages for the Klondike Valley and Dome Road development; however, our recommendation to locate the new reservoirs at the Pumphouse remains unchanged.

Prepared by: Reviewed by:

Matt Lozie, P.Eng Steve Bartsch, P.Eng

LW/ML/SB

Report to Council

[x] For Council Decision [ ] For Council Direction [ ] For Council Information

[ ] In Camera

AGENDA ITEM:	True North Company Lease Agreement	
PREPARED BY:	Paul Robitaille, Parks and Recreation Manager	**ATTACHMENTS:** Draft lease agreement – True North Company
DATE:	October 1, 2020	
RELEVANT BYLAWS / POLICY / LEGISLATION: Bylaw #10-10 – Lease and Rental Bylaw		

RECOMMENDATION

That Council authorize administration to enter into a 6-month lease agreement with True North Company to rent the back portion of the True North Company building, with the term ending on April 30, 2021.

ISSUE / PURPOSE

Bylaw #10-10 requires council resolution to enter into a lease or rent property from another party.

BACKGOUND SUMMARY

With the lack of a school gym, ancillary room, and COVID requirements for physical distancing, there is a dire lack of programming space to accommodate the needs of programming in the community. To allow administration to negotiate a lease agreement, Committee of the Whole passed the following resolution on Oct 7th:

CW20-16-05 Moved by Councillor Ayoub, seconded by Councillor Kendrick that Committee of the Whole forward to Council approval for administration to enter into a lease agreement for up to $3000 monthly to assist in the rental of an additional programming space for community use. Carried 4-0

ANALYSIS / DISCUSSION

We have completed negotiation for the lease and are now seeking approval to enter into this specific lease agreement with True North Company for $2500/month ending April 30, 2021. These other two possible locations could likely accommodate 12-20 people.

We will continue to use Minto for Recreation Programming purposes, and the occasional rental is spacing requirements allow. The additional space would be primarily for third party programming which the City would partner on.

APPROVAL		
NAME:	C Bellmore	**SIGNATURE:** C Bellmore
DATE:	Nov 12, 2020	

LEASE AGREEMENT

This Lease Agreement is made effective on this 30th Day of October, 2020

Between
True North Company,
Box 947
Dawson City, Yukon
Y0B 1G0

(Hereinafter known as "True North", of the First Part)

And
City of Dawson
Box 308
Dawson City, Yukon
Y0B 1G0

(Hereinafter known as the "City", of the Second Part)

LEASE AGREEMENT REGARDING THE RENTAL OF THE BACK PORTION OF THE TRUE NORTH COMPANY BUILDING, 1072 FRONT STREET, DAWSON CITY,

The parties to this Agreement agree to the terms and conditions set out hereunder.

1.00 TERM OF THE AGREEMENT

1.01 The term of this Agreement shall be for a term of 6 months, commencing on **November 1, 2020** and expires **April 30, 2021.**

1.04 This Agreement allows the City to operate their own, as well as third-party, programming on a daily basis, for the duration of this agreement

2.00 PREMISES

2.01 True North Company agrees to lease to the City the back room at the building at 1072 Front Street, City of Dawson.

3.00 REMUNERATION

2.02 Upon signing of this agreement, the City agrees to pay True North Company two thousand five hundred dollars ($2500.00) per month, which includes all additional costs, including heating, electrical and costs of utilities, for the term of this agreement.

4.00 CITY OBLIGATIONS

4.03 City, at their own cost, shall, at all times maintain their rented portion of the building in a neat and tidy fashion, including daily sanitization and cleaning.

4.04 City accepts the building in the current state, and will not make any changes to the infrastructure, without prior discussion with True North. City accepts responsibility for any damages caused during the rental of this space.

4.05 City shall maintain at all times during the term of this agreement public liability and property damage insurance of at least two million dollars ($2,000,000.00) against claims for personal injury, death or damage to property arising out of the operation of the this space under this agreement.

4.06 City shall provide proof that insurance is in place

5.00 TRUE NORTH OBLIGATIONS

5.01 True North shall ensure that boardwalk and door access is shovelled of all snow throughout the length of this lease.

5.02 True North shall ensure that the building is functioning properly, and shall provide any operational maintenance that may be required.

6.00 LIABILITY

6.01 City shall not have any claim or demand against True North, or any of its employees, or agents for detriment, damage, accident or injury, of any nature whatsoever or howsoever unless such damage or injury is due to the negligence of any employee, servant or agent of True North while acting within the scope of his duties or employment.

6.02 City at all times shall indemnify and save harmless True North or any of its officers, servants or agents from and against all claims and demands, loss, costs, damages, actions, suits or other proceedings by whomsoever made, brought or prosecuted, in any manner based upon, occasioned by or attributable to the execution of this agreement, or any action taken or things done or maintained by virtue hereof, or the exercise in any manner of rights arising hereunder, except claims for damage resulting from the negligence of any officer, servant or agent of True North while acting within the scope of his duties or employment.

7.00 GENERAL PROVISIONS

7.01 Time shall be of the essence of this agreement and of every part hereto and no extension or variation of the agreement shall operate as a waiver of this provision.

7.02 This agreement shall ensure to the benefit of and be binding upon the parties hereto, their executors, administrators, successors and authorized assigns.

7.03 This Agreement may be amended by the mutual written consent of the Parties hereto. To be valid, any amendment to this Agreement shall be in writing and signed by the Parties hereto within the duration of this Agreement.

In Witness whereof the parties have executed this agreement by their respective proper signatures as of the day and year written below:

FOR CITY OF DAWSON

_____
Date

_____	_____
Witness name (printed clearly)	Name (printed clearly)
_____	_____
Witness Signature	Signature

FOR TRUE NORTH COMPANY

_____
Date

_____	_____
Witness name (printed clearly)	Name (printed clearly)
_____	_____
Witness Signature	Signature

Report to Council

[X] For Council Decision [ ] For Council Direction [ ] For Council Information

[ ] In Camera

AGENDA ITEM:	Humane Society Dawson Lease Agreement (Lot 8-2, Callison Dry Industrial Subdivision	
PREPARED BY:	C Bellmore	**ATTACHMENTS:** Draft Lease Agreement – Humane Society Dawson
DATE:	October 21, 2020	
RELEVANT BYLAWS / POLICY / LEGISLATION: Bylaw #10-10 Lease & Rental Bylaw Property Lease Policy 2017-15		

RECOMMENDATION

That Council authorize administration to enter into a 5-year lease agreement with Humane Society Dawson with the term ending May 31, 2025.

ISSUE / PURPOSE

Bylaw #10-10 “Lease and Rental Bylaw” requires a resolution of Council to lease or rent property from another party. Upon passing of a resolution the authority is delegated to the CAO.

BACKGOUND SUMMARY

The Humane Society lease for this location has now expired and they would like to renew the lease on the same terms as the previous lease.

ANALYSIS / DISCUSSION

Section 4.1 (c) of Property Lease Policy 17-05 gives the current occupant the right of first refusal to renew their lease if they meet all the guidelines

Section 4.1 (b) requires approval of Council to make a City of Dawson property available for sale or lease

Administration does not foresee the need for this space in the next 5 years to meet operational objectives and recommends the renewal on the same terms as previous.

APPROVAL		
NAME:	C Bellmore	**SIGNATURE:** C Bellmore
DATE:	November 10, 2020	

LEASE AGREEMENT

This Lease Agreement is made effective on this 1st day of June, 2020.

Between
Humane Society Dawson
Box 1143
Dawson City, Yukon
Y0B 1G0

(Hereinafter known as the "Society", of the First Part)

And
City of Dawson
Box 308
Dawson City, Yukon
Y0B 1G0

(Hereinafter known as the "City", of the Second Part)

WHEREAS the City and the Society are interested in continued cooperation to enhance animal services for the citizens of Dawson and others, and

WHEREAS the City is the owner of Lot 8-2, Callison Dry Industrial Subdivision, Dawson City, YT, and

WHEREAS the Society is interested in leasing a portion of the said property for the continued operations of Humane Society Dawson, now

WHEREAS council passed resolution # _____ at their meeting on November _____, approving this lease, now

Therefore, the parties to this Agreement agree to the terms and conditions set out hereunder.

1.00 TERM OF THE AGREEMENT

1.01 The term of this Agreement shall be for a term of five (5) years, commencing on **June 1, 2020** and expires **May 31, 2025.**

1.02 The Society shall have the right to renew this agreement for a further term of five (5) years upon the mutual consent of both parties.

1.03 This agreement may be terminated by either party giving the other party written notice at least one year in advance of the date of termination.

1.04 Notwithstanding Section 1.03 of this agreement, where the City is of the opinion that an emergency requires the immediate relocation of the Society's building, the City may terminate this agreement by giving three months' notice in writing to the Society of its intention to terminate the agreement, subject to the City being responsible to pay all costs associated with relocating the Society's building including the cost of acquiring land on which the building can be relocated.

2.00 PREMISES

2.01 The City agrees to lease to the Society a portion of Lot 8-2, Callison Dry Industrial Subdivision, within the City of Dawson.

3.00 REMUNERATION

3.01 Upon signing of this agreement, the Society agrees to pay a rental of one dollar ($1.00) per year, for the term of this agreement.

3.02 Where an agreement for the provision of animal boarding services exists between the City and the Society, the annual rent shall be one dollar ($1.00), payable on January 1 of the year for which it is due.

3.03 Where an agreement for the provision of animal boarding services does not exist between the City and the Society, the annual rent shall be one thousand dollars ($1,000.00), payable on January 1 of the year for which it is due.

3.04 Where an operating agreement for the provision of animal control services between the City and the Society is terminated part way through a year, the rent owing for the portion of the year in which the agreement does not exist shall be calculated by prorating the one thousand dollars on the basis of the number of complete months in the year in which the operating agreement was not in effect.

5.00 USE OF PROPERTY

5.01 The City agrees to the continued allocation of the portion of the Callison Industrial Park Public Works Yard as identified in the attached Schedule “A” for use by the Society for the term of this agreement under the following terms and conditions:

a) The said land shall be used for the location of the Society’s administrative office, animal shelter, parking, storage area and outdoor kennels, and such other uses as may be agreed to in writing by the City.

b) If the Society duly and regularly performs all of its obligation herein the City may, at the expiration of the term hereof and upon the Society’s written request provided to the City no later than three months prior to the expiration of the term of this agreement, grant to the Society a renewal of this use of land for a further term to be mutually agreed by the City and the Society, subject to the same covenants and agreements as contained in this agreement. If the Society’s written request is not received, the use of the land shall automatically expire.

c) In the event the Society remains in possession of the land after the end of the term and without the execution and delivery of a new agreement, there shall be no tacit renewal of this lease or the term herby granted and the Society shall be deemed to be occupying the land as a lessee from month to month.

d) The Society shall enjoy quiet possession of, and right of ingress and egress to, the said land subject to the condition that the City, its officers, servants or agents shall have full and free access for inspection purposes to the said land, subject to the City providing at least 24 hours written notice to the Society of the date and time of the inspection unless the inspection is dealing with an emergency situation. A Society representative may accompany City officials on a scheduled inspection, but the City is under no obligation to wait beyond the time the inspection is scheduled. In an emergent situation, the City will attempt to contact the Society but may proceed with the inspection in any event.

e) All fencing, office structure and animal shelter, parking area, outdoor kennels, storage warehouse or other facilities erected by the Society will be in accordance with plans approved by the City. The Society shall keep said buildings and appurtenances in a good state of repair to the satisfaction of the City.

6.00 SOCIETY OBLIGATIONS

6.01 The Society, at the cost and expense of the Society, shall, at all times, maintain the said land in a neat and tidy condition as well as in a good state of repair.

6.02 The Society accepts the said land in an “as is” condition and may, with prior written consent of the City, which consent will not be unreasonably withheld, make improvements to the said land to make them suitable for the Society’s purposes. Any such improvements made by the Society at any time during the term of this agreement shall be at the risk, cost and expense of the Society.

6.03 The Society shall pay all capital costs related to upgrading the Society’s buildings and structures, installation of and connection to all utilities, and fencing and parking areas on the site provided by the City.

6.04 The Society shall pay all operating and maintenance costs for the Society buildings, fencing, and other structures on site.

6.05 The Society shall be responsible for paying all rates, taxes, and other charges and fees for service lawfully levied by the City, as well as all utilities levied by other service providers, and which become due and payable upon or in respect of the said land or any part thereof.

6.06 The Society shall maintain at all times during the term of this agreement public liability and property damage insurance of at least two million dollars ($2,000,000.00) against claims for personal injury, death or damage to property arising out of the operation of the Society under this agreement, or of any of the acts or omissions of the Society or any of its agents, employees or servants.

6.07 The Society, upon request by the City, shall provide proof that insurance is in place pursuant to this Agreement.

7.00 CITY OBLIGATIONS

7.01 The City shall pay all real property taxes levied in respect of the premises.

8.00 LIABILITY

8.01 The Society shall not have any claim or demand against the City or any of its officers, servants or agents for detriment, damage, accident or injury, of any nature whatsoever or howsoever caused to the said land or to any person or property, including any structures, erections, equipment, materials, supplies, motor or other vehicles, fixtures and articles, effects and things on or about the said land unless such damage or injury is due to the negligence of any officer, servant or agent of the City while acting within the scope of his duties or employment.

8.02 The Society at all times shall indemnify and save harmless the City or any of its officers, servants or agents from and against all claims and demands, loss, costs, damages, actions, suits or other proceedings by whomsoever made, brought or prosecuted, in any manner based upon, occasioned by or attributable to the execution of this agreement, or any action taken or things done or maintained by virtue hereof, or the exercise in any manner of rights arising hereunder, except claims for damage resulting from the negligence of any officer, servant or agent of the City while acting within the scope of his

duties or employment.

9.00 CONDITIONS ON EXPIRY OF AGREEMENT

9.01 Any structures including repairs, alterations, or improvements made to them remaining on the said lands at the expiry of this agreement (except and subject as this agreement may otherwise specifically provide for) shall be vested in title in the City without any payment of compensation to the Society by the City. Nevertheless, the City shall have the option of requiring or compelling the Society upon written notice to remove such structures, and the Society shall be so bound to remove said structures and to restore the said land and premises to a neat and tidy condition, all at the cost of the Society and without any right on the part of the Society to seek compensation from the City for any reason whatsoever.

10.00 ASSIGNMENT OF AGREEMENT

10.01 The Society shall not make any assignment of this Agreement, nor transfer or sublease of the whole or any portion of the said land demised or leased hereunder, without obtaining the prior consent in writing of the City to such assignment, transfer or sub-lease, which consent will not be unreasonably withheld.

11.00 INDEPENDANT CONTRACTOR

11.01 It is acknowledged by the parties hereto that the Society will act as an independent contractor, and not as an employee of the City. The Society and the City acknowledge and agree that this agreement does not create a partnership of joint venture between them.

12.00 GENERAL PROVISIONS

12.01 Time shall be of the essence of this agreement and of every part hereto and no extension or variation of the agreement shall operate as a waiver of this provision.

12.02 This agreement shall ensure to the benefit of and be binding upon the parties hereto, their executors, administrators, successors and authorized assigns.

12.03 This Agreement may be amended by the mutual written consent of the Parties hereto. To be valid, any amendment to this Agreement shall be in writing and signed by the Parties hereto within the duration of this Agreement.

12.04 The Society shall abide by all applicable lawful rules, regulations and bylaws of the Federal and Territorial governments and of the City affecting or pertaining to its operations within the City.

In Witness whereof the parties have executed this agreement by their respective proper signatures as of the day and year written below:

FOR THE SOCIETY

_____
Date

_____ _____
Witness name (printed clearly) Officer Name (printed clearly)

_____ _____
Witness Signature Officer Signature

FOR THE CITY OF DAWSON

_____
Date

_____
Witness name (printed clearly)

_____ _____
Witness Signature Cory Bellmore, CAO

SCHEDULE “A”

Report to Council

[X] For Council Decision [ ] For Council Direction [ ] For Council Information

[ ] In Camera

AGENDA ITEM:	Humane Society Dawson Operating Lease Agreement Leash-Free Dog Park	
PREPARED BY:	C Bellmore	**ATTACHMENTS:** Draft Lease Agreement – Humane Society Dawson
DATE:	October 21, 2020	
RELEVANT BYLAWS / POLICY / LEGISLATION:		

RECOMMENDATION

That Council authorize administration to enter into a 5 year lease agreement with Humane Society Dawson to operate the Leash-Free Dog Park with the term ending December 31, 2025.

ISSUE / PURPOSE

Bylaw #10-10 “Lease and Rental Bylaw” requires a resolution of Council to lease or rent property from another party. Upon passing of a resolution the authority is delegated to the CAO.

BACKGOUND SUMMARY

The previous agreement was a Memorandum of Understanding (MOU) and now it is expired. It was felt that the agreement was more appropriate as an Operating Lease Agreement than an MOU.

ANALYSIS / DISCUSSION

Administration does not foresee the need for this space in the next 5 years to meet operational objectives and recommends the renewal on the same terms as previous.

APPROVAL		
NAME:	C Bellmore	**SIGNATURE:** C Bellmore
DATE:	November 12, 2020	

OPERATING LEASE AGREEMENT

This Agreement is made effective on this ___ day of November, 2020.

Between
Humane Society Dawson
Box 1143
Dawson City, Yukon
Y0B 1G0

(Hereinafter known as the "Lessee", of the First Part)

And
City of Dawson
Box 308
Dawson City, Yukon
Y0B 1G0

(Hereinafter known as the "City", of the Second Part)

OPERATING LEASE AGREEMENT REGARDING THE OPERATION OF A LEASH-FREE DOG PARK ENCOMPASSING LOTS 8-10 BLOCK 5 AND LOTS 12-14 BLOCK 6, DAWSON ADDITION, PLAN 8513 CLSR YT AS IDENTIFIED IN SCHEDULE "A" OF THIS AGREEMENT

WHEREAS the City is the owner of Lots 8-10, Block 5, and Lots 12-14, Block 6, Dawson Addition and;

WHEREAS the Lessee is interested in maintaining the said property for the purpose of care and control of the leash-free dog park, and

WHEREAS this Lease Agreement between the **City** and **Humane Society Dawson** recognizes the benefit and value of working cooperatively to coordinate the maintenance and use of the Leash-Free Dog Park; this relationship recognizes the importance of responsible dog ownership and that well socialized and trained animals enhance public safety.

WHEREAS council passed resolution # _____ at their meeting on November _____, approving this lease.

Therefore, the parties to this agreement agree to the terms and conditions set out hereunder.

1.00 TERM OF THE AGREEMENT

1.01 This Agreement shall be effective as of signing by both parties and **shall expire December 31, 2025** unless extended by written consent of both parties.

1.02 Either party may terminate this Agreement by providing the other party 3 months written notice of its intention to terminate.

2.00 TERMS AND CONDITIONS

2.01 The City of Dawson agrees to:

1. Ensure that legislative authority is provided for the property to be utilized as an off-leash dog park for the duration of this agreement; and

2. Provide liability insurance for the property.

2.02 The Lessee agrees to:

1. Maintain the growth of the turf inside the fenced area by:
   a) Cutting the grass as required, and
   b) Monitor and clean area as required to ensure there is not an inordinate accumulation of feces on the property.

2. Provide further turf maintenance if required.

3. Maintain the fencing as required.

4. Ensure that adequate waste receptacles are installed at or near the area to allow users of the area to easily clean up after their animals.

3.00 REMUNERATION

3.01 Upon signing of this agreement, the City agrees to pay the Lessee up to a maximum of $5000 per year to maintain the park, upon submission of supporting invoices. These payments will be due and payable withing 30 days of receipt of invoices.

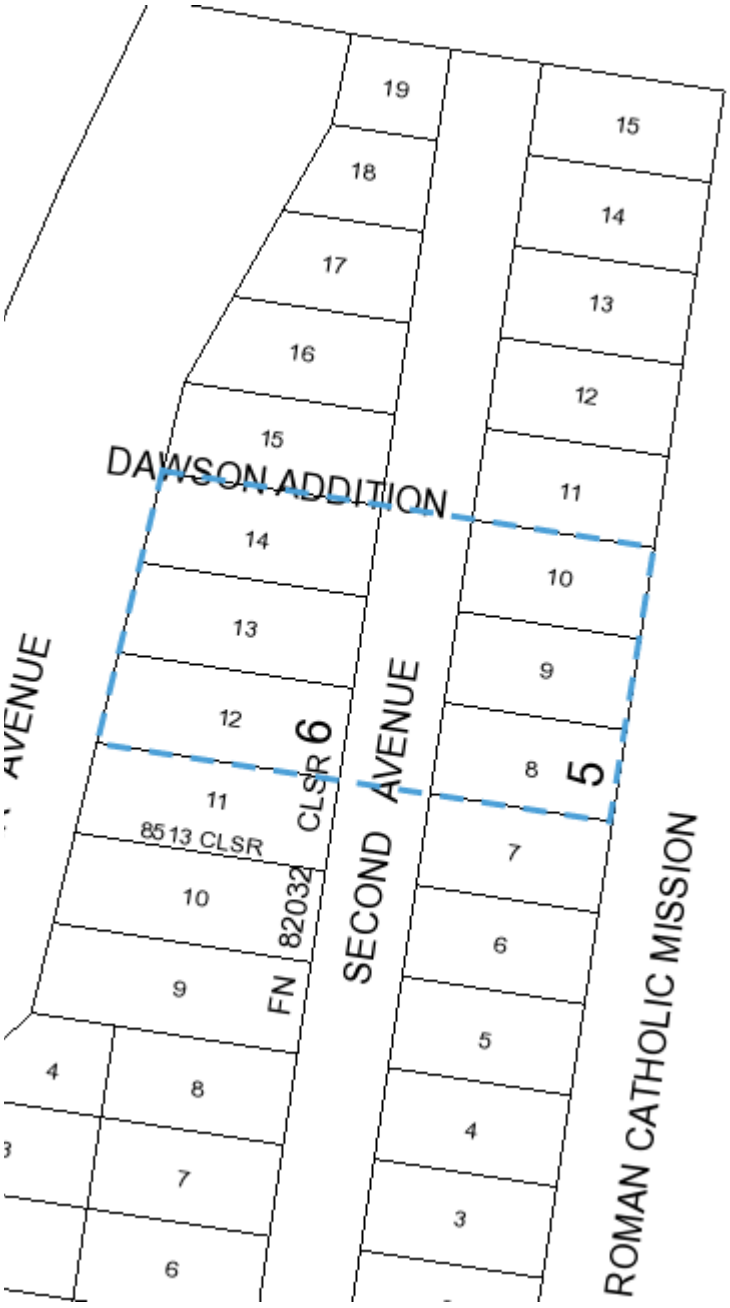
4.00 AMENDMENTS

4.01 This Agreement may be amended by the mutual written consent of the Parties hereto. To be valid, any amendment to this Agreement shall be in writing and signed by the Parties hereto within the duration of this Agreement.

5.00 IMPROVEMENTS AT TERMINATION

5.01 Any improvements to the land or property shall be agreed upon in writing prior to installation.

SCHEDULE "A"


DAWSON ADDITION
SECOND AVENUE
ROMAN CATHOLIC MISSION
AVENUE
6
5
8513 CLSR
82032 FN CLSR
19
18
17
16
15
14
13
12
11
10
9
8
7
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4
3
15
14
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7
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4
3

In Witness whereof, the parties have executed this agreement by their respective proper signatures as of the day and year written below:

FOR HUMANE SOCIETY DAWSON

_____
Date

_____	_____
Witness name (printed clearly)	Officer Name (printed clearly)
_____	_____
Witness Signature	Officer Signature

FOR THE CITY OF DAWSON

_____
Date

_____
Witness name (printed clearly)

_____	_____
Witness Signature	Cory Bellmore, CAO

Report to Council

[X] For Council Decision [ ] For Council Direction [ ] For Council Information

[ ] In Camera

AGENDA ITEM:	Dawson City Farmers Market Lease	
PREPARED BY:	C Bellmore	**ATTACHMENTS:** Draft Lease Agreement – Dawson City Farmers Market
DATE:	October 21, 2020	
RELEVANT BYLAWS / POLICY / LEGISLATION: Bylaw #10-10 Lease & Rental Bylaw Property Lease Policy 2017-15		

RECOMMENDATION

That Council to authorize administration to enter into a 5 year lease agreement with Dawson City Farmer's Market Society with the term ending August 31, 2025.

ISSUE / PURPOSE

Bylaw #10-10 "Lease and Rental Bylaw" requires a resolution of Council to lease or rent property from another party. Upon passing of a resolution the authority is delegated to the CAO.

BACKGOUND SUMMARY

The Dawson City Farmer's Market Society lease for this location expires December 31, 2020 and they would like to renew the lease on the same terms as the previous lease.

ANALYSIS / DISCUSSION

Section 4.1 (c) of Property Lease Policy 17-05 gives the current occupant the right of first refusal to renew their lease if they meet all the guidelines

Section 4.1 (b) requires approval of Council to make a City of Dawson property available for sale or lease

Administration does not foresee the need for this space in the next 5 years to meet operational objectives and recommends the renewal on the same terms as previous.

APPROVAL		
NAME:	C Bellmore	**SIGNATURE:** C Bellmore
DATE:	November 10, 2020	

LEASE AGREEMENT

This Lease Agreement is made effective on this 1st day of January, 2021.

Between
Dawson City Farmer's Market Society
Box 1213
Dawson City, Yukon
Y0B 1G0

(Hereinafter known as the "DCFMS", of the First Part)

And
City of Dawson
Box 308
Dawson City, Yukon
Y0B 1G0

(Hereinafter known as the "City", of the Second Part)

LEASE AGREEMENT REGARDING THE OPERATION AND ALLOCATION OF VENDOR STALLS ON FRONT STREET, ADJACENT TO CLSR 8338A, DAWSON CITY, IN Quad 116B/03, AS IDENTIFIED IN SCHEDULE "A" OF THIS AGREEMENT

This Lease Agreement between the **City** and **DCFMS** recognizes the benefit and value of a vibrant market.

WHEREAS the City supports and encourages local food production, and

WHEREAS DCFMS will coordinate the operation and allocation of vendor stalls, and

WHEREAS council passed resolution # _____ at their meeting on November _____, approving this lease, now

Therefore, the parties to this Agreement agree to the terms and conditions set out hereunder.

Both agencies agree to work cooperatively to coordinate the maintenance and use of the Farmer's Market.

1.00 TERM OF THE AGREEMENT

1.01 The term of this Agreement shall be for a term of five (5) years, commencing on **January 1, 2021** and expires **December 31, 2025.**

1.03 This agreement may be terminated by either party giving the other party written notice at least two months in advance of the date of termination.

1.04 This Agreement allows DCFMS to operate a "Farmers Market" each Saturday from May to October (20 weeks) between the hours of 9:00 am to 8:00 pm.

2.00 PREMISES

2.01 The City agrees to lease to DCFMS the portion of land known as the Farmer's Market, on Front Street on Front Street, adjacent to CLSR 8338A, Quad 116B/03, within the City of Dawson.

3.00 REMUNERATION

2.02 Upon signing of this agreement, DCFMS agrees to pay the City one thousand dollars ($1000.00) per year, for the term of this agreement.

4.00 DCFMS OBLIGATIONS

4.01 DCFMS shall ensure all vendors hold a current and approved business license in accordance with the Business License Bylaw or any successor legislation.

4.02 DCFMS shall establish a Vendor Policy and/or operate the "Farmer's Market" in accordance with the City of Dawson Farmer's Market policy.

4.03 DCFMS, at the cost and expense of DCFMS, shall, at all times, maintain the said land in a neat and tidy condition and ensure all vendor stalls and displays are removed from the site by market end each Saturday, including packaging.

4.04 DCFMS accepts the said land in an "as is" condition and may, with prior written consent of the City, which consent will not be unreasonably withheld, make improvements to the said land and building to make them suitable for DCFMS's purposes. Any such improvements made by DCFMS at any time during the term of this agreement shall be at the risk, cost and expense of DCFMS.

4.05 DCFMS shall maintain at all times during the term of this agreement public liability and property damage insurance of at least two million dollars ($2,000,000.00) against claims for personal injury, death or damage to property arising out of the operation of the DCFMS under this agreement, or of any of the acts or omissions of the DCFMS or any of its agents, employees or servants.

4.06 DCFMS, annually, shall provide proof that insurance is in place pursuant to this Agreement.

5.00 CITY OBLIGATIONS

5.01 The City shall ensure that legislative authority is provided for the property to be utilized as a vendor stall location for the duration of this agreement, and

5.02 The City shall maintain the area commonly referred to as the "Farmer's Market" by;

a. Cutting grass as required
b. Monitor and clean area as required
c. Ensure that adequate waste receptacles are installed and emptied as needed for public use.

6.00 LIABILITY

6.01 DCFMS shall not have any claim or demand against the City or any of its officers, servants or agents for detriment, damage, accident or injury, of any nature whatsoever or howsoever caused to the said land or to any person or property, including any structures, erections, equipment, materials, supplies, motor or other vehicles, fixtures and articles, effects and things on or about the said land unless such damage or injury is due to the negligence of any officer, servant or agent of the City while acting within the scope of his duties or employment.

6.02 DCFMS at all times shall indemnify and save harmless the City or any of its officers, servants or agents from and against all claims and demands, loss, costs, damages, actions, suits or other proceedings by whomsoever made, brought or prosecuted, in any manner based upon, occasioned by or attributable to the execution of this agreement, or any action taken or things done or maintained by virtue hereof, or the exercise in any manner of rights arising hereunder, except claims for damage resulting from the negligence of any officer, servant or agent of the City while acting within the scope of his duties or employment.

7.00 CONDITIONS ON EXPIRY OF AGREEMENT

7.01 Any structures including repairs, alterations, or improvements made to them remaining on the said lands at the expiry of this agreement (except and subject as this agreement may otherwise specifically provide for) shall be vested in title in the City without any payment of compensation to DCFMS by the City. Nevertheless, the City shall have the option of requiring or compelling DCFMS upon written notice to remove such structures, and DCFMS shall be so bound to remove said structures and to restore the said land and premises to a neat and tidy condition, all at the cost of DCFMS and without any right on the part of DCFMS to seek compensation from the City for any reason whatsoever.

8.00 ASSIGNMENT OF AGREEMENT

8.01 DCFMS shall not make any assignment of this Agreement, nor transfer or sublease of the whole or any portion of the said land demised or leased hereunder, without obtaining the prior consent in writing of the City to such assignment, transfer or sub-lease, which consent will not be unreasonably withheld.

9.00 INDEPENDANT CONTRACTOR

9.01 It is acknowledged by the parties hereto that DCFMS will act as an independent contractor, and not as an employee of the City. DCFMS and the City acknowledge and agree that this agreement does not create a partnership of joint venture between them.

10.00 GENERAL PROVISIONS

10.01 Time shall be of the essence of this agreement and of every part hereto and no extension or variation of the agreement shall operate as a waiver of this provision.

10.02 This agreement shall ensure to the benefit of and be binding upon the parties hereto, their executors, administrators, successors and authorized assigns.

10.03 This Agreement may be amended by the mutual written consent of the Parties hereto. To be valid, any amendment to this Agreement shall be in writing and signed by the Parties hereto within the duration of this Agreement.

10.04 DCFMS shall abide by all applicable lawful rules, regulations and bylaws of the Federal and Territorial governments and of the City affecting or pertaining to its operations within the City.

SCHEDULE “A”


Farmer's Market Area
Front Street
892 Front St
882 Front St
872 Front St
883 Second Ave
853 2nd Ave
841 2nd Ave
841 2nd Ave
841 Second Ave
833 2nd Ave
825 2nd Ave

In Witness whereof the parties have executed this agreement by their respective proper signatures as of the day and year written below:

FOR DCFMS

_____
Date

_____ _____
Witness name (printed clearly) Name (printed clearly)

_____ _____
Witness Signature Signature

FOR THE CITY OF DAWSON

_____
Date

_____
Witness name (printed clearly)

_____ _____
Witness Signature Cory Bellmore, CAO

Report to Council

[X] For Council Decision [ ] For Council Direction [ ] For Council Information

[ ] In Camera

AGENDA ITEM:	Dawson City Minor Soccer Operating Lease agreement	
PREPARED BY:	C Bellmore	**ATTACHMENTS:** Draft Lease Agreement – Operating Lease agreement
DATE:	Sept 25, 2020	
RELEVANT BYLAWS / POLICY / LEGISLATION: Bylaw #10-10 Lease & Rental Bylaw Property Lease Policy 2017-15		

RECOMMENDATION

That Council authorize administration to enter into a 5 year Operating Lease Agreement with Dawson City Minor Soccer for the care and control of Crocus Bluff field with the term ending December 31, 2025.

ISSUE / PURPOSE

Bylaw #10-10 "Lease and Rental Bylaw" requires a resolution of Council to lease or rent property from another party. Upon passing of a resolution the authority is delegated to the CAO.

BACKGOUND SUMMARY

Dawson City Minor Soccer and the City of Dawson had entered into a MOU previously for the care and control of the Crocus Bluff Field. This MOU is set to expire December 31, 2020.

ANALYSIS / DISCUSSION

Section 4.1 c) of the Property Lease policy 17-05 gives the current occupant the right of first refusal to renew their lease if they meet all the guidelines

Section 4.1 b) requires approval of council to make a City of Dawson property available for sale or lease

Administration supports the intention of this agreement and renewal.

The agreement was changed from a MOU to an Operating Lease agreement for consistency of agreements and titled similarly to the Dawson Golf Association Operating agreement but structured with the terms similar to the previous MOU.

APPROVAL		
NAME:	C Bellmore	**SIGNATURE:** C Bellmore
DATE:	November 10, 2020	

OPERATING LEASE AGREEMENT

This Agreement is made effective on this 18 day of November, 2020.

Between
Dawson City Minor Soccer
Dawson City, Yukon
Y0B 1G0

(Hereinafter known as the "Lessee", of the First Part)

And
City of Dawson
Box 308
Dawson City, Yukon
Y0B 1G0

(Hereinafter known as the "City", of the Second Part)

WHEREAS the City is the owner of the Crocus Bluff Soccer Field and;

WHEREAS the Lessee is interested in maintaining the said property for the purpose of care and control of the soccer field, and

WHEREAS this Lease Agreement between the **City** and **Dawson City Minor Soccer** recognizes the benefit and value of working cooperatively to coordinate the maintenance and use of the Crocus Bluff Soccer Field; this relationship recognizes that this facility provides recreation which is essential to both the health and wellbeing of our community and essential to the development of youth in Dawson City.

WHEREAS council passed resolution # _____ at their meeting on September _____, approving this lease

Therefore the parties to this agreement agree to the terms and conditions set out hereunder.

1.00 TERM OF THE AGREEMENT

1.01 This Agreement shall be effective as of signing by both parties and **shall expire December 31, 2025** unless extended by written consent of both parties.

1.02 Either party may terminate this Agreement by providing the other party 2 weeks written notice of its intention to terminate.

2.00 TERMS AND CONDITIONS

2.01 The City of Dawson agrees to:

1. Maintain water to field.
2. Provide liability insurance for the property.

3. Provide access to restroom facilities located in the Crocus Bluff Concession Building.

2.02 Dawson City Minor Soccer agrees to:

1. Maintain the growth of the turf inside the fenced area by:
   a) Fertilizing the field during the growing season, spring, summer and fall.
   b) Water the field as required.
   c) Cut grass as required.
   d) Aerate the field as required.
   e) Provide further turf maintenance if required.
   f) Maintain the existing fence.
   g) Scheduling of events and use of the field.
   h) Maintain the hose and sprinkler system.
   i) Provide and maintain a storage facility located at the NE side of the field.
   j) Ensure liability insurance is provided for the actions of DCMS volunteers while supervising/coaching registered players at sanctioned games, practices or events.
   k) Schedule programs with other community recreation groups.
   l) Schedule maintenance activities in association with the facilities schedule.

2. Maintain the roadside aesthetics of the area in a manner satisfactory to the City of Dawson

3.00 REMUNERATION

3.01 Upon signing of this agreement, the City agrees to pay the DCMS up to a maximum of $7000 per year to maintain the field upon submission of supporting invoices. These payments will be due and payable withing 30 days of receipt of invoices.

4.00 AMENDMENTS

4.01 This Agreement may be amended by the mutual written consent of the Parties hereto. To be valid, any amendment to this Agreement shall be in writing and signed by the Parties hereto within the duration of this Agreement.

5.00 IMPROVEMENTS AT TERMINATION

5.01 Any improvements to the land or property shall be agreed upon in writing prior to installation.

In Witness whereof the parties have executed this agreement by their respective proper signatures as of the day and year written below:

_____	_____
Cory Bellmore, CAO City of Dawson	Irwin Gaw Dawson City Minor Soccer
_____	_____
Date	Date
_____	_____
Witness	Witness

Report to Council

[X] For Council Decision [ ] For Council Direction [ ] For Council Information

[ ] In Camera

SUBJECT:	**Zoning Bylaw Amendment Application #20-007**	
PREPARED BY:	Stephanie Pawluk, CDO & Charlotte Luscombe, Planning Assistant	**ATTACHMENTS:** Application and Supporting Documentation Zoning Bylaw Amendment No. 8 Bylaw YHSI Sites in Core Commercial Zone Map
DATE:	November 10, 2020	
RELEVANT BYLAWS / POLICY / LEGISLATION: Municipal Act Official Community Plan Zoning Bylaw Heritage Management Plan		

RECOMMENDATION

Option 1: Give First Reading of Zoning Bylaw Amendment No. 2020-08 and forward the to Committee of the Whole for further discussion.

Option 2: Direct Administration to draft a Zoning Amendment Bylaw that amends the permitted uses in a C1 zone and forward to Committee of the Whole for discussion

Option 3: Direct Administration to draft a zoning bylaw to address the zoning of Lots 1, 2, 3, 9, and 10 of Block U, Ladue Estate collectively

It is respectfully recommended that Council select option 2: Direct Administration to draft a zoning amendment bylaw that amends the permitted uses in a C1 zone to include historic single-detached residential structures and forward to Committee of the Whole for discussion.

ISSUE

In September 2020, the applicant contacted the City to enquire about the property zoning as instigated through their land sale process. The property is Lot 1 Block U Ladue Estate (structure known as the Caley House) and is zoned C1 – Core Commercial. The current owner nor prospective buyer were aware of the nonconformance as the Caley House has always been used for residential purposes since at least the 1960s. The applicant wishes to change the zoning of the property from C1 – Core Commercial to R1 – Single Family and Duplex Residential in order to facilitate the property sale and ensure the residential use of the lot into the future. As applied for, Zoning Bylaw Amendment No. 2020-08 (attached) amends Lot 1, Block U, Ladue Estate from C1: Core Commercial to R1: Single Detached and Duplex Residential in the Zoning Bylaw.

This application raised the issue of other lots in this block with single detached dwellings that are zoned C1, as well as the issue of other legal nonconforming heritage homes throughout the C1 zone, issues that Administration and Council are already aware of. This report and request for decision focusses primarily on

the lot brought forth by the zoning amendment application under review, with consideration to the surrounding block and other legal nonconforming heritage homes.

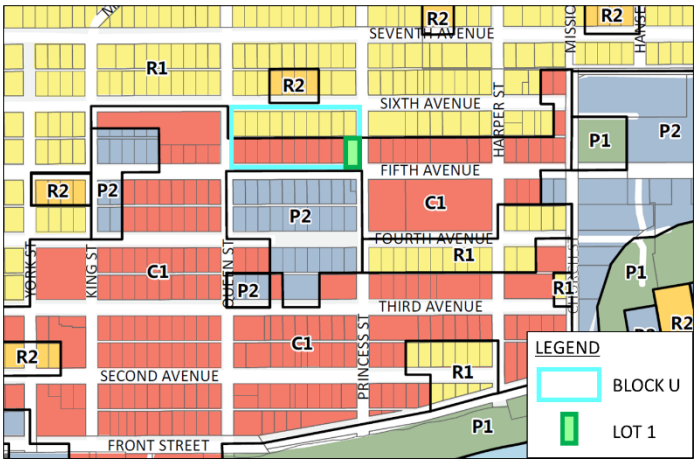

Figure 1: Current C1 zoning.

BACKGROUND SUMMARY

The applicant is in the process of selling the home on the lot. The property has been in the Caley family since 1970 and the 2-storey log home is registered on the Yukon Historic Sites Inventory (ref. 3-U-1) and is known as the Caley House. As part of the sale process, the applicant discovered that the property is on a lot zoned as C1 – Core Commercial. The property is currently non-conforming to the Zoning Bylaw, which means Division 4: 'Non-Conforming Uses' of the Municipal Act applies. This raised concerns with the mortgage lender as this would prevent the owner from rebuilding a residence should there be a natural disaster, fire or similar event resulting in the property's destruction. The Municipal Act S.304 notes:

> *If a building or other structure that does not conform to the provisions of an official community plan or zoning bylaw is destroyed by fire, or is otherwise damaged to an extent of 75 per cent or more of the assessed value of the building, it may not be rebuilt or repaired except in conformity with the provisions of the official community plan or zoning bylaw then in effect.*

At COW Meeting CW20-13, Administration sought direction from Council about the *intent* of the zoning of the half-block along Fifth Avenue of Block U. At this meeting, Administration raised the following issues regarding the half-block along Fifth Avenue of Block U:

- **Is this half-block zoned C1 for the intent of inciting a slow change to a C1 use over time and phasing out current R1 uses?**
- **Is there a desire to allow R1 structures to continue to exist in the future?**

At the time, Council was unable to direct Administration and the decision was tabled following discussion as to whether the residents of Lots 1, 2, 3, 9 and 10 desired a zoning change. Resolution CW20-13-05 notes:

> *Moved by Councillor Kendrick, seconded by Councillor Ayoub that committee of the whole postpone resolution #CW20-13-04 Request for Decision: Fifth Street C1 Zoning, until administration has the requested information.*

The requested information was for Administration to solicit feedback from the registered property owners on whether they wish to have the zoning of their lots changed from C1 to R1. Administration has not contacted the registered property owners of Lots 2, 3, 9 and 10 of Block U Ladue Estate who similarly use their C1 zoned properties for R1 purposes since the issue of single detached historic residential structures in the C1 zone has been simultaneously raised. There are approximately 25 registered property owners of single detached residential heritage structures that are listed in the Yukon Historic Sites Inventory (YHSI) in the C1 zone (please see attached map). Prior to contacting the registered property owners of Lots 2, 3, 9 and 10 of Block U Ladue Estate and/or the registered property owners of C1 zoned heritage residences,

Administration requires Council's decision on the direction of the issues. Specifically, the following questions should be addressed at a future Committee of the Whole meeting:

1) What is the strategic intent of the half-block U?
    a. Is the intent to maintain a commercial corridor along Fifth Avenue?
    b. Is the intent to allow mixed commercial and residential uses in this block (including new residential builds in the future)? If so, Council may want to pursue a zoning change for Lots 1, 2, 3, 9 and 10 of Block U Ladue Estate.
    c. Is the intent to allow mixed commercial and *historic* residential uses in this block? To allow only *historic* residential uses in this block *and* the C1 zone broadly, Council could direct Administration to pursue the inclusion of historic single-detached residential structures in the list of permitted uses in the C1 zone, instead of pursuing this Zoning Bylaw amendment. This would bring 24 other historic homes in the C1 zone into compliance.

It is important to consider the strategic, long-term vision of the block and surrounding area, as well as the potential to amend the C1 zone while assessing this amendment application as this decision could set a precedent for A) nonconforming residential structures zoned C1 and B) single detached historic residential structures in the C1 zone.

ANALYSIS / DISCUSSION

Municipal Act

S. 289(2) of the *Municipal Act* states:

> *The council of a municipality shall not pass a zoning bylaw or any amendment thereto that does not conform to the provisions of an existing official community plan.*

Therefore, this report will consider whether the proposed amendment is consistent with the Official Community Plan. Further, sections 294-296 (along with S. 17(5) of the Zoning Bylaw) outline the specific process required for public consultation with respect to a zoning bylaw amendment. A public hearing will be held, and if substantial concerns are raised, the application will be forwarded to Committee of the Whole for discussion.

Upon analysis of this issue in regard to s. 304 of the Municipal Act, it is interpreted that if a historic structure, such as the Caley house, was "destroyed by fire, or is otherwise damaged to an extent of 75 per cent or more of the assessed value of the building", it could not be rebuilt as a *historic* structure. This is because a new build fundamentally cannot be considered to be historic. The implications of this on the options under consideration are as follows:

- If the lot is zoned R1 and the historic home is destroyed or damaged to an extent of 75% or more as per s. 304 of the Municipal Act, the property owner can build a new single detached or duplex residential structure as per the design guidelines for new infill.
- If the lot is zoned C1 and the list of permitted uses in the C1 zone is changed to include historic single-detached residential structures, and the historic home is destroyed or damaged to an extent of 75% or more as per s. 304 of the Municipal Act, the property owner would have to build a new structure that complies with the C1 zone whilst ideally replicating the exterior of the former historic structure.

Policy relevant to the reconstruction and replication of historic buildings includes the Standards and Guidelines for the Conservation of Historic Places in Canada, the Zoning Bylaw #2018-19, and the 2008 Dawson City Heritage Management Plan. In the Zoning Bylaw (A.1.4.33.V) and the Dawson Heritage Management Plan (p. 38), there is a recommendation that historic buildings be replicated (on the exterior at least) if there is sufficient information to do so. Given that this building currently exists and there are photos and plans that show the building details, this could be achieved; however, the new build would have to

comply with the zoning (eg. multi-unit residential if zoned C1) whilst potentially achieving exterior replication of the former building. Let it be noted that replication refers only to massing and exterior design of the former building as seen from the street. Thus, the footprint and appearance may be altered towards the rear of the site, allowing for the construction of a structure that conforms to the C1 zone.

The Standards and Guidelines for the Conservation of Historic Places in Canada notes that reconstruction is not considered a heritage conservation activity as the original materials are no longer present and therefore cannot be conserved (p. 15). This supports the interpretation that if the ZBL is amended to include historic single-detached residential structures, and the historic home is destroyed, it could not be rebuilt as a historic single-detached residential structure to comply with the C1 zone -it would have to be rebuilt to adhere to a different permitted use in the C1 zone.

Official Community Plan

The land use designation for the subject property is Downtown Core, which is intended to support a broad range of uses, including low-density residential. S.6.2 notes:

> *While the area will predominately consist of commercial and institutional uses, high- and low- density residential uses are also acceptable. This diverse mixture of uses is essential to the Downtown Core's vibrant, mixed-use character.*

The broad land use permitted in the Downtown Core would therefore support this lot being zoned for residential use. This OCP designation is intentionally broad to allow for diversity, and spot zoning would arguably not contradict the OCP in this case.

Zoning Bylaw

The lot under consideration is zoned as C1: Core Commercial in the 2018 ZBL. C1 uses are largely commercial and multi-residential in nature, and these uses are typically focused in the inner areas of the downtown core. Multi-residential is defined by the Zoning Bylaw as "any physical arrangement of three or more permanent dwelling units". As per this definition, the current single detached dwelling on the lot under consideration is not compliant with the current C1 zoning.

Around the fringes of the downtown core, it becomes appropriate to have more zoning variability as the town transitions to predominately residential neighbourhoods; however, the lot under consideration exists on Fifth Avenue -a prominent commercial/institutional corridor that runs through town with no other properties along this section of the corridor being zoned residential.

Upon review of the historical zoning of this lot, a question arose about the change in zoning between 1975 to 1980. ZBL 203 zoned Lots 1-3 and 9-10 all residential, yet ZBL 80-08 changed this designation to GC – General Commercial. As such, 1980 is when this lot became non-compliant. Administration has been unable to determine whether this shift was intentional or a mistake. Then in 1997, ZBL 97-25 zoned the lot TS1: Downtown Tourist/ Service Commercial, which lists single-detached dwellings as 'discretionary uses.' Whether the lot was viewed as compliant to this zone would have been up to the CDO at the time. The property once again became clearly non-compliant with the enactment of the 2012 Zoning Bylaw, which changed the zoning from TS1: Downtown Tourist/ Service Commercial, to C1: Downtown Core Commercial. During ZBL reviews, it is not common to zone lots 'out of compliance' by changing their zoning, unless this is a strategic decision made to incite a slow change to a new use over time by disallowing new developments that fit the old zone. Moving forward, Council must decide whether the intent for this half-block is to slowly change to a C1 use over time, or if residential uses are appropriate to continue into the future.

1975: Bylaw 203: Residential compliant

1980: Bylaw 80-08: GC – General Commercial noncompliant

1997: Bylaw 97-25: TS1: Downtown Tourist/ Service Commercial (lists single-detached dwellings as 'discretionary uses') (compliance up to CDO at the time)

2009: Bylaw 09-03: TS1: Downtown Tourist/ Service Commercial (lists single-detached dwellings as 'discretionary uses') (compliance up to CDO at the time)

2012: Bylaw 12-27: C1: Downtown Core Commercial noncompliant

2018: Bylaw 2018-19: C1: Downtown Core Commercial noncompliant

Heritage Management Plan

The Caley House is identified as a Yukon Historic Site and is described as follows:

> *One of the few historic residences located on Fifth Avenue in the downtown area; this building represents several eras of Dawson history. East of this lot on Princess Street are more heritage houses, the Parks Canada Customs House, Gammies, and several other two story structures. This is an important building for Queen Street and Fifth Avenue as there are not many two story log buildings from the early twentieth century. The house has recently been stabilised, and is well located on a large lot. A white picket fence surrounds the yard behind the house, with a garden and lawn.*

Any structural alteration would require review by the Heritage Advisory Committee; however, due to the property's current non-conforming status, development would be limited to repairs or non-structural alterations as per Division 4 of the Municipal Act unless brought into compliance by A) zoning the lot R1 or B) adding historic residential structures to the list of permitted uses in the C1 zone.

OPTIONS

Option 1: Give First Reading of Zoning Bylaw Amendment No. 2020-08 and forward the issue to Committee of the Whole for discussion.

This is the option that the applicant has applied for. This option would proceed the bylaw amendment that changes the zoning of Lot 1 from C1 to R1. Proceeding with this decision may set a precedent for potential zoning changes of lots 2, 3, 9 and 10, as well as other historic homes in the C1 zone, either as instigated by the City or by the property owners.

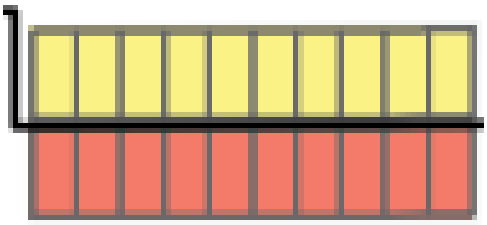

Figure 4: Rezone Lot 1 from C1 to R1

Option 2: Direct Administration to draft a Zoning Amendment Bylaw that amends the permitted uses in a C1 zone and forward to Committee of the Whole for discussion.

Should Council wish to further explore the option of bringing *historic* homes in the C1 zone into compliance, it is recommended that Council direct Administration to research the issue and draft a zoning amendment bylaw that includes historic single-detached residential structures in the list of permitted uses in the C1 zone, instead of pursuing this Zoning Bylaw amendment. This would bring the applicant's home and 24 other historic residential structures that are listed in the YHSI in the C1 zone into compliance, negating the need to address each of the 25 historic homes on a case by case basis. This option is recommended as it addresses this issue for the applicant and the community at large.

If this option is chosen, it is recommended that Council return the application fee to the applicant as per s. 17.2.6 of the ZBL, which reads: "if it appears that the proposed amendment is one that is applicable to most of the persons affected in the area and/or will benefit the City at large, Council may direct that the application fee be returned to the applicant".

Option 3: Draft a zoning bylaw to address the zoning of Lots 1, 2, 3, 9, and 10 of Block U, Ladue Estate collectively

This option is compliant with the OCP, as identified above and is also compatible with the existing function and scale of the neighbourhood. However, If it is Council's desire to allow the current R1 uses to exist in the future, Administration can pursue a zoning bylaw amendment that rezones Lots 1, 2, 3, 9, and 10 of Block U, Ladue Estate from C1 to R1 (as shown in Figure 3). This option does not address the 24 other historic residences in the C1 zone and breaks up the commercial/institutional corridor along Fifth Avenue.

If this option is chosen, it is recommended that Council return the application fee to the applicant as per s. 17.2.6 of the ZBL, which reads: "if it appears that the proposed amendment is one that is applicable to most of the persons affected in the area and/or will benefit the City at large, Council may direct that the application fee be returned to the applicant".

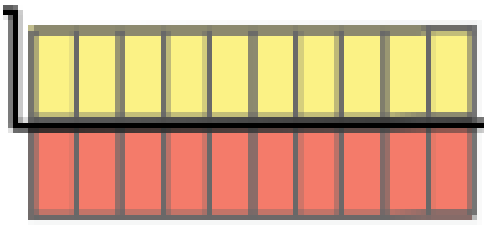

Figure 3: Rezone Lots 1, 2, 3, 9, and 10 of Block U, Ladue Estate from C1 to R1.

APPROVAL		
NAME:	Cory Bellmore, CAO	**SIGNATURE:** C Bellmore
DATE:	November 13, 2020	

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

ZONING BYLAW AMENDMENT APPLICATION CHECKLIST

Permit #: 20-115 Applicant Name: Maureen Caley-Verdonk

Legal Description: Lot 1 Block U Ladue Mailing Address: 902 5th Avenue

Step	Signature	Date
Completed Application and Supporting Documents Submitted		
Permit Paid, Stamped, and Listed in Permit Database		
Title and Survey Search	C Luscombe	8/10/20
Perform analysis and prepare report on the proposed amendment & submit a copy of the application, their recommendation, and report to the Council • Email sent to Tr'ondek Hwech'in for consultation (if applicable) • Email sent to other departments for feedback (Public Works, Fire, By-Law, Recreation)		
Council 1st Reading		
Public Notice • Copy of Public Notice emailed to Heather and added to RFD folder • Mailed to affected property owners [ ], Mailed to affected claim holders (cross list with claimholder database) [ ], posted at COD office [ ], posted at Post Office [ ], COD website [ ], E-news [ ], Klondike Sun [ ] • Posted at site		
Public Hearing		
Council 2nd Reading & Council 3rd Reading • *Can occur at the same Council meeting*		
Permit Filing • Original Permit, letter, & supporting documentation in land file • Scanned in to CDO Z: drive & Saved in appropriate location • Copy of permit only put in binder • Copy of letter & permit mailed to applicant		

THE CITY OF DAWSON

P.O BOX 308, DAWSON CITY, YUKON Y0B 1G0
PH: (867) 993-7400, FAX: (867) 993-7434

Zoning Assessment

File Number: 20-115 **Date:** _____

Zone: C1 - Core Commercial → R1 - Residential **Assessment completed by:** C. Luscombe

1. Application Type

☐	OCP Amendment	☐	Variance
☑	Zoning Amendment	☑	Development
☐	Subdivision	☐	Other:

2. Official Community Plan Designation: _____
Does the proposed development meet OCP requirements? __ yes __no
If no, OCP amendment is required.

3. Zoning By-Law Designation: _____
Does the proposed development meet ZBL requirements? __ yes __no
If no, ZBL amendment is required.

4. Heritage Management Plan Designation:
_____
Does the proposed development require HAC review? __ yes __no __
If yes, fill out Heritage Assessment form.

5. Zone Specific Regulations:

Provision	Permitted	Proposed	Compliant	Variance Required
Permitted Use	Single family	Yes - Same	(Y) / N	
Minimum Parcel Size	2500 ft²	5000 ft²	(Y) / N	
Maximum Parcel Size	/	/	Y / N	
Minimum Parcel Width	25 ft	50 ft	(Y) / N	
Minimum Setback (Front)	10 ft	10 ft	(Y) / N	
Minimum Setback (Side) ext	10 ft		Y / N	
Minimum Setback (Side)	5 ft	2.5 ft	Y / N	
Minimum Setback (Rear)	5 ft		Y / N	

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Provision	Permitted	Proposed	Compliant	Variance Required
Minimum Floor Area	256ft²	1944ft²	(Y) / N	
Maximum Height (Principal)	35ft		Y / N	
Maximum Height (Accessory)	20ft		Y / N	
Maximum Parcel Coverage	50%		Y / N	
Maximum Floor Area Ratio (FAR)	/	/	Y / N	
Minimum Off-Street Parking Spaces	1		Y / N	
Minimum Setback (Principal and Accessory)	2 ft		Y / N	
Zone Specific:			Y / N	
Zone Specific:			Y / N	

6. Notes:

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PH: 867-993-7400 FAX: 867-993-7434
www.cityofdawson.ca

OFFICE USE ONLY	
APPLICATION FEE:	410 + GST
DATE PAID:	
RECEIPT #:	
PERMIT #:	20-115

AMENDMENT APPLICATION

PLEASE READ THE ATTACHED INSTRUCTIONS, GUIDELINES AND APPLICATION REQUIREMENTS PRIOR TO COMPLETING FORM.

PROPOSED DEVELOPMENT

☐ Official Community Plan Amendment (OCPA)

☑ Zoning Bylaw Amendment (ZBA)

☐ Joint OCPA/ZBA

APPLICANT INFORMATION

APPLICANT NAME(S): Joyce Caley

MAILING ADDRESS: Box 57 POSTAL CODE: Y0B 1G0

EMAIL: caley.joyce@gmail.com mverdonk@northwestel.net PHONE #: 993-3451 9935424

OWNER INFORMATION (IF DIFFERENT FROM APPLICANT)

OWNER NAME(S): Maureen Caley - Verdonk

MAILING ADDRESS: Box 521 POSTAL CODE: Y0B1G0

EMAIL: mverdonk@northwestel.net PHONE #: 8679933451

PROPOSED AMENDMENT

A.) REDESIGNATION/REZONING:

CIVIC ADDRESS: 902 - 5th Avenue VALUE OF DEVELOPMENT:

LEGAL DESCRIPTION: LOT(S) 1 BLOCK 4 ESTATE Ladue PLAN#

PROPOSED AMENDMENT: FROM DESIGNATION: Commercial TO DESIGNATION: Residential

REASON FOR PROPOSED AMENDMENT: Please provide justification of the proposed amendment.

- Selling the property (I have lived here in this house since 1963 + all this time thought it was zoned residential).
- Bank requires confirmation the house would be built as a residence for purchaser to qualify for a mortgage
- historical significance for rebuilding as a residence
- current status is "nonconforming"

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B.) TEXT AMENDMENT: (Attach additional sheets if required)

DESCRIPTION OF PROPOSED AMENDMENT: Please provide a description of the proposed amendment.

REASON FOR PROPOSED AMENDMENT: Please provide justification of the proposed amendment.

DECLARATION

- I/WE hereby make application for a Development Permit under the provisions of the City of Dawson Zoning Bylaw #2018-19 and in accordance with the plans and supporting information submitted and attached which form part of this application.
- I/WE have reviewed all of the information supplied to the City of Dawson with respect to an application for a Development Permit and it is true and accurate to the best of my/our knowledge and belief.
- I/WE understand that the City of Dawson will rely on this information in its evaluation of my/our application for a Development Permit and that any decision made by the City of Dawson on inaccurate information may be rescinded at any time.
- I/WE hereby give my/our consent to allow Council or a person appointed by its right to enter the above land and/or building(s) with respect to this application only.

I/WE HAVE CAREFULLY READ THIS DECLARATION BEFORE SIGNING IT.

OCT. 5/20
DATE SIGNED

Joyce Caley McCaley-Vendonk
SIGNATURE OF APPLICANT(S)

DATE SIGNED

Joyce Caley
SIGNATURE OF OWNER(S)

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OFFICE USE ONLY	
PERMIT #:	20-115

COMPLETE APPLICATION SUBMISSION REQUIREMENTS

An application is not deemed complete until the following information is submitted to the satisfaction of a Development Officer.

- ☐ Application Form (completed in full)
- ☐ Application Fee as per City of Dawson Fees and Charges Bylaw & Zoning Bylaw
- ☐ Site Plan that includes:
  - a north arrow and scale
  - property lines shown and labelled as per the most recent legal survey
  - proposed rezoning/re-designation
  - all easements and rights of way shown and labelled
  - the location and labelling of all abutting streets, lanes, highways, road rights of way, sidewalks, water bodies, and vegetation
  - the topography and other physical features of the subject land
  - the location, size, type, and dimensions of all existing buildings and/or structures on the subject land, as well as the distance of the buildings and/or structures from the property lines
  - the location, size, type, and dimensions of all proposed buildings and structures on the subject land, as well as the proposed distance of the buildings and/or structures from the property lines
  - the location of retaining walls and fences (existing and proposed)
  - the location, dimensions, and number of onsite parking areas
  - the location of loading facilities
  - the date of the plan
- ☐ Certificate of Title (if owner does not match Assessment Roll)
- ☐ Other as required by the CDO: _____

OFFICE USE ONLY

LEGAL DESCRIPTION: LOT(S) 1 **BLOCK** V **ESTATE** Ladue **PLAN#** 8338

ZONING: C1 - Core Commercial **DATE COMPLETE APPLICATION RECEIVED:** _____

TYPE OF APPLICATION: Zoning Bylaw Amendment

APPLICANT NAME(S): Maureen Caley-Verdonk

OWNER NAME(S): Joyce Caley

☐ **APPLICATION REJECTED**

☐ **APPLICATION APPROVED / PERMIT ISSUED**

A letter [ ] has OR [ ] has not been attached to this permit explaining reasons and/or permit conditions. If a letter is attached, it constitutes a valid and binding component of this permit.

DATE: _____ **SIGNATURE:** _____

THE CITY OF DAWSON
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www.cityofdawson.ca

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PERMIT #:	

INSTRUCTIONS AND GUIDELINES

IT IS IMPORTANT TO READ AND UNDERSTAND THE FOLLOWING INSTRUCTIONS PRIOR TO COMPLETING THE APPLICATION FORM. THESE GUIDELINES ARE FOR REFERENCE ONLY. IN THE EVENT OF A DISCREPANCY WITH THE ZONING BYLAW OR OTHER BYLAWS/LEGISLATION, THE BYLAW/LEGISLATION PREVAILS.

1. Bylaw Amendments:
   a) Any person may apply for an amendment to the text of the OCP/ZBL by paying the required application fee, as specified in the Fees and Charges Bylaw, and submitting a written statement that describes and justifies the proposed amendment.
   b) An owner of a parcel in the City, or an authorized agent of an owner, may apply to have the designation of the land amended to another designation.
   c) An application for a re-zoning/re-designation shall be made in writing to the development officer using the form provided and accompanied by the following:
      a. documentation of ownership;
      b. a written statement to describe and justify the proposal;
      c. a map showing the proposed change in the context of adjacent land;
      d. the necessary processing and advertising fees as set out in the Fees and Charges Bylaw;
      e. permission for right of entry onto the land by City staff for reasonable inspection; and
      f. any additional information a development officer may require in order to prepare, evaluate, and make recommendations on the proposed amendment.
   d) A development officer may request the applicant provide an analysis by a qualified professional of the potential impact on land use, traffic, utilities, and other City services and facilities if the amendment proposes an increase in density or other
   e) intensification of use.
   f) An application may not be considered to have been received until all requirements have been submitted to the satisfaction of a development officer.
   g) Notwithstanding these requirements, the application may be considered if, in the opinion of a development officer, it is of such a nature as to enable a decision to be made without some of the required information.
   h) If it appears that the proposed amendment is one that is applicable to most of the persons affected in the area and/or will benefit the City at large, Council may direct that the application fee be returned to the applicant.
2. Review Process
   a. Upon receipt of a completed application for a text amendment or re-zoning, a development officer shall initiate or undertake an investigation and analysis of the potential impacts of development under the proposed zone. The analysis shall be based on the full development potential of the uses and development regulations specified in the proposed zone and not on the merits of any particular development proposal.
   b. The analysis shall, among other factors, consider the following criteria:
      i. relationship to, and compliance with, the OCP and other approved municipal plans and Council policy
      ii. relationship to, and compliance with, municipal plans in preparation
      iii. compatibility with surrounding development in terms of land use function and scale of development
      iv. traffic impacts
      v. relationship to, or impacts on, services (such as water and sewage systems or public transit), utilities, and public facilities (such as recreational facilities and schools)
      vi. relationship to municipal land, rights of way, or easement requirements
      vii. effect on the stability, retention, and rehabilitation of desirable existing uses, buildings, or both in the area
      viii. necessity and appropriateness of the proposed text amendment or re-zoning according to the stated intentions of the applicant
      ix. analysis of any documented concerns and opinions of area residents and land owners regarding the application
   c. Subsequently, the development officer shall:
      i. prepare a report on the proposed amendment; and
      ii. submit a copy of the application and the development officer's recommendation and report to Council.
   d. Before approving a text amendment or re-zoning, Council shall comply with the requirements and notification procedures set out in the Act.

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3. Resubmission Interval
    a. When an application for an amendment to this bylaw has been refused by Council, another application for the same, or substantially the same, amendment shall not be submitted within 12 months of the date of the refusal unless Council directs otherwise.
4. Before a second reading of a bylaw proposing amendments is heard, Council shall hold a public hearing to hear and consider all submissions respecting the proposed amendments.
5. The public hearing shall be held no earlier than seven days after the last date of publication of the notice.
6. A notice must be circulated, in the method approved by Council, once a week for two successive weeks prior to the public hearing.
7. Methods of notice circulation may include the City of Dawson website, local newspapers, the City and Post Office Bulletin Boards, and written notification letters.
8. The notice shall:
    a. describe the area affected by the proposed amendment;
    b. state the date, time, and place for the public hearing respecting the proposed amendment; and
    c. include a statement of the reasons for the amendment.
9. Written notification letters shall be mailed to all applicable properties within the following radii of the subject property prior to the public hearing:
    a. 100 m (328.1 ft.) for properties within the historic townsite
    b. 1 km (3,280.8 ft.) for properties in all other areas
10. For amendments proposed for one property, a notification sign shall be placed on the subject property following first reading until such time as Council has ruled on the application.
    a. The sign shall state the details of the amendment; the date, time, and place of the public hearing; and the City's contact information.
    b. The sign shall be provided by the City and shall be returned to the City on the day following the public hearing.
    c. Signs not returned will be subject to an advertising fee equal to the replacement of the sign materials.

City of Dawson
PO Box 308
Dawson City, YT
Y0B 1G0

INVOICE	IVC00006254
Type	Invoice
Date	10/13/2020
Page	1

Payment Terms: Due on Receipt
Finance Charges: 1.25%
Contact: (867) 993-7400 Ext. 0000

Bill to: **Caley, Joyce**
Box 57
Dawson City YT Y0B1G0

Ship to: **Caley, Joyce**
Box 57
Dawson City YT Y0B1G0

Customer ID	Customer P.O. No.	GST #	Payment Terms	
CALE001	DP# 20-115	106930084RT001	Due on Receipt	
Quantity	**Description**	**U Of M**	**Unit Price**	**Subtotal**
1	ZONING AMENEDMENT APPLICATION	Each	$ 410.00	$ 410.00

Payment is due upon receipt of Invoice.
Thank you!

Subtotal	$ 410.00
Deposit Paid	$ 0.00
GST	$ 20.50
Total	$ 430.50

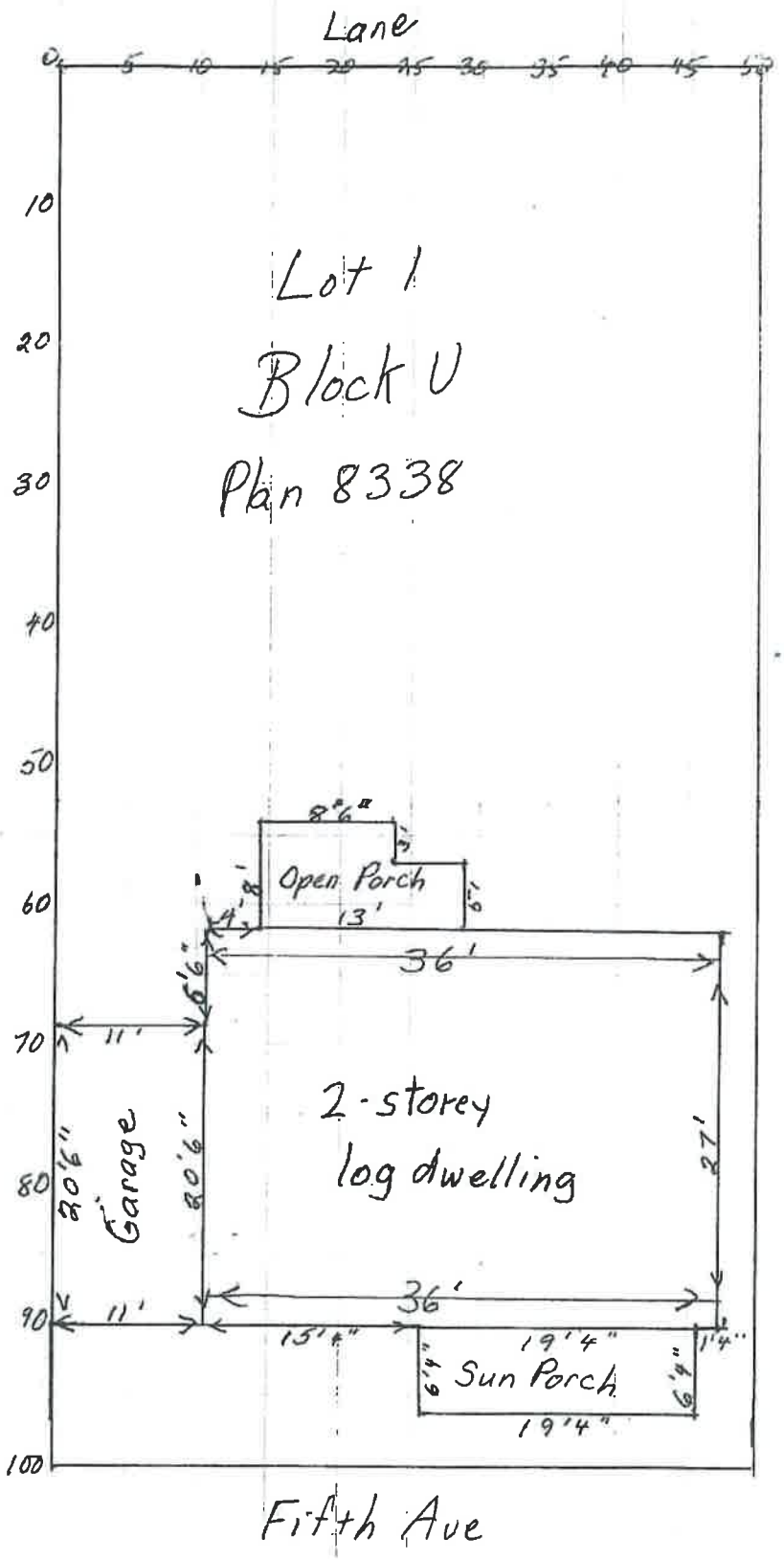
Please return this portion with your payment.

Customer ID CALE001 **Customer** Caley, Joyce **Invoice No.** IVC00006254

City of Dawson
PO Box 308
Dawson City, YT
Y0B 1G0

Invoice Total	Amount Paid
$ 430.50	

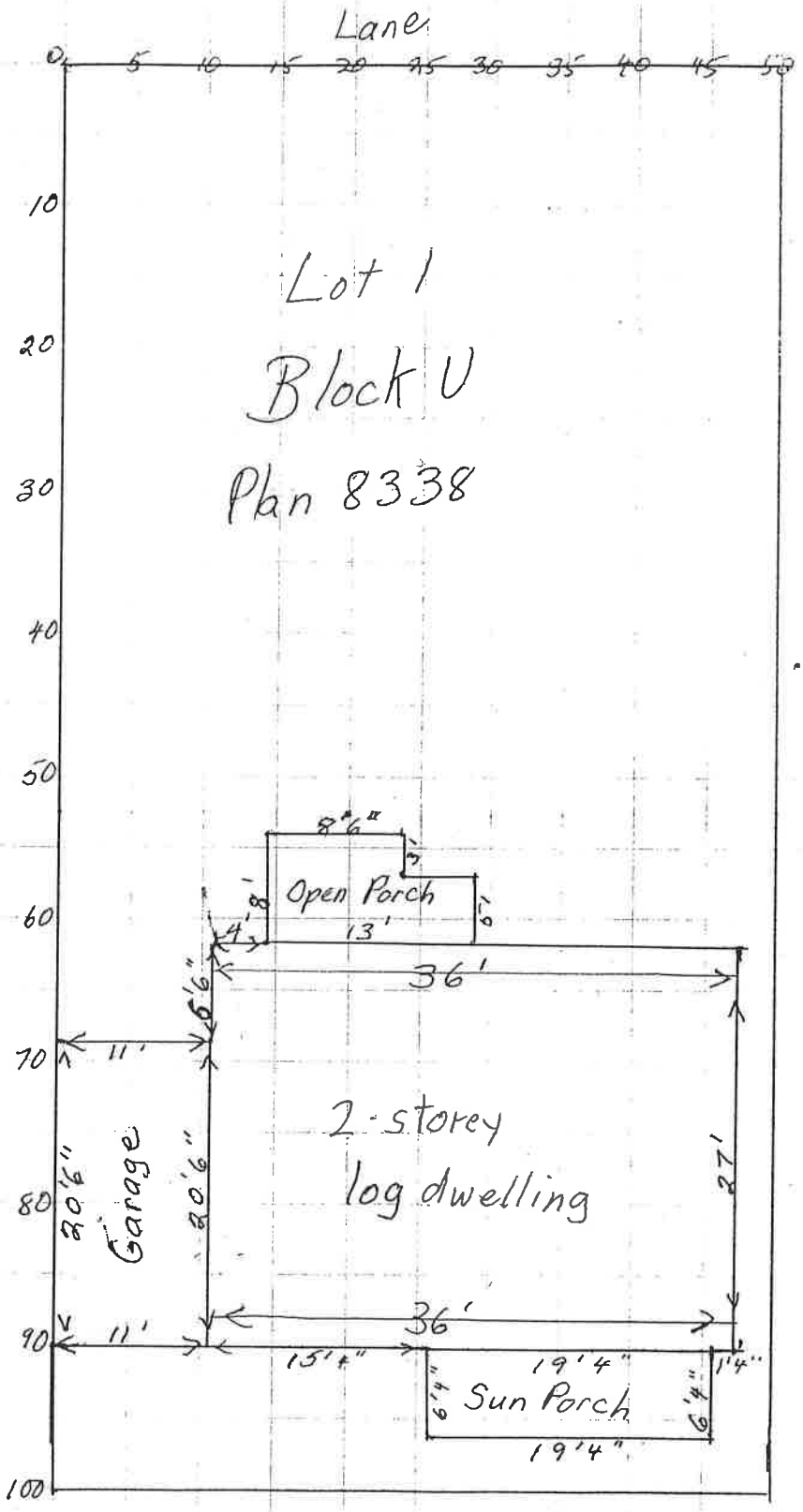
Site Plan



Scale
1cm = 5'
2mm = 1'

J Caley

Site Plan



Scale
1 cm = 5'
2 mm = 1'

Princess Street

Haley

Yukon
Tourism and Culture
Historic Sites Inventory Program

Yukon Historic Sites
CALEY HOUSE

Summary

YHSI ID
116B/03/274

Designations

CRHP Category
Building

Site Categories
Architecture

Records

Show In Register?

Primary Name
CALEY HOUSE

Secondary Names

Name 1
3-U-1

Name 2
Downtown Transitional Character Area

Contributing Resources
Building

Historical Pattern

Historical Pattern 1

Historical Pattern
Social

Historical Pattern

Location

Community
Dawson City

Other Community

Other Locality

Physical Address

Address
902 Fifth Ave.

Province
Yukon

Country
Canada

Postal Code
Y0B 1G0

Previous Address

Context

One of the few historic residences located on Fifth Ave. in the downtown area; this building represents several eras of Dawson history. East of this lot on Princess St. are more heritage houses, the Parks Canada Customs House, Gammies, and several other two story structures. This is an important building for Queen St. and Fifth Ave. as there are not many two story log buildings from the early twentieth century. The house has recently been stabilized, and is well located on a large lot. A white picket fence surrounds the yard behind the house, with a garden and lawn.

Latitude
64.059750414 64° 03' 35.1014" N

Longitude
-139.431024785 139° 25' 51.6892" W

UTM
07 N 576,572.2E 7,104,615.3N

Coordinate Determination
Digital Maps

NTS Map Sheet
116B/03

Area (m2)

Borden Number

Misc. Info

Dates & Condition

Dates

Date 1

Date Type
Construction

From Date

Details
1914

To Date

Construction Periods

Construction Period 1
From 1906 to 1939

Site Status
Standing

Floor Condition
Good

Wall Condition
Good

Door Condition
Good

Roof Condition
Good

Building Size
12m X 15.2m

Condition Notes

All Other Resource Types

Themes & Function

YHS Themes
Buildings/Functional/Housing
Buildings/Material/Log
Administrative/Service/Education
Administrative/Service/Health Care

Themes

Theme 1
Category / Type
Peopling the Land / Settlement

Functional Uses

Functional Use 1
Use Type
Historic
Functional Type
Residence / Group Residence

YHS Current Use
Residence

YHS Past Use
Teacherage, residence

Associations

Associations

First Nation Associations

First Nation Association 1
Association
Traditional Territory
Comments

First Nation
Trondek Hwechin

Legal & Zoning

Ownerships

Ownership 1
Category of Property
Private

Comments

Zoning

Group

Town Site Map Number

Lot
1

Site District
Ladue

Block
U

Group YHSI

Plan Number
8338

Previous Ownerships

Previous Ownership 1
Dates
30/03/1901
Numbers
Patent 3751
Names
Joseph Ladue & James Wilson, executor Harper

Previous Ownership 2
Dates
05/10/1901
Numbers
61 D
Names
Joseph Ladue & James Wilson, executor Harper

Previous Ownership 3
Dates
15/05/1902
Numbers
187 E
Names
Charles Milne

Previous Ownership 4
Dates
15/04/1904
Numbers
10 J
Names
Merrill Des Brisey & Henry Alan Bulver, merchants

Previous Ownership 5
Dates
08/08/1907
Numbers
83 N
Names
Henry Vaux O Chatterton, manager

Previous Ownership 6
Dates
23/07/1909
Numbers
246 O
Names
Andrew L Grant, gentleman

Previous Ownership 7
Dates
11/03/1924
Numbers
138 W
Names

Alexandra Maria Kirk, widow

Previous Ownership 8

Dates
13/09/1935

Numbers
39 Z

Names
The Yukon Consolidated Gold Corporation Ltd.

Previous Ownership 9

Dates
28/08/1970

Numbers
63 WW

Names
Robert George Caley

Previous Ownership 10

Dates
23/06/1980

Numbers
80Y463

Names
Joan M Veinott, public administrator for R Caley estate

Previous Ownership 11

Dates

Numbers

Names
Joyce Caley

Previous Ownership 12

Dates
11/02/1982

Numbers
82Y70

Names

Photos

Slide Negative Index

89.10.103.12 99.05.126.15) south west corner 16) west elevation 17) north west corner 18) north wall 19) north east corner 20) east elevation 21) south east corner 22) south elevation 99.05.111.16s) south east corner 17s) north west corner

Photo 1

Photo 2

Feature Name
Caley House 1999

Caption
Caley House 1999

Comments

CreditLine
Yukon Government

Location
SW corner

Edit Photo (/Ibbit/Photos/Edit/2adbb029-87a2-483b-bfe9-870b0dfe307f)

Feature Name
CALEY HOUSE

Caption
Photo taken September, 1973.

Comments

CreditLine
Parks Canada

Location
Dawson City

Edit Photo (/Ibbit/Photos/Edit/288debd5-e47b-4a56-aa1b-0abeac7ff56b)

Management

Revision Logs

Revision Log 1

Revision Type
Monitoring Visit

Date
1993/03/17

Revised By
B Barrett

Details

Revision Log 2

Revision Type
Monitoring Visit

Date
1999/03/11

Revised By
B Barrett

Details

Revision Log 3

Revision Type
Record Update

Date
1999/05/18

Revised By

Details

D Dickson

Revision Log 4

Revision Type
Monitoring Visit

Date

Revised By
B Hogan

Details

Revision Log 5

Revision Type
Record Update

Date
2010/03/09

Revised By
A Claxton

Details

Revision Log 6

Revision Type
Monitoring Visit

Date
2016/09/28

Revised By
R. Jansen

Details

Contacts

Contact 1

Type
Owner

First Name
Joyce

Last Name
Caley

Phone
993-5424

Email

Mailing Address
Box 57 Dawson City YT Y0B 1G0

Description

Web Links

Jurisdiction
None Selected

Recognition Date

Owner Consent
None Selected

☐ **Publicly Accessible?**

CIHB Number
3-U-1

YG Building Number

FHBRO Number

YG Reserve Number

Descriptions

Description 1

Description Type
Place Description

2 story frame simple

Description 2

Description Type
Cultural History

Built in 1914, altered in 1935. Used as boarding house, teacherage in early 1930's. YCGC assistant manager's residence from 1935-42. Temporary emergency hospital in 1951 when St. Mary's Hospital burned. Owned by the Caley's since August 1970. Personal Recollection - John Gould - This in 1920-30's was a rooming house for teachers operated by Miss Kirk. YCGC acquired it in mid 30's for their manager, Art Dailey. Now owned by Mrs. Robert Caley.

Description 3

Description Type
Renovation Information

Permit issued June 1993 to relocate and setup building. No final date. Old foundation was removed, filled in basement and moved back a few feet from the road.

Description 4

Description Type
Construction Style

Square notched logs with metal gable roof. Single hung windows, closed porch off west wall with a metal shed roof. Ship lap siding on stairway and platform with railings off south wall. Vertical ship lap siding on sawdust boxes. Overhang with metal shed roof off east wall, dual stairways and railings with small platform, also a small square bay with metal shed roof off east wall. Decorative trim over door on east wall. Addition with metal shed roof and ship lap siding off north wall. Double garage door of tongue and groove siding in addition, west wall.

Description 5

Description Type
Historical Sources Location

Joyce Caley, John Gould Dawson City Museum, Vena Bleakley Collection, 984.32 Dawson Municipal Records, Yukon Government, Land Titles, Public Safety

Certificate of Title

Canada

Yukon Territory

Yukon Land Registration District

This is to certify that JOYCE CALEY

of the City of Dawson, Yukon Territory

is now the owner of an estate in fee simple of and in

The whole of Lot One (1), in Block U, in the Ladue Estate, in the City of Dawson, in the Yukon Territory, as shown on a plan of record in the Land Titles Office for the Yukon Land Registration District under number 8338A;

subject to the encumbrances, liens and interests notified by memorandum underwritten or endorsed hereon, or which may hereafter be made in the Register.

In Witness Whereof, I have hereunto subscribed my name and affixed my official seal.

this Eleventh day of February 19 82.

P.O. Address

Box 57

Dawson City, Yukon

Registrar, Yukon Land Registration District

Certificate of Title No.

82170

LAND TITLES ACT, SEC. 73: The title granted to the land mentioned in any certificate of title granted under this Act is, by implication, and without any special mention in the certificate, unless the contrary is expressly declared, subject to

(a) any subsisting reservations or exceptions contained in the original grant of the land from the Crown;
(b) all unpaid taxes;
(c) any public highway or right of way or other public easement, howsoever created, upon, over or in respect of the land;
(d) any subsisting lease or agreement for a lease for a period not exceeding three years, where there is actual occupation of the land under the same;
(e) any decrees, orders or exceptions against or affecting the interest of the owner in the land, that have been registered and maintained in force against the owner;
(f) any right of expropriation that may, by statute or ordinance, be vested in the Crown or in any person or body corporate; and
(g) any right of way or other easement granted or acquired under the provisions of the *Irrigation Act*.

THE CITY OF DAWSON

Zoning Bylaw Amendment No. 8 Bylaw

Bylaw No. 2020-08

WHEREAS section 265 of the Municipal Act, RSY 2002, c. 154, and amendments thereto, provides that a council may pass bylaws for municipal purposes.

WHEREAS section 288 of the Municipal Act, RSY 2002, c. 154, and amendments thereto, provides that a council, within two years after the adoption of an official community plan, or as soon as is practicable after the adoption of an amendment to an official community plan, a council must adopt a zoning bylaw.

WHEREAS section 288 of the Municipal Act, RSY 2002, c. 154, and amendments thereto, provides that no person shall carry out any development that is contrary to or at variance with a zoning bylaw.

THEREFORE, pursuant to the provisions of the *Municipal Act* of the Yukon, the council of the City of Dawson, in open meeting assembled, **ENACT AS FOLLOWS**:

PART I - INTERPRETATION

1.00 Short Title

1.01 This bylaw may be cited as the ***Zoning Bylaw Amendment No. 8 Bylaw***.

2.00 Purpose

2.01 The purpose of this bylaw is to provide for

(a) An amendment to the Zoning Bylaw from C1: Core Commercial to R1: Single Detached and Duplex Residential.

CAO _____ Presiding Officer _____

Table of Contents

3.00 Definitions

3.01 In this Bylaw:

(a) Unless expressly provided for elsewhere within this bylaw the provisions of the *Interpretations Act,* RSY 2002, c. 125, shall apply;

(b) " Bylaw Enforcement Officer" means a person employed by the City of Dawson to enforce bylaws;

(c) “CAO” means the Chief Administrative Officer for the City of Dawson;

(d) “city” means the City of Dawson;

(e) “council” means the Council of the City of Dawson.

PART II – APPLICATION

4.00 Amendment

5.00 This bylaw amends Lot 1, Block U, Ladue Estate from C1: Core Commercial to R1: Single Detached and Duplex Residential in the Zoning Bylaw Schedule C: Historic Townsite, as shown in Appendix A of this bylaw.

PART III – FORCE AND EFFECT

6.00 Severability

6.01 If any section, subsection, sentence, clause or phrase of this bylaw is for any reason held to be invalid by the decision of a court of competent jurisdiction, the invalid portion shall be severed and the part that is invalid shall not affect the validity of the remainder unless the court makes an order to the contrary.

7.00 Enactment

7.01 This bylaw shall come into force on the day of the passing by Council of the third and final reading.

8.00 Bylaw Readings

Readings	Date of Reading
FIRST	
PUBLIC HEARING	
SECOND	
THIRD and FINAL	

Wayne Potoroka, Mayor
Presiding Officer

Cory Bellmore, CAO
Chief Administrative Officer

PART IV – APPENDIX (APPENDICES)

Appendix 1.

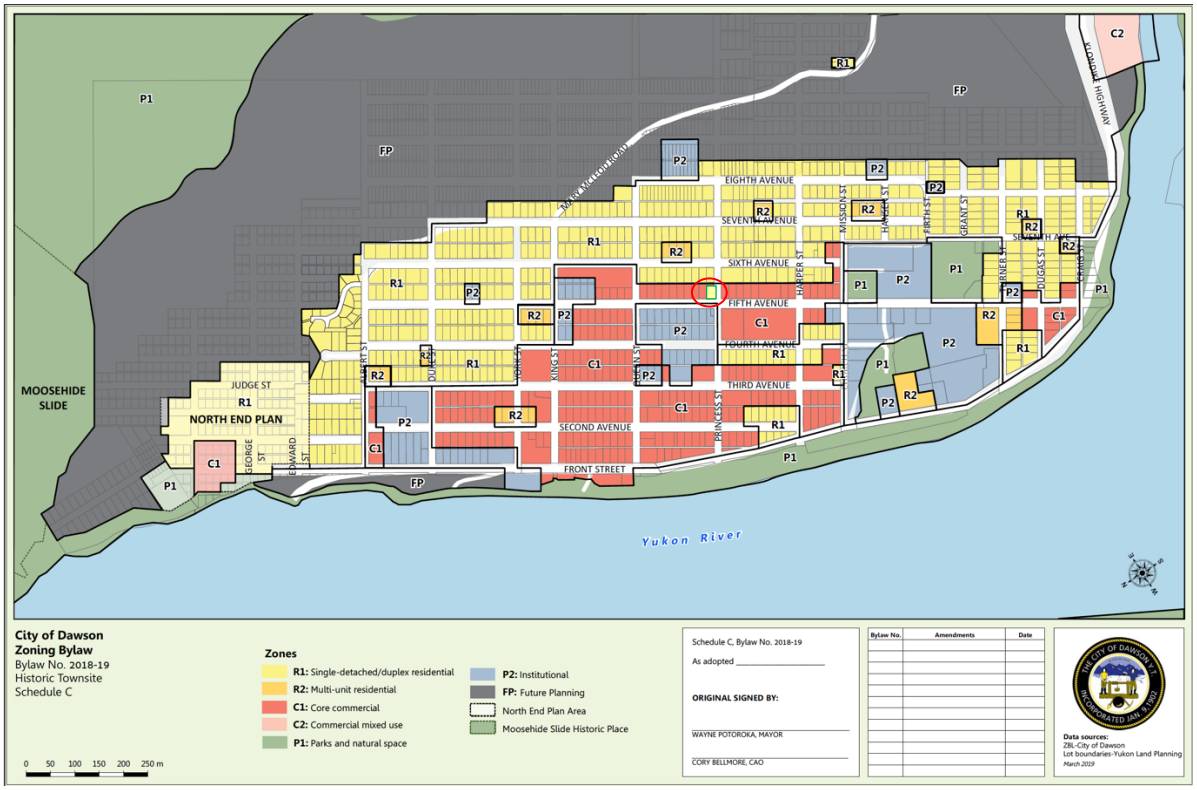


Figure 1. Location Map

CAO

Presiding Officer

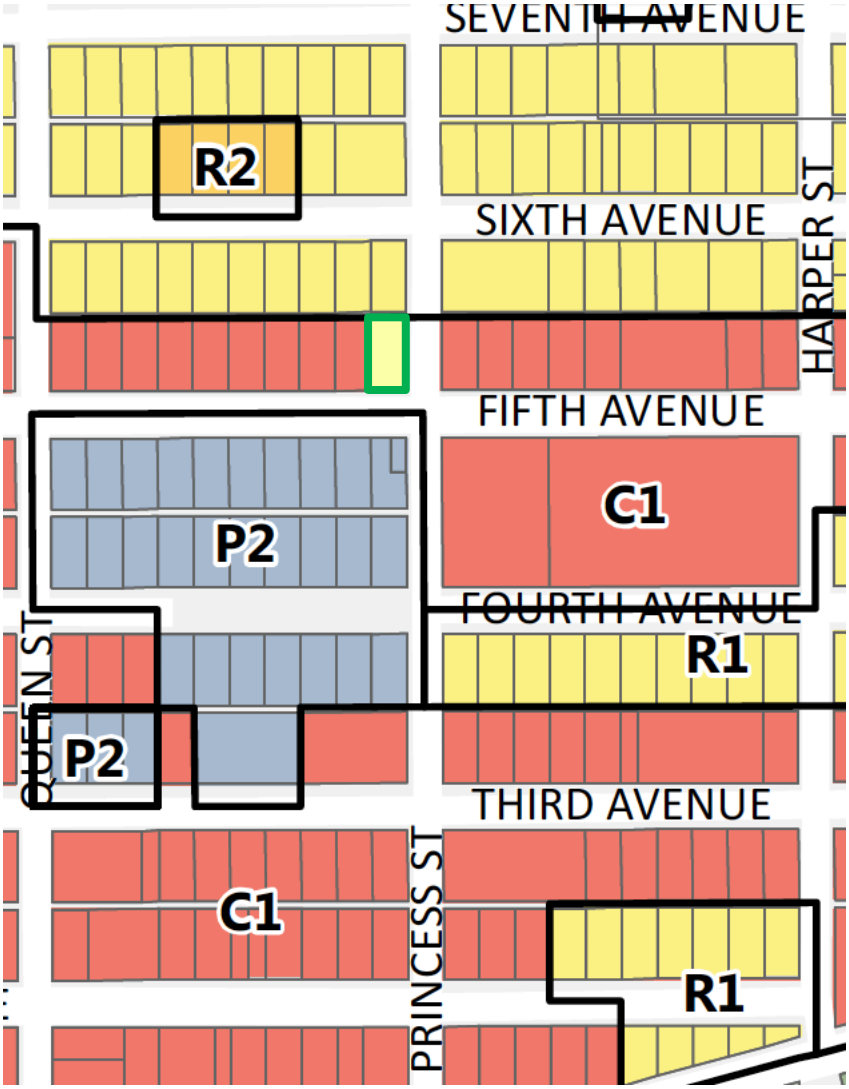
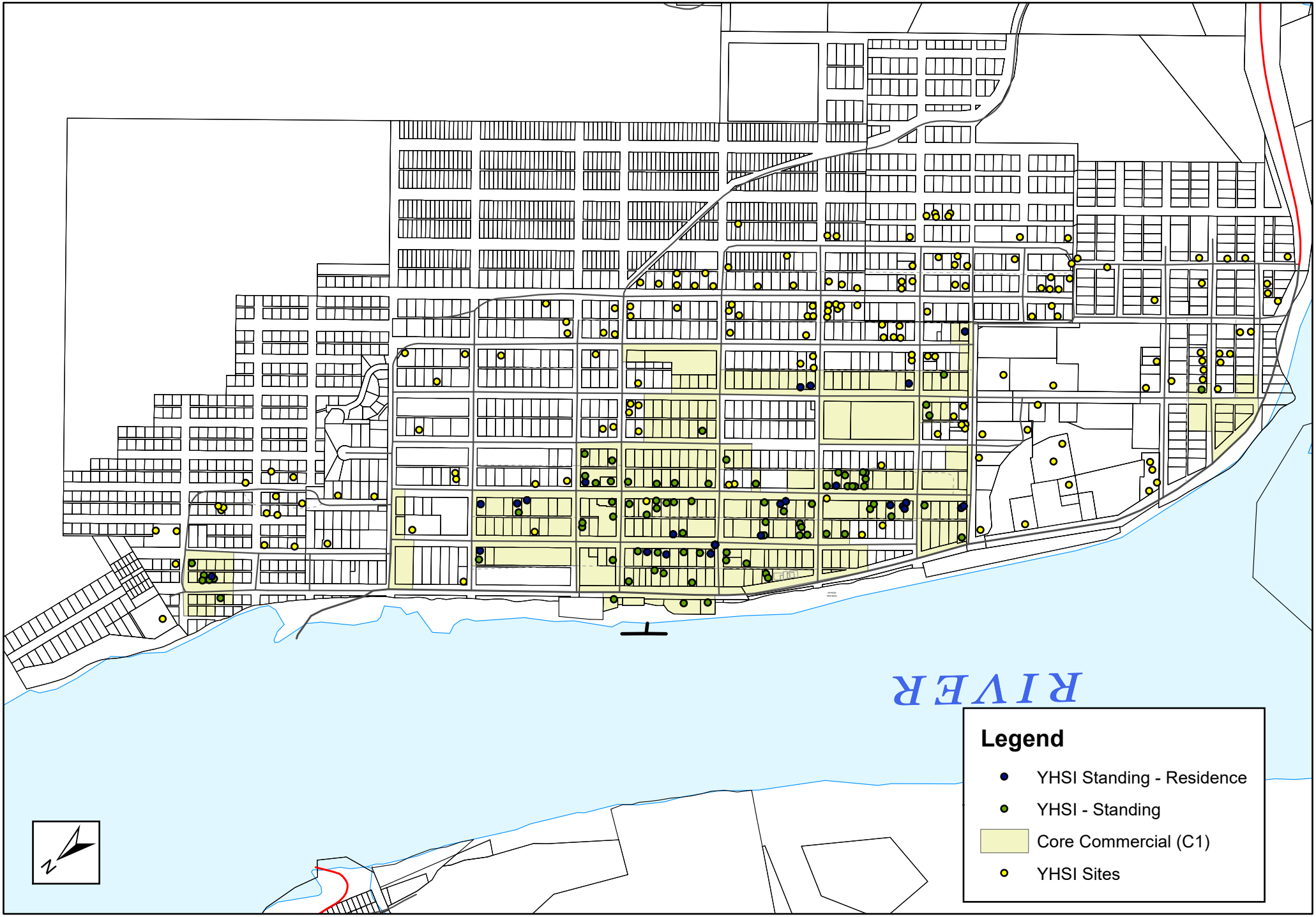


Figure 2. Amended area

YHSI Sites in Core Commercial Zone



RCMP·GRC
ROYAL CANADIAN MOUNTED POLICE • GENDARMERIE ROYALE DU CANADA

MONTHLY POLICING REPORT
September 2020

Dawson City RCMP Detachment
"M" Division Yukon

Royal Canadian Mounted Police / Gendarmerie royale du Canada

Canada

The Dawson City RCMP Detachment responded to a total of 94 calls for service during the month of September, 2020.

OCCURRENCES	September 2020	Year to Date 2020	September 2019	Year to Date 2019	Year Total 2019
Assaults (including common assault, assault with a weapon, assault causing bodily harm etc.)	1	38	1	58	79
Sexualized Assaults	1	5	1	3	3
Break and Enters	3	8	7	30	35
Thefts (all categories)	5	47	14	76	90
Drugs (all categories)	2	21	0	3	4
Cause Disturbance	6	49	15	114	136
Mischief	10	4	18	56	158
Impaired Driving	1	28	2	38	41
Vehicle Collisions	4	32	13	69	80
Mental Health Act	1	31	8	36	43
Assistance to General Public	3	68	3	25	35
Missing Persons (including SAR)/Requests to Locate/Well Being Checks	4	81	11	89	93
Check Stops Check stop numbers have been adjusted as per policy. Each number represents the number of vehicles as a contact. ie 439 means 439 vehicles were checked	0	439	35	265	373
Other Calls for Service	53	853	105	757	875

Total Calls for Service (Numbers are adjusted (higher) because of the way checkstop contacts are now reported)	94	1704	233	1619	2067
Total Criminal Code Charges Laid	3 Criminal Code	33 Criminal Code	9 Criminal Code	37 Criminal Code	57 CC
Total Territorial Act Charges (ie : Liquor Act/Motor Vehicle Act)		9 Motor Vehicle Act	0 Motor Vehicle Act 0 Liquor Act	7 Motor Vehicle Act 4 Liquor Act	5 Liquor Act 14 Motor Vehicle Act

	September, 2020	**Year to Date 2020 Total**	**September, 2019**	**Year Total 2019**
Prisoners held locally	2	38	5	65
Prisoners remanded	0	3	0	0
Total Prisoners	2	38	5	65

Justice Reports	**September, 2020**	**Year to Date 2020**	**September 2019**	**Year Total 2019**
Victim Services Referrals Offered	2	27	6	52
Youth Diversions	0	1	0	2
Adult Diversions	0	0	0	1

September snow on the Dempster Highway

Annual Performance Plan (A.P.P.'S) Community Priorities

Community approved priorities are:

(1) Substance Abuse
(2) Road Safety
(3) Youth Initiatives
(4) Attendance at THFN and Community Events
(5) Restorative Justice

(1) Substance Abuse

Licensed establishment checks are continuing for monitoring people who are consuming intoxicants within the community. Citizens that are found in need to get home are being looked after and assistance is being provided to find a safe and sober means to get them home. The Dawson City RCMP is encouraging people to make arrangements prior to a night out to ensure that they have a safe plan to get home.

(2) Road Safety

The Dawson City RCMP will be continuing to conduct check stops to assess driver's sobriety. With icy roads beginning to form, motorists are encouraged to keep extra space between vehicles for increased safety. As always, please remember not to drink and drive, call a friend or make alternate arrangements to get home safely.

(3) Youth Initiatives

School zone patrols are being done throughout the school day to remind motorists to slow down and watch for students, staff, and visitors to the school. Education and police visibility is the primary goal to ensure the safety of youth attending school. As a reminder, the speed limit in the school zone is 25k/h. If you see us out don't be shy to wave or say hi.

(4) Attendance at THFN and Community Events

Cst. Phil PREMERL attended a Search and Rescue educational session with Dawson City Rangers to learn about search and rescue techniques, specifically surrounding missing people with autism. Members of the detachment attended the THFN support center to meet with staff and citizens. Cpl. Dustin GRANT and Cst. Phil PREMERL took part in the First Responder Golf tournament with Fire Departments, EMS, and Hospital staff.

(5) Restorative Justice

There are no updates for Restorative Justice for the month of September.

Fun Fact

On March 8, 1901 a man was fined 86 cents for "depositing garbage on the ice near factory"

Kindest regards,

Cst. Phil PREMERL

For

Sgt. Rob MORIN
N. C. O. In Charge
Dawson City RCMP-GRC
Box 159
Dawson City, Yukon Y0B 1G0

Duka Environmental Services Ltd.

GOVERNMENT OF YUKON
INTEGRATED PEST MANAGEMENT

2020 NUISANCE AND VECTOR MOSQUITO CONTROL PROGRAM
SUMMARY REPORT

A Report Prepared For
Government of Yukon
Community Services
Community Operations & Programs - C-12
Whitehorse, Yukon

Prepared by
Duka Environmental Services Ltd.
Langley, British Columbia

File No. 0720
15 September 2020

19732 68 Ave, Langley B.C. Canada V2Y 1H6 Tel: 1 604 881 4565 Fax: 1 866 759 5902
Email: duka@telus.net Website: www.duka.consulting

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2 - 2020 Participating Community Contacts and Certified Applicators Information

3 - Yukon Weather Summaries 2020 - Temperature, Precipitation and Snow Course Data, October 2020 – May 2020.

4 - Town of Faro and Village of Teslin (Level 1 Participants) Community Services 2020 Mosquito Control Program - Summary of Services and Program Operations

1.0 INTRODUCTION

Duka Environmental Services Ltd. (Duka Ltd.) is an environmental services firm with extensive experience in integrated pest management and mosquito control program development and operation. *Duka Ltd*. was retained by the Yukon Government (YG), Community Services, Community Operations and Programs (Community Services), to manage mosquito control operations (nuisance populations) for communities participating in the 2020 Mosquito Control Program. These communities were:

- Army Beach (Marsh Lake)
- Burwash Landing
- Carmacks
- Dawson City
- Destruction Bay
- Faro
- Goldenhorne
- Grizzly Subdivision/1385 Klondike
- Haines Junction
- Tagish
- Teslin

Communities electing to not participate in the 2020 program included

- Beaver Creek
- Pelly Crossing
- Ibex/Echo Valley
- Mayo
- Ross River
- Old Crow

Participating communities were encouraged to contribute to overall control program success by providing an individual(s) to work locally with *Duka Ltd.* program coordinators. Prior to annual program start-up in April, communities are invited, in early February, by Community Services, to send uncertified personnel to the pesticide applicators certification course. Using a customized power point presentation, *Duka Ltd.* program managers present, and review, the BC Ministry of Environment Pesticide Applicators Certification study kit and materials with individuals sent to the course by their community. Field sampling, treatment and insect (mosquito) collection and preservation techniques are also reviewed. The 2020 course was presented in Whitehorse on 11 - 12 March.

Following successful completion of the applicator course examination, administered by Yukon Environment, certified applicators are provided additional, on-site field training and VectoBac 200G (*Bacillus thuringiensis* var. *israelensis*) for ground-based, community larval mosquito control. Adult mosquito population sampling equipment and additional training were also provided to certified applicators and community volunteers later in the season.

Duka Ltd. personnel worked with Yukon Government Community Services, community contact personnel and local applicators to complete surveying and monitoring of mosquito populations, the aerial and ground-based treatment of larval mosquito populations, and ongoing public education and notification functions. Training, instruction, and certification of local applicator personnel ensured the delivery of safe and effective mosquito control for residents and visitors of Yukon. Adult mosquito

control (adulticiding) hasn't been a component of the annual control program for over twenty years. Where nuisance was reported, residents were offered information on available control products, equipment and recommendations which they could employ to reduce mosquito development and annoyance on their properties.

This report summarizes activities completed for the 2020 Yukon Nuisance Mosquito Control Program; Section 2.0, Control Program Methodologies and Operations, details program approach, procedures, organization and observations. Community-specific data related to surveying, monitoring and pesticide applications are presented in Sections 3.1 through 3.9. Sections 4.0 and 5.0, provide program conclusions and recommendations, respectively. Maps of aerial and ground-based larvicide (VectoBac 200G) treatment areas and adult mosquito sampling locations for each community are presented in the Figures section of this report.

Appendix 1, presents a copy of Community Services Letter of Invitation and the Letter of Agreement provided to communities, unincorporated and municipal, on 29 January 2020. Appendix 2 provides details on local applicators and community contacts from the 2020 Mosquito Control Program. Appendix 3 provides a summary of Yukon weather and snow water equivalents for the period April - May 2020. Appendix 4 provides a summary of services and program operations provided for the Town of Faro and Village of Teslin as Level 1 participants, (see Appendix 1, and Section 2.2.1 of Municipal participation letter for definition).

2.0 CONTROL PROGRAM METHODOLOGY AND OPERATIONS

The most effective means of reducing adult mosquito populations, and the potential for annoyance, is through an integrated approach focused on limiting larval mosquito populations. This includes the timely detection and control of larval development using biological products and physical or cultural control methodologies which reduce some larval habitats and others that conserve, or enhance natural, mosquito predators. Regular surveying and monitoring, beginning in mid to late April or early May, and continued through June and into July, ensures that developing larvae populations are identified for timely control.

Factors limiting program success are larvicide treatment scope (total area treated) and frequency of applications, both from the ground and by air. Physical controls including improved drainage or grading and filling of low areas, or the clearing of obstructions in ditches to facilitate flow often provides a permanent solution to accessible, man-made habitats located nearest to residents or recreational venues and businesses. Such physical activities are not, however, a practical solution for the reduction of the widespread swamp and wetland areas which often surround many Yukon communities. The nature of these habitats is such that the treatment of developing larval mosquito populations is best achieved with the proven safe and effective, biological larvicide, VectoBac 200G.

Increasing the magnitude and frequency of larvicide applications reduces overall mosquito populations and improves program effectiveness. Community applicators and *Duka Ltd.* program coordinators work to routinely monitor and treat developing larval populations located closest to residential, commercial and recreational facilities. Comprised largely of ditches, snowmelt-filled depressions and permanent, or slow draining ponds, the extent of these ground-based treatments is limited by availability of certified applicators and *Duka Ltd.* personnel to the community.

Priority for aerial applications is given to the treatment of infested larval mosquito development sites having difficult access, which are large in size or number, and locations closest to participating communities. These sites typically include muskeg swamp, seasonally flooded river or lake floodplains, and snowmelt or precipitation-filled depressions often located throughout cleared, and or, burned woodland and forest areas. Wherever possible, local representatives (Administrators, Councilors, Mayors, senior public works personnel) and community applicators accompany *Duka Ltd*. personnel during reconnaissance flights prior to aerial larvicide treatments. Treatment sites and areas of avoidance are confirmed with community representatives during telephone conversations, emails, on-site meetings and through these aerial surveys. Opportunities to reduce or eliminate potential larval mosquito development habitats are reviewed with community personnel during certification training and as part of ground and aerial surveys.

Currently, a single aerial larvicide application and an allotted (budgeted) volume of VectoBac 200G larvicide (the treatment scope) is provided for participating communities. Depending on the scope (limit) of aerial applications, some infested sites located outside of available treatment boundaries may go untreated. Depending on their distance, number and locations, temperatures and winds, these untreated sites may provide a source of adult mosquitos and reportable annoyance. The expansion of overall treatment program scope, and the possibility of a second aerial treatment for some communities would improve program efficacy and is reviewed, as appropriate, in the individual Community-Specific Results and Discussions (Sections 3.1 - 3.9).

2.1 Mosquito Control Program Regulatory Requirements

Mosquito population surveillance and control services were provided to participating communities by *Duka Ltd.* (the permittee/program coordinator), through Community Services offices, in accordance with the Yukon Environment Act, Pesticide Service Permit # 21-004 (expiry, 31 December 2021). Two other communities also maintain their own permits for larval mosquito surveillance and control; the Village of Teslin (Pesticide Use Permit # 22-003), and Town of Faro (Pesticide Use Permit # 22-008), both of which expire on 31 December 2020. Pesticide Vendor Permits also maintained by *Duka Ltd.* (# 23-002), and Yukon Community Services (# 23-006) expire 31 December 2020.

A training course was provided at Whitehorse from 11-12 March 2020. It helped community personnel become certified applicators and reviewed their roles and responsibilities, depending on the community Participation Level chosen in the 2020 program.

Adult mosquito control applications (adulticiding, spraying) do not form a part of the mosquito control services provided to participating communities under this program. Communities wishing to control adult mosquitos are required to obtain a Pesticide Use Permit from Yukon Environment for this purpose. Adult mosquito control operations have not been completed as part of any annual community-based mosquito control program for over 20 years.

2.2 Program Communications

2.2.1 Community Contacts and Reporting

Prior to control program start-up, communities were first contacted by Community Services during late January and February to confirm their interest in participating in the annual mosquito control program.

Beginning with program operations in 2018, communities wishing to participate in the annual Mosquito Control Program were presented with 3 different options (Levels) related to the amount of services to be provided, and the resultant obligations of the community. All costs of goods (materials) and services supplied are invoiced back to the municipality and reflect these levels of service. Appendix 1, presents a copy of Community Services Letter of Invitation and the Letter of Agreement provided to Yukon communities on 29 January 2020. Briefly, these were:

- **Level 1: Independent Program Operation by Municipality.**

Community maintains their own permit, and reporting. They will complete, using their own personnel, ALL surveillance and control, independent of Community Services contracted Program Coordinator. Ground-based applications by local, certified applicators only.

Community Services, in conjunction with the program coordinator, provides certification training, larval and adult sampling equipment. Sample identification (taxonomy) and reporting of same back to the community for their submission to Yukon Environment. VectoBac 200G is supplied for control.

- **Level 2: Ground Surveys and Applications.**

Community provides a local, certified applicator to work with the Community Services contracted Program Coordinator. Local applicator expected to work with the program coordinator, and independently, completing sampling and ground-based applications.

Community Services, in conjunction with the program coordinator, provides certification training, larval and adult sampling equipment. Sample identification (taxonomy). Program Coordinator will complete surveillance and control services which complement those of the local applicator. Permitting and reporting to Yukon Environment is provided. A comprehensive summary report for all communities participating in Level 2, is produced.

- **Level 3: Ground AND Aerial Surveys and Applications.**

Municipality receives assistance and program services from Community Services, program coordinators and is expected to supply all of the requirements, as summarized in Level 2 above, and in the *Letter of Agreement* (Appendix 1). Aerial surveys and applications are included.

Duka Ltd. program managers and local (Whitehorse–based) program coordinators maintained regular contact with community applicators and administrators throughout 2020. Control program activities were regularly reviewed and coordinated with community applicators using personal meetings, telephone calls, telephone texts and emails. Program coordinators regularly visited participating communities to meet with community applicators. While on-site they completed sampling and treatments, often with local applicators, and retrieved the treatment data and samples completed and collected by community personnel. Local applicators were trained in the use of larval and adult mosquito sampling equipment, sample preparation and larvicide treatment operations. Advice and direction was provided to Faro and Teslin, Level 1 communities, when requested.

Communities without a local applicator received all their larval sampling, control applications and adult mosquito population monitoring from *Duka Ltd.* personnel. Regular updates on program operations were available to community representatives (City/Town Managers and CAOs, Highways Road Foremen, Mayors etc.) from the program coordinator and manager through personal on-site meetings, telephone contacts, text messaging, e-mail, office memos and facsimiles.

Regular progress reports (email, text messages, telephone) detailing control program activities were provided to YG Community Services, Community Operations and Programs, throughout the season.

2.2.2 General Public Information

The annual Yukon Government Nuisance Mosquito Control Program has been providing Yukon residents and visitors with safe and effective mosquito population surveillance and larval control services for over thirty seasons. Throughout this period, regular newspaper articles and advertisements, radio and television interviews, council presentations and interactions with *Duka Ltd* field personnel and program managers has provided residents with invaluable information on mosquitos and access to program services. Residents, business and facility operators in participating communities are very familiar with the annual mosquito control program. The program has a high visibility using helicopters and program technicians and biologists working with community personnel in campgrounds, parks and along roadsides sampling and treating larval mosquito populations and collecting adult mosquitos.

The general public was informed of 2020 control program start-up and aerial application dates through Community Services-sponsored advertisements (X2) published in the '*Yukon News'* and '*Whitehorse Star'* newspapers in early April. These advertisements provided residents with a summary of program

operations, a list of participating communities, application and control product details, and contact information for service access and more information. Email and website contact addresses and telephone numbers for *Duka Ltd.* (including a toll free 1-800#) and for Community Services, were included in these advertisements and in all *Duka Ltd* public information materials including brochures, door knob hangers and posters.

In addition to the printed materials informing residents of mosquito control services available to them, senior *Duka Ltd.* managers also provided several newspaper and local (CKRW, CBC North) radio interviews during late June and July 2020. These interviews discussed mosquito biology, the impacts of the unseasonably cold and wet weather conditions on mosquito populations, survival and nuisance. Control program operations were reviewed and suggestions for avoiding, and reducing mosquito annoyance by residents, businesses and visitors was discussed.

All requests for service or for more information were followed up with return telephone or e-mail contact, as appropriate, and on-site inspections where necessary.

2.3 Control Program Personnel

2.3.1 Corporate/Consulting Personnel

Duka Environmental Services Ltd. (*Duka Ltd*) is an Environmental Services firm with extensive experience and specialization in Integrated Pest Management (IPM) program development and design. Control program manager and company President Mr. Curtis Fediuk, is a Registered Professional Biologist (RPBio) has nearly 40 years of experience in mosquito surveillance and control. He has been managing the annual Nuisance Mosquito Control Program in Yukon for over 35 years. Program coordinators, field biologists and technicians are Yukon residents. All *Duka Ltd*. program personnel working in the annual mosquito control program are certified through the BC Ministry of Environment Pesticide Management Branch as Pesticide Applicators for larval mosquito control.

In addition to regular, on-site involvement of program managers, local, daily project coordination was provided from late April through to mid-August 2020 by *Duka Ltd*. personnel residing in Whitehorse. Regular, typically every three weeks, *Duka Ltd.* program personnel completed extended field trips to all participating communities. *Duka Ltd.* personnel duties included the instruction and coordination of community applicators, surveying and sampling of mosquito populations, aerial and ground-based larvicide applications, light trap collections and mosquito species identification. Program personnel also provided ongoing community applicator training, public information, data collection and compilation, liaison and reporting of program activities throughout the season.

As result of travel restrictions and isolation/distancing protocols related to the COVID-19 pandemic, *Duka Ltd.* senior management personnel, Mr. Curtis Fediuk, was unable to attend and supervise the aerial application campaign for the first time in +20 years. The aerial application pilot had worked on

this program the past three seasons, and along with Mr. Fediuk's direction and the support provided by experienced local *Duka Ltd.* personnel, the 2020 aerial applications were successfully completed. Although *Duka Ltd.* field biologists and technicians were required to limit their personal interactions with community volunteers and residents, larval and adult mosquito surveillance and control operations were completed as required and with same level of effort, community field visits and veracity as in previous years.

2.3.2 Community Personnel

The availability of a local, certified applicator in each community improves program success. Community applicators treat the initial hatch of mosquito larvae in late April and early May, and their observations and sampling of local larval development is very important to the timely scheduling of aerial applications. Their availability to the program into June and July also allows for an increase in the frequency, and extent of ground-based larvicide treatments. Control of larval mosquito development which occurs before, and after, aerial applications, improves program effectiveness.

Beginning in late May or early June, community applicators are provided with, and trained by program coordinators, in the use of adult mosquito sampling equipment and techniques. Community applicators are encouraged to collect and retain samples of both larvae and adult mosquitos for species identifications, and to record their information observations on the level of local mosquito annoyance. These activities complement those completed by *Duka Ltd.* program coordinators.

Community applicators were required to possess a valid pesticide applicators certificate in the category of '*Mosquito – Ground Application of Bacterial Pesticides and Growth Regulators*', issued by the BC Ministry of Environment (BCMOE) before applying mosquito control larvicides within their communities. To assist community applicator/volunteers acquire necessary certification, *Duka Ltd.* personnel presented a 2 day training course and Power Point™ review of the BCMOE study kit materials at Whitehorse. Course materials and the BC Ministry of Environment 'Applicators Study kit' include a detailed review of mosquito lifecycles and biology, an overview of pesticide regulations and legislation, public safety, pesticide use, application and reporting. An additional module includes training on collecting and preserving larval and adult mosquito samples. During the second afternoon of the course, attendees complete an 'open book' certification examination. Participants in the course received either a one year, or five year certification, depending on 'score', following successful completion of the written examination. Course attendees are provided with all sampling equipment they will require including a dipper, sample bottles, labels, +90% isopropyl alcohol (for larval sample preservation) and data recording sheets.

Aerial application pilots working in the annual nuisance mosquito control program must be also certified as applicators through a similar, pilot-specific, BCMOE examination. *Duka Ltd.* personnel were available to all interested helicopter companies to help them acquire the relevant study materials and

prepare their pilots to write the BC Ministry of Environment Pesticide applicator's certification examination for application pilots.

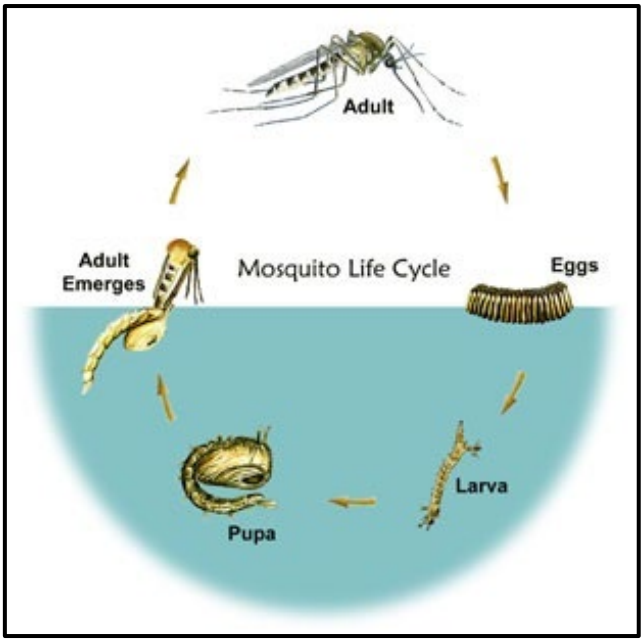
Eight communities (Army Beach, Burwash, Carmacks, Dawson City, Faro, Goldenhorne, Tagish and Teslin) had certified (licensed) applicators available to the community for the 2020 season. Faro and Teslin had limited, Level 1, participation in the 2020 program. These communities have their own Pesticide Use Permits and their certified staff completed all surveillance, sampling and treatments.

Faro and Teslin staff completed all community surveillance, sampling, treatments and are responsible for all reporting to Yukon Environment. *Duka Ltd.* program coordinators retrieved larval and adult samples collected where provided by their community applicators in order to complete mosquito species identification (taxonomy) for the community, and as required by their permit reporting. Appendix 2 provides a listing of current community contacts (administrators, managers) and applicators, uncertified volunteers, their contact details and certification status.

Fireweed Helicopters (Whitehorse) was again the successful aerial (helicopter) contractor selected by the Yukon Government to provide aerial application services in 2020. The pilot assigned to the program by Fireweed has completed these applications for the past three seasons. The continuity of personnel and pilot experience contributed to the effective, efficient control of larval mosquito development.

2.4 Surveying, Monitoring and Results

All mosquitos require water for larval development. Larvae must go through four stages or instars, (1st,2nd, 3rd and 4th), each a little bigger than the previous, before developing into pupae. Pupae undergo complete metamorphosis and emerge as winged, terrestrial adults. Although this process can occur in as little as 5-7 days, in Yukon and other northern communities it can take upwards of 21 days, depending on conditions and temperatures.



Adult, female mosquitos will typically fly less than 1-2km in search of a blood meal although distances of 5km are not uncommon, and some research has found them 30 km from their origin, and at heights of 10,000m.

While these are the extreme, and rare distances, the impact of winds on adult mosquito dispersal can be significant.

The key to successful mosquito control (population management) and a reduction in adult mosquito nuisance populations is through the early detection and timely control of larval development. Regular surveying and monitoring of potential mosquito development sites (water bodies), beginning in mid to late April of each season, ensures that the onset of larval development is identified and control operations initiated.

Larval densities as low as one larvae per 500 ml dip sample, in a roadside ditch or pond the size of back yard swimming pool (5m x 12m), has the potential to produce thousands of larvae. Left untreated, the resultant adult mosquito population is capable of causing noticeable annoyance for local area residents. The largest, and majority of habitats affecting Yukon communities are muskeg swamps, bogs and the slow draining snowmelt water which accumulates within them. These sites provide several hundred hectares of ideal larval mosquito development habitat located adjacent to, and within 1-2 km of community boundaries.

Surveying, monitoring, ground-based treatment of larvae and monitoring of adult mosquito populations were completed by *Duka Ltd* personnel and community applicators. In communities where no local applicator was available, *Duka Ltd.* personnel completed all surveys, habitat mapping, monitoring of larval and adult mosquito populations, and all VectoBac 200G (larvicide) treatments. *Duka Ltd.* biologists also contributed to public education initiatives and regularly interacted with community residents and workers, and updated local, community administrative personnel. *Duka Ltd.* program coordinators and managers collected, sorted and recorded activities and data collected for program and regulatory agency reporting.

2.4.1 Weather Conditions Affecting Mosquito Development in 2020

Numerous cues interact to affect the timing and magnitude of mosquito development in Yukon. Temperatures (both winter and summer), precipitation, and snowfall accumulations vary from year to year and month to month. The interaction of these parameters has a direct effect on the magnitude of snowmelt water and rainfall which accumulate in shallow, scattered ponds and meandering larval development sites. The more standing water which exists, and the longer that it persists, the greater the potential for larval mosquito development, species diversity, and populations. Adult mosquito survival and dispersal is affected by winds, temperatures and humidity.

Fall and winter (October-April) 2019-2020 temperatures were generally close to the historical average for most regions of Yukon, with a marked cold spell in January when monthly mean temperatures were 9-12^{o}C below average. Precipitation was above, to well-above the historical average in central Yukon, (www.yukon.ca/en/snow-surveys). Overall monthly mean temperatures throughout most of Yukon during the spring and summer (April-July) of 2020 were a little (0.6 – 2.4^{o}C) “cooler” than average. Snow water equivalents in Yukon, recorded on 01 May 2020, for almost all communities participating in the mosquito control program, were all above normal, (Appendix 3).

Monthly precipitation totals for communities in Yukon during May and July 2020 were above average, and June was below average, (www.climate.weather.gc.ca/climateData/dailydata). Total precipitation for most Yukon communities during the 2020 summer, May through August, were above the 2015-2019 averages. Haines Junction recorded over twice as much precipitation in the summer of 2020, Burwash Landing received over 170% of normal, Carmacks, Dawson City and Faro all received between 105-115% of total, normal precipitation.

2.4.2 Larval Development and Populations

Cooler temperatures throughout central and southern Yukon during March and April, combined with above average precipitation and snowfall with a resultant delay in larval development of 2-3 weeks when compared with recent seasons. Larval eclosion (hatching) and development wasn't noted by local applicators and/or *Duka Ltd.* personnel until the end of April and first few days of May. Temperatures during the second week of May were warmer (3-6^{o}C) than the previous weeks with rapid snowmelt and widespread larval development observed. Temperatures cooled again during the third week of May before warming up again at the end of the month. Larval development rates decreased, then increased in response to these conditions.

Surveying by local applicators and regular field visits by program coordinators noted recurrent larval development in most communities throughout May, June and mid-July.

Larval populations throughout the season were variable, with most sites, in most communities, averaging 10-20 larvae/dip sample. Early season, late April and early May larval populations were often quite large, with larval populations of 100 - 200 larvae/dip common for most communities.

Larval populations during June and July were not as large and typically ranged from 5-10 larvae/dip although occasionally a site would have densities of +20 larvae/dip sample.

Twenty three species of larval mosquitos, from four different genera, and a total of 2420 specimens, were collected from various Yukon communities during 2020. Table 1 presents this data by date and community. Seventeen species of *Aedes* were identified, three species of *Culiseta,* two *Culex* and one *Anopheles*. The "wetter" conditions of this year not only extended larval development throughout the summer but also resulted in an increased diversity of species. A total of seventeen species of larvae were collected in 2019 and eighteen in 2018. Twenty three species of larvae were also collected in 2017, a year similar to 2020, with a colder winter, a cool summer and above average precipitation.

Aedes mosquitos are the dominant genus of mosquitos occurring in Yukon and accounted for 85.3% of all specimens collected in 2020 (Charts 1 and 2 below). *Aedes* eggs are laid on wet soil and vegetation along the margins of temporary, or fluctuating water bodies including snowmelt and precipitation runoff pools, ponds, floodplains and marshes. Eggs can remain viable and capable of overwintering for upwards of twenty years. Cold winter temperatures tend to increase the number of eggs "primed" to hatch and this typically occurs soon after sites become inundated with spring snowmelt and precipitation. Once underway, *Aedes* larval development is widespread and synchronous making the identification of developmental onset, and timely treatment, essential to control program success.

Since fluctuating pond levels, snowmelt or rainfall accumulations may immerse eggs several times in one season, each initiating a further hatch, regular surveillance and control of *Aedes* mosquitos is required.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. campestris	0	2	16	0.7%	0	0	0	0	0	11	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. canadensis	++	2	5	0.2%	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	0	0	0	0	0
Ae. cataphylla	0	18	107	4.4%	0	0	0	5	0	67	5	0	0	11	0	0	19	0	0	0	0	0	0	0
Ae. communis	0	30	213	8.8%	0	0	0	0	0	51	132	4	0	26	0	0	0	0	0	0	0	0	0	0
Ae. diantaeus	0	1	1	0.0%	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ae. dorsalis	+++	1	3	0.1%	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Ae. euedes	0	1	1	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ae. excrucians	0	2	7	0.3%	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	5	0	0	0	0
Ae. fitchii	0 ?	4	31	1.3%	0	0	0	0	0	0	0	0	0	31	0	0	0	0	0	0	0	0	0	0
Ae. impiger	0	14	103	4.3%	0	0	0	0	0	85	8	0	0	10	0	0	0	0	0	0	0	0	0	0
Ae. implicatus	0	61	819	33.8%	0	0	0	2	9	432	307	1	0	57	0	0	11	0	0	0	0	0	0	0
Ae. increpitus	0	2	44	1.8%	0	0	0	0	0	0	43	0	0	1	0	0	0	0	0	0	0	0	0	0
Ae. melanimon	+++	1	26	1.1%	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. pionips	0	9	51	2.1%	0	0	0	0	0	0	0	0	0	25	0	0	26	0	0	0	0	0	0	0
Ae. punctor	0	3	6	0.2%	0	0	0	0	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Ae. spp	N/A	30	613	25.3%	0	0	0	45	86	132	197	150	0	3	0	0	0	0	0	0	0	0	0	0
Ae. sticticus	+ ?	1	8	0.3%	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. stimulans	0	1	7	0.3%	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An. earlei	+ ?	1	1	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
An. spp	N/A	2	2	0.1%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Cs. impatiens	0 ?	2	7	0.3%	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	4	0	0	0	0
Cs. incidens	++ ?	24	185	7.6%	0	0	0	0	0	0	0	0	0	0	0	0	100	14	0	71	0	0	0	0
Cs. inornata	+++	4	18	0.7%	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	13	0	0	0	0
Cs. spp	N/A	10	126	5.2%	0	0	0	0	0	0	0	0	0	76	0	0	18	0	0	32	0	0	0	0
Cx. tarsalis	++++	4	12	0.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	0
Cx. territans	0 ?	3	8	0.3%	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	6	0	0	0	0
	Total	233	2420	100%	0	0	0	52	95	796	723	155	0	253	0	0	187	14	0	145	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value — Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

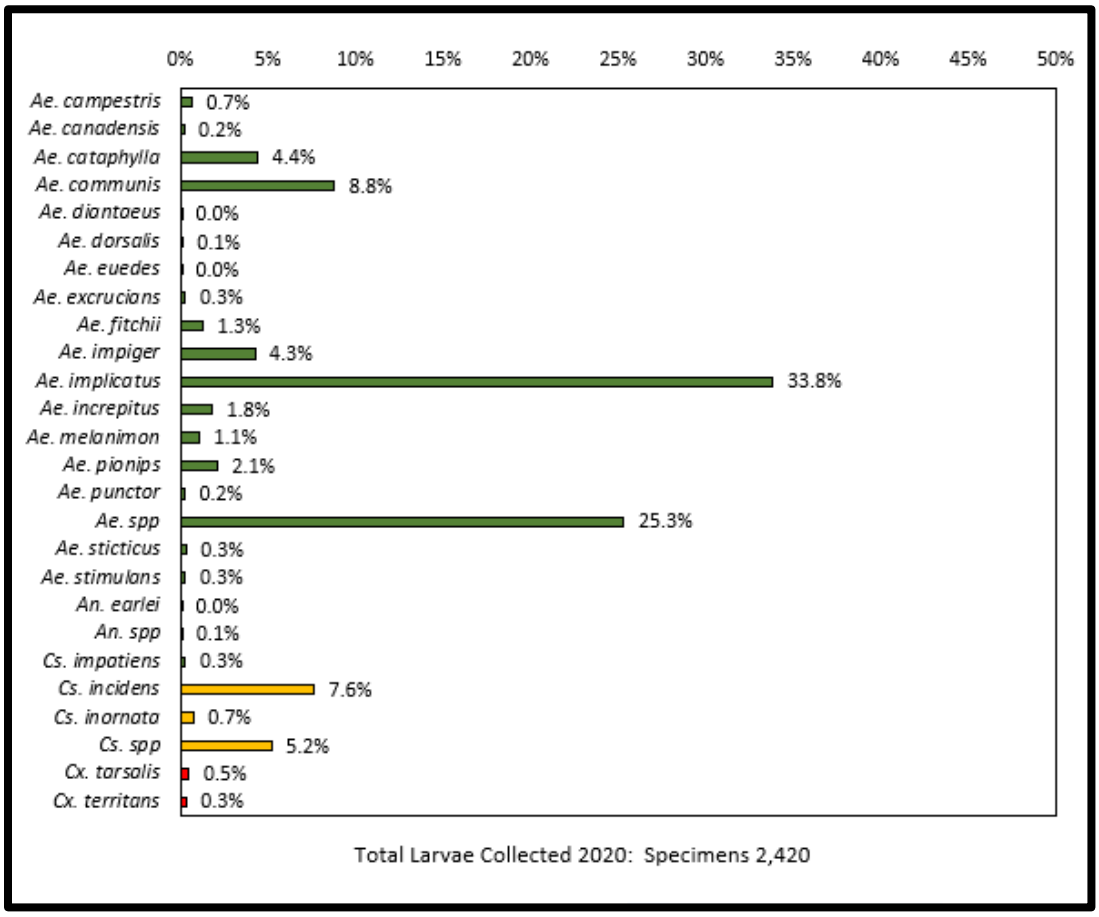
Chart 1: Government of Yukon; Larval mosquito distribution (temporal) and occurrence (%), based on 2420 individuals collected for identification between 21 April and 17 July 2020.

Two species of *Aedes* mosquito larvae were the predominant this season and comprised 42.6% of all larval specimens collected during sampling in 2020. Common throughout the north, including Yukon, *Ae. communis* (8.8%), and *Ae. implicatus* (33.8%), make use of snowmelt pools, floodwaters and fluctuating water levels in marshes and swamps. A further 25.3% of all larvae collected during 2020

were also *Aedes,* although their species could not be determined because of their small size, immaturity or damage when collected or preserved. *Aedes* mosquitos prefer mammals, including humans, and are the primary nuisance species in Yukon.

Three species of *Culiseta* and two species of *Culex* were collected as larvae during the 2020 season. These genera of mosquitos typically overwinter as adults and may emerge in early spring to search for open water to lay their eggs soon after snowmelt. They are, however, most common later in the season with their activity increasing in response to increased day length and temperatures. In addition to being nuisance pests of man, animals and birds, several species of *Culex* and *Culiseta* mosquitos are also recognized vectors of West Nile virus.

The third most common mosquito (7.6%) collected as larvae during 2020 were *Culiseta incidens,* (Charts 1 and 2). Collected exclusively in late June and July, it is a mosquito which prefers ditches, woodland pools and polluted waters.



<u>Chart 2:</u> Government of Yukon; Larval mosquito identification summary. Species compositions, as a percentage (%) of 2420 individuals collected between 21 April and 17 July 2020.

The remaining diversity and number of larval species collected during 2020 demonstrates the variety of habitats and effects of cool and wet weather conditions on recurring *Aedes* mosquito development, and the magnitude of *Culex* and *Culiseta* populations (14.6%) when compared with past seasons. *Culex* and *Culiseta* accounted 7% percent of all larvae collected in in 2019, 1.6% in 2018 and 9.2% in 2017.

Charts 1 and 2 above, present the temporal occurrence and relative abundance, as a percentage of the total, of the various mosquito species collected as larvae throughout Yukon during the 2020 season. Individual community discussions in Sections 3.1 – 3.9 may, as appropriate, review temporal differences in mosquito species distribution and occurrence.

2.4.3 Adult Mosquito Population Surveys

Most *Aedes* mosquitos are recognized as extreme nuisance pests of man and animals. Many of them are aggressive "biters", others will bite throughout the day, and still others readily enter buildings and residences (Belton, 1984). *Culex* and *Culiseta* mosquitos will bite a variety of hosts including birds, and in addition to causing nuisance for man and animals several species can transmit diseases, including West Nile virus.

Adult mosquito populations occurring in participating communities were measured using New Jersey light traps. These traps use an incandescent light bulb to generate heat, one of the attractants for female mosquitos searching for a blood meal. A fan inside the top of the trap pushes mosquitos attracted to the light bulb down, and into a collection jar. These sampling devices provide an objective, reproducible, uniform sampling method and the collection of undamaged specimens.

New Jersey light traps were deployed in two fashions again this season. The first had local applicators use programmable timers to turn the light traps on and off. This allowed them to set-up their traps and collect samples for several hours/day, or over several consecutive days if they wished.

The second light trap sampling method, using carbon dioxide (CO_2) and a sampling period of 1 hour, was deployed by *Duka Ltd.* program coordinators to increase the effectiveness of the New Jersey light traps when deployed for these short periods of time. Carbon dioxide is often utilized as an additional attractant for female mosquitos in northern areas to complement the stimulus of thermal attraction normally provided by a light bulb.

Adult mosquito nuisance was measured using another standardized method. A "standard biting/landing count", measures the number of mosquitos which land on the exposed forearm (from wrist to elbow) to bite in a one minute period. A count in excess of three bites per minute (3bpm) is

more than an average person can tolerate and indicates a level of annoyance which would typically warrant control measures such as adulticiding.

Adult mosquitos at participating communities were collected for species identification during 2020 using both non-baited (light only) and CO_2-baited New Jersey light traps. Bite count sampling, typically estimated during the set-up and retrieval of light trap sampling equipment, provided additional samples and collection of species actively attempting to bite. Table 2 presents this information by date, and community, A total of thirteen species of *Aedes* and four species of *Culiseta* were collected during adult mosquito population sampling completed from 28 May to 18 July 2020, (Charts 3 and 4 below).

Adult mosquito populations this season were substantial and widespread. The level of nuisance reported by community residents, local applicators/volunteers and experienced by *Duka Ltd.* personnel was notable, and unlike anything they could remember.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. cataphylla	0	10	28	0.7%	0	0	0	0	0	0	0	0	0	16	0	0	11	0	0	1	0	0	0	0
Ae. communis	0	58	392	10.4%	0	0	0	0	0	0	0	0	16	131	17	11	161	18	0	38	0	0	0	0
Ae. diantaeus	0	2	2	0.1%	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Ae. dorsalis	+++	8	60	1.6%	0	0	0	0	0	0	0	0	0	14	2	0	36	0	0	8	0	0	0	0
Ae. excrucians	0	39	410	10.9%	0	0	0	0	0	0	0	0	0	1	18	4	208	5	0	174	0	0	0	0
Ae. fitchii	0 ?	1	1	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ae. implicatus	0	32	286	7.6%	0	0	0	0	0	0	0	0	0	132	1	1	84	0	0	68	0	0	0	0
Ae. mercurator	0	2	2	0.1%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Ae. provocans	0 ?	24	196	5.2%	0	0	0	0	0	0	0	0	0	144	0	1	29	0	0	22	0	0	0	0
Ae. riparius	0	18	85	2.3%	0	0	0	0	0	0	0	0	0	0	0	2	48	1	0	34	0	0	0	0
Ae. spp	N/A	3	3	0.1%	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0
Ae. sticticus	+ ?	93	1955	51.9%	0	0	0	0	0	0	0	0	35	485	61	39	932	29	15	359	0	0	0	0
Ae. vexans	++	38	294	7.8%	0	0	0	0	0	0	0	0	0	0	17	2	162	7	1	105	0	0	0	0
An. punctipennis	+ ?	1	1	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Cs. alaskaensis	0	6	27	0.7%	0	0	0	0	0	0	0	0	0	25	0	0	1	0	0	1	0	0	0	0
Cs. impatiens	0 ?	9	10	0.3%	0	0	0	0	0	0	0	0	1	0	2	2	2	2	1	0	0	0	0	0
Cs. incidens	++ ?	6	15	0.4%	0	0	0	0	0	0	0	0	2	2	6	1	4	0	0	0	0	0	0	0
Cs. inornata	+++	1	1	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Adult Total	351	3768	100%	0	0	0	0	0	0	0	0	54	950	125	63	1684	62	18	812	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value — Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 3: Government of Yukon; Adult mosquito distribution (temporal) and occurrence (%), based on 3768 individuals collected for identification between 28 May and 18 July 2020.

The most common genus of mosquitos collected as adult specimens during 2020 were *Aedes,* accounting for nearly 98.5% of the 3768 adult mosquitos identified, (Chart 3, above). The three most numerous *Aedes* species collected as adults during 2020 were *Aedes sticticus* (52.2%), *Ae. communis* (10.8%) and *Ae. excrucians*, (Chart 3 above, and Chart 4 below). These species are common to the north and develop in temporary, shaded, woodland ponds, snow melt pools and flooded cottonwood forests. They are aggressive "biters" in shaded areas and at dusk and dawn. *Aedes sticticus* will enter houses readily and can penetrate most common window screens.

Culiseta alaskaensis accounted for 0.7% of all adult mosquitos collected in 2020. This is a large mosquito which uses heavily vegetated pools and ditches. Females bite in the shade but are not generally an aggressive pest, (Belton 1984). *Culiseta impatiens* (0.3%) and *Culiseta incidens* (0.4%) prefer similar habitats to locally occurring *Aedes.* They are not aggressive pests but will be bite readily and both have been identified as potential West Nile virus vectors.

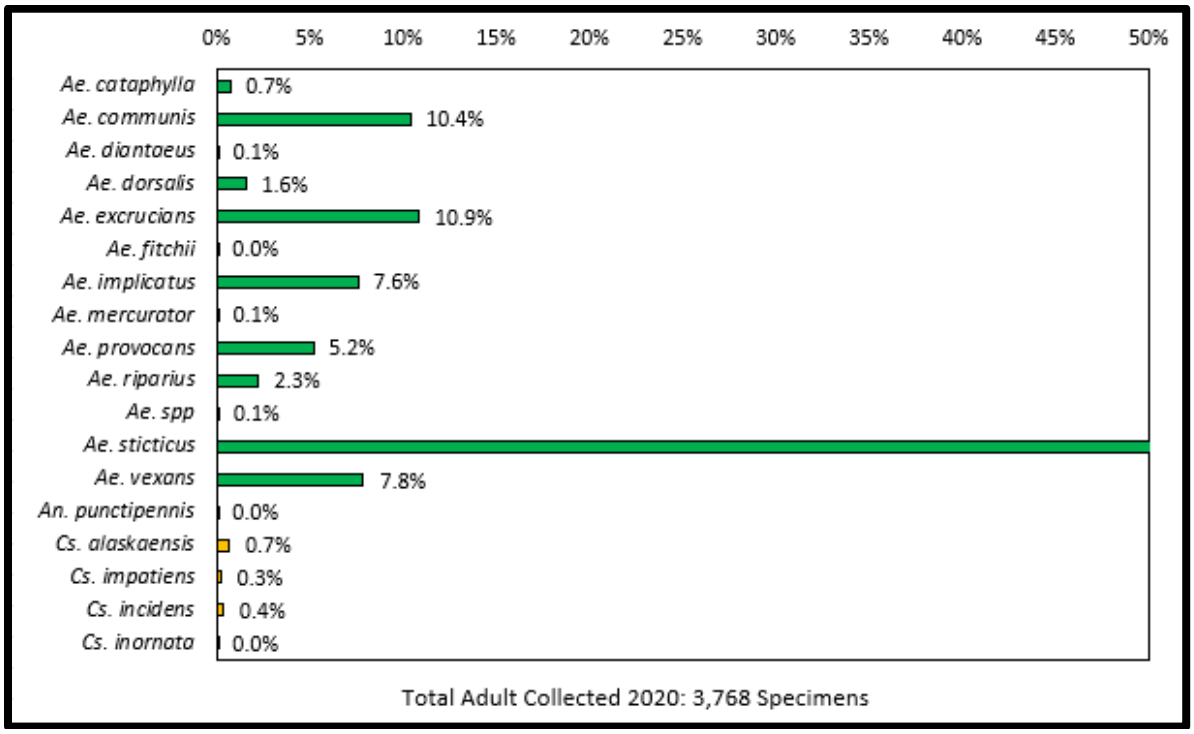


Chart 4: Government of Yukon; Adult mosquito species composition (%), based on 3768 individuals collected for identification between 28 May and 18 July 2020.

Overall, adult mosquito populations and resultant annoyance throughout Yukon during 2020 was above average and in some places reported as extreme. Light traps baited with CO_2 were set up on a total of 73 occasions by *Duka Ltd.* personnel between 28 May and 18 July 2020. Community volunteers set up light traps, typically for 1-2 days, on 66 occasions during this same time period. This year's adult mosquito sampling was the most rigorous completed in several years. Typically less than 80 sampling events per year, in total, are completed. In 2020, adult sampling was completed on 139 occasions.

Using CO_2-baited light traps, Haines Junction had the highest single capture of 470 adult mosquitos on 24 June 2020, Burwash Landing had 427 individuals on 23 June, Tagish had 302 individuals on 27 June, and on 17 July, Destruction Bay had 194 adult mosquitos collected.

Haines Junction, Burwash, Destruction Bay and Tagish all have extensive areas of permanent and snowmelt/precipitation influenced swamp habitat adjacent to their communities, much of it which goes untreated. Given the very wet conditions of this year, it is likely that the uncontrolled larval development occurring outside of aerial treatment boundaries was the source of these unprecedented nuisance populations.

2.5 Mosquito Control (Population Management) Summary

The goal of the annual mosquito control program is to provide residents and visitors of the various participating communities (municipalities) and residential settlements/subdivisions (unincorporated areas) with relief from extreme, or protracted adult mosquito nuisance. This is achieved through effective management of pest (larval mosquito) populations, the conservation of natural predators and processes, public education and information. In most seasons, the scope of aerial applications and ground-based treatments are sufficient to achieve this goal. In 2020 however, the prolonged cool and wet weather conditions of May through July were unprecedented, water accumulations were extensive and persistent. Subsequent adult mosquito populations emerging from untreated areas, and their dispersal into adjacent communities during May and June resulted in obvious, notable adult mosquito nuisance.

2.5.1 Larvicide Applications

The mosquito control program in Yukon adheres to the principles of Integrated Pest Management. This IPM approach focuses efforts on the reduction and control of the most susceptible stage of the mosquito, its larval populations. Wherever possible, larval mosquito development is prevented or reduced through physical control options including alterations in water depth or flows, and where appropriate, through site drainage and elimination. Physical options may also include the management of water bodies to preserve, or enhance, natural predator populations of insects, fish and animals. Where such activities are undesirable, or impractical, larval mosquito populations in Yukon are controlled using non-chemical, bio-rational larvicide products.

All larval mosquito control applications conducted as part of the 2020 Yukon Mosquito Control Program were completed using the bacterial larvicide VectoBac 200G. This product is comprised of corn cob granules, coated with wax and then with the naturally occurring bacterium *Bacillus thuringiensis* var. *israelensis (Bti) Serotype H-14, Strain AM 65-52.* This bacterium has specific insecticidal properties against a narrow range of target organisms; specifically mosquitos, black flies and some biting midges. It is not persistent in the environment and has no effect on other organisms including insects, amphibians, fish, wildlife, livestock, domestic animals and humans. This product was tested (1984/85) in Yukon, under operational field conditions, as part of product registration with the Pesticide Regulatory Management Agency (PMRA) of Agricultural Canada. It is used worldwide, has organic labelling in numerous countries, and is approved under the World Health Organization Pesticide Evaluation Scheme and is on the WHO pre-qualification list for vector control products. It has been

used in the annual program, without incident, for over thirty five years and has proven, effective control of larval mosquitos in Yukon. It's biological safety profile and manufacturer's guarantee of product quality confirms it is the only larvicide of choice for local mosquito control program operations.

A Bell 206L Jet-Ranger helicopter (Fireweed Helicopters) fitted with a granular application bucket was used for all aerial applications. A total of 800.66 hectares of infested larval mosquito habitat were aerially treated with 3,402.8 kilograms of VectoBac 200G during the period 10-15 May 2020, (Table 3). As result of travel restrictions and isolation/distancing protocols related to the COVID-19 pandemic, *Duka Ltd.* senior management personnel, Mr. Curtis Fediuk, was unable to attend and supervise the aerial application campaign for the first time in +20 years. The aerial application pilot had worked on this program the past three seasons, and along with Mr. Fediuk's direction, and the support provided by experienced local *Duka Ltd.* personnel, the 2020 aerial applications were successfully completed.

Eight communities had certified applicators available to work locally during 2020. Army Beach, Burwash, Carmacks, Dawson City, Faro, Goldenhorne, Tagish and Teslin certified (licensed) applicators completed surveillance, and in some instances larvicide applications, independent of, *Duka Ltd.* personnel during 2020, (Table 4). Regular monitoring and ground-based larvicide treatments, when done by community applicators during the season, controls initial larval development and complements aerial applications by controlling potential sources of mosquito annoyance typically located closest to residential and business areas.

Despite having certified applicators available, the communities of Carmacks, Destruction Bay, Goldenhorne, Haines Junction, Grizzly Subdivision/1385 Klondike Highway and Tagish all participated in the 2020 program without the benefit of local applicator treatments for larval development. Community applicators or volunteers were able to still contribute to program success with larval and adult mosquito sampling. In these communities *Duka Ltd.* personnel, as always, completed mosquito population surveying, monitoring independent of, and to complement that of local applicators. Ground-based larval controls were also completed by *Duka Ltd.* personnel wherever possible, and as frequently as time and distances allowed.

Duka Ltd. personnel and community applicators combined to apply a total of 163.98 kilograms of VectoBac 200G during 2020 to control larval development in 21.872 hectares of ground-accessible mosquito habitat, (Table 4). This was over twice the amount applied during recent years (2019, 2018) and reflected the amount of standing water accumulation, its persistence during the summer and the recurring larval development which was the result.

2.5.2 Larvicide Post-application Monitoring

Larvicide application efficacy (treatment effectiveness) was assessed through a comparison of pre-treatment and post-treatment larval populations. Post-application monitoring of larval treatment

areas, typically within 2-48 hours, confirmed the success of both aerial and ground-based VectoBac 200G applications in controlling larval mosquito development. Larval control in treatment areas was typically complete and certainly reduced by greater than 95% in all treated areas.

2.5.3 Adult Mosquito Control

Adult mosquito control (adulticiding) using truck mounted or back pack ULV (ultra low volume) sprayers is no longer a component of routine services provided annually to participating communities by Yukon Community Services.

Adulticiding provides temporary relief from adult mosquito annoyance and repeated applications, along an approved route, are required to provide extended relief. The application method, a mist applied to the air, and the non-target specificity of control products, are such that the potential for impacts on insects other than mosquitos makes this the least desired method for routine mosquito population management.

- ***Devices, pesticides and repellants***

Adult mosquito collection devices such as Mosquito Magnets™, which uses propane to emit CO_2 an attractant, and sometimes pheromones, will collect adult mosquitos and are marketed by several companies for use by property owners. Although they do collect adult mosquitos, with a collection range of about ½ hectare (one acre), their ability to reduce mosquito populations sufficiently to provide relief from localized annoyance on a community level is unlikely.

Citronella candles, mosquito coils, Konk™ Automatic Aerosal Sprayers and other such products are marketed as mosquito repellants, or for adult mosquito or biting insect control. These are readily available to residents and property owners.

- ***Natural predators***

Although flying insects can form a large component of the diet for flying insectivores (*eg.* bats, swallows, Purple Martins), there is no scientific evidence which suggests that birds or bats provide a detectable level of mosquito control. Both birds and bats are opportunistic feeders and adult mosquitos have been identified as a very small component (<2%) of their diet, (Fang 2010, Gonsalves *et al*, 2013). Interested

residents are, however, still encouraged to install bird nesting boxes or bat houses if they wish, since it allows individuals to contribute to a comprehensive, integrated mosquito control program. In some cases it may provide residents with a sense of reduced adult mosquito annoyance and a chance to enhance the natural control of mosquito populations. Additional predators for adult mosquitos include insects such as wasps, deer flies, dragonflies, damsel flies and spiders etc..

The key to successful mosquito control (population management) and a reduction in adult mosquito nuisance populations is through the early detection and timely control, or prevention, of larval development. Preserving and enhancing natural predator populations, including aquatic larval predators (diving beetles, dragon flies, fish etc.), and reducing, or eliminating larval mosquito habitats contributes to sustainable control operations. The preservation or enhancement of balanced habitats has the best opportunity for a meaningful long-term contribution to overall mosquito control program success through reduction of mosquito populations and enhancement of natural controls including insects, fish, birds and bats.

Dytisdid beetle larvae eating mosquito larvae

Elimination of stagnant water and enhancements to natural or created ecosystems will be of benefit to overall control program efficacy through increasing overall habitat for natural mosquito predators.

In situations where natural controls are unable to reduce mosquito populations, the use of the proven effective biological control product *Bacillus thuringiensis* var. *israelensis* Serotype H-14, Strain AM 65-52 (VectoBac 200G) maximizes the environmental compatibility of the program. It provides for a targeted control of larval mosquitos and sustainability of operations through the conservation of natural predators.

3.0 COMMUNITY-SPECIFIC RESULTS AND DISCUSSIONS

An ongoing emphasis in all public education initiatives is to encourage the elimination or reduction of larval mosquito habitats and the effective use of protective measures against adult nuisance including repellants and window screening, etc. Local residents, business operators and public work crews are encouraged to drain or prevent non-flowing, standing waters which provide suitable habitat for larval mosquito development. Removal of vegetation or obstructions in ditches and along pond edges, or increasing pond depths and water flow, can exclude their use by larval mosquitos and increase access for predators such as fish. Ditching or grading and leveling of uneven fields or road-sides and filling of depressions such as tire-ruts or excavations eliminates mosquito development habitat.

The majority of sites amenable to physical alteration or elimination on public lands in participating communities have been identified, and most have been addressed and are maintained by public works crews. Routine roadside contouring, ditching and culvert installation has reduced, or eliminated the amount of standing waters, and consequently the potential for larval development, inside the boundaries of many Yukon communities.

The communities of Burwash Landing, Destruction Bay, Haines Junction and others along the Alaska and Klondike Highways maintain effective drainage in roadside ditches and low-lying areas which has reduced the need for treatments. The City of Dawson continues to identify and eliminate depressions, ditches, excavations and similar areas to reduce standing water accumulations in town.

Control program field personnel and community applicators need to routinely survey for new, or previously unknown habitats which may be created as a result of human activities including recreational activities (Quads, ATV tire ruts) and residential, commercial and highways construction. These surveys ensure that development habitats are identified, and appropriate actions taken, in a timely fashion to minimize their potential as sources of adult mosquito annoyance.

Eliminating the extensive swamps and forested larval mosquito habitats which surround many Yukon communities is impossible, and given the magnitude of mosquito development habitat which exists adjacent to many communities, it is neither practical, nor economically feasible, to locate and treat all larval mosquito-infested development sites within Yukon. For this reason, priority is given to the detection and treatment of larval mosquito development sites closest to participating communities. Frequent surveying, monitoring and control of developing larvae, ,most often by air (helicopter), using VectoBac 200G is the safest, most environmentally compatible and proven, cost effective method, of treating these expansive habitats.

The widespread, and synchronous development of *Aedes* mosquitos occurs throughout Yukon shortly after snowmelt, and with warming temperatures, over a very short time period, typically 5-14 days. In seasons with rapidly progressing larval mosquito development, and a variable continuum of larval development, the treatments required in some seasons for upwards of 12-14 communities may need to be completed in as little as five to seven days. Identifying larval development onset, larval age

classes, proportions and population sizes within each community, is required to effectively determine the community order for aerial applications. Accurately timed and targeted aerial applications are essential to achieve the goal of reducing potential, widespread adult mosquito annoyance.

To address the varied level of community involvement and activity within the 2020 Yukon Government Community Mosquito Control Program, highlights of the local programs are presented individually, and alphabetically, in Sections 3.1 through 3.9, below.

3.1 ARMY BEACH (MARSH LAKE)

3.1.1 Public Education and Information

Residents in the community of Army Beach/South Mclintock were apprised of mosquito control program activities throughout the season, and as detailed in Sections 2.2.1 and 2.2.2, above. Given the absence of a 'formally' designated administrative contact and local public information officer for the program area, regular contact with *Duka Ltd.* personnel ensured that long-time residents and certified applicators Ms. Linda Morrison, Mr. Lloyd Atkinson, Paul Prevost and Ray Whitten were able to share information and updates about program operations and findings with their neighbours.

3.1.2 Surveying and Monitoring

Winter snowfall and accumulations for southwest Yukon were above average, and snow water equivalents in the Marsh Lake area averaged 116-120% of normal for February/March and normal in April 2020. Monthly precipitation totals for the Whitehorse and Teslin areas, located on "either side" of Army Beach, during April and May 2020, were about 120-130% of normal and temperatures were a little cooler than normal, (Appendix 3).

Water accumulations in the swampy areas between Army Beach Road and South Mclintock Roads were reported as "wetter" than in recent, past seasons.

- ***Larval mosquitos***

Local, certified applicators (see Appendix 2) began surveying for larval development in mid-April with widespread development noted by local applicators in the last week of April. Larval populations were predominantly 1st instar and 2nd larvae with some 3rd and 4th instar larvae found in areas exposed to sunlight. Larval populations ranged in size upwards of 200 larvae/dip sample, with most samples averaging 10-30 larvae/dip. Sampling immediately before aerial applications by *Duka Ltd.* biologists on 11 May 2020 found 1st through 3rd instar larvae with population densities ranging upwards of 30 larvae/350ml dip sample, (Table 1). A site with continuous activity throughout the 2020 season was the water-filled ditch alongside the campground entrance. Larvae were observed here by *Duka Ltd.* personnel in May, early June and mid-July.

Larval samples were collected for identification from accessible swamplands along community roads and trails by community applicators during the season and as part of aerial application pre-treatment sampling by *Duka Ltd* personnel, and during subsequent field site visits.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. communis	0	4	17	7.3%	0	0	0	0	0	3	7	0	0	7	0	0	0	0	0	0	0	0	0	0
Ae. impiger	0	1	1	0.4%	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. implicatus	0	9	167	71.7%	0	0	0	0	0	75	86	0	0	6	0	0	0	0	0	0	0	0	0	0
Ae. pionips	0	1	1	0.4%	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ae. punctor	0	0	0	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. spp	N/A	2	10	4.3%	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0
Cs. incidens	++?	3	14	6.0%	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0
Cs. spp	N/A	2	21	9.0%	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	11	0	0	0	0
Cx. territans	0?	1	2	0.9%	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
	Total	23	233	100%	0	0	0	0	0	78	104	0	0	24	0	0	16	0	0	11	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value … Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

<u>Chart 5:</u> Army Beach/South Mclintock; Larval mosquito distribution (temporal) and occurrence (%), based on 223 individuals collected for identification between 09 May and 13 July 2020.

The predominant larval species collected were *Aedes implicatus* (71.7%) and *Aedes communis* (7.3%), two species common to the north and which prefer woodland and snowmelt development sites, a very common habitat in the Army Beach area. *Culiseta incidens*, a mosquito which prefers ditches, ponds and artificial containers was collected from several roadside ditches. It is more a pest of large mammals than man and will also bite birds. It is West Nile virus vector. *Culex territans* prefers amphibians.

- ***Adult mosquitos***

Adult mosquito populations were monitored locally using non-baited and carbon dioxide (CO_2) baited light traps, (Table 2, Chart 6 below). Light trapping was completed by *Duka* program biologists and by local volunteers, Paul Prevost and Linda Morrison in June and July 2020. Light traps were set up by community volunteers near their homes and were typically run for 1-2 nights. *Duka Ltd.* program biologists would set-up, and run, at various locations within the community, one to two traps, for an hour each, using CO_2 as an attractant. Adult mosquitos were also collected by *Duka Ltd.* personnel while landing to bite.

Adult mosquito populations and annoyance at Army Beach and the South McLintock area were reported as above average, and the worst since the program started here 5-6 years ago. Residents understood that this years unprecedented rainfall was the cause. Despite the report by local applicators, *Duka Ltd.* personnel noted it was much less than several other Yukon communities this year and light trap captures also exhibited lower trap numbers as compared with other communities.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. communis	0	15	43	19.1%	0	0	0	0	0	0	0	0	0	20	2	7	10	2	0	2	0	0	0	0
Ae. diantaeus	0	1	1	0.4%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ae. excrucians	0	9	14	6.2%	0	0	0	0	0	0	0	0	0	0	0	0	6	5	0	3	0	0	0	0
Ae. riparius	0	2	2	0.9%	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
Ae. sticticus	+ ?	29	151	67.1%	0	0	0	0	0	0	0	0	0	40	24	21	41	7	8	10	0	0	0	0
Ae. vexans	++	6	8	3.6%	0	0	0	0	0	0	0	0	0	0	1	0	3	1	1	2	0	0	0	0
Cs. impatiens	0 ?	5	6	2.7%	0	0	0	0	0	0	0	0	0	0	2	2	0	2	0	0	0	0	0	0
	Adult Total	67	225	100%	0	0	0	0	0	0	0	0	0	60	29	30	62	18	9	17	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 6: Army Beach/South Mclintock; Adult mosquito distribution (temporal) and occurrence (%), based on 225 individuals collected for identification between 03 June and 13 July 2020.

In total, 225 adult mosquitos were identified from 2020 collections, (Table 2 and Chart 6 above). *Aedes sticticus,* was the predominant species collected this season, accounting for 67.1% of all identified specimens. It prefers flooded cottonwood swamps and is an aggressive pest of man and animals. *Aedes communis*, the most common adult mosquitos last year (58%), was the second most numerous this year and accounted for 19.1% of adult specimens collected. It develops in shady pools and can be a fierce biter at dawn and dusk.

An interesting observation from this summer, is that *Ae. sticticus* was a predominant component of local adult mosquito populations and annoyance although it was not collected during larval sampling completed within the treatment boundaries of Army Beach and South McIntock. This suggests that they had either moved/dispersed into the community from adjacent untreated areas, or had developed in previously treated aerial habitat. Since this area wasn't actively sampled after aerial applications had been completed the answer, unfortunately couldn't be established. The frequent precipitation of May and June would have created ideal conditions for additional hatches of *Aedes* sp. mosquitos.

3.1.3 Mosquito Control and Recommendations

Duka Ltd. program personnel and the application pilots met with local applicators on 11 May 2020 to review areas for aerial treatment and discuss local efforts completed to date. Larval surveys and sample collections were completed immediately prior to aerial applications by *Duka Ltd.* personnel. The local applicators and pilot all noted how the area was "wetter than last season ".

Following sample collection and confirmation of areas treated previously from the ground, larval mosquito development in 140.54 hectares of swampy area located within the community of Army Beach and South McIntock (Marsh Lake) were aerially treated with 597.3 kilograms of VectoBac 200G on 11 May 2020, (Table 3, Figure 1).

Ground-based applications of some 17.92 kilograms of VectoBac 200G were completed by local personnel and *Duka* program biologists. A total of 2.389 hectares of accessible ponds, depressions and ditches located throughout the community, including South McClintock were treated from the ground during the period 28 April – 13 June 2020, (Table 4, Figure 1). Post-application monitoring of both aerial and ground-based treatments confirmed larval mortalities from VectoBac 200G applications were in excess of 95%.

Figure 1 presents details of mosquito population (adult and larval) sampling, ground-based, and aerial VectoBac 200G application locations. Aerial applications this year were concentrated in the Army Beach and McLintock (peninsula) area and were again sufficient to control larval development occurring here, and at the that time. The total amount of area treated from the ground this season was over twice that treated in recent seasons and included treatments into late June and mid-July, confirming the persistence of water accumulations and recurrent larval development in 2020.

This was the eighth season of aerial applications at Army Beach, and mosquito annoyance in residential areas was reported by local applicators as far above the recent normal, which since annual program operations began, has typically been "minimal to non-existent". As mentioned elsewhere in this report, the frequent precipitation and cool temperatures of the 2020 summer season were very conducive to recurring larval development and adult mosquito survival.

In seasons of average, to above average larval mosquito development, expected with snow water equivalents of 110-130% of normal, or greater, recorded in March and April, or with frequent and above average precipitation during April and early May, it may be warranted to increase aerial application scope. Increasing the annual scope would permit the treatment of all habitat occurring at the Army Beach peninsula, including that the Marsh Lake Campground and additional development habitat located across the Alaska Highway from the community. It may also be worth considering the need for a second aerial application in seasons where there is daily, or several days of excessive rainfall (within 7-10 days) following the completion of aerial applications.

Barring this expansion of effort, or in conjunction with it, physical alterations to roadways and culverts, which may reduce the amount of standing water at Army Beach should be considered. The reduction or alteration of habitats to make them less likely to support larval development is the preferred approach for long-term mosquito management.

3.2 BURWASH LANDING

3.2.1 Public Education and Information

Residents in the community of Burwash Landing were apprised of mosquito control program activities throughout the season, and as detailed in Sections 2.2.1 and 2.2.2, above.

In the absence of a 'formally' designated administrative contact and local public information officer for the program area, *Duka Ltd.* personnel maintained regular contact with the recently certified local applicator, Mr. Colin Gray. Mr. Gray, a resident of nearby Destruction Bay was able to share information about program operations and findings with residents and business operators in the Burwash community when he was in town. Very few people were seen by *Duka Ltd.* personnel around town and most residents avoided interactions with non-community members due to COVID-19 precautions. Tourist attractions, such as the museum, were closed for the season.

3.2.2 Surveying and Monitoring

Standing water accumulations and permanent ponds in the forest fire (2005) recovery areas west of the airport and southwards of town provide extensive mosquito development habitat. These areas were observed by the pilot to be generally "wetter" than in recent years.

Snowfall and accumulations (SnowBulletin, www.env.gov.yk.ca) for southwest Yukon were above average, and snow water equivalents in the Burwash area averaged 134% of normal when measured on 01 March, on 01 April 2020 they were 145% of normal and on 01 May 2020 they were 100% of normal, (Appendix 3).

Precipitation totals for May, June and July 2020 (252.1mm) were 189% of the 2015-2019 average (133.2mm) for the months, (www.climate.weather.gc.ca). Monthly mean temperatures in June and July 2020 were 1.4-1.8^{o}C below normal, (Appendix 3).

- ***Larval mosquitos***

The local applicator (community volunteer) started monitoring for larvae on 21 April 2020 following a discussion and local weather status update with *Duka Ltd.* management personnel. Larval populations in standing water adjacent the highway S-curve through town were predominantly 1st and 2nd instar larvae.

Completed the afternoon before prior to the aerial applications, sampling of the numerous tire ruts, depressions and ponds along the Alaska Highway S-curve through town and in the swamp and burned areas west of town, noted larval populations averaged ranging from 5-20 larvae/dip sample, with some ponds having 50-100 larvae/dip sample. Larval populations on 09 May 2020 were predominantly 2nd and 3rd instars, (Table 1). Burwash Heights, Ta-an-na Crescent and Copperlilly Way roadside ditches had larval populations of 5-50 larvae/dip sample.

Sampling of the roadside ditches along Copperlilly Road in Burwash Heights were dry or inactive by early June while the rainwater-filled depression along the Highway S-curve through town contained

water, and developing larvae when sampled by *Duka Ltd.* personnel on both site visits in June, and again in July. First through 4th instar larvae were found during each visit suggesting multiple larval hatches, likely in response to the frequent, and often heavy (+25mm/day) precipitation. *Duka Ltd.* personnel felt, on the basis of observations in the grassland and forest fire areas adjacent the S-curve through town, that water accumulations were stable, or increasing as the season progressed.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. cataphylla	0	3	10	4.9%	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. communis	0	3	10	4.9%	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. excrucians	0	1	5	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
Ae. fitchii	0 ?	1	14	6.9%	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	0	0	0	0
Ae. impiger	0	2	5	2.5%	0	0	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Ae. implicatus	0	9	97	47.8%	0	0	0	2	0	93	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Ae. pionips	0	1	1	0.5%	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ae. punctor	0	1	1	0.5%	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. spp	N/A	4	46	22.7%	0	0	0	45	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. sticticus	+ ?	1	8	3.9%	0	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0
An. spp	N/A	1	1	0.5%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Cs. incidens	++ ?	1	1	0.5%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Cs. spp	N/A	1	4	2.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
	Total	29	203	100%	0	0	0	52	0	119	0	0	0	19	0	0	4	0	0	9	0	0	0	0

Notes: ·Species Occurrence: Lowest Value — Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 7: Burwash Landing; Larval mosquito distribution (temporal) and occurrence (%), based on 203 individuals collected for identification in 21 April - 17 July 2020.

Larval populations at Burwash were very diverse this season with 10 different species collected with the predominant species *Aedes implicatus* (47.8%) and *Aedes fitchii* (6.9%). Both of these species develop in snowmelt pools and in margins of grasslands and woodlands. *Aedes communis* (4.9%) and *Aedes cataphylla* (4.9%),the next most common species this season and use similar habitats.

- ***Adult mosquitos***

Adult mosquito populations were sampled by program biologists using two CO_2-baited light traps set up at various sites around town (Figure 2). Light trap sampling was completed by *Duka Ltd.* biologists on 01 June, 23 June and 17 July 2020.

Light trapping equipment was delivered, and instructions on sample collection and preservation were provided to the local applicator during the 01 June field visit. Unfortunately, the local applicator wasn't able, or didn't manage to collect any adult mosquito samples this season.

The most numerous (64.4%) mosquitos collected as adult specimens at Burwash Landing were *Aedes sticticus,* (Chart 8 below). It develops in wooded, river floodplains and cottonwood swamps. It is a very aggressive pest of man and animals and will readily enter houses. It was collected (3.8%) as larvae

from aerial applications sites in early May, (Table 1, Chart 7 above). Subsequent sampling of these expansive areas wasn't completed after the initial aerial application and it is possible that it developed after the aerial and in response to the frequent precipitation of June and July.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. communis	0	6	76	15.6%	0	0	0	0	0	0	0	0	0	12	0	0	58	0	0	6	0	0	0	0
Ae. excrucians	0	4	25	5.1%	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	16	0	0	0	0
Ae. provocans	0 ?	2	2	0.4%	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
Ae. riparius	0	4	20	4.1%	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	12	0	0	0	0
Ae. sticticus	+ ?	6	313	64.4%	0	0	0	0	0	0	0	0	0	52	0	0	196	0	0	65	0	0	0	0
Ae. vexans	++	3	49	10.1%	0	0	0	0	0	0	0	0	0	0	0	0	42	0	0	7	0	0	0	0
Cs. inornata	+++	1	1	0.2%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Adult Total	26	486	100%	0	0	0	0	0	0	0	0	0	64	0	0	316	0	0	106	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value — Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 8: Burwash Landing; Adult mosquito distribution (temporal) and occurrence (%), based on 486 individuals collected for identification between 01 June and 17 July 2020.

3.2.3 Mosquito Control and Recommendations

Larval surveys and sample collections were completed immediately prior to aerial applications by *Duka Ltd.* personnel. Application timing was ideal and the pilot noted that the area appeared about as " wet" as last year at this time.

A total of 76.67 hectares of larval mosquito development habitat, located primarily to the west of the airport and south of town, and largely concentrated in the forest fire recovery areas, were treated by air with 325.8 kilograms of VectoBac 200G on 10 May 2020 (Table 3, Figure 2).

A total of 0.813 hectares of habitat were treated from the ground with a total of 6.10 kilograms of VectoBac 200G between 09 May and 17 July 2020, (Table 4). This amount of treatment was over 5X the amount if area which has been typically treated in previous years and reflects the amount of standing water observed this season. Figure 2 provides details on sampling and treatment locations. Post-application monitoring of all VectoBac 200G applications confirmed treatment success.

The greatest source of larval mosquito development and potential for adult mosquito annoyance in the Burwash Landing area are snowmelt and precipitation accumulations in the forest fire areas west of and south of town. Predominantly concentrated within 2-3 kilometres west of town, the amount of surface water accumulations in this area varies greatly from season to season. In seasons with well above average (+130 %) snowfall, and recurring or above average precipitation, upwards of 100-130 hectares of habitat can exist in close proximity to the town and nearby Kluane First Nations settlement. This season, snow water accumulations were 125% of normal on 01 March, 145% of normal of 01 April

and 100% of normal on 01 May 2020 (www.yukon.ca/snow-surveys). Precipitation for totals for April were 226% of normal, May was 274% of normal, June 126% of normal and July, 170% of normal.

Increasing the scope of aerial applications to include an additional 10-15 bags (181-272 kg) of Vectobac 200G would allow for the control of another 42-64 hectares of development habitat. In seasons such as 2011, 2014 and 2018 when winter snowpack accumulations were upwards of 130% of normal, or when precipitation totals for March-April exceed average amounts, wide-spread larval development can be the result.

The unprecedented "cool and wet" conditions of the 2020 summer, the amount of water accumulations noted, and the size of adult mosquito samples (populations) collected suggests that larval development subsequent to the initial aerial application likely occurred. Having the ability to treat such development with a second aerial application, 10-14 days after the first, and when precipitation amounts have been excessive, and are being forecasted to continue, may need to be considered.

3.3 CARMACKS

3.3.1 Public Education and Information

The residents, its local applicator and administrative personnel at Carmacks were apprised of mosquito control program activities throughout the season and as detailed in Sections 2.2.1 and 2.2.2, above. Community administrators, Village Council and Mayor, are always welcome to contact *Duka Ltd.* for program updates or information and the Village receives a copy of the annual summary report directly from *Duka Ltd.* each fall. *Duka Ltd.* personnel maintained regular contact with the City Foreman and local applicator Mr. Bill Tonnerson, and the newly certified applicator Mr. George Kontogonis throughout the season.

Duka Ltd. personnel interaction with local residents and business operators was minimal as a result of the need to maintain social/physical distance as part of COVID-19 protocols. Normally, regular and routine contact with staff and visitors to the store, the restaurant and at the YTG Highways camp provides opportunities for feedback and discussions related to mosquitos and their control. Very few people were seen by *Duka Ltd.* personnel around town and most residents avoided interactions with non-community members due to COVID-19 precautions.

3.3.2 Surveying and Monitoring

Local applicators were available this season to complete larval and adult mosquito sampling and collection. *Duka Ltd.* program biologists and technicians completed larval surveys and population (larval and adult) monitoring when on site. *Duka Ltd.* personnel were also available to complete larval treatments and CO_2-baited light trap sampling when they were in the community.

Winter snowfall and accumulations (SnowBulletin, www.env.gov.yk.ca) at Carmacks during 2020 were above normal, and actually increased month over month, February to April. Snow water equivalents for 01 March were 131% of normal, 01 April 147%, and 01 May, 221% of normal, (Appendix 3).

Monthly mean temperatures for every month, April through August 2020 were 0.7°C to 2.1°C colder than normal, (www.climate.weather.gc.ca, and Appendix 3). Precipitation totals (127.8mm) for the period May through July 2020 were about 121% of the recent five year (2015-2019) average (105.9mm).

- ***Larval mosquitos***

Mr. Tonnerson reported during Initial conversations on 26 April that there was still ice in the Rawlinson Drive slough. Larval surveys by *Duka Ltd.* biologists at Rawlinson slough on 13 May 2020 found 1st – 2nd instar larvae at populations of 0-50 larvae/dip sample, with larval activity the greatest near the centre of the marsh where surface waters were exposed to the sun all day. There was thick ice at the northern end of the slough where the culvert drained into the Yukon River. Larval populations in the ice-free, shaded areas at this end of the marsh averaged 0-5 larvae/dip sample. Guder Road swamp was very active with larval development, having 1st through 3rd instar larvae at populations of 50-100 larvae/dip sample on 13 May, (Table 1).

Larval sampling on 05-06 June by *Duka Ltd.* personnel noted 3rd and 4th instar at populations of 0-2 larvae/dip in the Rawlinson Drive slough. Rising Yukon River levels causes water to flow back into the Rawlinson marsh through the drainage culvert at the north end if the slough, under River Drive. Larval populations of 0-5 larvae/dip sample were found on 26 June 2020 in the grassy area near the culvert, and 0-1 larvae/dip sample was found in accessible areas of the marsh on 16 July. On both sampling occasions the marsh was very flooded with shallow, grassy pools and many deeper, clear pools. Larval populations in accessible, roadside areas of Guder Swamp were 20 larvae/dip when sampled on 06 June. When sampled on 26 June, larval populations were 0-5 larvae/dip sample and on 15 July larval populations were 0-2 larvae/dip sample.

A new site discovered this year, and which was active each time is was sampled, was the coal mining railroad buckets located at the Carmacks Roadhouse on River Drive. These were active throughout the season, averaging 0-5 larvae/dip sample. They were also a unique source of *Culiseta* larvae collected locally, (Table 1, Chart 9 below) .

Taxonomic identification of the larvae collected locally during the 2020 season also found 3 species of *Aedes* mosquitos, with *Aedes implicatus* the most predominant at 22.3% of all larval specimens identified. A large proportion (46.3%) of the larval samples could only be identified to *Aedes* because of their small size (1st instar) and immaturity, (Table 1 and Chart 9 below). *Aedes communis* (2.9%) and *Aedes punctor* (2.3%) are both common to the north, use snow and rain pools for development, and have been collected locally in past years. Like all Aedes, they are aggressive pests of man and animals.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. communis	0	1	4	2.3%	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Ae. implicatus	0	3	39	22.3%	0	0	0	0	0	0	9	0	0	30	0	0	0	0	0	0	0	0	0	0
Ae. punctor	0	2	5	2.9%	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
Ae. spp	N/A	2	81	46.3%	0	0	0	0	0	0	81	0	0	0	0	0	0	0	0	0	0	0	0	0
An. spp	N/A	1	1	0.6%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Cs. incidens	++?	2	14	8.0%	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	9	0	0	0	0
Cs. inornata	+++	1	5	2.9%	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
Cs. spp	N/A	1	26	14.9%	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0
	Total	13	175	100%	0	0	0	0	0	0	90	0	0	65	0	0	10	0	0	10	0	0	0	0

Notes: ·Species Occurrence: Lowest Value Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 9: Carmacks; Larval mosquito distribution (temporal) and occurrence (%), based on 175 individuals collected for identification 13 May to 16 July 2020.

- ***Adult mosquitos***

Adult mosquito population monitoring was completed by *Duka Ltd.* biologists using two CO_2-baited light traps set up on 05-06 June, 25-26 June and 15-16 July 2020, (Table 2). Light traps were set-up by *Duka Ltd.* personnel in the residential area near the Rawlinson Drive slough, near the Guder Drive slough, at the Village of Carmacks water treatment building, and at the Roadhouse historic site near the Nordenskoild River bridge.

The local applicator, Mr. Kontogonis, set his light trap up at the Village compound (sewage plant) or the campground on a total of four occasions during the 2020 season, 08, 12, 21 June and 10 July.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. cataphylla	0	2	10	2.6%	0	0	0	0	0	0	0	0	0	9	0	0	1	0	0	0	0	0	0	0
Ae. communis	0	3	6	1.5%	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	3	0	0	0	0
Ae. dorsalis	+++	1	1	0.3%	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ae. excrucians	0	3	31	7.9%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	30	0	0	0	0
Ae. fitchii	0?	1	1	0.3%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Ae. implicatus	0	7	96	24.6%	0	0	0	0	0	0	0	0	0	69	1	0	20	0	0	6	0	0	0	0
Ae. mercurator	0	0	0	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. provocans	0?	4	51	13.1%	0	0	0	0	0	0	0	0	0	47	0	0	4	0	0	0	0	0	0	0
Ae. riparius	0	4	23	5.9%	0	0	0	0	0	0	0	0	0	0	0	0	11	0	0	12	0	0	0	0
Ae. spp	N/A	3	3	0.8%	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	0
Ae. sticticus	+?	7	119	30.5%	0	0	0	0	0	0	0	0	0	50	0	0	40	0	0	29	0	0	0	0
Ae. vexans	++	5	49	12.6%	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	32	0	0	0	0
	Adult Total	40	390	100%	0	0	0	0	0	0	0	0	0	178	2	0	96	0	1	113	0	0	0	0

Notes: ·Species Occurrence: Lowest Value Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 10: Carmacks; Adult mosquito distribution (temporal) and occurrence (%), based on 390 individuals collected for identification between 05 June and 16 July 2020.

Light trap captures collected a total of 12 different species of adult mosquitos during the 2020 summer. The most diverse collection of all participating communities, (Table 2, Chart 10). The two most common species collected this summer were *Aedes sticticus* (30.5%) and *Aedes implicatus* (24.6%). *Aedes provocans* (13.1%) and *Aedes vexans* (12.6%) were the next most common.

These are all aggressive pest of man and animals with *Aedes vexans* and *Aedes sticticus* two of the most pestiferous. They prefer to develop in river floodplains and inundated cottonwood forests. Habitats which is very common around the Village of Carmacks.

Adult mosquito annoyance at Carmacks was noted as high by *Duka Ltd.* personnel. Reports of mosquito nuisance were received from local applicators and grocery store employees.

3.3.3 Mosquito Control and Recommendations

A total of 76.659 hectares of infested mosquito development habitat located within and adjacent to town were aerially treated with 325.8 kilograms of VectoBac 200G on 13 May 2020 (Table 3).

Ground-based treatments were completed at the River Drive ditches by *Duka Ltd.* technicians and biologists on 13 May 2020, (Table 4). Subsequent sampling of the Rawlinson and Guder Drive/Goulter Road marshes by *Duka Ltd.* personnel on 05-06 June allowed for the treatment of accessible areas. The Guder Drive marsh was treated on both the 26 June, and 16 July community field visit by *Duka Ltd.* personnel. Coal mining buckets on display (Lot 260) near the Carmacks Roadhouse were active with larval development on 3 occasions in June and July 2020, (Table 4).

A total of 0.54 kilograms of VectoBac 200G were applied from the ground to some 0.071 hectares of active, mosquito development habitat between 13 May and 16 July 2020, (Table 4). Figure 3 presents details on larval and adult mosquito sampling and Vectobac 200G treatment (aerial and ground) locations.

The Rawlinson Drive and Guder Road swamps are two of the largest, and most important, sources of local mosquito development. The Rawlinson marsh is 'downtown', adjacent to residential areas, commercial, and public buildings and the Guder swamp is adjacent the large residential subdivision just northwest of downtown.

An issue that seems to occur every few years is the flooding of the Rawlinson marsh from high Yukon River levels. Although not an issue every summer for local mosquito control operations, the Village may wish to investigate the installation of "flap valve" or "flood gate" at the culvert drainage/entrance point for the Rawlinson marsh with the Yukon River. With high river levels, as observed in 2011, 2016 and again in 2020, Yukon River waters can enter and flood the Rawlinson slough after aerial applications are completed. This can initiate another hatch of larval mosquito development and result in adult

mosquito annoyance. In the absence of such a restriction to flooding, and in years with a prediction of high river levels, or above average snowfall or precipitation (2020), the town should plan for a second aerial treatment to control any resulting larval mosquito development occurring here and in the Guder swamp areas.

3.4 DAWSON CITY

3.4.1 Public Education and Information

The residents, local applicators and administrative personnel at the City of Dawson were apprised of mosquito control program activities as detailed in Sections 2.2.1 and 2.2.2, above. City administrators, Council and Mayor, are always welcome to contact *Duka Ltd.* biologists/technicians and management personnel for program updates and information. In addition, the City receives a copy of the annual summary report directly from *Duka Ltd.* each fall.

The City of Dawson has five certified applicators available to work in its annual mosquito control program. Regular communication was maintained with second year applicator, Mr. Nate Wood, and the new applicator Mr. Phil Langlois throughout the 2020 season.

Casual discussions in early June with several individuals on the street received the comment "good job on the mosquitos". On 26 June 2020 *Duka Ltd.* personnel spoke with two people while treating the pond by Robert Service School. They were curious and the program was explained for them. Dawson City didn't seem as 'shuttered' due to COVID-19 as the other communities did.

3.4.2 Surveying and Monitoring

Local applicators were available this season to complete larval and adult mosquito sampling and collection. *Duka Ltd.* program biologists and technicians completed larval surveys and population (larval and adult) monitoring when on site. *Duka Ltd.* personnel were also available to complete larval treatments and CO_2-baited light trap sampling when they were in the community.

Winter snowfall and accumulations (SnowBulletin, www.env.gov.yk.ca) at Dawson during 2020 were above normal, and actually increased month over month, February to April. Snow water equivalents for 01 March were 153% of normal, 01 April 166%, and 01 May, 194% of normal, (Appendix 3).

Monthly mean temperatures for every month, April through July 2020 were below 0.9°C to 3.0°C, colder than normal, (www.climate.weather.gc.ca, and Appendix 3). Precipitation totals (127.1mm) for the period April through July 2020 were just below the recent five year (2015-2019) average of 132mm for these months).

- ***Larval mosquitos***

Local applicators completed initial surveys of ditches, ponds and snowmelt accumulations along roadsides and in vacant lots within city boundaries during the week 27 April to 01 May 2020. Larval populations were variable, and comprised of 1st through 4th instars, with the older instars typically located in areas most exposed to sunlight. Larval populations averaged 30-200 larvae/dip sample, with some samples exceeding 500 larvae/dip sample. Sampling immediately prior to aerial applications *Duka Ltd.* biologists on 13 and 14 May at roadside swamps along the Klondike Highway into town found 1st through 4th instars and populations ranging from 5-100+ larvae/dip sample.

A site with continuous activity throughout the season was downtown between George and Edward Street. The entire block was flooded early in the season and the drainage ditches along the edges were active during *Duka Ltd.* personnel visits on 05-06 June, 25-26 June and 15 July 2020.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. canadensis	++	1	4	0.7%	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Ae. cataphylla	0	4	23	4.1%	0	0	0	0	0	0	4	0	0	0	0	0	19	0	0	0	0	0	0	0
Ae. communis	0	7	43	7.7%	0	0	0	0	0	0	38	4	0	1	0	0	0	0	0	0	0	0	0	0
Ae. impiger	0	1	1	0.2%	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. implicatus	0	10	134	24.0%	0	0	0	0	0	0	126	1	0	2	0	0	5	0	0	0	0	0	0	0
Ae. increpitus	0	2	44	7.9%	0	0	0	0	0	0	43	0	0	1	0	0	0	0	0	0	0	0	0	0
Ae. pionips	0	2	8	1.4%	0	0	0	0	0	0	0	0	0	5	0	0	3	0	0	0	0	0	0	0
Ae. spp	N/A	5	209	37.4%	0	0	0	0	0	0	59	150	0	0	0	0	0	0	0	0	0	0	0	0
An. earlei	+?	1	1	0.2%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Cs. impatiens	0?	1	4	0.7%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
Cs. incidens	++?	7	64	11.4%	0	0	0	0	0	0	0	0	0	0	0	0	27	0	0	37	0	0	0	0
Cs. inornata	+++	1	6	1.1%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
Cs. spp	N/A	2	9	1.6%	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0
Cx. tarsalis	++++	2	9	1.6%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0
	Total	46	559	100%	0	0	0	0	0	0	271	155	0	22	0	0	54	0	0	57	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value — Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

<u>Chart 11:</u> Dawson City; Larval mosquito distribution (temporal) and occurrence (%), based on 559 individuals collected for identification between 10 May and 15 July 2020.

Larval collections by community applicators and *Duka Ltd.* field personnel provided for a comprehensive review of local mosquito populations. Dawson City was unique in all of Yukon this summer with larvae collected from all four genera, (Table 1, Chart 11). A total of 12 different species of mosquitos were identified from 2020 collections. The majority of these, 7 species and 83.4%, were *Aedes,* with *Ae. implicatus* (24%) and *Ae. increpitus* (7.9%), the most predominant. *Culiseta incidens* a mosquito which prefers to use temporary waterbodies such as ditches, ponds and containers accounted for 11.4% of all larvae collected from Dawson City in 2020. It was collected in late June and July from several locations downtown by *Duka Ltd.* personnel, (Table 1, Chart 11 above).

- ***Adult mosquitos***

Adult mosquito sampling equipment, including a light trap, timer, and all necessary preservation and sample-labeling materials were available to local applicators after on 05 June 2020. Local applicators were encouraged to operate their light trap on a weekly basis and two samples were provided to *Duka Ltd.* personnel for identification. *Duka Ltd* personnel deployed two light traps on several occasions within Dawson City limits, 05-06 June, 25-26 June and 15-16 July 2020, (Table 2, Chart 12 below).

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. implicatus	0	7	24	40.0%	0	0	0	0	0	0	0	0	0	16	0	0	5	0	0	3	0	0	0	0
Ae. mercurator	0	2	2	3.3%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0
Ae. provocans	0 ?	3	3	5.0%	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0
Ae. riparius	0	3	5	8.3%	0	0	0	0	0	0	0	0	0	0	0	2	3	0	0	0	0	0	0	0
Ae. sticticus	+ ?	6	19	31.7%	0	0	0	0	0	0	0	0	0	4	0	0	6	0	0	9	0	0	0	0
Ae. vexans	+ +	4	7	11.7%	0	0	0	0	0	0	0	0	0	0	0	1	3	0	0	3	0	0	0	0
	Adult Total	25	60	100%	0	0	0	0	0	0	0	0	0	21	0	3	19	0	0	17	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value → Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 12: Dawson City; Adult mosquito distribution (temporal) and occurrence (%), based on 60 individuals collected for identification on 05 June and 16 July 2020.

A total of 90 adult specimens were captured, and preserved for identification from sampling completed at Dawson City in 2020. This was the lowest total "catch rate" in all of Yukon and may be a reflection of the effective targeting of habitats nearest downtown and the City's "isolation" from the extensive swamp lands across the river and on the way into town. Adult mosquitos at the golf course, campground and out by Callison subdivision was reported by local applicators as "the same", or a "little worse than usual", both positive comments when compared with "above average" to "extreme nuisance" reported in other communities and over at the campgrounds across the Yukon River from Dawson.

The predominant species of adult mosquitos captured at Dawson City in 2020, were *Aedes implicatus* (40%) and *Aedes sticticus* (31.7%) and *Aedes vexans* (11.7%). *Aedes implicatus* were the most numerous larvae collected this year, but as seen in other communities *Ae. sticticus* were absent from larval collections. All three of these species are aggressive pests of man, and especially *Ae. vexans* and *Ae. sticticus* which use river floodplains and flooded cottonwood forests.

3.4.3 Mosquito Control and Recommendations

The monitoring of in-town development sites and others located along the Klondike Highway east of town, and in the campground and ferry landing areas across the Yukon River from Dawson were initially

completed by local applicators and *Duka Ltd* personnel beginning the last week of April. Sampling for larval development and adult mosquito populations was completed by *Duka Ltd.* program biologists when they first visited town to complete aerial and ground-based applications and thereafter when delivering supplies, providing staff training and retrieving applicator samples collected for taxonomic identification. Larval mosquito sampling and treatment of larval development occurring downtown during the period late April through to late July, by local applicators is to be encouraged. Treatments by *Duka Ltd* personnel during June and July this year was very impactful on reducing mosquito populations downtown.

Mosquito development sites located between the City and the Callison Subdivision/Dredge Pond areas, at the golf course, the old paddle wheel graveyard and adjacent campground area, were all treated with VectoBac 200G by aerial application on 14 May 2020. A total of 488.7 kilograms of VectoBac 200G were applied to 115.00 hectares of larval mosquito habitat (Table 3). Table 4 provides details of ground-based applications of VectoBac 200G (17.78 kg) completed by local applicators and *Duka Ltd.* personnel between 10 May and 15 July 2020. The total area treated from the ground in 2020 was nearly triple that of last season and reflects the persistent nature of standing waters noted in the downtown area Figure 4 provides sampling and Vectobac 200G treatment (aerial and ground) location details for 2020.

Post-application monitoring of aerial treatment sites by program personnel found larval populations in treated areas had been reduced by over 95% within the first few hours of treatment. Adult mosquito annoyance within the City was reported to *Duka Ltd.* as minimal to non-existent during casual conversations with local applicators, residents, business operators, visitors and tourists.

Ongoing, and routine public works activities have had a positive impact on the amount of standing water and larval development in town. Ditching, grading, addition of fill and ongoing construction activities have decreased the extent of snowmelt, river seepage and precipitation which collects in low-lying areas of Dawson City. Efforts to reduce water accumulations in vacant lots and other low-lying areas within the City should continue. Artificial containers should also be routinely inspected for larval development and drained, or emptied as appropriate. Development has been noted in late July by *Duka Ltd.* personnel in several rainwater-filled dredge buckets located along Front Street.

With expanding residential and commercial development near 'Guggieville', 'Louse Town' and the Dredge Pond areas of the tailings piles east of downtown, the impacts of adult mosquito annoyance and requests for mosquito control by area residents, business owners and visitors in these areas will likely increase. Another area worthy of consideration for increased aerial applications is the golf course and paddle wheel graveyard/campground areas across the river from Dawson, both of these areas are used by visitors and locals. Increasing the scope of aerial applications from the current average of 115 hectares to some 175-200 hectares would allow the inclusion of habitat in these areas and which currently goes largely untreated. Expanded treatment of these areas will provide improved mosquito control for residents and visitors of Dawson.

3.5 DESTRUCTION BAY

3.5.1 Public Education and Information

The community of Destruction Bay was apprised of mosquito control program activities throughout the season, with details provided in Sections 2.2.1 and 2.2.2, above.

In the absence of a 'formally' designated administrative contact and local public information officer for the program area, *Duka Ltd.* personnel maintained regular contact with the recently certified applicator, Mr. Colin Gray, who lives in town. Program operations were regularly reviewed with Mr. Gray who was able to share the information with Destruction Bay area residents and business operators.

Duka Ltd. personnel completed larval surveys, adult mosquito sampling and all treatments for the community. These activities were completed whenever control program biologists were available in the community. *Duka Ltd.* field personnel undertook to discuss the mosquitos and control program operations whenever possible with local Highways personnel, hotel and restaurant operators, staff, residents and community visitors although this year COVID distancing restrictions meant most of these interactions were minimal.

3.5.2 Surveying and Monitoring

Snowfall and accumulations (SnowBulletin, www.env.gov.yk.ca) for southwest Yukon were above average, and snow water equivalents in the Burwash Landing area (17 km north of Destruction Bay) averaged 134% of normal when measured on 01 March. On 01 April 2020 snowpack was 145% of normal, and by 01 May 2020 area snowpack was measured as 100% of normal, (Appendix 3).

Precipitation totals, as measured at Burwash Landing, for May, June and July 2020 (252.1mm) were 189% of the 2015-2019 average (133.2mm) for these months, (www.climate.weather.gc.ca). Monthly mean temperatures in May, June and July 2020 were all below average, and for June and July they were (1.4-1.8^{o}C) below normal, (Appendix 3).

- ***Larval mosquitos***

Sampling of Alaska Highway roadsides (snowmelt pools) just north of town and a few ditches in residential areas of town were first completed by Mr. Gray on 26 April 2020. Larval populations were predominantly 1st and 2nd instar larvae. Sampling of roadside snowmelt immediately before aerial applications by *Duka Ltd.* personnel on 09 May 2020 found 1st through 3rd instar larvae with population densities ranging from 5 to 100 larvae/dip sample, (Table 1).

Subsequent monitoring on 01 June found the Shakwak Road ditches mostly dry and absent of larvae. Roadside ponds along the Alaska Highway just north of town were also reduced in size as compared to early May monitoring and larval populations were 0-5 larvae/dip sample. Monitoring on 24 June found surface water run-off in the lowest part of the Shakwak Road ditches at the culvert. Here there were 1st instars at a population of 0-5 larvae/dip sample. The ditches north of town were also flooded and had 1st through 4th instars at populations of 5-30 larvae/dip sample. These ditches remained flooded and active throughout the season, with 0-20 larvae/dip sample containing 1st through 4th instar larvae on 17 July.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. canadensis	++	1	1	0.6%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ae. cataphylla	0	1	2	1.2%	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. communis	0	4	16	9.8%	0	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. impiger	0	1	1	0.6%	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. implicatus	0	6	100	61.0%	0	0	0	0	2	83	0	0	0	15	0	0	0	0	0	0	0	0	0	0
Ae. pionips	0	2	18	11.0%	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0
Ae. spp	N/A	1	1	0.6%	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cs. impatiens	0 ?	1	3	1.8%	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0
Cs. incidens	++?	1	5	3.0%	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0
Cs. spp	N/A	1	17	10.4%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	0	0	0	0
	Total	19	164	100%	0	0	0	0	3	102	0	0	0	15	0	0	27	0	0	17	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value — Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 13: Destruction Bay; Larval mosquito distribution (temporal) and occurrence (%), based on 164 individuals collected for identification on 26 April and 17 July 2020.

Six species of *Aedes* mosquitos and two *Culiseta* were collected during 2020. The most numerous larvae collected this season were *Aedes implicatus*, accounting for 61% of all larvae identified from Destruction Bay. The next most common species was *Aedes communis*. Both species are common to the north and make use of shaded and woodland pools as development habitat. *Culiseta incidens* and *Culiseta impatiens* were both collected in late June, and *Culiseta* sp. larvae were collected in mid-July from the precipitation-filled pools along the Alaska Highway roadside 1-2km north of town. These species are more common later in the season and use temporary sites, permanent ponds and containers as habitat.

- ***Adult mosquitos***

Light trap (CO_2-baited) sampling by *Duka Ltd*. personnel on 01-02 June, 23-24 June and 17-18 July 2020 resulted in the collection of a total of 363 adult specimens for identification, (Table 2, Chart 14 below). Adult mosquito captures were variable between 01 June and 18 July with the largest signal night capture on 17 July at Shakwak Road where 194 mosquitos were collected, (Table 2).

The community volunteer also completed light trapping at his residence, on several occasions, although his light trap had technical difficulties early on in the season and was replaced in mid-July. Light trap sampling on 25 July by the local applicator at his residence caught two specimens.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. cataphylla	0	3	3	0.8%	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0
Ae. communis	0	6	23	6.3%	0	0	0	0	0	0	0	0	0	6	0	0	8	0	0	9	0	0	0	0
Ae. excrucians	0	6	50	13.8%	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	37	0	0	0	0
Ae. implicatus	0	3	43	11.8%	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	33	0	0	0	0
Ae. provocans	0 ?	3	15	4.1%	0	0	0	0	0	0	0	0	0	4	0	0	1	0	0	10	0	0	0	0
Ae. riparius	0	2	15	4.1%	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	10	0	0	0	0
Ae. sticticus	+ ?	8	176	48.5%	0	0	0	0	0	0	0	0	0	9	0	0	60	0	0	107	0	0	0	0
Ae. vexans	+ +	4	37	10.2%	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	25	0	0	0	0
An. punctipennis	+ ?	1	1	0.3%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Adult Total	36	363	100%	0	0	0	0	0	0	0	0	0	19	0	0	112	0	0	232	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value … Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 14: Destruction Bay; Adult mosquito distribution (temporal) and occurrence (%), based on 363 individuals collected for identification between 01 June and 25 July 2020.

Adult mosquito populations at Destruction Bay were quite diverse in 2020 with 8 species of *Aedes* collected. *Aedes sticticus* (48.5%) was the most predominant adult mosquito species collected in 2020. The next most numerous were *Aedes excrucians* (13.8%), *Aedes implicatus* (11.8%) and *Aedes vexans* (10.2%). All of these species of *Aedes* are common to the north, and like all *Aedes* they are aggressive pests of man and animals.

One adult specimen of *Anopheles punctipennis*, an uncommon species, was collected by the local applicator in his single night capture of 25 July, (Table 2). Females bite after dark and are persistent in entering houses (Belton, 1984).

3.5.3 Mosquito Control and Recommendations

Aerial applications on 10 May 2020 used 181 kilograms of VectoBac 200G to treat 42.58 hectares of infested larval mosquito habitat located adjacent to the community of Destruction Bay, (Table 3). Roadside ditches along Shakwak Road and snowmelt-filled depressions along the Alaska Highway north of town were treated from the ground on every field visit by *Duka Ltd.* personnel during 2020. A total of 9.5 kg of Vectobac 200G were applied to 1.267 ha, (Table 4).

The total area treated from the ground in 2020 was over 20 times that of last season and reflects the persistent nature of standing waters noted along the Alaska Highway roadside through town. Figure 5 provides sampling and Vectobac 200G treatment (aerial and ground) location details for 2020. Post-

application monitoring of all treated areas confirmed the effectiveness of VectoBac 200G applications with observed larval mortalities exceeding 95%.

Increasing the scope of aerial applications at Destruction Bay to include treatment of habitats located outside town boundaries, but within 2-3 km of town, would control larval development occurring in other, nearby snowmelt habitats, or those closer to town in "above average" seasons such as 2011, 2014, 2018 and 2020. In those years, above average snowpack (110-150% of normal) and melt provided widespread flooding and larval development, adult mosquito populations were increased and annoyance was reported by residents to be much worse than the average. An additional 7-12 bags (127-217 kg) of VectoBac 200G would allow for a further 30-50 hectares of a larval mosquito development habitat to be treated. A second, or delayed and expanded, single aerial application could allow for treatment of larval development occurring with a late or extensive snow melt, or in response to above average precipitation during the month May.

3.6 GOLDENHORNE

3.6.1 Public Education and Information

The community of GoldenHorne was appraised of mosquito control program activities throughout the season, with details provided in Sections 2.2.1 and 2.2.2, above. The community is located at the southern boundary of the City of Whitehorse and area residents have ready access to local Whitehorse newspapers and radio. These media provided a regular source of program advertisement and operational updates.

Duka Ltd. personnel met up with the owners of Northern Light Spa on 04 May 2020 to confirm access for surveillance, sampling and treatment. Use of the property for helicopter landing and takeoff, as required for any aerial applications, was also confirmed. Field visits after 28 May were unable to be conducted as the site driveway was blocked off with a 'CLOSED' sign and *Duka Ltd.* personnel were unable to reconnect with the property owners.

Duka Ltd. program biologists completed all larval surveys, treatments and adult mosquito sampling for the community. The local applicator, Ms. Monti Patterson was provided with a light trap and required sampling equipment on 27 May 2020. Unfortunately, Ms. Patterson was unable to complete any larval surveillance or treatments this year.

3.6.2 Surveying and Monitoring

Snowfall accumulations (SnowBulletin, www.env.gov.yk.ca) in the Whitehorse area were above average, with snow water equivalents measured as 115% of normal on 01 March. Cool temperatures and snowfall in March resulted in an increase in local snowpack which was measured as 130% of normal on 01 April 2020. Measurements for 01 May recorded snowpack as 118% of normal, (Appendix 3).

Frequent precipitation, measured at Whitehorse Airport, for May, June and July 2020 totaled 137.6mm and was 153% of the 2015-2019 average (89.6mm) for these months, (www.climate.weather.gc.ca). Monthly mean temperatures in April, May, June and July 2020 were all below average, and for June and July they were (1.3-1.8°C) below normal, (Appendix 3).

- ***Larval mosquitos***

Sampling on 04 May by *Duka Ltd.* personnel noted the onset of larval development in the pond north of the elementary school, at several ponds located on the Northern Lights Spa (Gentian Lane) property and under the powerline which paralleled the road. Larval populations of 1st and 2nd instars averaging some 10-20 larvae/dip sample were noted in these sites and upwards of 100 larvae/dip were observed in the Northern Lights field ponds. The pond behind the elementary school still had ice in the centre and some snow was noted along the pond margins.

Field visits to the Northern Lights property on 28 May 2020 found that snowmelt pools under the powerlines had dried and that the field ponds were also reduced in size, and inactive with larvae. The elementary school pond, however, appeared to have increased in size since the aerial applications of 15 May. No larval development was found in this site either, confirming the effectiveness of aerial applications.

Sampling of the elementary school pond on 28 June noted that it had increased in size since last monitored in late May. Larval populations of 1st-4th instars and 0-10 larvae/dip were noted. Subsequent sampling on 14 July noted that the pond was still very full and larvae (1st instars) were again found, and at populations of 0-2 larvae/dip sample, (Table 1, Chart 15).

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. impiger	0	2	9	16.7%	0	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. implicatus	0	3	28	51.9%	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. spp	N/A	1	3	5.6%	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cs. incidens	++?	1	14	25.9%	0	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0
	Total	7	54	100%	0	0	0	0	0	40	0	0	0	0	0	0	0	14	0	0	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value — Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 15: Goldenhorne; Larval mosquito distribution (temporal) and occurrence (%), based on 54 individuals collected for identification between 04 May and 28 June 2020.

Identification of larval samples collected from Goldenhorne found two of the most common mosquito species of the Yukon. *Aedes implicatus* was the most common species (51.9%) and *Aedes impiger* accounted for 16.7%). *Culiseta incidens*, a mosquito which has slowly been increasing in its occurrence within Yukon (*Duka Ltd* , 2016-2019) was collected from the elementary pond in late June.

This is typically a " late season " species which makes use of permanent waterbodies (ponds, ditches, etc.) and containers. It is not an aggressive pest of man, preferring other mammals and birds. It is a competent vector of West Nile virus.

- ***Adult mosquitos***

Adult mosquitos were sampled using light trap equipment on five occasions during the period 28 May to 24 July 2029, (Table 2, Chart 16 below). An average of between 7 and 46 adult specimens were captured per sampling event by *Duka Ltd.* personnel using CO_2-baited traps. Next to Dawson City, these were some of the smallest captures/samples collected during 2020.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. communis	0	5	40	27.6%	0	0	0	0	0	0	0	0	16	0	0	0	0	16	0	8	0	0	0	0
Ae. excrucians	0	1	5	3.4%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0
Ae. sticticus	+?	5	89	61.4%	0	0	0	0	0	0	0	0	35	0	0	0	0	22	0	32	0	0	0	0
Ae. vexans	++	3	11	7.6%	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	5	0	0	0	0
	Adult Total	14	145	100%	0	0	0	0	0	0	0	0	51	0	0	0	0	44	0	50	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value … Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 16: Goldenhorne; Adult mosquito distribution (temporal) and occurrence (%), based on 145 individuals collected for identification between 28 May and 24 July 2020.

Two mosquitos predominated the adult sampling collections, *Aedes sticticus* (61.4%) and *Aedes communis* (27.6%). Both species develop in temporary snowmelt and rain pools and along with *Aedes vexans* (7.6%) have a preference for river floodplains and flooded cottonwood forests. They are aggressive pests of man, will bite fiercely at dusk and dawn, and at any time in shaded woods. *Ae. sticticus* will also readily enter houses and are small enough to penetrate standard window screening.

3.6.3 Mosquito Control and Recommendations

Sampling and treatment locations are detailed on the community map included as Figure 6, in the Figures section of this report.

A total of 8.518 ha of larval mosquito habitat was treated at the Northern Lights Spa property and behind the Elementary school on 15 May 2020 with 36.20 kg of VectoBac 200G, (Table 3). Ground-based applications of VectoBac 200G, totaling 18.0 kg, were completed to control larval mosquitos in 2.4 ha of habitat, (Table 4). The total area treated from the ground in 2020 was over 12 times that of last season and reflects the increased amount, and persistence of standing water, and the resulting larval development.

Ground-based treatments in Goldenhorne were first completed by Duka Ltd. personnel on 04 May 2020. Water levels in the pond behind Goldenhorn Elementary School remained high into July and required treatment during light trapping trips on 28 June and 14 July 2020. Post-application monitoring of all treated areas confirmed VectoBac 200G effectiveness with observed larval mortalities exceeding 95%.

Regular monitoring and treatment of the ponds behind the elementary school and the temporarily-flooded fields and powerline rights-of-way at the Northern Light Spa during the past 3 years has effectively controlled developing larval mosquito populations. Combined with aerial and ground-based treatments completed nearby in the Wolf and Cowley Creeks areas as part of the City of Whitehorse annual mosquito control program there has been a noticeable impact on adult mosquito populations and localized annoyance.

3.7 GRIZZLY SUBDIVISION AND 1385 KLONDIKE HIGHWAY

In response to reports of adult mosquito annoyance and resident contact of Community Services, two subdivision areas, located along the Klondike Highway, approximately 25-27 km north of Whitehorse, have participated in the annual mosquito control program.

3.7.1 Public Education and Information

Residents of the Grizzly Subdivision and 1385 Klondike Highway area, located north of Whitehorse, were generally informed of mosquito control program activities through newspaper advertisements and radio interviews as detailed in Section 2.2.2, above.

Ms. Jackie Taylor at Grizzly Subdivision and Ms. Charmyn Gunn at 1385 Klondike Highway were once again local, resident contacts, whom *Duka Ltd.* program personnel contacted for input and feedback on local weather conditions and adult mosquito nuisance. Program updates were shared with them which enabled them to share this information with their neighbours. Contact was maintained with Ms. Taylor and Gunn through on-site visits, email, telephone conversations and text messages during the season.

Ms. Taylor was provided with a light trap and all required sampling equipment in early June. Ms. Gunn indicated that she would be unable to assist with light trapping this season. Unfortunately, Ms. Taylor was also unable to find the time to complete any light trapping.

Duka Ltd personnel completed all larval surveys, treatments and adult mosquito sampling for the communities.

3.7.2 Surveying and Monitoring

Snowfall accumulations (SnowBulletin, www.env.gov.yk.ca), measured at the nearest community, Whitehorse, were above average, with snow water equivalents measured as 115% of normal on 01 March. Cool temperatures and snowfall in March resulted in an increase in local snowpack which was measured as 130% of normal on 01 April 2020. Measurements for 01 May recorded snowpack as 118% of normal, (Appendix 3).

Frequent precipitation, measured at Whitehorse Airport, for May, June and July 2020 totaled 137.6mm and was 153% of the 2015-2019 average (89.6mm) for these months, (www.climate.weather.gc.ca). Monthly mean temperatures in April, May, June and July 2020 were all below average, and for June and July they were (1.3-1.8^{o}C) below normal, (Appendix 3).

- ***Grizzly Subdivision***

Twenty-seven kilometres north of the Alaska Highway junction on the North Klondike Highway, the Grizzly Subdivision, near Lake Laberge, is comprised of several large properties. It is located on an elevated area with potential habitats including accessible roadside ditches and a low-lying, cleared area within the subdivision. Inaccessible sites include extensive swamplands located adjacent to, and within 1-3 km to the south, and northwest of the subdivision.

- ***1385 Klondike Highway Area***

Located approximately 20 kilometres along the Klondike Highway, just north of the Alaska Highway junction, and south of Grizzly Subdivision, this area includes several private residences, home-based businesses (heavy equipment trucking, dog kennels, horse boarding crafts etc.), and agricultural lands used for grazing, and others which produce hay. Immediately west of the highway and south of these properties is a Yukon Government-owned salt flat and surrounding property leased as pastureland for horses. The leaseholder for the salt flat/grazing area first requested (2018) that this area be excluded from the control program.

- ***Larval mosquitos***

The majority of ponds in these two areas, both temporary and permanent, are largely inaccessible from the ground and would typically be sampled by *Duka Ltd.* biologists with access provided by helicopter. Unfortunately, physical distancing protocols required by COVID-19 prevented *Duka Ltd.* personnel from riding with pilot on reconnaissance and sampling flights.

Duka Ltd. personnel were able to hike into the salt flats area on 06 May 2020 where larval populations of 0-30 larvae/dip sample and 1st through 3rd instar were observed. The aerial application pilot reported that the amount of surface water accumulations in, and between the two subdivisions was increased over that he had observed in past seasons. Sampling of Klondike Highway roadside ditches between the two subdivisions on 06 June found 3rd – 4th instars and pupae at populations of 0-4 larvae/dip sample, (Table 1, Chart 17 below).

Sampling of the salt flats area (1385 Klondike Hwy) on 25 June 2020 did not find any developing larvae.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week #→	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. campestris	0	1	11	42.3%	0	0	0	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. cataphylla	0	1	2	7.7%	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. fitchii	0 ?	1	7	26.9%	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0
Ae. spp	N/A	1	6	23.1%	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	4	26	100%	0	0	0	0	0	19	0	0	0	7	0	0	0	0	0	0	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value — Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 17: Grizzly Sub /1385 Klondike Hwy; Larval mosquito distribution (temporal) and occurrence (%), based on just 26 individuals collected for identification on 06 May and 06 June 2020.

Figure 7 provides a map detailing larval and adult mosquito sampling locations and areas aerially treated in 2020.

Three species of *Aedes* were identified from larval samples collected on 06 May. *Aedes campestris,* a mosquito which prefers alkaline pools and was collected from the salt flats accounted for almost half (42.3%) of larvae collected. *Aedes fitchii* (26.1%) and *Aedes cataphylla* (7.7%) develop in grassy snowmelt pools and in transition areas between grasslands and woods. Both are aggressive pests of man.

- ***Adult mosquitos***

Adult mosquito populations were monitored by *Duka Ltd.* personnel using carbon dioxide (CO_2) baited light traps, and by local volunteer Ms. Jackie Taylor (Grizzly Sub) in June and July 2020.

Light trap were set up by community volunteers was operated near her home and for a single night, 06 June. *Duka Ltd.* program biologists used CO_2-baited lights traps for a one hour interval. Light traps were set for a total of 5 nights and 561 adult mosquito specimens were collected, (Table 2, Chart 18 below).

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. communis	0	5	100	17.9%	0	0	0	0	0	0	0	0	0	43	0	0	49	0	0	8	0	0	0	0
Ae. diantaeus	0	1	1	0.2%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ae. dorsalis	+++	4	52	9.3%	0	0	0	0	0	0	0	0	0	13	0	0	32	0	0	7	0	0	0	0
Ae. excrucians	0	3	14	2.5%	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	5	0	0	0	0
Ae. implicatus	0	2	4	0.7%	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0
Ae. riparius	0	1	6	1.1%	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0
Ae. sticticus	+?	5	367	65.5%	0	0	0	0	0	0	0	0	0	100	0	0	235	0	0	32	0	0	0	0
Ae. vexans	++	3	16	2.9%	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	10	0	0	0	0
	Adult Total	24	560	100%	0	0	0	0	0	0	0	0	0	158	0	0	340	0	0	62	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 18: Grizzly Sub /1385 Klondike Hwy; Adult mosquito distribution (temporal) and occurrence (%), based on 560 individuals collected for identification between 05 June and 16 July 2020.

A total of eight different species of *Aedes* mosquitos were collected this season from the 1385 Klondike Hwy and Grizzly Subdivision areas. As noted elsewhere throughout Yukon in 2020, *Aedes sticticus* were the predominant (65.5%) species collected locally. *Aedes communis* (17.9%) and *Aedes dorsalis* (9.3%) were next most common species collected as adults. *Ae. communis* is a common mosquito of the north and *Ae. dorsalis* larvae prefer saltwater and saline habitats.

The other *Aedes* species collected as adults are also common to the north and all of them are pests of man and animals. *Aedes dorsalis*, *Aedes vexans* and *Aedes sticticus* have also been identified as potential vectors for West Nile virus.

3.7.3 Mosquito Control and Recommendation

Although far from exhaustive, larval and adult sampling results of the last few seasons, and the large number of adult specimens collected in 2020 confirms that there are several species of *Aedes* mosquitos developing in the swamps southwest of the Grizzly Subdivision and in 1385 Klondike Highway area. Since 2016 at least 11 different species of larval and adult mosquitos, including several *Culiseta* species have been collected locally. In addition, the unique, saline conditions of the salt flat areas to the west of the 1385 Klondike area also provide ideal larval habitat for not only *Aedes campestris* (2016, 2017, 2019, 2020) but also *Aedes dorsalis* (2018), a mosquito typically collected from salt marsh habitat.

Aerial applications completed on 13 May 2020 used 362 kg of VectoBac 200G to treat 85.17 ha of larval mosquito habitat located adjacent to the Grizzly Subdivision, and a further 181 kg of VectoBac 200G were applied to 42.59 ha of habitat in the 1385 Klondike Highway area,(Table 3, Figure 7). There were no ground treatments completed for 1385 Klondike Hwy or at the Grizzly Valley subdivision in 2020.

Four seasons of sampling and treatment has helped to define the local mosquito complex and better inform the minimum treatment scope required to achieve the desired threshold for control and relief of annoyance. In seasons with normal, or above normal amounts of winter snowfall and precipitation such as that observed most recently in 2016, 2018 and 2020, the salt flat areas at 1385 Klondike and the swamps and ponds south and west of the Grizzly Sub can be extensively flooded. In years such as these, it is estimated that some 40-50 bags (724—905 kg) of VectoBac 200G should be allotted for the treatment of 170.4 – 212.0 hectares of habitat in these areas.

3.8 HAINES JUNCTION

3.8.1 Public Education and Information

Residents and administrative personnel of Haines Junction were apprised of mosquito control program activities throughout the season, with details provided in Sections 2.2.1 and 2.2.2, above. City administrators, Council and Mayor, are always welcome to contact *Duka Ltd.* biologists/technicians and management personnel for program updates and information. In addition, the City receives a copy of the annual summary report directly from *Duka Ltd.* each fall. Senior project manager for *Duka Ltd.* Mr. C. Fediuk also met with Mr. Colin Kallio, Public Works Manager, on 13 August 2020 to review the annual program, to discuss an expansion of aerial applications and this seasons observations and mosquito populations.

Duka Ltd. program personnel first contacted the previous years (2015-2019) local applicator season, Mr. Brent Behm, in mid-April to discuss local conditions and receive updates on initial surveying and monitoring activities. Unfortunately the two previously certified local applicators were unable to attend the Certification course during March in Whitehorse and as such were only able to complete larval and adult mosquito surveillance. *Duka Ltd.* Program coordinators maintained regular contact with Mr. Behm through on-site visits, email, telephone conversations and text messages during the season.

Sampling and monitoring of accessible larval mosquito development habitats located within town were completed by local applicators. Adult mosquito light trapping was also completed by local applicators. *Duka Ltd.* Program biologists completed larval and adult mosquito sampling, and all larval mosquito treatments with VectoBac 200G.

3.8.2 Surveying and Monitoring

Snowfall accumulations and snowpack in the southwest of Yukon was below normal for the late winter and spring 2020. Local snowpack in the Haines Junction area was measured below average (88% of normal) on 01 March, 94% of normal on 01 April and 87% of normal on 01 May, (SnowBulletin, www.env.gov.yk.ca, Appendix 3).

Monthly precipitation totals for the period April through August 2020 were all above normal, except for June which received about 75% of total normal rainfall. Total precipitation for the five months in 2020 was 187.9mm, or 171% of the normal (110.1mm) 2015-2019 average. Monthly mean temperatures for April through August, with the exception of May, were 1.2°C-1.4°C below average, (www.climate.weather.gc.ca and Appendix 3).

May received over twice (216%) the normal amount of precipitation and was the only 2020 summer month with monthly mean temperatures above (0.8°C) their respective monthly normals.

- ***Larval mosquitos***

The local applicator sampled for larval development at several locations around town beginning on 22 April and no larvae were found. Subsequent sampling between 28-30 April noted the onset of larval development with 1st instar larvae at populations of 1-30 larvae/dip sample observed in ponds and roadside ditches. *Duka Ltd.* personnel were informed of the widespread development by the local applicator and visited the community on 05 May when 1st-3rd instar were observed at 5-50 larvae/dip sample with population in excess of 100 larvae/dip sample measured at several locations. Sampling completed on 09 May at habitats scheduled for aerial application found similar populations and age classes as that noted several days previous in ground accessible treatment sites.

Several sites including the roadside ditches, the old sewage lagoon, Libby Dulac's ponds and Pine Lake Campground sloughs were all active in May and again in June and July. Sampling on 02 June and 24 June 2020 found larval populations of 1st through 4th instars at 20 larvae/dip. Sampling on 17 July 2020 found larval populations averaging 5-20 larvae/dip sample. Sites such as the old sewage lagoon, Dulac's pond and the Pine Lake boardwalk/slough stayed marshy and wet throughout the summer. The aerial applicator pilot also commented on the increased amounts of water in most areas when he flew over the community in early May.

Identification of 471 larvae from samples collected by *Duka Ltd.* personnel and local applicators during the period 05 May to 17 July 2020 contained ten seven species of *Aedes,* two species of *Culiseta* and two species of *Culex* mosquitos (Table 1, Chart 19 below). Larval populations at Haines Junction were the most diverse of all communities participating in 2020 Yukon Mosquito Surveillance and Control Program. The most numerous species collected locally during in 2020 were *Aedes implicatus* (19.5%), *Aedes cataphylla* (14.2%) and *Culiseta incidens* (12.7%), (Table 1, Chart 19 below).

A full 26.5% of all mosquito larvae collected at Haines Junction this season were *Culiseta* and *Culex,* mosquitos which typically develop later in the season and which were the predominant larvae collected in late June and July, accounting for 81% of larvae collected at that time. *Aedes* mosquitos predominated May 2020 larval collections (100%) and accounted for 73.5% of all larval identifications, (Table 1, Chart 20 below).

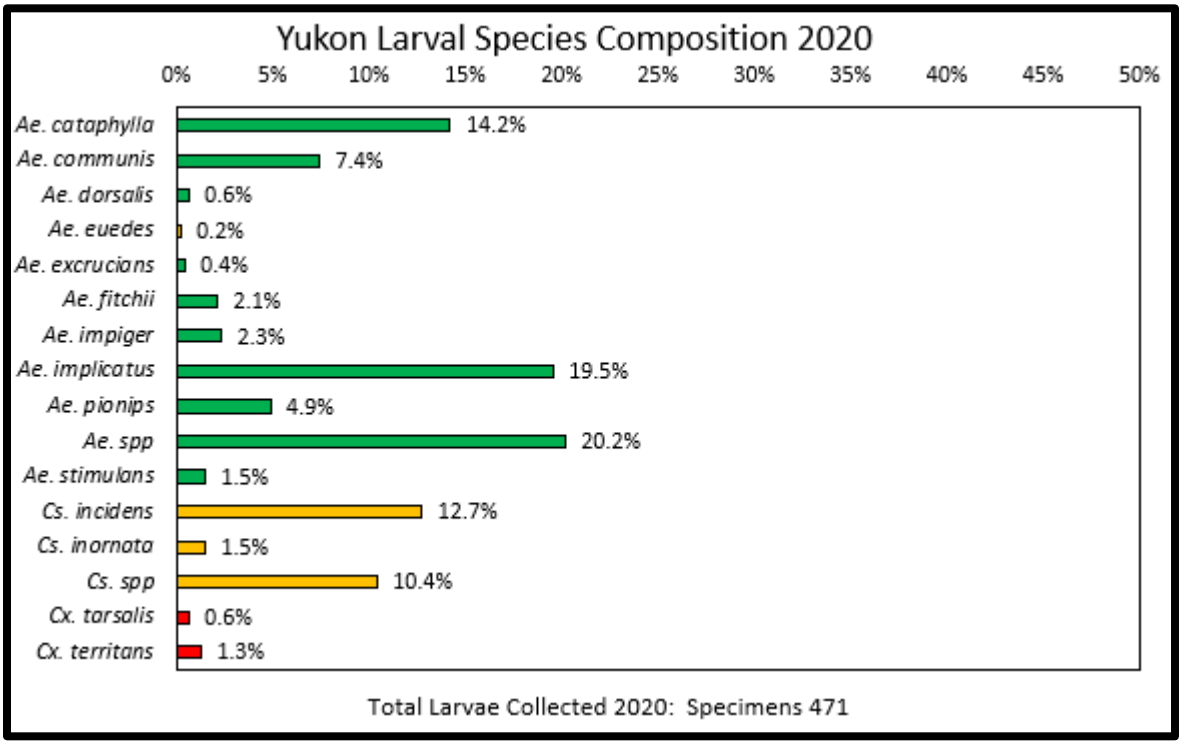


Chart 19: **Village of Haines Junction; Larval mosquito identification summary. Species compositions, as a percentage (%) of 471 individuals collected between 05 May and 17 July 2020.**

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. cataphylla	0	7	67	14.2%	0	0	0	0	0	56	0	0	0	11	0	0	0	0	0	0	0	0	0	0
Ae. communis	0	6	35	7.4%	0	0	0	0	0	21	0	0	0	14	0	0	0	0	0	0	0	0	0	0
Ae. dorsalis	+++	1	3	0.6%	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0
Ae. euedes	0	1	1	0.2%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Ae. excrucians	0	1	2	0.4%	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. fitchii	0 ?	2	10	2.1%	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0
Ae. impiger	0	4	11	2.3%	0	0	0	0	0	5	0	0	0	6	0	0	0	0	0	0	0	0	0	0
Ae. implicatus	0	11	92	19.5%	0	0	0	0	0	84	0	0	0	4	0	0	4	0	0	0	0	0	0	0
Ae. pionips	0	3	23	4.9%	0	0	0	0	0	0	0	0	0	18	0	0	5	0	0	0	0	0	0	0
Ae. spp	N/A	8	95	20.2%	0	0	0	0	0	95	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. stimulans	0	1	7	1.5%	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cs. incidens	++ ?	7	60	12.7%	0	0	0	0	0	0	0	0	0	0	0	0	42	0	0	18	0	0	0	0
Cs. inornata	+++	2	7	1.5%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0
Cs. spp	N/A	3	49	10.4%	0	0	0	0	0	0	0	0	0	31	0	0	18	0	0	0	0	0	0	0
Cx. tarsalis	++++	2	3	0.6%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
Cx. territans	0 ?	2	6	1.3%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0
	Total	61	471	100%	0	0	0	0	0	270	0	0	0	97	0	0	70	0	0	34	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value — Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 20: **Haines Junction; Larval mosquito distribution (temporal) and occurrence (%), based on 471 individuals collected for identification between 05 May and 17 July 2020.**

- ***Adult mosquitos***

A light trap, timer, sample collection, preservation and labeling supplies were all delivered to Mr. Behm on 01 June for his use. Mr. Behm set the trap up at the Public Works Yard and ran it for several nights but unfortunately the samples were mistakenly thrown out by a co-worker. *Duka Ltd.* biologists used $C0_2$-baited light traps to sample adult mosquito populations whenever they were in town during June and July, collecting twelve samples, (Table 2, Chart 21). During baited light trapping between ~25 and 400+ adults were collected. The largest numbers were from treed areas along Bearberry and Marshall Creek Road.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. cataphylla	0	5	15	1.5%	0	0	0	0	0	0	0	0	0	7	0	0	8	0	0	0	0	0	0	0
Ae. communis	0	5	16	1.6%	0	0	0	0	0	0	0	0	0	12	0	2	2	0	0	0	0	0	0	0
Ae. excrucians	0	9	216	21.3%	0	0	0	0	0	0	0	0	0	1	0	4	158	0	0	53	0	0	0	0
Ae. implicatus	0	12	115	11.3%	0	0	0	0	0	0	0	0	0	41	0	1	47	0	0	26	0	0	0	0
Ae. provocans	0 ?	12	125	12.3%	0	0	0	0	0	0	0	0	0	92	0	1	21	0	0	11	0	0	0	0
Ae. riparius	0	1	10	1.0%	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0
Ae. sticticus	+ ?	12	399	39.3%	0	0	0	0	0	0	0	0	0	134	0	13	185	0	0	67	0	0	0	0
Ae. vexans	+ +	7	90	8.9%	0	0	0	0	0	0	0	0	0	0	0	1	72	0	0	17	0	0	0	0
Cs. alaskaensis	0	6	27	2.7%	0	0	0	0	0	0	0	0	0	25	0	0	1	0	0	1	0	0	0	0
Cs. impatiens	0 ?	1	1	0.1%	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
	Adult Total	70	1014	100%	0	0	0	0	0	0	0	0	0	312	0	22	505	0	0	175	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value — Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 21: Haines Junction; Adult mosquito distribution (temporal) and occurrence (%), based on 1014 individuals collected for identification between 01 June and 18 July 2020.

A total of 1014 adult mosquito specimens were collected during 2020, (Table 2, Chart 21). The peak for adult mosquito populations was in late June when the three highest single trap captures 343, 357 and 470 adult specimens were collected at three different locations on 23-24 June, (Table 2). The most common adult specimens collected locally this season were *Aedes sticticus* (39.3%), *Aedes excrucians* (21.3%), *Aedes provocans* (12.3%) and *Aedes implicatus* (11.3%). As noted elsewhere in Yukon, *Ae sticticus* were the predominant mosquito adults collected in the community despite being absent in all local larval collections. *Ae. sticticus* prefer flooded cottonwood forest and river floodplains, habitat which is abundant along the Dezadeash River through Kluane National Park. With the excessive precipitation, cool temperatures and the inability to treat mosquito development in national parks, these conditions, and this area may have contributed to the surge in this species, this year.

3.8.3 Mosquito Control and Recommendation

Regular monitoring and treatment of larval mosquito populations which occur in the slow draining lake level-influenced sloughs and snowmelt-filled depressions at the Pine Lake campground and recreation

area is essential to reducing localized adult mosquito annoyance for campground and day use area visitors and tourists. The permanent and slow draining ponds at the Libby Dulac and Mabel Brewster properties along Alaska Highway, the old sewage lagoon and adjacent areas also require regular and frequent surveillance and treatment.

The extensive swamplands and snowmelt water accumulations that occur on agricultural and undeveloped lands surrounding the town can cause widespread and extreme adult mosquito annoyance if left untreated. This season the application pilot noted the increased amount of standing waters occurring at Haines Junction, particularly in the Pine Lake, Bearberry fields area, south of the Marshall Creek Road and adjacent the Dezadeash River.

Mosquito development habitat totaling 119.247 hectares were treated from the air on 10 May 2020 using 506.8 kilograms of VectoBac 200G, (Table 3). Ground-based treatments were completed by *Duka Ltd.* biologists with the assistance of the local applicator between 05 May 2020 and 17 July 2020. A total of 62.31 kilograms of VectoBac 200G were applied to 8.31 hectares of accessible habitat, (Table 4). This was over 2X the amount treated from the ground in past seasons and would surely have been greater had local applicators been certified to treat developing larval populations in the absence of *Duka Ltd.* personnel. Figure 8 presents a map detailing mosquito population (larval and adult) surveillance and VectoBac 200G treatment locations for 2020. Post application monitoring of VectoBac 200G treatments confirmed larval mortalities in excess of 95%.

Adult mosquito populations were reported as extreme by the local applicator and several residents and property owners who interacted with *Duka Ltd.* during the course of the season. Light trap collections at Haines Junction were also some of the largest one hour, CO_2-baited captures completed this season.

The most effective method of reducing mosquito populations is through habitat reduction, wherever possible, practical and economical. Alaska Highways upgrades and drainage improvements over the past several years by Yukon and local public works personnel has greatly improved local conditions through the elimination of several large roadside ponds and depressions. Ongoing and routine grading of roadsides and trails by public works staff effectively eliminates water-holding tire-ruts created by off-road vehicles and snow mobiles. These types of sites can provide several hundred metres, of 20-30cm wide, linear mosquito development habitat which is precipitation and snowmelt influenced. Lacking any natural insect predators or fish, these sites can provide ideal larval mosquito development habitat. The clearing and development of surrounding areas to expand local agricultural is also impacting local surface water accumulations by increasing their exposure to winds and sunlight which helps to dry these areas.

Currently the snowmelt and floodwater habitats which exist adjacent the Dezadeash River through the Kluane National Park and Reserve are not treated due to restrictions from Parks Canada. Inclusion of active mosquito habitat closest to town would

greatly increase the effectiveness of the local control program in reducing the potential for adult mosquito annoyance. The addition of approximately 6-10 bags (108-181 kg) of VectoBac 200G to the aerial application program at Haines Junction would allow for the treatment of an additional 25-43 hectares of larval mosquito habitat, located immediately adjacent to downtown, and which is currently going untreated. A dialogue with Parks Canada should be initiated to explain the program's goals and the safety of VectoBac 200G. Similar conservation areas, parks and wildlife management areas elsewhere in nearby British Columbia and Canada allow such treatments.

3.9 TAGISH

3.9.1 Public Education and Information

The community of Tagish was apprised of mosquito control program activities as detailed in Sections 2.2.1 and 2.2.2.

In the absence of a 'formally' designated administrative contact and local public information officer for the program area, *Duka Ltd.* personnel maintained regular contact with the recently certified local applicator, Ms. Laura Davidson. Ms. Davidson, a Whitehorse resident, typically visited her cabin and the community on weekends and was able to share information about program operations and findings with residents and business operators when she was in the community. Ms. Davidson completed larval sampling and treatments in late April and early May and operated the light trap at her beach front property for 3 weekends in June.

Duka Ltd. personnel completed larval surveys, adult mosquito sampling and treatments for the community. These activities were completed whenever control program biologists were available and in the community. *Duka Ltd.* field personnel undertook to discuss the mosquitos and control program operations whenever possible with local Highways personnel, hotel and restaurant operators, staff, residents and community visitors although this year COVID distancing restrictions meant most of these interactions were minimal.

3.9.2 Surveying and Monitoring

Snowfall and accumulations (SnowBulletin, www.env.gov.yk.ca) for the Marsh Lake area were above average, with snow water equivalents measured as 114% of normal on 01 March. Cool temperatures and snowfall in March resulted in minimal snowmelt and local snowpack which was measured as 104% of normal on 01 April 2020. Measurements for 01 May recorded snowpack for the area as 81% of normal, (Appendix 3).

Frequent precipitation, measured at Whitehorse Airport, for May, June and July 2020 totaled 137.6mm and was 153% of the 2015-2019 average (89.6mm) for these months, (www.climate.weather.gc.ca).

Monthly mean temperatures in April, May, June and July 2020 were all below average, and for June and July they were (1.3-1.8°C) below normal, (Appendix 3).

- ***Larval mosquitos***

Water accumulations in low-lying areas around town were noted by the application pilot as about what he remembered form previous years. Sampling completed by the local applicator along Pennycook Road on 26 April found developing populations of 1st and 2nd instar larvae. Sampling of the grassy riverbank north of the bridge and along the Highway into the community by *Duka Ltd.* personnel on 11 May found 2nd and 3rd instar larvae larval populations of 200-300 larvae/dip sampling. Sampling at of grassy shoreline near California Beach, at southern end of the river connecting the two lakes, found 1st-3rd instar larvae at populations of 2-50 larvae/dip sample. Snowmelt waters at the Tagish campground and the ditches along Tagish Road, Peacock Road and Chinook Road had larval populations ranging from 5-100 larvae/dip sample, (Table 1).

Duka Ltd personnel sampling of the Campground, Pennycook Road and along the Highway in early June, late June and mid-July found larval populations averaging 0-5 larvae/dip sample, (Table1).

Identification of 305 larvae from samples collected by the local applicator and *Duka Ltd.* personnel during the period 26 May to 13 July 2020 contained eight different species of *Aedes* and one species of *Culiseta,* (Table 1, Chart 22 below). The large populations of predominantly 1st instar larvae which were collected in early May were too small and immature to be identified to species. As a result almost half, or 44.3% could only be identified to the genus level, *Aedes*. The most numerous species collected was *Aedes implicatus* which accounted for 30.2% of all larvae collected at Tagish in2020. It is woodland mosquito which develops in snowmelt pool and is common to the north.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. campestris	0	1	5	1.6%	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. cataphylla	0	1	1	0.3%	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. communis	0	2	26	8.5%	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. diantaeus	0	1	1	0.3%	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Ae. impiger	0	1	6	2.0%	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. implicatus	0	6	92	30.2%	0	0	0	0	7	0	85	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. increpitus	0	0	0	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. melanimon	+++	1	26	8.5%	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. spp	N/A	5	135	44.3%	0	0	0	0	85	0	47	0	0	3	0	0	0	0	0	0	0	0	0	0
Cs. incidens	++?	2	13	4.3%	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	7	0	0	0	0
	Total	20	305	100%	0	0	0	0	92	0	196	0	0	4	0	0	6	0	0	7	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value … Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), the ability to readily, and effectively transmit the disease.

<u>Chart 22:</u> Tagish; Larval mosquito distribution (temporal) and occurrence (%), based on 305 individuals collected for identification between 26 April and 13 July 2020.

The next most common species were *Aedes communis* (8.5%) and *Aedes melanimon* (8.5%). *Ae. communis* prefer flooded cottonwood forest and *Ae. melanimon* roadside ditches and sloughs.

- ***Adult mosquitos***

Adult mosquito populations were sampled by the local applicator at her California Beach property in early June and late June. *Duka Ltd* personnel used CO2-baited light traps to sample for adult mosquitos at several locations around the community. A total of 496 adult mosquito specimens were collected for identification during the 2020 summer.

Identification of individuals collected from light trap sampling noted that *Aedes sticticus* accounted for 62.9% of all specimens collected and identified in 2020, (Table 2, Chart 23 below). The next most common species were *Aedes communis* (16.9%) and *Aedes excrucians* (11.1%). As noted elsewhere in Yukon this summer, *Ae. sticticus*, a mosquito which prefers flooded cottonwood forest and river valleys was the most common adult mosquito collected locally. Both *Aedes communis* and *Ae. excrucians* make use of temporary pools and are common to the north.

Adult mosquito populations were variable depending on sampling location with the highest captures made by *Duka Ltd.* personnel using CO_2-baited traps. Local adult mosquito populations peaked in late June with the capture of 302 adult mosquitos at the Carcross/Tagish First Nation (CTFN) water building.

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. communis	0	10	83	16.7%	0	0	0	0	0	0	0	0	0	36	14	0	31	0	0	2	0	0	0	0
Ae. dorsalis	+++	3	7	1.4%	0	0	0	0	0	0	0	0	0	0	2	0	4	0	0	1	0	0	0	0
Ae. excrucians	0	4	55	11.1%	0	0	0	0	0	0	0	0	0	0	18	0	12	0	0	25	0	0	0	0
Ae. implicatus	0	1	4	0.8%	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0
Ae. riparius	0	1	4	0.8%	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
Ae. spp	N/A	0	0	0.0%	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. sticticus	+?	11	312	62.9%	0	0	0	0	0	0	0	0	0	96	35	0	168	0	5	8	0	0	0	0
Ae. vexans	++	3	27	5.4%	0	0	0	0	0	0	0	0	0	0	16	0	7	0	0	4	0	0	0	0
Cs. impatiens	0?	3	3	0.6%	0	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0
Cs. incidens	++?	1	1	0.2%	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
	Adult Total	37	496	100%	0	0	0	0	0	0	0	0	1	137	85	0	227	0	6	40	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value … Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Chart 23: Tagish; Adult mosquito distribution (temporal) and occurrence (%), based on 496 individuals collected for identification between 30 May and 13 July 2020.

Adult mosquito annoyance was notable around the community with several residents telling with the local applicator that there were more mosquitos than usual.

3.9.3 Mosquito Control

A total of 93.69 hectares of infested larval mosquito habitat located around the community were treated by air on 11 May 2020 with a total of 398.2 kilograms of VectoBac 200G, (Table 3). Aerial treatments included the snowmelt accumulations north of the old gas station and campground area before the bridge and similar habitat ate southern edge of the community near where the river connects Tagish Lake. All ground-based applications were completed by *Duka Ltd.* personnel during their various field visits between 11 May and 13 July 2020. A total of 7.5 kg of VectoBac 200G were applied to a total of 1.0 ha of accessible habitat located at the campgrounds, and various ditches and roadside depressions along Pennycook and Tagish Roads. Figure 9 provides a map detailing mosquito surveillance (larvae and adult) and VectoBac 200G (aerial and ground) treatment site locations.

Increasing the scope of aerial applications at Tagish would allow for additional habitat to be treated. In seasons with "above average" winter snowpack, or the rapid melt of a moderate one there can be extensive snowmelt water accumulations in the forested and undeveloped lands surrounding the community. In years such as 2011, 2014 and 2018, when above average snowpack (110-150% of normal) occurs, the resultant widespread flooding, larval development and adult mosquito populations were increased, and annoyance reported by residents. An additional 6-8 bags (109-145 kg) of VectoBac 200G would allow for a further 25-35 hectares of a larval mosquito development habitat to be treated.

In 2020, the likely source of the "above average" to "extreme levels" of adult mosquito annoyance was the above average amount of precipitation during May and the frequent precipitation of June. A second aerial application, some 10-21 days after the original may need to be considered to address seasons with above average snowpack followed by frequent, or large amounts of precipitation.

4.0 CONTROL PROGRAM SUMMARY

4.1 Public Education and Information

The annual nuisance mosquito control program has been annually providing participating communities with mosquito control services for over twenty five years. The program has a high visibility using helicopters, field biologists/technicians, certified, and trained, local applicators working along roadsides, on private properties and in accessible swamps and marshes.

Residents and visitors of participating communities and the general public in Yukon were again informed of the annual mosquito control program and ongoing operations through various methods during 2019, (Section 2.2.1 and 2.2.2). These include newspaper articles, advertisements, radio or television interviews and routine contact with program personnel. Residents, community administrators and applicators could access the control program and field biologist personnel through a *Duka Ltd.*-supplied toll free 1-800-681-3472 telephone number, our corporate email (duka@telus.net), our website (www.duka.consulting) or

through community services front desk personnel, general enquiries at 867-667-5811. All requests for service or more information were followed-up with telephone contact or on-site inspection.

Residents, businesses and visitors to Yukon have benefited from this service for over twenty five years and continue to be very supportive of the program. The use of the locally proven effective, safe and environmentally sound control product VectoBac 200G is essential to the continued, favorable response from individuals inquiring about the program and for communities wishing to participate.

4.2 Mosquito Populations

Monitoring for initial larval development and site surveying in 2020 was completed by local, community applicators (where they were available) and *Duka Ltd.* program biologists/technicians beginning in mid to late April, depending on the presence and/or amount of snow cover still on the ground. Subsequent monitoring of mosquito (larval and adult) populations and sample collections were completed by local community personnel and/or by *Duka Ltd.* program coordinators when they were in visiting participating communities during late May, June and July to conduct training and larva treatments, as appropriate.

Winter snowfall accumulations for most communities during 2020 were well above average, ranging upwards of 130% of normal, and for some areas in excess of 160% of normal, when measured on 01 March, 01 April and 01 May, (Appendix 3). The exception was the southwest corner of the territory where snow water equivalents were 70-120% of normal.

The 2020 mosquito control program season, April through July, for much of Yukon was "cooler and much wetter" than recent five year (2015-2019) averages. With a delayed melt of average, to above average snowpack in late April and early May, followed by frequent and recurring precipitation, standing water accumulation within, and around most communities was extensive, and slow to drain or evaporate.

- ***Larval mosquito development***

Sampling for communities with local applicators was underway by mid to late April, and by the first week of May larval development was underway in participating communities. Snowmelt and floodwater *Aedes* larvae were the predominant genus collected Yukon-wide and throughout the month of May, (Table1). Larval sampling during June and July continued to collect mainly *Aedes* mosquitos although *Culiseta* and *Culex,* later developing species*,* began to appear, (Table 1).

Larval populations collected during 2020 were comprised of mostly *Aedes implicatus* (33.8%), *Ae. communis* (8.8%) and *Culiseta incidens* (7.6%) with lesser numbers of *Ae. cataphylla* (4.4%) and *Ae. impiger* (4.3%), (Table 1, Charts 1 and 2, Section 2.4.2). *Aedes* mosquitos are common to the arctic and the increased amount of *Culiseta incidens* collected this season, as a proportion of all species, and the increasing numbers of *Culex* and *Culiseta* in recent years suggests "warmer and/or wetter" weather patterns for Yukon summers of late.

- ***Adult mosquito populations***

The most numerous mosquitos collected as adults this season were *Aedes* (98.6%) and the remaining 1.4% were *Culiseta*, (Table 2 and Chart 4, Section 2.4.3.) A total of eleven species of *Aedes* were collected as adult mosquitos in 2020. The most common species was *Aedes sticticus,* comprising 51.9% of all specimens identified. This was extraordinary occurrence since they were not identified in larval collections from 2020. Given that they have been collected as larvae in past seasons, some may have been present in the 2020 *Aedes* complex but were too small for identification. Their very high contribution to the adult mosquito complex is a measure of their aggressive biting and host seeking ability but it may also suggest that they were developing after the widespread larval sampling which preceded initial ground-based applications and the aerial application campaign.

The predominant adult mosquito collected in other Yukon communities and in many British Columbian mosquito surveillance and control programs this season was also *Aedes sticticus* (*Duka Ltd.* 2020). The very wet weather conditions of 2020 and the abundance of cottonwood habitat throughout Yukon and along river valley bottoms throughout BC, much of which had not been extensively flooded for many years, likely contributed to their large populations this year. *Aedes sticticus* were consistently the most abundant mosquito collected throughout the sampling season, (Table 2, Chart 4).

4.3 Mosquito Control and Population Management

The most effective way to reduce adult mosquito populations and subsequent annoyance in populated areas is through an integrated approach to control which focuses on reducing, and suppressing larval mosquito populations. This can be achieved by eliminating, or reducing the source of larval mosquito development, through the conservation or enhancement of natural mosquito predators and their habitat, and through the timely use of proven safe, and effective bio-rational larvicides.

It is not feasible, desirable or economically viable however, to attempt the drainage of the widespread swamps and wetlands which surround many Yukon communities. For sites of this type, the target-specific bio-rational and proven effective larval control product VectoBac 200G larvicide (*Bacillus thuringensis* var. var. *israelensis,* Serotype H-14, Strain AM65-52) is recommended for controlling widespread, synchronous larval mosquito development which occurs in expansive snowmelt and floodwater sites in Yukon. VectoBac 200G is very target-specific and only controls mosquitos and a limited number of other, similar insect species. It has no impact on beneficial insects, fish, reptiles, amphibians, birds and mammals.

Original research for VectoBac 200G (*Bti*) was completed in Yukon during the mid-1980s as part of its North American and Canadian product registration. Similar products exist, but are made with different *Bti* strains. When another product (AquaBac) was used in Yukon for 3 seasons in the early 1990s, it was noted as largely ineffective, and adult mosquito annoyance rates were increased. With manufacturer recommended application rates twice that of VectoBac 200G, the resultant helicopter charter time budget (flight hours) required to apply this other larvicide would also need to be doubled. In addition to product

ineffectiveness, the overall cost per treated hectare would be approximately double that currently allotted to the program. The total volume of larvicide to be ordered, stored and transported around to the numerous participating communities would further complicate program efficiencies and increase overall costs. Program coordinator time, travel and expenses would be increased and the larval "treatment window" for aerial applications likely extended. This extension could result in some communities having to receive treatments when larval populations and age classes (instars) are less than ideal for control. VectoBac 200G is the most cost effective *Bti* product available, when application rates, efficacy and third party disbursements are considered, and is the only recommended *Bti* larvicide for use in Yukon.

A review of the Charts 1 and 2, in Sections 2.4.2 and 2.4.3, and the individual community discussions (Sections 3.1-3.9) above, confirmed that the overall timing of aerial applications using VectoBac 200G effectively targeted, and controlled, widespread and synchronous larval development occurring throughout participating Yukon communities. The presence, or in some cases the increase in some species as a percentage of local populations, when measured as adult mosquitos, and this year particularly with *Aedes sticticus*, suggests that they may be migrating into town from uncontrolled habitats located outside of the treatment boundaries. Slow or extended periods of development (+14 days), and later onset of development for others may also allow some species to emerge after initial treatments have been completed. An expansion of the aerial scope, and /or a second aerial application, 7-21 days after initial treatments, in some communities might better target these species. The majority of mosquito control programs in British Columbia and the Pacific Northwest large enough to employ aerial applications as part of routine operations, typically have 2 or 3 aerial applications per season.

The goal of the annual Yukon mosquito control program is to provide participating communities with measureable relief of adult mosquito annoyance and to improve public health, worker safety, tourism and outdoor recreation through the delivery of cost effective and environmentally sound mosquito control. An above average snowpack, a delayed snowmelt or precipitation later in May, June or July can create conditions for extensive, or secondary larval mosquito hatches. The greater the magnitude, and frequency of larvicide applications, completed from both air and ground, the greater the overall suppression of mosquito populations and resultant program effectiveness in reducing adult mosquito annoyance.

4.4 Regulatory Requirements

Duka Environmental Services Ltd., managing consultants for the annual (2019–2021) Yukon Mosquito Control Program is currently authorized to apply pesticides, and to provide mosquito services, under Environment Act Pesticide Use Permit # 21-004 through to 31 December 2021. This permit allows *Duka Ltd*. to provide mosquito control services to Yukon communities, and for this program, through the Community Services Department, Operations and Programs Branch (C-12) of the Yukon Government. Larval mosquito control is permitted using approved products containing *Bacillus thuringiensis* var. *israelensis* (*Bti*), including VectoBac 200G (PCP # 18158). All larvicide applications were completed by *Duka Ltd* personnel, community volunteers/public works staff and helicopter pilots certified as pesticide applicators in the appropriate category.

The community of Teslin maintains it's own Pesticide Use Permit # 22-003 which allows Village personnel to use VectoBac 200G for larval mosquito control. The Town of Faro also maintains its own Pesticide Use Permit (# 22-008) allowing public works personnel to control larval mosquito development. Both of these community permits expire on 31 December 2020. Mosquito control program support services, training, equipment, VectoBac 200G and mosquito identifications were provided to these communities through their involvement as in the annual Yukon Mosquito Control Program as Level 1 participants (Appendix 1). Their surveillance and control efforts are summarized in Appendix 4.

Community Services, Operations and Programs Branch maintains a Pesticide Vendor Permit (#23-006) which allows it to supply participating communities with the VectoBac 200G required for control program operations. *Duka Environmental Services Ltd* also maintains a Pesticide Vendor Permit (#23-002) allowing it to sell VectoBac and similar larvicides to Community Services, interested communities, agencies, groups and individuals, with appropriate permits. Both of these Vendor Permits expire on 31 December 2020.

The requisite annual Vendor and Pesticide Use reports are prepared, and submitted, to Yukon Environment, Environmental Programs Branch by *Duka Environmental Services Ltd.* at the end of each operational season for both *Duka Ltd.* and Community Services. Teslin and Faro are obligated as a condition of their own Permits, as Level 1 participants in the 2020 Community Services-provided mosquito control program, to complete, and submit, their own reports of mosquito surveillance and control activities. *Duka Ltd.* will assist them, as appropriate, and where requested.

Adult mosquito control applications (adulticiding) do not form a part of the mosquito control services provided to participating communities. Communities wishing to control adult mosquitos were required to obtain a Pesticide Use Permit from Yukon Environment for this purpose. Experienced *Duka Ltd.* personnel were available to assist any individuals or communities requesting same.

Occasionally Yukon residents located outside of communities participating in the annual control program contacted program personnel to inquire about receiving mosquito control services or to purchase VectoBac 200G for use on their own properties. Where appropriate, these individuals were directed to contact Community Services or the Yukon Environment.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Public Education and Information

Mosquito population reduction and control is a community-based activity and its success depends upon community support. Increasing the level of public involvement and input into the annual control program improves program delivery and effectiveness. In addition to helping program biologists identify potential mosquito development habitats, the general public can have a direct impact on reducing local sources of mosquito development and annoyance which occur on their property.

Newspaper advertisements and articles, radio and television interviews and updated status reports are instrumental in educating the public and gaining program support. Door knob hangers and public information brochures, laminated posters, colouring books etc. are available through *Duka Ltd.* to further educate residents and businesses.

All public education materials available to the program through *Duka Ltd.* provided interested individuals with telephone (toll free 1-800-681-3472), email (duka@telus.net) and website (www.duka.consulting) contact addresses for additional, detailed information on local mosquito development and control. In addition, contact information for appropriate Regional, Provincial and Federal and Health offices is also included on all public information materials, as are links to other informative websites.

Increasingly, website searches and e-mail contact between program participants, residents, program managers and biologists is becoming more common and provides for an additional source of information and program feedback. The general public can report adult mosquito annoyance and potential larval development sites (a waterbody) directly to *Duka Ltd* via www.duka.consulting on the "*Mosquito Reporting Form*" which also allows for the attachment of pictures and/or maps.

The Community Services Development Branch should consider increasing the amount of information currently available on, and through its website, as it relates to mosquito biology, control, program activities and services. It would complement brochures, newspaper articles and news media interviews by providing ready access to a 'permanent' source of contact and information.

A comprehensive informational poster or full page press release detailing the program, mosquito biology, control methodologies, expected results and program goals could also be developed. Placement of such a poster in public access areas of participating communities would increase public awareness, knowledge and opportunities for resident's involvement, public outreach and expanded education.

Duka Ltd. personnel contacts with the general public, business and facility operators this season were very positive. Casual conversations with residents and anecdotal comments from public works staff and others were positive, and for the large majority of Yukon residents and visitors, the 2019 summer season was one of zero, to minimal, adult mosquito annoyance.

Copies of this summary report should be available to all participating communities so that they can review mosquito control program operations and recommendations overall, and specifically those for their own community. *Duka Ltd.* sends copies of the entire summary report directly to those communities having municipal governments at Carmacks, Dawson City and Haines Junction.

5.2 Program Staffing and Support

Duka Environmental Services Ltd. worked with Yukon Government, Community Services, Operations and Programs Branch, to coordinate all aspects of the annual nuisance mosquito control program for

participating communities. *Duka Ltd.* management personnel present, at Whitehorse, a Pesticide Applicator Certification Course for individuals selected by participating communities. Given that certification can be either for 1 or 5 years, dependent upon examination results, the status of potential applicators should be determined in late December or early January. This would allow adequate time for the ordering of study materials and course scheduling, tentatively for February or March. Conducting the course in February or March enables any individuals unsuccessful in their initial examination to have an opportunity for additional study time and a chance to re-write the exam prior to season start-up in April. In addition, an earlier commitment from participating communities would allow the community and program managers time to better assess the level of effort to be required by each community.

Appendix 2 provides a listing of applicator certification details from the 2020 program. Additional, potential applicators identified during the 2020 season are included in the Appendix listing for Community Services to invite to the 2021 Applicators Certification Training course. In communities without local applicators, *Duka Ltd.* personnel completed all surveying and monitoring of populations and ground-based larvicide applications, where possible, and as time permitted. All aerial VectoBac 200G applications were directed on-site by *Duka Ltd*. personnel.

Continuity of program management and field coordination is essential to effective program operations and reporting. The nature of program operations involving communities with varying degrees of local administrative and field support requires experienced, knowledgeable personnel. The frequent turnover in community volunteers, Community Services staff and Yukon Environment personnel assigned to the project requires the stability of uniquely experienced consultants for continued, annual, operational control program success. A complete understanding of Yukon Environment Regulatory requirements (permitting and reporting), unincorporated communities, settlement and city council administration, as well as a sound knowledge of mosquito biology, species occurrence, distribution, and control in northern climes is required.

The success of each community's mosquito control program is enhanced by the presence of a local applicator. These individuals improve program effectiveness by locating and treating larval mosquitos before, during, and after the aerial larvicide campaign is completed. Once larval collections and control applications are completed, community personnel contribute further through adult mosquito sampling and collection. Data collection and sampling by local applicators/volunteers provides invaluable information on Yukon mosquito etiology including species presence, development rates and distributions essential to timely aerial treatments and ground-based controls.

The availability of local, certified personnel increases the timeliness and magnitude of larval control measures and ensures that mosquitos are treated at their source, and before, they become a nuisance. Communities should be encouraged to have at least one employee or volunteer certified as an applicator. Ideally a municipal or Yukon Government public works employee, these 'volunteers', should be encouraged by their managers to allot adequate time each week to complete surveying, sampling and

larval mosquito treatment. This commitment is most important from April through early June when most larval development occurs.

Increasing the participation rate of residents as community applicators would assist program coordinators to maximize the already very effective program by increasing the frequency of monitoring and control of larval development and reporting of adult mosquito distribution. Aerial applications are scheduled on the basis of winter and current weather conditions, historical treatment data and the early sampling information provided by local applicators and *Duka Ltd.* program biologists and technicians. Aerial applications are the single largest expenditure of the annual control program and the correct timing and selection of habitats for treatment is crucial to program success and effective reduction of adult mosquito populations. The value of larval surveillance data collected by local, community personnel and provided to control program coordinators cannot be underestimated.

5.3 Surveying and Monitoring

The frequency of surveillance and treatment of larval mosquitos is very important for an integrated pest management program with a focus on larval control initiatives. This is particularly important in Yukon where the large majority of larval development is synchronous and usually territory-wide in just 1-3 weeks in response to snowmelt water accumulations beginning in April and early May.

Weather conditions including temperatures, precipitation frequency and amounts during the summer, through to early August, also affect the magnitude and distribution of subsequent larval development and adult mosquito survival. Community contact and the scheduling of on-site surveying and monitoring of development sites, and larval mosquito populations should commence as early as mid-April, wherever possible, and depending on conditions. Local, certified applicators typically treat the initial hatch of larvae in late April or early May and their observations on local larval development status is very important to the timely scheduling of aerial applications. Mosquito population surveillance and larval treatments during June, July and August contribute to the programs informational database, predictive indices refinements and ongoing program success in suppressing adult mosquito populations and potential annoyance.

The unpredictable nature of weather, distances between communities and the number of participating communities, often times upwards of 15, can make it difficult for program coordinators to conduct weekly larval surveillance and treatment, especially early in the season when larval development is synchronous and widespread throughout the Yukon. Combined with the low levels of active participation by many community applicators, the need for timely surveillance and treatment can be difficult to achieve. The availability of an additional, certified field biologist/technician and requisite budgetary resources to assist the program coordinator for a eight week period, tentatively 15 April – 15 June, would maximize larval controls and program effectiveness. Alternatively, returning to the pre-2000s program staffing structure with two biologists/technicians available throughout the season would allow for weekly to bi-weekly visits

at all communities and regular, scheduled sampling and treatments of mosquito populations. The extent of monitoring, treatments and sample collection, through either of these two staffing scenarios, particularly in communities without a local applicator, would be greatly improved.

Larval mosquito sampling, collection and identification (taxonomy) are an essential component of a scientifically-based approach to mosquito population management. A firm knowledge of the pest species being targeted, their occurrence, and distribution are important for the effective implementation of an Integrated Pest Management approach to control. This is especially important for a program comprised of 15 or more distinct communities, with widely variable local conditions, habitats, populations and commuting distances.

Mosquito population monitoring through bite, landing count, and light trap sampling should be continued as part of the comprehensive mosquito control program. This monitoring provides a relative measure of control program efficacy by comparing adult mosquito populations inside community boundaries, the 'controlled' area, with those measured outside. This information also provides data essential for the temporal comparison of mosquito development onset and distributions.

Tables 1 and 2, and Charts 3 - 23 (Section 3.1 and 3.9) of this report provide a listing, and visual comparison, by community, of larval and adult mosquito species collected during 2020.

5.4 Mosquito Control

The greatest source of adult mosquitos and resultant nuisance in Yukon are snowmelt and precipitation-influenced swamps, marshes, depressions, ponds and river or lake shore sloughs and oxbows. Given their difficult access, the widespread distribution and largely synchronous nature of *Aedes* larval development requires helicopters to effectively control of these often large, and inaccessible areas.

Ground-based applications of water-filled depressions, tire ruts, ditches and ponds located adjacent to private residences, businesses, roadsides and in community fire breaks compliments aerial applications. These treatments are important to program success as they control larval development closest to residences and businesses, and at sites where recurrent larval development often occurs. Tables 3 and 4 of this report summarize aerial and ground-based applications, respectively. Figures 1-9 provide mosquito surveillance (larval and adult) and VectoBac 200G treatment details for participating communities.

In addition to natural waterbodies (ponds, depressions), some species of mosquitos (*Culex* and *Culiseta*) can develop in artificial containers or depression capable of holding water for several weeks. Buckets, boats, tires and stored equipment can all provide suitable larval mosquito habitat. Removal or regular draining of these types of sites around homes and businesses can have a noticeable impact on mosquito annoyance levels. Elimination of man-made habitats such as impounded ditches or depressions and ruts along highways and roadsides removes a source of larval development and future adult mosquito

annoyance. Physical controls such as these are best achieved through public education initiatives and program consultations with community personnel.

The overall scope of both aerial and ground-based larvicide applications in most participating communities are sufficient to provide relief from routine, expected adult mosquito annoyance. Given the increasing temperatures and "wetter" weather patterns occurring in the north as climate change impacts local conditions it may be time to consider the need for an expanded aerial in some communities, and the potential need for a second aerial application in some communities. The availability of funding sufficient to provide for additional materials (VectoBac 200G), aircraft (helicopter) charter and consulting support for a second aerial would need to be in place as an accessible contingency.

An expanded aerial scope and the possibility of a second, smaller-scale aerial application under conditions of above average precipitation or river level flooding should be considered for some communities. Increasing the scope, frequency and number of larvicide applications has been demonstrated to reduce adult mosquito annoyance and requests for adult mosquito control.

5.5 Pesticides and Equipment

The granular biological mosquito larvicide VectoBac 200G (PCP# 18158) was used exclusively in the 2020 Government of Yukon Mosquito Control Program.

VectoBac 200G contains the naturally-occuring soil bacterium *Bacillus thuringiensis* var. *israelensis* (*Bti*) and is formulated on a corn cob granule for ease of application. This bacterium has specific insecticidal properties against a narrow range of target organisms specifically mosquitos, black flies and some biting midges. It is not persistent in the environment and has no effect on other organisms including insects, amphibians, fish, wildlife, livestock, domestic animals and humans. VectoBac 200G is the most environmentally acceptable mosquito control product available. Its proven effectiveness in Yukon and elsewhere in Canada and the world has been confirmed over twenty seasons of consecutive use. VectoBac 200G is the preferred larvicide choice for hundreds of communities located throughout Canada, the USA and elsewhere in the world.

VectoBac products have never been disqualified or disallowed in any Mosquito Abatement District or municipal contracts because of quality control, microbial contamination or lack of performance issues. It is the only larvicide product endorsed by the United States Centres for Disease Control for use in their country-

wide ZIka virus, *Aedes aegypti,* control program. VectoBac products are made to the highest pharmaceutical standards and retested regularly while in storage to ensure they continue to exceed the minimums for efficacy.

Aerial (helicopter) applications rates during 2020 were 4.25 kilograms/hectare and ground-based treatments ranged from 7.0-10.0 kilograms/hectare. All application rates were within those recommended by the manufacturer, Valent Biosciences.

Post application monitoring indicated larval mortalities exceeding 95%. In keeping with the program's goal of environmental compatibility, which includes lowest application rates, target species specificity, product safety and cost effectiveness, VectoBac 200G should continue to be used for all larvicide applications.

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TABLES

Table 1: Larval Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Sampling Location	# Larvae Dip	Instar Stage	Sample Size	# identified	Species
	Army Beach / Marsh Lake					
09-May-20	*Morrison Ditch	150	3-4	78	75	*Ae. implicatus*
					3	*Ae. communis*
11-May-20	Pools in firesmarted trees	2-30	1-3	33	33	*Ae. implicatus*
11-May-20	Marsh off the end of cul de sac	2-30	1-3	22	16	*Ae. implicatus*
					6	*Ae. communis*
11-May-20	Marsh Lake campground entrance	5-15	1-2	12	5	*Ae. implicatus*
					1	*Ae. communis*
					5	*Ae. spp*
11-May-20	*Firewood field		1-3	5	2	*Ae. implicatus*
					1	*Ae. impiger*
11-May-20	*FireSmart 2015, S M'Clintock Rd		1-3	14	14	*Ae. implicatus*
11-May-20	*60m in bush, 200m N of powerline xing		2-3	11	11	*Ae. implicatus*
11-May-20	*Ed's beach		1-3	10	5	*Ae. implicatus*
					5	*Ae. spp*
03-Jun-20	Ditches between Army Beach and M'Clintock	0-5	<1-P	10	10	*Cs. spp*
03-Jun-20	Pools near campground entrance in	0-5	3-4	14	7	*Ae. communis*
	trees				6	*Ae. implicatus*
					1	*Ae. pionips*
27-Jun-20	Cul de sac at end of Army Beach Dr	0-8	<1-3	4	4	*Cs. incidens*
27-Jun-20	Corner across from Linda's driveway	0-10	<1-4	4	4	*Cs. incidens*
27-Jun-20	Ditches by campground entrance	0-10	<1-P	8	6	*Cs. incidens*
					2	*Cx. territans*
13-Jul-20	Ditches by campground entrance	0-15	<1-2	11	11	*Cs. spp*
	Army Beach/Marsh Lake larval totals				233	
	Burwash Landing					
21-Apr-20	*Alice's corner N side (S curve)		1-2	70	1	*Ae. implicatus*
					3	*Ae. cataphylla*
					8	*Ae. spp*
21-Apr-20	*Alice's corner S side (S curve)		1	20	1	*Ae. implicatus*
					19	*Ae. spp*
21-Apr-20	*NW of arena		1	20	2	*Ae. cataphylla*
					18	*Ae. spp*

Table 1: Larval Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Sampling Location	# Larvae Dip	Instar Stage	Sample Size	# identified	Species
09-May-20	S curve	5-50	2-3	48	41	*Ae. implicatus*
					1	*Ae. communis*
					5	*Ae. cataphylla*
					1	*Ae. punctor*
09-May-20	Copperlily and Alaska Hwy	0-10	<1-3	5	5	*Ae. implicatus*
09-May-20	Aerial across from Copperlily and	0-5	<1-2	25	7	*Ae. implicatus*
	Alaska Hwy				3	*Ae. communis*
					1	*Ae. spp*
09-May-20	Ditches by new water treatment plant	5-50	2-3	21	15	*Ae. implicatus*
					6	*Ae. communis*
09-May-20	Before S curve	5-10	3	9	9	*Ae. implicatus*
09-May-20	End of Copperlily Rd	5-50	2-3	42	16	*Ae. implicatus*
					8	*Ae. sticticus*
					1	*Ae. impiger*
01-Jun-20	Copperlily and Alaska Hwy	0-3	4-P	5	4	*Ae. impiger*
					1	*Ae. pionips*
01-Jun-20	Before S curve	0-5	4-P	14	14	*Ae. fitchii*
23-Jun-20	S curve	0-3	<1-P	4	2	*Ae. implicatus*
					1	*An. spp*
					1	*Cs. incidens*
17-Jul-20	S curve	0-4	<1-2	9	5	*Ae. excrucians*
					4	*Cs. spp*
	Burwash Landing larval totals				203	
	Carmacks					
13-May-20	River Dr ditches	0-15	3-P	4	4	*Ae. implicatus*
13-May-20	Rowlinson Dr swamp	0-50	<1-2	48	48	*Ae. spp*
13-May-20	Guder Dr swamp	50-100	1-3	38	5	*Ae. implicatus*
					33	*Ae. spp*
05-Jun-20	Rawlinson Dr swamp	0-2	3-P	2	2	*Ae. punctor*
06-Jun-20	River Dr coal mining buckets, lot 260	0-10	<1-2	26	26	*Cs. spp*
06-Jun-20	Guder Dr swamp	0-20	2-P	37	30	*Ae. implicatus*
					4	*Ae. communis*
					3	*Ae. punctor*

Table 1: Larval Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Sampling Location	# Larvae Dip	Instar Stage	Sample Size	# identified	Species
26-Jun-20	River Dr coal mining buckets, lot 260	0-5	<1-4	10	5	*Cs. incidens*
					5	*Cs. inornata*
16-Jul-20	Coal buckets	0-5	<1-4	9	9	*Cs. incidens*
16-Jul-20	Rawlinson Dr swamp	1	4	1	1	*An. spp*
	Carmacks larval totals				175	
	Dawson City					
10-May-20	*Edward at Front St (ditch)	200	2-3	100+	25	*Ae. implicatus*
10-May-20	*Church at Front St (Commissioner's Res)	500	3-4	500+	25	*Ae. implicatus*
11-May-20	*Alley between Princess and Harper	400	3-4	200+	37	*Ae. implicatus*
					1	*Ae. cataphylla*
11-May-20	*3rd Ave at Duke St (ditch)	200	1	500+	16	*Ae. implicatus*
13-May-20	Across fron Callison industrial park	0-20	<1-3	16	3	*Ae. communis*
					1	*Ae. impiger*
					5	*Ae. implicatus*
					2	*Ae. cataphylla*
					5	*Ae. spp*
13-May-20	Ditch near Callison Way	0-15	<1-3	25	2	*Ae. communis*
					6	*Ae. implicatus*
					1	*Ae. cataphylla*
					16	*Ae. spp*
14-May-20	Corner of Front and George St	0-100	3-4	17	5	*Ae. communis*
					12	*Ae. implicatus*
14-May-20	Swamp behind Fireweed Helicopters	0-15	2-3	26	26	*Ae. communis*
14-May-20	Quigley Dump Rd	5-15.	<1-3	38	38	*Ae. spp*
16-May-20	*Dump Pond	60	3-4	45	2	*Ae. communis*
					43	*Ae. increpitus*
19-May-20	*Klondike Hwy S of Crocus Bluff	150	1-2	100+	100	*Ae. spp*
21-May-20	*King St at 5th/6th (powerline)	90	2-3	50+	4	*Ae. communis*
					1	*Ae. implicatus*
21-May-20	*Pierre Burton Lot 35	100	2-3	50+	50	*Ae. spp*
05-Jun-20	George St and 2nd Ave	0-20	2-P	-	-	*Sample pupae only*
05-Jun-20	Duke St and 5th Ave	0-20	<1-P	9	2	*Ae. implicatus*
					7	*Cs. spp*

Table 1: Larval Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Sampling Location	# Larvae Dip	Instar Stage	Sample Size	# identified	Species
05-Jun-20	Commissioner's Slough	0-5	<1-P	2	2	*Cs. spp*
06-Jun-20	Callison Way and Cameron Cres	0-10	<1-P	11	5	*Ae. pionips*
					4	*Ae. canadensis*
					1	*Ae. communis*
					1	*Ae. increpitus*
25-Jun-20	George St and Front	0-10	<1-P	8	3	*Ae. pionips*
					5	*Ae. implicatus*
26-Jun-20	RS School	0-20	<1-2	19	19	*Ae. cataphylla*
26-Jun-20	5th and Duke	0-10	<1-3	20	20	*Cs. incidens*
26-Jun-20	Commissioners Slough	0-10	<1-2	7	7	*Cs. incidens*
15-Jul-20	3rd and Harper	0-5	<1-P	13	6	*Cs. incidens*
					7	*Cx. tarsalis*
15-Jul-20	Commissioners Slough	0-4	<1-4	8	4	*Cs. impatiens*
					4	*Cs. incidens*
15-Jul-20	Duke St and 5th Ave	0-4	<1-3	7	7	*Cs. incidens*
15-Jul-20	George and Front St	0-25	<1-2	9	9	*Cs. incidens*
15-Jul-20	Robert Service School	0-20	2-P	20	6	*Cs. Inornata*
					11	*Cs. incidens*
					1	An. earlii
					2	*Cx. tarsalis*
	Dawson City larval totals				559	
	Destruction Bay					
26-Apr-20	*Cottonwood Campground		1-2	1	1	*Ae. spp*
02-May-20	*Cottonwood Campground		1-2	2	2	*Ae. implicatus*
09-May-20	Shakwack St	5-50	1-3	32	27	*Ae. implicatus*
					5	*Ae. communis*
09-May-20	Aerial on south end of town by lake	5-20	1-3	14	10	*Ae. implicatus*
					3	*Ae. communis*
					1	*Ae. impiger*
09-May-20	2 km north of town	5-25	2-3	20	18	*Ae. implicatus*
					2	*Ae. communis*
09-May-20	1 km north of town	50-100	2-3	36	28	*Ae. implicatus*
					6	*Ae. communis*

Table 1: Larval Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Sampling Location	# Larvae Dip	Instar Stage	Sample Size	# identified	Species
					2	*Ae. cataphylla*
01-Jun-20	2 km north of town	0-5	2-4	15	15	*Ae. implicatus*
24-Jun-20	1.5 km north of town - culvert	0-5	3-4	17	1	*Ae. canadensis*
					16	*Ae. pionips*
24-Jun-20	1.5 km north of town - grassy pools	0-30	<1-P	10	3	*Cs. impatiens*
					5	*Cs. Incidens*
					2	*Ae. pionips*
17-Jul-20	2-1 km north of town	0-20	<1-P	17	17	*Cs. Spp*
	Destruction Bay larval totals				164	
	Goldenhorn					
04-May-20	Pond behind Goldenhorn school	0-10	<1-2	18	7	*Ae. implicatus*
					3	*Ae. impiger*
					3	*Ae. spp*
04-May-20	Powerline infront of Northern Lights Spa	0-20	<1-2	60	12	*Ae. implicatus*
04-May-20	Fields beside Northern Lights Spa	0-100	<1-2	29	9	*Ae. implicatus*
					6	*Ae. impiger*
28-Jun-20	Pond behind Goldenhorn school	0-10	<1-4	14	14	*Cs. incidens*
	Goldenhorn larval totals				54	
	Grizzly Subdivision /1385 Klondike Hwy					
06-May-20	Salt Flat	0-30	<1-3	30	2	*Ae. cataphylla*
					11	*Ae. campestris*
					6	*Ae. spp*
06-Jun-20	Ditches between Grizzley Sub and 1385	0-4	3-P	7	7	*Ae. fitchii*
	Grizzly Subdivision larval totals				26	
	Haines Junction					
05-May-20	Ditches by horsefields on way	0-100	<1-2	30	14	*Ae. implicatus*
	to Burwash				10	*Ae. cataphylla*
					4	*Ae. spp*
05-May-20	Old sewage lagoon	0-100	<1-3	12	2	*Ae. implicatus*
					1	*Ae. impiger*
					3	*Ae. cataphylla*

Table 1: Larval Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Sampling Location	# Larvae Dip	Instar Stage	Sample Size	# identified	Species
					6	*Ae. spp*
05-May-20	Ditch by Marshall Creek Road	0-200	<1-3	50+	5	*Ae. implicatus*
					2	*Ae. communis*
05-May-20	Aerial check near Marshall Creek Rd	5-50	<1-2			missing?
05-May-20	Pine Lake	0-20	<1-3	16	12	*Ae. implicatus*
					4	*Ae. spp*
05-May-20	PH#3	5-20	1-3	22	13	*Ae. implicatus*
					2	*Ae. communis*
					7	*Ae. spp*
05-May-20	Mabel's ponds	5-20	2-3	21	6	*Ae. implicatus*
					3	*Ae. impiger*
					2	*Ae. excrucians*
					8	*Ae. cataphylla*
					2	*Ae. spp*
05-May-20	Aerial check off end of Alpine Dr	0-50	<1-2	47	47	*Ae. spp*
05-May-20	Alaska Hwy and Wintergreen Rd	1-100	2-3	31	18	*Ae. cataphylla*
					12	*Ae. communis*
					1	*Ae. impiger*
05-May-20	Bearberry	0-50	<1-3	35	14	*Ae. implicatus*
					21	*Ae. spp*
09-May-20	Ditches between Pine and Dulac	5-50	1-3	23	5	*Ae. communis*
					7	*Ae. implicatus*
					7	*Ae. stimulans*
					4	*Ae. spp*
09-May-20	Dulac's pond	5-20	2-3	28	17	*Ae. cataphylla*
					11	*Ae. implicatus*
01-Jun-20	Old sewage lagoon	0-20	<1-2	20	20	*Cs. spp*
02-Jun-20	Horsefields	0-10	3-P	21	9	*Ae. cataphylla*
					9	*Ae. fitchii*
					3	*Ae. dorsalis*
02-Jun-20	Mabel's ponds	0-4	3-P	-	-	pupae only
02-Jun-20	Airport Rd	0-20	3-P	25	17	*Ae. pionips*
					6	*Ae. impiger*
					2	*Ae. communis*

Table 1: Larval Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Sampling Location	# Larvae Dip	Instar Stage	Sample Size	# identified	Species
02-Jun-20	Dulac's pond	0-10	<1-P	18	2	*Ae. cataphylla*
					4	*Ae. implicatus*
					1	*Ae. fitchii*
					11	*Cs. spp*
02-Jun-20	Campground	0-5	<1-P	13	12	*Ae. communis*
					1	*Ae. pionips*
23-Jun-20	Campground, by lake	0-5	4-P	5	5	*Ae. pionips*
23-Jun-20	Campground, behind sites	0-5	<1-3	5	5	*Cs. incidens*
23-Jun-20	Dulac's pond	0-20	<1-4	18	18	*Cs. incidens*
24-Jun-20	Marshall Creek Rd	0-6	<1-P	18	18	*Cs. spp*
24-Jun-20	Marshall Creek Rd - aerial	0-4	<1-2	5	4	*Ae. implicatus*
					1	*Ae. euedes*
24-Jun-20	Old sewage lagoon	0-20	<1-4	19	19	*Cs. incidens*
17-Jul-20	Pine Lake	0-10	<1-4	8	3	*Cs. incidens*
					1	*Cx. tarsalis*
					4	*Cx. territans*
17-Jul-20	Dulac's pond	0-10	<1-4	15	3	*Cs. inornata*
					8	*Cs. incidens*
					2	*Cx. territans*
					2	*Cx. tarsalis*
17-Jul-20	Marshall Creek	0-5	2-4	4	4	*Cs. incidens*
17-Jul-20	Old sewage lagoon	0-4	2-3	7	4	*Cs. inornata*
					3	*Cs. incidens*
	Haines Junction larvae totals				471	
	Tagish					
26-Apr-20	*KM 1.5 Pennycook		<1-2	44	3	*Ae. implicatus*
					34	*Ae. spp*
02-May-20	*KM 1.5 Pennycook		1-2	58	4	*Ae. implicatus*
					51	*Ae. spp*
11-May-20	Aerial site #2	200	2-3	43	15	*Ae. implicatus*
					38	*Ae. spp*
11-May-20	Aerial site #3	300	2-3	66	56	*Ae. implicatus*
					1	*Ae. communis*

Table 1: Larval Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Sampling Location	# Larvae Dip	Instar Stage	Sample Size	# identified	Species
					9	*Ae. spp*
11-May-20	Willows by California beach	2-50	1-3	17	11	*Ae. implicatus*
					6	*Ae. impiger*
11-May-20	Ditches just down from aerial	10-100	2-3	100+	25	*Ae. communis*
11-May-20	Tagish/Peacock Rd	50-100	2-3	35	5	*Ae. campestris*
					26	*Ae. melanimon*
					3	*Ae. implicatus*
					1	*Ae. cataphylla*
03-Jun-20	Campground	0-3	3-4	3	3	*Ae. spp*
03-Jun-20	Pennycook Rd	0-5	3-P	1	1	*Ae. diantaeus*
27-Jun-20	Pennycook and Hwy	0-5	2-P	6	6	*Cs. incidens*
13-Jul-20	Pennycook Rd	0-5	<1-2	7	7	*Cs. incidens*
			Tagish larvae totals		305	
	Total larval collected 2020				**2,190**	

* Samples collected by community applicators.

Samples collected by Duka Ltd. program biologists.

Table 2: **Adult Mosquito Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program**

Date	Sampling Location	Catch Method	Sample Size	# Identified	Species
	Army Beach / Marsh Lake				
03-Jun-20	Water treatment building	LT	1	1	Ae. communis
03-Jun-20	Entrance to day use area	LT	5	2	Ae. sticticus
				3	Ae. communis
04-Jun-20	Water treatment building	LT	50	36	Ae. sticticus
				14	Ae. communis
04-Jun-20	Campground, site 5	LT	4	2	Ae. sticticus
				2	Ae. communis
08-Jun-20	*104 Army Beach Dr	LT	6	3	Ae. sticticus
				2	Ae. communis
				1	Ae. vexans
08-Jun-20	*120 S M'Clintock Rd	LT	9	8	Ae. sticticus
				1	Cs. impatiens
08-Jun-20	120 S M'Clintock Rd	HC	4	3	Ae. sticticus
				1	Cs. impatiens
10-Jun-20	120 S M'Clintock Rd	HC	5	5	Ae. sticticus
11-Jun-20	120 S M'Clintock Rd	HC	5	5	Ae. sticticus
14-Jun-20	120 S M'Clintock Rd	HC	4	3	Ae. sticticus
				1	Ae. communis
14-Jun-20	*104 Army Beach Dr	LT	3	3	Ae. communis
15-Jun-20	*120 S M'Clintock Rd	LT	2	2	Cs. impatiens
15-Jun-20	120 S M'Clintock Rd	HC		2	Ae. sticticus
16-Jun-20	120 S M'Clintock Rd	HC		5	Ae. sticticus
				1	Ae. communis
18-Jun-20	120 S M'Clintock Rd	HC	9	9	Ae. sticticus
19-Jun-20	*104 Army Beach Dr	LT	4	2	Ae. sticticus
				2	Ae. communis
22-Jun-20	*120 S M'Clintock Rd	LT	10	7	Ae. sticticus
				1	Ae. communis
				2	Ae. vexans
22-Jun-20	120 S M'Clintock Rd	HC	5	5	Ae. sticticus
24-Jun-20	*104 Army Beach Dr	LT	1	1	Ae. excrucians
24-Jun-20	120 S M'Clintock Rd	HC	4	4	Ae. sticticus
26-Jun-20	120 S M'Clintock Rd	HC	4	3	Ae. sticticus
				1	Ae. excrucians

Table 2: **Adult Mosquito Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program**

Date	Sampling Location	Catch Method	Sample Size	# Identified	Species
27-Jun-20	*104 Army Beach Dr	LT	2	2	Ae. excrucians
27-Jun-20	Water treatment building	LT	28	17	Ae. sticticus
				6	Ae. communis
				1	Ae. vexans
				2	Ae. excrucians
				1	Ae. riparius
				1	Ae. diantaeus
27-Jun-20	Day use area	LT	8	5	Ae. sticticus
				3	Ae. communis
28-Jun-20	Along S M'Clintock Rd	LT	6	2	Ae. sticticus
				1	Ae. communis
				2	Ae. excrucians
				1	Ae. riparius
29-Jun-20	120 S M'Clintock Rd	HC	1	1	Ae. vexans
30-Jun-20	120 S M'Clintock Rd	HC	1	1	Ae. excrucians
30-Jun-20	120 S M'Clintock Rd	HC	4	3	Ae. sticticus
				1	Ae. excrucians
30-Jun-20	120 S M'Clintock Rd	HC	2	1	Ae. sticticus
				1	Cs. impatiens
02-Jul-20	120 S M'Clintock Rd	HC	2	1	Ae. excrucians
				1	Cs. impatiens
04-Jul-20	*104 Army Beach Dr	LT	2	1	Ae. sticticus
				1	Ae. communis
06-Jul-20	*120 S M'Clintock Rd	LT	1	1	Ae. sticticus
08-Jul-20	120 S M'Clintock Rd	HC	3	2	Ae. sticticus
				1	Ae. vexans
09-Jul-20	120 S M'Clintock Rd	HC	3	3	Ae. sticticus
09-Jul-20	104 Army Beach Dr	HC	2	2	Ae. sticticus
13-Jul-20	Water treatment building	LT	9	4	Ae. sticticus
				2	Ae. communis
				3	Ae. excrucians
13-Jul-20	End of Army Dr cul de sac	LT	8	6	Ae. sticticus
				2	Ae. vexans
		Army Beach Adult totals		225	

Table 2: **Adult Mosquito Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program**

Date	Sampling Location	Catch Method	Sample Size	# Identified	Species
	Burwash Landing				
01-Jun-20	Museum	LT	20	18	*Ae. sticticus*
				2	*Ae. communis*
01-Jun-20	Volunteer fire dept	LT	44	34	*Ae. sticticus*
				10	*Ae. communis*
23-Jun-20	Volunteer fire dept	LT	427	7	*Ae. excrucians*
				6	*Ae. riparius*
				42	*Ae. vexans*
				119	*Ae. sticticus*
				36	*Ae. communis*
				1	*Ae. provocans*
				1	*Cs. inornata*
23-Jun-20	Museum	LT	104	77	*Ae. sticticus*
				22	*Ae. communis*
				1	*Ae. provocans*
				2	*Ae. excrucians*
				2	*Ae. riparius*
17-Jul-20	Volunteer fire dept	LT	58	38	*Ae. sticticus*
				2	*Ae. communis*
				1	*Ae. vexans*
				10	*Ae. excrucians*
				7	*Ae. riparius*
17-Jul-20	Copperlilly and Hwy	LT	48	27	*Ae. sticticus*
				4	*Ae. communis*
				6	*Ae. excrucians*
				5	*Ae. riparius*
				6	*Ae. vexans*
	Burwash Landing adult totals			486	
	Carmacks				
05-Jun-20	Rawlinson Dr swamp	LT	2	1	*Ae. dorsalis*
				1	*Ae. provocans*
06-Jun-20	Water treatment plant (River Dr)	LT	36	11	*Ae. sticticus*
				19	*Ae. implicatus*

Table 2: **Adult Mosquito Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program**

Date	Sampling Location	Catch Method	Sample Size	# Identified	Species
				6	*Ae. provocans*
06-Jun-20	Guder Dr slough	LT	140	39	*Ae. sticticus*
				2	*Ae. communis*
				9	*Ae. cataphylla*
				40	*Ae. provocans*
				50	*Ae. implicatus*
08-Jun-20	*Village Compound	LT	1	1	*Ae. implicatus*
12-Jun-20	*Village Compound	LT	1	1	*Ae. spp*
21-Jun-20	*Village Compound	LT	1	1	*Ae. spp*
25-Jun-20	Water treatment plant (River Dr)	LT	11	5	*Ae. sticticus*
				2	*Ae. vexans*
				1	*Ae. implicatus*
				2	*Ae. riparius*
				1	*Ae. excrucians*
25-Jun-20	Rawlinson Dr swamp	LT	35	20	*Ae. sticticus*
				8	*Ae. vexans*
				4	*Ae. implicatus*
				3	*Ae. riparius*
26-Jun-20	Guder Dr slough	LT	49	15	*Ae. sticticus*
				1	*Ae. communis*
				15	*Ae. implicatus*
				7	*Ae. vexans*
				1	*Ae. cataphylla*
				4	*Ae. provocans*
				6	*Ae. riparius*
10-Jul-20	*Village Compound	LT	1	1	*Ae. spp*
15-Jul-20	Guder Dr slough	LT	65	18	*Ae. sticticus*
				25	*Ae. vexans*
				9	*Ae. excrucians*
				12	*Ae. riparius*
				1	*Ae. fitchii*
16-Jul-20	Roadhouse	LT	48	11	*Ae. sticticus*
				21	*Ae. excrucians*
				6	*Ae. implicatus*

Table 2: **Adult Mosquito Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program**

Date	Sampling Location	Catch Method	Sample Size	# Identified	Species
				7	*Ae. vexans*
				3	*Ae. communis*
		Carmacks adult totals		**390**	
	Dawson City				
05-Jun-20	Commissioner's Slough	LT	4	3	*Ae. implicatus*
				1	*Ae. provocans*
05-Jun-20	George and Front St	LT	15	3	*Ae. sticticus*
				12	*Ae. implicatus*
06-Jun-20	Commissioner's Slough	LT	2	1	*Ae. sticticus*
				1	*Ae. implicatus*
17-Jun-20	*Public works woodshop	LT	3	2	*Ae. riparius*
				1	*Ae. vexans*
25-Jun-20	Commissioner's Slough	LT	10	4	*Ae. sticticus*
				3	*Ae. vexans*
				1	*Ae. implicatus*
				2	*Ae. riparius*
25-Jun-20	George and Front St	LT	9	2	*Ae. sticticus*
				4	*Ae. implicatus*
				1	*Ae. provocans*
				1	*Ae. riparius*
				1	*Ae. mercurator*
16-Jul-20	George and Front St	LT	11	5	*Ae. sticticus*
				1	*Ae. provocans*
				2	*Ae. implicatus*
				2	*Ae. vexans*
				1	*Ae. mercurator*
16-Jul-20	Commissioner's Slough	LT	6	4	*Ae. sticticus*
				1	*Ae. vexans*
				1	*Ae. implicatus*
	Dawson City adult totals			60	

Table 2: **Adult Mosquito Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program**

Date	Sampling Location	Catch Method	Sample Size	# Identified	Species
	Destruction Bay				
01-Jun-20	First road north of rest stop	LT	13	7	*Ae. sticticus*
				6	*Ae. communis*
01-Jun-20	Shackwack Rd	LT	6	2	*Ae. sticticus*
				4	*Ae. provocans*
23-Jun-20	First road north of rest stop	LT	59	41	*Ae. sticticus*
				5	*Ae. communis*
				2	*Ae. excrucians*
				9	*Ae. implicatus*
				1	*Ae. provocans*
				1	*Ae. cataphylla*
24-Jun-20	Shackwack Rd	LT	11	7	*Ae. sticticus*
				3	*Ae. excrucians*
				1	*Ae. cataphylla*
24-Jun-20	Cul de sac at end of Shackwack Rd	LT	40	12	*Ae. sticticus*
				3	*Ae. communis*
				8	*Ae. excrucians*
				5	*Ae. riparius*
				12	*Ae. vexans*
17-Jul-20	Shackwack Rd	LT	194	91	*Ae. sticticus*
				1	*Ae. communis*
				21	*Ae. vexans*
				27	*Ae. excrucians*
				10	*Ae. riparius*
				33	*Ae. implicatus*
				10	*Ae. provocans*
				1	*Ae. cataphylla*
18-Jul-20	Shackwack Rd cul de sac	LT	14	6	*Ae. sticticus*
				2	*Ae. communis*
				5	*Ae. excrucians*
				1	*Ae. vexans*
18-Jul-20	Across from RV park	LT	24	10	*Ae. sticticus*
				6	*Ae. communis*
				5	*Ae. excrucians*

Table 2: **Adult Mosquito Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program**

Date	Sampling Location	Catch Method	Sample Size	# Identified	Species
				3	*Ae. vexans*
25-Jun-20	*1 Lakeview Drive	LT	2	1	*Ae. implicatus*
				1	*An. punctipennis*
		Destruction Bay adult totals		363	
	Goldenhorn				
28-May-20	Pull out by Goldenhorn School pond	LT	7	5	*Ae. sticticus*
				2	*Ae. communis*
28-May-20	End of driveway of Northern Lights Spa	LT	46	30	*Ae. sticticus*
				14	*Ae. communis*
				2	*Cs. incidens*
28-Jun-20	Pull out by Goldenhorn School pond	LT	44	22	*Ae. sticticus*
				16	*Ae. communis*
				6	*Ae. vexans*
14-Jul-20	End of driveway of Northern Lights Spa	LT	37	24	*Ae. sticticus*
				4	*Ae. communis*
				4	*Ae. vexans*
				5	*Ae. excrucians*
14-Jul-20	Pull out by Goldenhorn School pond	LT	13	8	*Ae. sticticus*
				4	*Ae. communis*
				1	*Ae. vexans*
		Golden Horn totals		147	
	Grizzly Subdivision /1385 Klondike Hwy				
05-Jun-20	Policeman's Point Rd	LT	28	1	*Ae. communis*
				13	Ae. dorsalis
				1	Cs. incidens
				13	*Ae. sticticus*
06-Jun-20	*Lot 508 on Ursa Way	LT	131	87	*Ae. sticticus*
				42	*Ae. communis*
				2	Ae. implicatus
25-Jun-20	Policeman's Point Rd	LT	223	154	*Ae. sticticus*
				32	*Ae. communis*
				29	Ae. dorsalis

Table 2: **Adult Mosquito Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program**

Date	Sampling Location	Catch Method	Sample Size	# Identified	Species
				2	Ae. vexans
				1	Ae. excrucians
				1	Ae. diantaeus
				2	Ae. implicatus
26-Jun-20	1st pull out after Ursa Way	LT	119	81	*Ae. sticticus*
	(bottom of hill)			17	*Ae. communis*
				8	*Ae. excrucians*
				6	*Ae. riparius*
				3	*Ae. dorsalis*
				4	*Ae. vexans*
16-Jul-20	1st pull out after Ursa Way	LT	62	32	*Ae. sticticus*
	(bottom of hill)			8	*Ae. communis*
				10	*Ae. vexans*
				5	*Ae. excrucians*
				7	*Ae. dorsalis*
	Grizzly Sub totals			561	
	Haine's Junction				
01-Jun-20	Old sewage lagoon	LT	27	4	*Ae. sticticus*
				1	Ae. excrucians
				2	Ae. implicatus
				4	Ae. provocans
				16	*Cs. alaskaensis*
01-Jun-20	Bearberry	LT	350	54	*Ae. sticticus*
				59	*Ae. provocans*
				11	*Ae. implicatus*
				2	*Ae. communis*
				7	*Cs. alaskaensis*
02-Jun-20	Public Works shop	LT	27	12	Ae. sticticus
				3	Ae. implicatus
				7	Ae. provocans
				4	Ae. cataphylla
				1	*Cs. alaskaensis*
02-Jun-20	First right after campground when	LT	125	64	*Ae. sticticus*

Table 2: **Adult Mosquito Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program**

Date	Sampling Location	Catch Method	Sample Size	# Identified	Species
	headed into town			10	*Ae. communis*
				25	*Ae. implicatus*
				22	*Ae. provocans*
				3	*Ae. cataphylla*
				1	*Cs. alaskaensis*
17-Jun-20	Pine Lake day use		22	13	*Ae. sticticus*
				2	*Ae. communis*
				1	*Ae. implicatus*
				1	*Ae. vexans*
				1	*Ae. provocans*
				4	*Ae. excrucians*
23-Jun-20	Pine Lake Campground, Site 21	LT	94	46	*Ae. sticticus*
				23	*Ae. excrucians*
				6	*Ae. vexans*
				10	*Ae. implicatus*
				9	*Ae. provocans*
23-Jun-20	Bearberry	LT	343	66	*Ae. sticticus*
				4	*Ae. implicatus*
				12	*Ae. vexans*
				32	*Ae. excrucians*
				5	*Ae. provocans*
				4	*Ae. cataphylla*
				1	*Cs. impatiens*
24-Jun-20	Old sewage lagoon	LT	357	41	*Ae. sticticus*
				19	*Ae. excrucians*
				10	*Ae. riparius*
				29	*Ae. vexans*
				21	*Ae. implicatus*
				1	*Ae. communis*
				3	*Ae. cataphylla*
				3	*Ae. provocans*
				1	*Cs. alaskaensis*
24-Jun-20	Marshall Creek Road	LT	470	32	*Ae. sticticus*
				1	*Ae. communis*

Table 2: **Adult Mosquito Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program**

Date	Sampling Location	Catch Method	Sample Size	# Identified	Species
				84	*Ae. excrucians*
				25	*Ae. vexans*
				12	*Ae. implicatus*
				4	*Ae. provocans*
				1	*Ae. cataphylla*
17-Jul-20	Old sewage lagoon	LT	89	33	*Ae. sticticus*
				28	*Ae. excrucians*
				10	*Ae. vexans*
				13	*Ae. implicatus*
				5	*Ae. provocans*
18-Jul-20	Tomlin Hill Park	LT	52	20	*Ae. sticticus*
				3	*Ae. provocans*
				5	*Ae. implicatus*
				7	*Ae. vexans*
				17	*Ae. excrucians*
18-Jul-20	Lot 13 Bearberry	LT	34	14	*Ae. sticticus*
				8	*Ae. excrucians*
				8	*Ae. implicatus*
				3	*Ae. provocans*
				1	*Cs. alaskaensis*
		Haines Juction totals		1014	
	Tagish				
30-May-20	*20 Beach Front Road	LT	1	1	*Cs. impatiens*
03-Jun-20	Campground, near entrance	LT	20	12	*Ae. sticticus*
				8	*Ae. communis*
03-Jun-20	Pennycook Rd and Highway	LT	61	48	*Ae. sticticus*
				9	*Ae. communis*
				4	*Ae. implicatus*
04-Jun-20	CTFN water building	LT	50	33	*Ae. sticticus*
				17	*Ae. communis*
04-Jun-20	Old gas station before bridge	LT	2	1	*Ae. sticticus*
				1	*Ae. communis*
05-Jun-20	*20 Beach Front Road	LT	4	2	*Ae. sticticus*

Table 2: **Adult Mosquito Sampling and Identifications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program**

Date	Sampling Location	Catch Method	Sample Size	# Identified	Species
				1	*Ae. communis*
				1	*Cs. incidens*
13-Jun-20	Pennycook Rd and Highway		85	35	*Ae. sticticus*
				14	*Ae. communis*
				16	*Ae. vexans*
				18	*Ae. excrucians*
				2	*Ae. dorsalis*
23-Jun-20	*20 Beach Front Road	LT	1	1	*Ae. sticticus*
24-Jun-20	*20 Beach Front Road	LT	1	1	*Ae. communis*
27-Jun-20	CTFN water building	LT	302	160	*Ae. sticticus*
				28	*Ae. communis*
				7	*Ae. vexans*
				9	*Ae. excrucians*
				4	*Ae. riparius*
				4	*Ae. dorsalis*
				1	*Cs. impatiens*
27-Jun-20	2nd resort after bridge	LT	12	7	*Ae. sticticus*
				2	*Ae. communis*
				3	*Ae. excrucians*
06-Jul-20	*20 Beach Front Road	LT	6	5	Ae. sticticus
				1	Cs. impatiens
13-Jul-20	Pennycook Rd and Highway	LT	40	8	*Ae. sticticus*
				2	*Ae. communis*
				25	*Ae. excrucians*
				1	*Ae. dorsalis*
				4	*Ae. vexans*
			Tagish totals	496	
			Total Adults collected	3,742	

* Community applicators completed sampling using New Jersey light traps only.

All other sampling completed by Duka Ltd. biologist using CO2 - baited New Jersey Light traps. Flow rate 8psi/min sample duration 1 hour.

– HC - means " hand captured " will landing to bite using pill bottle and lid.

Table 3: Aerial Applications of VectoBac 200G; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Location*		Area Size ha	Amount Applied kg
10-May-20	Destruction Bay		42.588	181.00
10-May-20	Burwash Landing		76.659	325.80
10-May-20	Haines Junction		119.247	506.80
11-May-20	Army Beach		140.541	597.30
11-May-20	Tagish		93.694	398.20
13-May-20	1385 Klondike Hwy & Grizzly Valley Sub		127.765	543.00
13-May-20	Carmacks		76.659	325.80
14-May-20	Dawson		114.988	488.70
15-May-20	Golden Horn Sub		8.518	36.20
		2020 Aerial	**800.659 ha**	**3,402.80 kg**

* See Figures Section for individual community maps of surveillance and treatment areas.

Table 4: Ground-Based VectoBac 200G Applications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Location	Area Size ha	Amount Applied kg
	Army Beach / Marsh Lake		
26-Apr-20	* #1 Lach Meadow site 102	0.067	0.50
26-Apr-20	* #2 Lach Willows site 102	0.017	0.13
26-Apr-20	* #3 Bradet Dyke site 95	0.033	0.25
30-Apr-20	* #4 2017 Fire Smart	0.093	0.70
30-Apr-20	* #5 2016 Fire Smart	0.033	0.25
30-Apr-20	*# 6 Powerline	0.067	0.50
01-May-20	* #1 Morrison site 120	0.033	0.25
01-May-20	* #2 Wengynowski site 122	0.133	1.00
01-May-20	* #3 Philips site 124	0.033	0.25
01-May-20	* #4 Hougen site 128	0.040	0.30
01-May-20	* #5 Bradet Dyke site 95	0.100	0.75
01-May-20	* #6 Lach Willows site 102	0.160	1.20
01-May-20	* #7 Powerline	0.213	1.60
02-May-20	* Firesmart 2016	0.007	0.05
02-May-20	* Firesmart 2017	0.080	0.60
02-May-20	* Atkinson Ditch	0.033	0.25
02-May-20	* Atkinson Gate	0.017	0.13
02-May-20	* Morrison Pond	0.033	0.25
05-May-20	* Edge of Hole	0.017	0.13
05-May-20	* Swamp Firth	0.067	0.50
05-May-20	* Swamp	0.033	0.25
05-May-20	* Swamp	0.107	0.80
06-May-20	* Lowry	0.003	0.02
06-May-20	* Mason	0.001	0.01
06-May-20	* Bierlmeier	0.007	0.05
06-May-20	* Small	0.001	0.01
06-May-20	* Firesmart 2017	0.107	0.80
06-May-20	* Main Trail	0.160	1.20
07-May-20	* Across S M'Clintock Road from launch	0.107	0.80
03-Jun-20	Ditch between Army Beach and M'Clintock	0.080	0.60
03-Jun-20	In trees just past campground gate	0.027	0.20
27-Jun-20	Army Beach Rd cul-de-sac	0.067	0.50
27-Jun-20	Corner across from Linda's house	0.053	0.40

Table 4: Ground-Based VectoBac 200G Applications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Location	Area Size ha	Amount Applied kg
27-Jun-20	Culvert between Army & M'Clintock roads on hwy	0.080	0.60
27-Jun-20	Ditches by campground entrance	0.213	1.60
13-Jul-20	End of Army Beach cul de sac	0.027	0.20
13-Jul-20	Ditches by campground entrance	0.040	0.30
	Army Beach Totals	2.389 ha	17.92 kg
	Burwash Landing		
9-May-20	S curve	0.213	1.60
9-May-20	Copperlily and Alaska Hwy ditches	0.027	0.20
9-May-20	Aerial by new water treatment plant	0.133	1.00
9-May-20	Before S curve	0.040	0.30
9-May-20	End of Copperlily road	0.027	0.20
1-Jun-20	Before S curve	0.213	1.60
23-Jun-20	S curve	0.120	0.90
17-Jul-20	S curve	0.040	0.30
	Burwash Landing totals	0.813 ha	6.10 kg
	Carmacks		
13-May-20	River Dr ditches	0.013	0.10
5-Jun-20	Rawlinson Dr swamp	0.007	0.05
6-Jun-20	River Dr coal mining buckets	0.007	0.05
6-Jun-20	Guder Dr slough	0.013	0.10
26-Jun-20	River Dr coal mining buckets	0.001	0.01
26-Jun-20	Guder Dr slough	0.013	0.10
15-Jul-20	Guder Dr slough	0.013	0.10
16-Jul-20	River Dr coal mining buckets	0.003	0.03
	Carmacks Totals	0.071 ha	0.54 kg
	Dawson City		
10-May-20	* Edward at Front St. (ditch)	0.013	0.10
10-May-20	* Church at Front St.	0.053	0.40
10-May-20	* 5.5 (alley) at Princess/Harper (ditch)	0.002	0.02
11-May-20	* 3rd Ave at Duke (ditch)	0.003	0.03
11-May-20	* 6.5 Ave (alley) at Princess/Harper	0.007	0.05
11-May-20	* 4th Ave at Duke/York (ditch)	0.020	0.15

Table 4: Ground-Based VectoBac 200G Applications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Location	Area Size ha	Amount Applied kg
13-May-20	* 2nd at King	0.001	0.01
13-May-20	* 4th at Queen (schoolyard field)	0.033	0.25
14-May-20	Corner of Front and George St	0.027	0.20
14-May-20	Block between George and Edward St	0.573	4.30
14-May-20	Across street from St. Marys church`	0.013	0.10
14-May-20	*Albert/6th ditch	0.001	0.01
16-May-20	*3rd/Harper puddle	0.011	0.08
16-May-20	*Boutillier Rd ditch	0.001	0.01
16-May-20	*Dump pond	0.007	0.05
16-May-20	*2nd/Albert pond	0.133	1.00
19-May-20	*Judge/Albert pond	0.001	0.01
19-May-20	*Ditch between York/King at 6th	0.007	0.05
20-May-20	*King St at 5th/6th (powerline)	0.013	0.10
21-May-20	*Pierre Berton Rd (lot 35)	0.013	0.10
21-May-20	*Pierre Berton Rd (lot 17 ditch)	0.033	0.25
21-May-20	*5th Ave at Duke (NE ditch)	0.011	0.02
21-May-20	*Albert at 3rd (NE ditch)	0.001	0.01
21-May-20	*Princess/8th (NE ditch)	0.001	0.01
26-May-20	Grant/8th (NE ditch)	0.001	0.01
26-May-20	Dump Rd pond/ditch	0.033	0.25
26-May-20	Klondike Hwy/Leggo ditch/pond	0.013	0.10
5-Jun-20	George St and 2nd Ave	0.080	0.60
5-Jun-20	Duke St and 5th Ave	0.027	0.20
5-Jun-20	Commissioners Slough	0.133	1.00
5-Jun-20	Harper and 3rd	0.013	0.10
6-Jun-20	Callison Way and Cameron Cres	0.093	0.70
25-Jun-20	George St and 2nd Ave	0.200	1.50
26-Jun-20	Pond at RS school	0.093	0.70
26-Jun-20	5th and Duke St	0.013	0.10
26-Jun-20	Albert and Front St	0.080	0.60
26-Jun-20	Commissioners Slough	0.267	2.00
26-Jun-20	Callison and Hwy	0.187	1.40
15-Jul-20	3rd and Harper	0.040	0.30
15-Jul-20	Commissioners Slough	0.080	0.60
15-Jul-20	Duke St and 5th Ave	0.013	0.10

Table 4: Ground-Based VectoBac 200G Applications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Location	Area Size ha	Amount Applied kg
15-Jul-20	George and Front St	0.027	0.20
15-Jul-20	Robert Service School	0.007	0.05
	Dawson City Totals	2.379 ha	17.78 kg
	Destruction Bay		
09-May-20	Shackwack St ditches	0.347	2.60
09-May-20	2 km north of town	0.253	1.90
09-May-20	1.5 km north of town	0.133	1.00
09-May-20	1 km north of town	0.280	2.10
01-Jun-20	1.5 km north of town some water in grass near culvert	0.013	0.10
01-Jun-20	2km north of town,	0.040	0.30
24-Jun-20	1.5 km N of town - culvert	0.027	0.20
24-Jun-20	1.5 km N of town - grassy pools	0.040	0.30
24-Jun-20	1 km north of town	0.040	0.30
24-Jun-20	Shackwack St ditches	0.027	0.20
17-Jul-20	2-1 km N of town	0.067	0.50
	Destruction Bay Totals	1.267 ha	9.50 kg
	Goldenhorne		
4-May-20	Pond behind Golden Horn school	0.187	1.40
4-May-20	Powerline in front of Northern Lights Spa	0.133	1.00
4-May-20	Meltwater in Northern Lights Spa fields	1.280	9.60
28-Jun-20	Pond behind Golden Horn school	0.733	5.50
14-Jul-20	Pond behind Golden Horn school	0.067	0.50
	Golden Horn Totals	2.400 ha	18.00 kg
	Haines Junction		
5-May-20	Ditches by horsefields on way to Burwash	0.400	3.00
5-May-20	Swamp by Marshall Creek Rd	0.520	3.90
5-May-20	PH#3	0.067	0.50
5-May-20	Mabels ponds (4)	1.213	9.10
5-May-20	Wintergreen Rd and Alaska Hwy	0.987	7.40
5-May-20	Bearberry	1.360	10.20
2-Jun-20	Horsefields	0.040	0.30
2-Jun-20	Old sewage lagoon	0.653	4.90

Table 4: Ground-Based VectoBac 200G Applications; Government of Yukon; 2020 Nuisance and Vector Mosquito Control Program

Date	Location	Area Size ha	Amount Applied kg
2-Jun-20	Mabels ponds (4)	0.107	0.80
2-Jun-20	Dips in Hwy between town and Bearberry	0.013	0.10
2-Jun-20	Airport Rd	0.227	1.70
2-Jun-20	Dulac's Pond	0.507	3.80
2-Jun-20	Ditches between Dulacs and Campground	0.027	0.20
2-Jun-20	Campground	0.067	0.50
23-Jun-20	Campground, by lake	0.007	0.05
23-Jun-20	Campground, behind sites	0.007	0.05
23-Jun-20	Dulac's Pond	0.293	2.20
24-Jun-20	Marshall Creek road	0.053	0.40
24-Jun-20	Marshall Creek road - aerial	0.001	0.01
24-Jun-20	Old sewage lagoon and area	1.600	12.00
17-Jul-20	Pine Lake Campground	0.053	0.40
17-Jul-20	Dulac's Pond	0.067	0.50
17-Jul-20	Marshall Creek	0.013	0.10
17-Jul-20	Old sewage lagoon	0.027	0.20
	Haines Junction Totals	8.308 ha	62.31 kg
	Tagish		
11-May-20	Ditches just down from aerial staging	0.200	1.50
11-May-20	Tagish/Peacock Rd	0.267	2.00
11-May-20	Tagish/Chinook Rd	0.080	0.60
11-May-20	Ditches just before bridge	0.013	0.10
11-May-20	Campground	0.213	1.60
3-Jun-20	Campground	0.040	0.30
03-Jun-20	Pennycook Rd	0.080	0.60
27-Jun-20	Pennycook Rd and Hwy	0.093	0.70
13-Jul-20	Pennycook Rd	0.013	0.10
	Tagish Totals	1.000 ha	7.50 kg
	2020 Ground-Based VectoBac 200G Totals	**18.627 ha**	**139.64 kg**

* Community applicator completed treatments. All other applications completed by Duka Ltd. biologist.

FIGURES

2020 Yukon Government Community Mosquito Control Program,
VectoBac 200G Treatments and Sampling Locations (9 maps)

Yukon
Army Beach

Mosquito Control Program
Duka Environmental Services

Aerial Application Date:
11 May 2020

Aerial Application totalling:
140.541 Ha Treated
597.00 Kg of VectoBac 200G

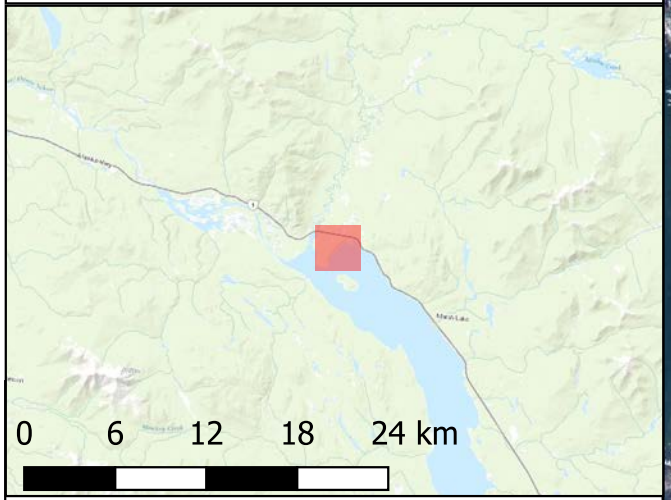
Legend

Aerial Treatment Area

Light Trapping

Samples Taken

Hand Treatments



Disclaimer: Polygon areas show general treatment areas and are not to be interpreted as "blanket applications". Aerial applications may have been made to spot or non-contiguous areas. The shaded polygon areas may not be an exact measure of the actual treatment area.

Figure 1

2020 Totals:

14 Larval Samples

19 Light Trap Captures

37 Hand Applications

0 0.4 0.8 1.2 1.6 km

Yukon
Burwash Landing

Mosquito Control Program
Duka Environmental Services

Aerial Application Date:
10 May 2020

Aerial Application totalling:
76.66 Ha Treated
325.80 Kg of VectoBac 200G

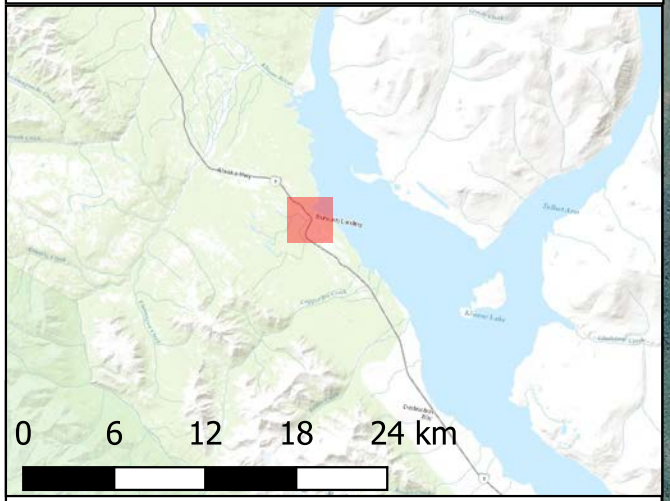
Legend

Aerial Treatment Area

Light Trapping

Samples Taken

Hand Treatments



Disclaimer: Polygon areas show general treatment areas and are not to be interpreted as "blanket applications". Aerial applications may have been made to spot or non-contiguous areas. The shaded polygon areas may not be an exact measure of the actual treatment area.

Figure 2

2020 Totals:

13 Larval Samples

6 Light Trap Captures

8 Hand Applications

0 0.4 0.8 1.2 1.6 km

Yukon
Carmacks

Mosquito Control Program
Duka Environmental Services

Aerial Application Date:
13 May 2020

Aerial Application totalling:
76.66 Ha Treated
325.800 Kg of VectoBac 200G

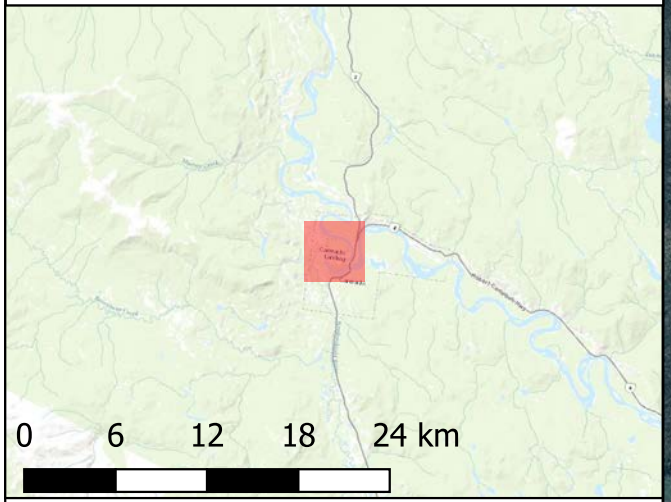
Legend

Aerial Treatment Area

Light Trapping

Samples Taken

Hand Treatments



Disclaimer: Polygon areas show general treatment areas and are not to be interpreted as "blanket applications". Aerial applications may have been made to spot or non-contiguous areas. The shaded polygon areas may not be an exact measure of the actual treatment area.

Figure 3

2020 Totals:

9 Larval Samples

10 Light Trap Captures

8 Hand Applications

0 0.5 1 1.5 2 km

Yukon
Dawson City

Mosquito Control Program
Duka Environmental Services

Aerial Application Date:
14 May 2020

Aerial Application Totalling:
114.99 Ha Treated
488.700 Kg of VectoBac 200G

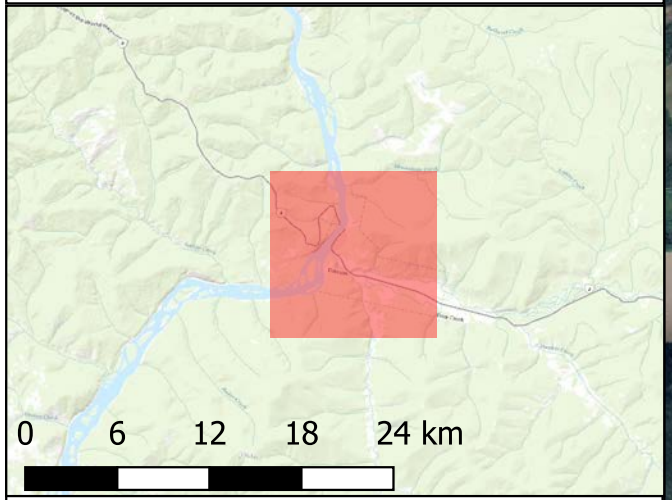
Legend

Aerial Treatment Area

Light Trapping

Samples Taken

Hand Treatments



Disclaimer: Polygon areas show general treatment areas and are not to be interpreted as "blanket applications". Aerial applications may have been made to spot or non-contiguous areas. The shaded polygon areas may not be an exact measure of the actual treatment area.

Figure 4

2020 Totals:

26 Larval Samples

8 Light Trap Captures

43 Hand Applications

0 1 2 3 4 km

Yukon
Destruction Bay

Mosquito Control Program
Duka Environmental Services

Aerial Application Date:
10 May 2020

Application totalling:
42.59 Ha Treated
181.00 Kg of VectoBac 200G

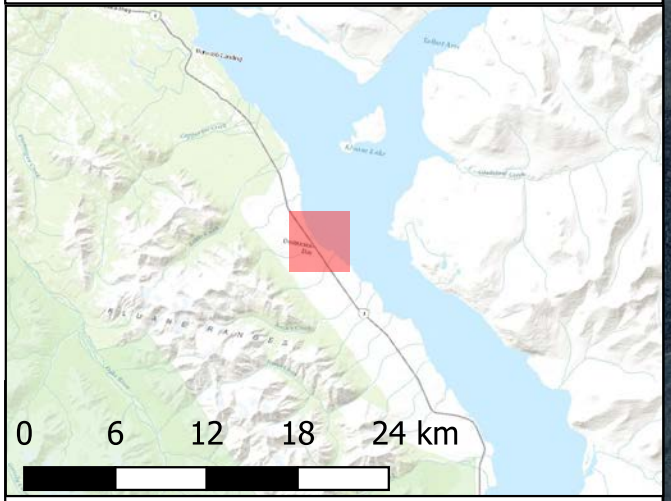
Legend

Aerial Treatment Area

Light Trapping

Samples Taken

Hand Treatments



Disclaimer: Polygon areas show general treatment areas and are not to be interpreted as "blanket applications". Aerial applications may have been made to spot or non-contiguous areas. The shaded polygon areas may not be an exact measure of the actual treatment area.

Figure 5

2020 Totals:

10 Larval Samples

9 Light Trap Captures

11 Hand Applications

0 0.5 1 1.5 2 km

Yukon
Goldenhorne

Mosquito Control Program
Duka Environmental Services

Aerial Application Date:
15 May 2020

Aerial Application Totalling:
8.52 Ha Treated
36.200 Kg of VectoBac 200G

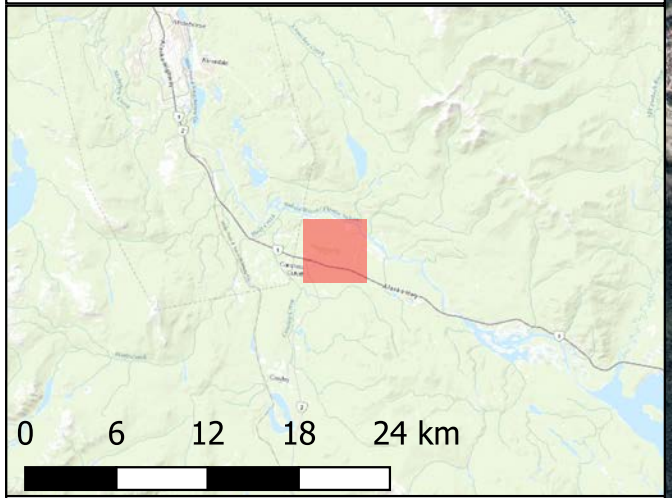
Legend

Aerial Treatment Area

Light Trapping

Samples Taken

Hand Treatments



Disclaimer: Polygon areas show general treatment areas and are not to be interpreted as "blanket applications". Aerial applications may have been made to spot or non-contiguous areas. The shaded polygon areas may not be an exact measure of the actual treatment area.

Figure 6

2020 Totals:

4 Larval Samples

5 Light Trap Captures

5 Hand Applications

0 0.6 1.2 1.8 2.4 km

Yukon

Grizzly Subdivision and

1385 Klondike Hwy

Mosquito Control Program Duka Environmental Services

Aerial Application Date:
13 May 2020

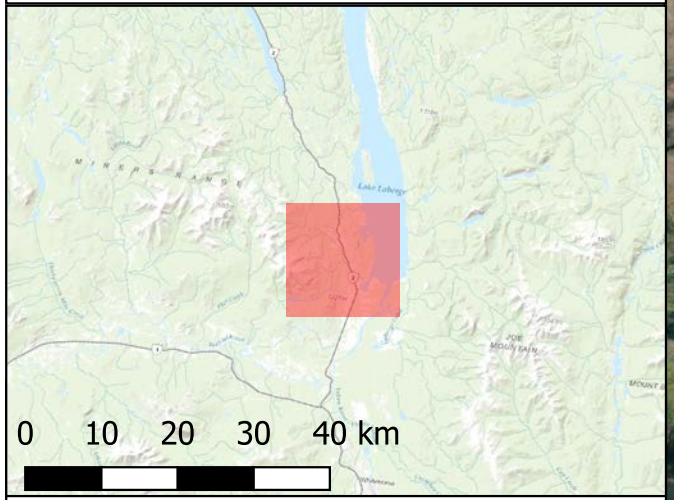
Aerial Application Totalling: 127.76 Ha Treated
543.000 Kg of VectoBac 200G

Legend

Aerial Treatment Area

Light Trapping

Samples Taken



Disclaimer: Polygon areas show general treatment areas and are not to be interpreted as "blanket applications". Aerial applications may have been made to spot or non-contiguous areas. The shaded polygon areas may not be an exact measure of the actual treatment area.

Figure 7

2020 Totals:

2 Larval Samples

5 Light Trap Captures

0 2 4 6 8 km

Yukon
Haines Junction

Mosquito Control Program
Duka Environmental Services

Aerial Application Date:
10 May 2020

Aerial Application Totalling:
119.25 Ha Treated
506.80 Kg of VectoBac 200G

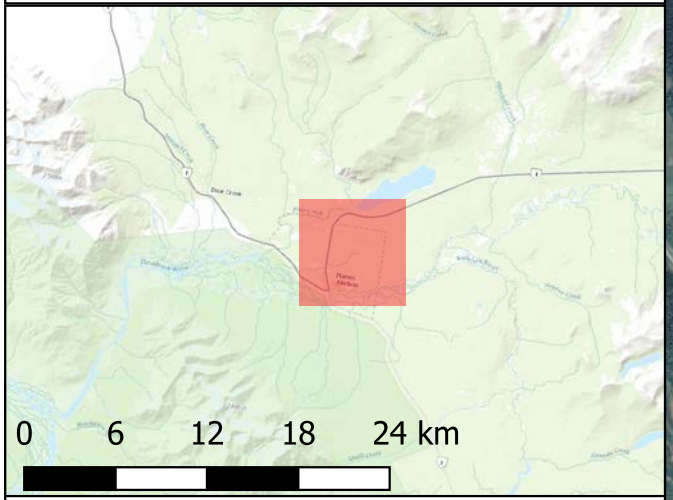
Legend

Aerial Treatment Area

Light Trapping

Samples Taken

Hand Treatments



Disclaimer: Polygon areas show general treatment areas and are not to be interpreted as "blanket applications". Aerial applications may have been made to spot or non-contiguous areas. The shaded polygon areas may not be an exact measure of the actual treatment area.

Figure 8

2020 Totals:

28 Larval Samples

12 Light Trap Captures

24 Hand Applications

0 1 2 3 4 km

Yukon
Tagish

Mosquito Control Program
Duka Environmental Services

Aerial Application Date:
11 May 2020

Aerial Application Totalling:
93.69 Ha Treated
398.20 Kg of VectoBac 200G

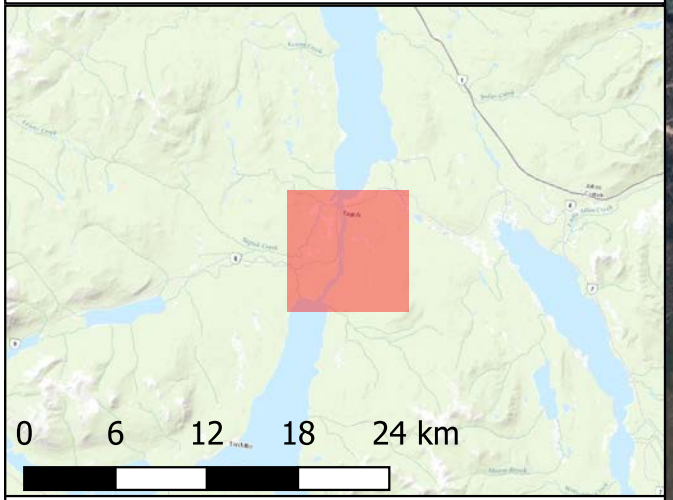
Legend

Aerial Treatment Area

Light Trapping

Samples Taken

Hand Treatments



Disclaimer: Polygon areas show general treatment areas and are not to be interpreted as "blanket applications". Aerial applications may have been made to spot or non-contiguous areas. The shaded polygon areas may not be an exact measure of the actual treatment area.

Figure 9

2020 Totals:

11 Larval Samples

13 Light Trap Captures

9 Hand Applications

0 1 2 3 4 km

APPENDIX 1

Yukon Community Services, Invitation Package to municipalities interested in participating in the Government of Yukon 2020 Mosquito Control Program.

Yukon
Community Services

January 29, 2020

Re: Government of Yukon 2020 Mosquito Control Program (MCP)

The Government of Yukon is again offering the Mosquito Control Program to municipalities. The program administration and coordination has been awarded to Duka Environmental Services Ltd. The contractor's Program Coordinator is Curtis Fediuk.

The full 2020 Mosquito Control Program for Yukon municipalities includes; hand application of larvicide (*Bacillus thuringiensis* sub. *Israelensis Bti*; trade name Vectobac 200G) to early melt areas, aerial application of larvicide, follow up hand applications, and prior to and post application larva and mosquito monitoring. Areas to receive the larvicide have been determined from previous years' programs and any subtracted or additional areas will be determined through consultation between the municipal official(s) and the Program Coordinator. A plan will be devised to achieve a balance between YG budget and potential treatment areas.

In order to participate, municipalities must provide suitable personnel to assist the Program Coordinator with the following; early hand application, ground support during the aerial application of larvicide, and post application monitoring and sampling. The municipal contact will be required to report monitoring results to the Program Coordinator. The contractor and all support personnel will be operating under, and should be thoroughly familiar with, the Contractor's Pesticide Service Permit. Mentoring, information, and assistance will be provided as required, throughout the season by the contractor.

Municipal personnel directly assisting the Program Coordinator in the application of pesticides will require a pesticide applicator certificate.

YG is pleased to offer the review course and simplified BC Pesticide Applicators Certification exam for the ***Pesticide Certification for the Ground Application of Bacterial Pesticides and Growth Regulators for Mosquito Control.*** The **course is scheduled for March 11th and 12th, 2020 in Whitehorse** and will run for two full days, including exam time. Please note that there is a $90.00 exam fee payable to the BC Minister of Finance prior to the writing of the exam.

All participating municipalities ***are required to*** designate a candidate(s) to take this course and write the corresponding exam if not currently certified. The successful candidates' passing the exam acquires certification for handling and application of granular larvicides. The course is mainly "home study" but will include a two-day review session with the exam at the end of the second day. Please note that this is a BC exam and all candidates should also become familiar with the Yukon's Pesticide Regulations.

All municipalities participating in the Program must complete and submit the Mosquito Control Program Registration Form

1. Name and affiliation of least one person designated by your municipality to act as the primary contact person for the 2020 Mosquito Control Program. Also provide name and number of an alternate.

2. A list of **certified** and **non-certified** personnel in your municipality (employees or others) who will be assisting the Program Co-coordinator. Where appropriate, please include the certification number of each individual and expiration date.

3. A list of personnel your municipality is willing to sponsor to attend the 2020 Applicator Certification Course in Whitehorse. There is no cost for the course however; the cost of travel, room and board while in Whitehorse is not covered by our program.

Municipalities participating in the Program must complete the Mosquito Control Program Registration Form and the Letter of Agreement and must abide by the terms and conditions of the agreement. On the Letter of Agreement, municipalities must confirm their level of participation in the Program.

If your municipality is administering its own program but would like to send a participant to the course please fill out only the enclosed form, "2020 MCP Registration Form", (the letter of agreement is not required). Please note that the course exam fee is $90 and payable to the BC Minister of Finance.

Please email or fax the completed forms prior to end of day February 21st, 2020.

E-mail: Virginia.Cobbett@gov.yk.ca
Fax: 867-393-6258

Sincerely,

Virginia Cobbett
Community Operations Supervisor
Community Services
Operations and Programs Branch

Cc: Dave Albisser, Director Operations and Programs; Community Services
Curtis Fediuk, Duka Environmental Services Ltd.

2020 MOSQUITO CONTROL PROGRAM
Registration Form

1.

Municipality:

_____

Primary Contact Name:_____

Phone: _____ Fax: _____

Alternate Contact Name :_____

Phone: _____ Fax: _____

2. Certified/Non-certified personnel who will be assisting Program Co-coordinator:

Name	Certificate No. (if any) /Issuing Prov. or Terr.	Phone

3. Candidates for the 2020 Course: *Ground Application of Bacterial Pesticides and Growth Regulators for Mosquito Control,* March 11th and 12th, 2020:

Name	Address	Phone

Letter of Agreement – Municipal Mosquito Control Program

We understand that effective mosquito control operations require ongoing effort and that such effort will be conducted only by trained personnel on an as-needed basis throughout the duration of the mosquito control season.

In consideration of acceptance into the Mosquito Control Program, _____

(Municipality name) requests to participate in:

☐ **LEVEL 1: Independent Program Operation by Municipality.**

Municipal obligations/requirements:

Municipality will need its own Yukon Environment Pesticide Service Permit which requires advertisement, mosquito population monitoring (larval and adults), treatment site maps and written records of sampling and treatments. Municipality must report all activities to Yukon Environment as per permit requirements. Applicators must be certified to complete larvicide treatments.

Community Services Program and Program Coordinator/Contractor Provides:

Pesticide applicator Training Course in Whitehorse. VectoBac 200G larvicide. Larval and adult mosquito sampling equipment. Delivery and pick-up of equipment and training on its use. Sample identification (larval and adult taxonomy) and reporting of same back to municipality for the municipality's submission to Yukon Environment as part of permit reporting.

All costs of goods and services will be invoiced back to the Municipality.

☐ **LEVEL 2: Ground Surveys and Applications**

Municipal obligations/requirements:

Municipal applicator is expected to complete larval and adult mosquito sample collection, preservation, reporting of population surveillance, sampling and observations. This information is to be provided to the Program Coordinator/contractor for submission to Yukon Environment as a condition of the permit. Municipal applicator is expected to complete ground-based applications. Applicators must be certified to make treatments. Applicators will have to keep track of application details and provide relevant information to Program Coordinator/contractor. Applicators should assist Program Coordinator/contractor with applications where possible.

Community Services Program and Program Coordinator/Contractor Provides:

Pesticide applicator Training Course in Whitehorse. VectoBac 200G larvicide. Larval and adult mosquito sampling equipment. Delivery and pick-up of equipment, training on its use. Coordination of all aspects of the mosquito surveillance and control program with personnel/applicators designated by the municipality.

Municipalities work under the Program Coordinator/Contractor permit who will complete all required Yukon Environment reporting. Program coordinator/contractor will also collect their own samples and complete ground-based larvicide treatments when in town. Program Coordinator/contractor provides a comprehensive Summary Report.

All costs of goods and services will be invoiced back to the Municipality.

☐ **LEVEL 3: Ground and Aerial Surveys and Applications**

Municipality receives from Community Services, and is expected to supply, all of the services summarized in Level 2. Aerial applications are included.

All costs of goods and services will be invoiced back to the Municipality.

_____ (Municipality name) agrees to abide by the following Terms and Conditions:

- That we will only use individuals who have the required Pesticide Applicator Certification, (ie: Ground Application of Bacterial Pesticides and Growth Regulators for Mosquito Control). if applying pesticides ourselves, and that these persons will abide by all Federal and Territorial Acts and Regulations
- That we will use, store and apply pesticide only as directed on the container label, and always maintain public health and safety standards
- That we understand this program is limited to applying granular larvicide's and we will ensure we have the appropriate pesticide permit and approval required from the Environmental Programs Branch, Environment Yukon before applying any other pesticide
- That we will read and follow all requirements as set out in the Program Contractor's Pesticide Service Permit and ensure our staff or volunteers keep a copy of the permit on hand while applying larvicide's at any location. (Copies of the Permit will be supplied to all participating Municipalities)
- That we will provide due care for, and maintenance of, equipment in our possession
- That we will keep detailed records, and provide a season end summary, of all mosquito control activities done by Municipal representatives, including "light trap counts" and dates, times, places and methods larvicide's applications
- That the application of larvicide's shall be restricted to non-domestic water sources which are not utilized by fish and have no surface discharge to waters utilized by fish
- That incorporated communities will pay for all costs associated with participation in the Program.

Applicant:

_____	_____	_____
Signature	Title	Date

Yukon Government, Community Services Approval:

_____	_____	_____
Signature	Title	Date

Yukon
Community Services

January 29, 2020

Re: Government of Yukon 2020 Mosquito Control Program (MCP)

The Government of Yukon is again offering the Mosquito Control Program to interested communities. The program administration and coordination has been awarded to Duka Environmental Services Ltd. The contractor's Program Coordinator is Curtis Fediuk.

The 2020 Mosquito Control Program for Yukon communities includes; hand application of larvicide (*Bacillus thuringiensis* sub. *Israelensis Bti*; trade name Vectobac 200G) to early melt areas, aerial application of larvicide, follow up hand applications, and prior to and post application larva and mosquito monitoring. Areas to receive the larvicide have been determined from previous years' programs and any subtracted or additional areas will be determined through consultation between the community official(s), the Program Coordinator. A plan will be devised to achieve a balance between YG budget and potential treatment areas.

In order to participate, the community ***must provide a primary and alternate contact to be the community liaison*** and assist the Program Coordinator with ground support during the aerial application of larvicide and post application monitoring and sampling. The community contact will be required to report monitoring results to the Program Coordinator. The contractor and all support personnel will be operating under, and should be thoroughly familiar with, the Contractor's Pesticide Service Permit. Mentoring, information, and assistance will be provided as required, throughout the season by the contractor.

Community personnel who wish to directly assist the Program Coordinator with larvicide application will require a pesticide applicator certificate. Certification is required for any application of pesticides.

YG is pleased to offer the review course and simplified BC Pesticide Applicators Certification exam for the ***Pesticide Certification for the Ground Application of Bacterial Pesticides and Growth Regulators for Mosquito Control.*** The **course is scheduled for March 11th and 12th, 2020 in Whitehorse** and will run for the two full days, including exam time. Please note that there is a $90.00 exam fee payable to the BC Minister of Finance prior to the writing of the exam.

Candidates that pass the exam acquire certification for handling and application of granular larvicides. The course is mainly "home study" but will include a two-day review session with the exam at the end of the second day. Please note that this is a BC exam and all candidates should also become familiar with the Yukon's Pesticide Regulations.

All communities participating in the Program must complete and submit the Mosquito Control Program Registration Form

1. Name and affiliation of at least one person designated by your community to act as the primary contact person for the 2020 Mosquito Control Program. Also provide name and number of an alternate.

2. A list of **certified** and **non-certified** personnel in your community (employees or others) who will be assisting the Program Coordinator. Where appropriate, please include the certification number of each individual and expiration date.

3. A list of personnel your community is willing to sponsor to attend the 2020 Applicator Certification Course in Whitehorse. There is no cost for the course however; the cost of the exam, travel, room and board while in Whitehorse is not covered by our program.

Please email or fax the completed forms prior to end of day February 21st, 2020.

E-mail: Virginia.cobbett@gov.yk.ca
Fax: 867-393-6258

Sincerely,

Virginia Cobbett
Community Operations Supervisor
Community Services
Operations and Programs Branch

Cc: Dave Albisser, Director Operations and Programs; Community Services
Curtis Fediuk, Duka Environmental Services Ltd.

2020 MOSQUITO CONTROL PROGRAM
Registration Form

1.

Community: _____

Primary Contact Name:_____

Phone: _____ Fax: _____

Alternate Contact Name :_____

Phone: _____ Fax: _____

2. Certified/Non-certified personnel who will be assisting Program Co-coordinator:

Name	Certificate No. (if any) /Issuing Prov. or Terr.	Phone

3. Candidates for the 2020 Course: *Ground Application of Bacterial Pesticides and Growth Regulators for Mosquito Control,* March 11th and 12th, 2020:

Name	Address	Phone

Letter of Agreement – Unincorporated Community Mosquito Control Program

We understand that effective mosquito control operations require ongoing effort and that such effort will be conducted only by trained personnel on an as-needed basis throughout the duration of the mosquito control season.

In consideration of acceptance into the Community Mosquito Control Program, _____ (Community name)

agrees to abide by the following Terms and Conditions:

- That we will only use individuals who have the required Pesticide Applicator Certification, (ie: Ground Application of Bacterial Pesticides and Growth Regulators for Mosquito Control). if applying pesticides ourselves, and that these persons will abide by all Federal and Territorial Acts and Regulations
- That we will use, store and apply pesticide only as directed on the container label, and always maintain public health and safety standards
- That we understand this program is limited to applying granular larvicide's and we will ensure we have the appropriate pesticide permit and approval required from the Environmental Programs Branch, Environment Yukon before applying any other pesticide
- That we will read and follow all requirements as set out in the Program Contractor's Pesticide Service Permit and ensure our staff or volunteers keep a copy of the permit on hand while applying larvicide's at any location. (Copies of the Permit will be supplied to all participating Communities)
- That we will provide due care for, and maintenance of, equipment in our possession
- That we will keep detailed records, and provide a season end summary, of all mosquito control activities done by Community representatives, including "light trap counts" and dates, times, places and methods larvicide's applications
- That the application of larvicide's shall be restricted to non-domestic water sources which are not utilized by fish and have no surface discharge to waters utilized by fish

Community Representative:

_____	_____	_____
Signature	Title	Date

Yukon Government, Community Services Approval:

_____	_____	_____
Signature	Title	Date

APPENDIX 2

2020 Participating Community Contacts and Certified Applicators Information

Appendix 2:

Yukon Community	**2020 Active Contacts and Certified Applicators**
• Army Beach	- Paul (+ Judy) Prevost, Community Contact Email home: Jandp.prevost@gmail.com Telephone # 867-660-5833 104 Army Beach Road - Lloyd Atkinson, Community Contact Telephone # 867-660-5914 Email: catkinson@northwest.com - Bob (+ Carol) Mitchell, Community Contact Telephone # 867-660-5693 -Linda Morrison, Local Applicator /Community Contact, Certificate # 229402, Expiry 13 March 2025 Telephone # 867-689-9851 120 South Mclintock Road lmorrison@northwestel.net - Roy Whitten, Local Applicator /Community Contact, Certificate # 229719, Expiry 26 March 2025 Telephone # 867-660-4250, 336-4688 allnorthmech@northwestel.net
• Beaver Creek	- No Local Applicator/ Community Contact
• Burwash Landing	- Colin Gray, Local Applicator /Community Contact, Certificate # 229720, Expiry 26 March 2025 Telephone # 1-867-841-4553, Cell 1-306-920-9009 Email: grayallmylife@gmail.com
• Carmacks	- Mr. Bill Tonnersen, Community Contact Certificate # 197558, Expiry 22 March 2021 Telephone # 867-332-1518 Email: vocpublicworks@live.ca - Mr. George Kontogonis, Community Contact Certificate # Expiry Telephone # 1-867-332-2751 Email: gkontogonis@hotmail.com

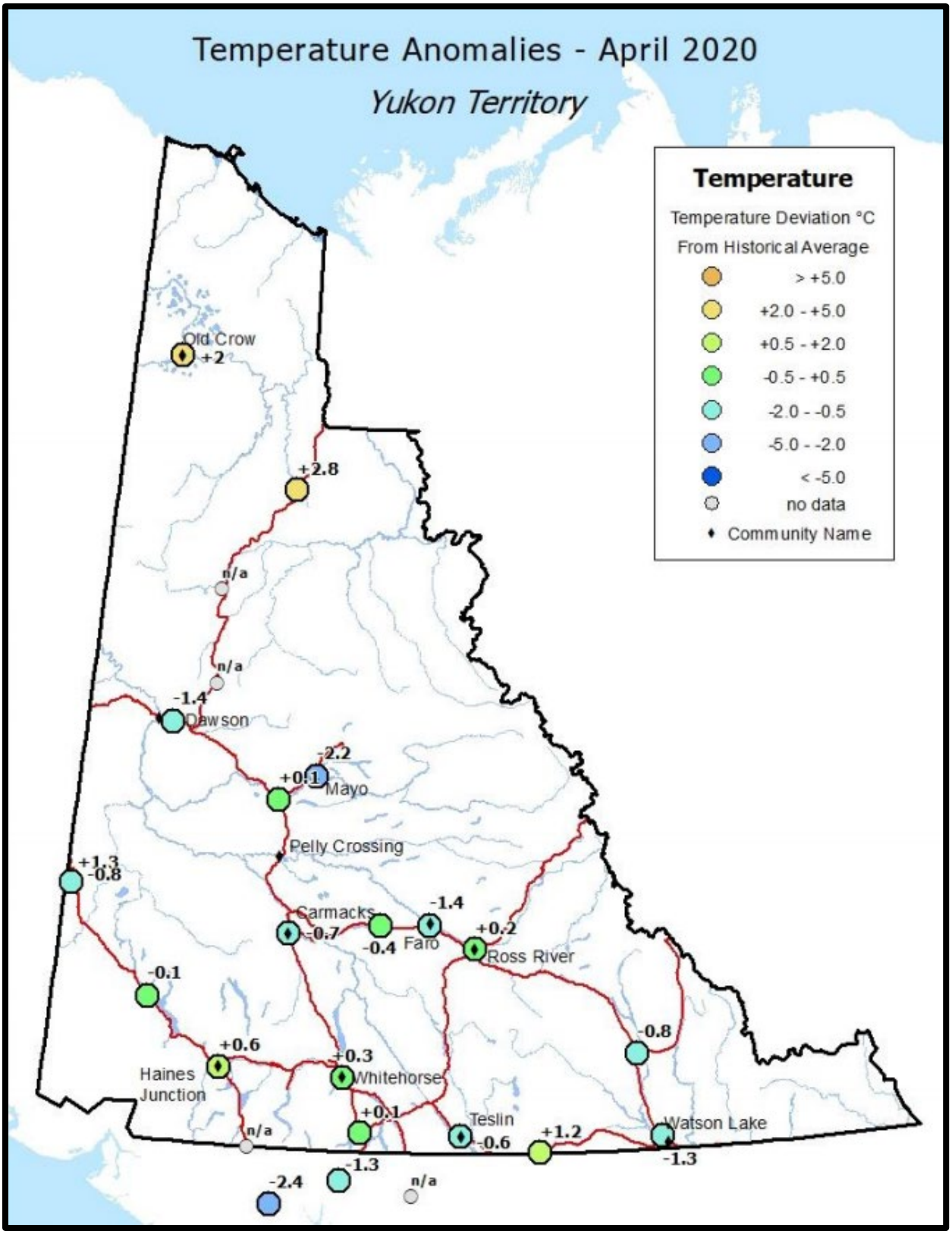
Yukon Community	2020 Contacts and Certified Applicators
• Dawson City	- Brent McDonald, Local Applicator /Community Contact, Certificate # 197560, Expiry 22 March 2021 . Telephone # 867-993-7400 ext 302, 867-393-3090 (cell) Email work: nbmcdonald@cityofdawson.ca Home 867-993-3762 Email home: sleddoger@gmail.com - Mark Dauphinee, Local Applicator/Community Contact Certificate # 202742, Expiry 21 Mar 2022 Telephone # 867-993-3516 (cell) Email work: mdauphinee@cityofdawson.ca - Kyle MacDougall, Local Applicator/Community Contact Certificate # 202743 Expiry 21 Mar 2022 Telephone # 867- (cell) Email work: - Phil Langlois, Local Applicator/Community Contact Certificate # Expiry Telephone # 867-919-6288 (cell) Email work:PW-3@cityofdawson.ca Email home: phil.langlois73@gmail.com - Nate Wood, Local Applicator/Community Contact Certificate # Expiry 18 Mar 2025 Telephone # 867-993-3083 (cell) Email work: pw-hand@cityofdawson.ca
• Destruction Bay	- No Local Applicator/Community Contact
• Faro	- Keith Austin, Community Contact, Local Applicator Certificate # 202745 , Expiry 21 March 2022 Telephone # 867 994-2758, operations@faroyukon.ca Telephone # 867 994-2217 (home); kjaustin@northwestel.net - Chris Wilkinson, Local Applicator/Community Contact Certificate # 210305 Expiry 22 March 2019 Telephone # 867-332-1362 (cell) Email work: cwilkinson@northwestel.net Adam Minder, Local Applicator/Community Contact Certificate # 229717 Expiry 26 March 2025 Telephone # 867-334-9953 (cell) Email work:

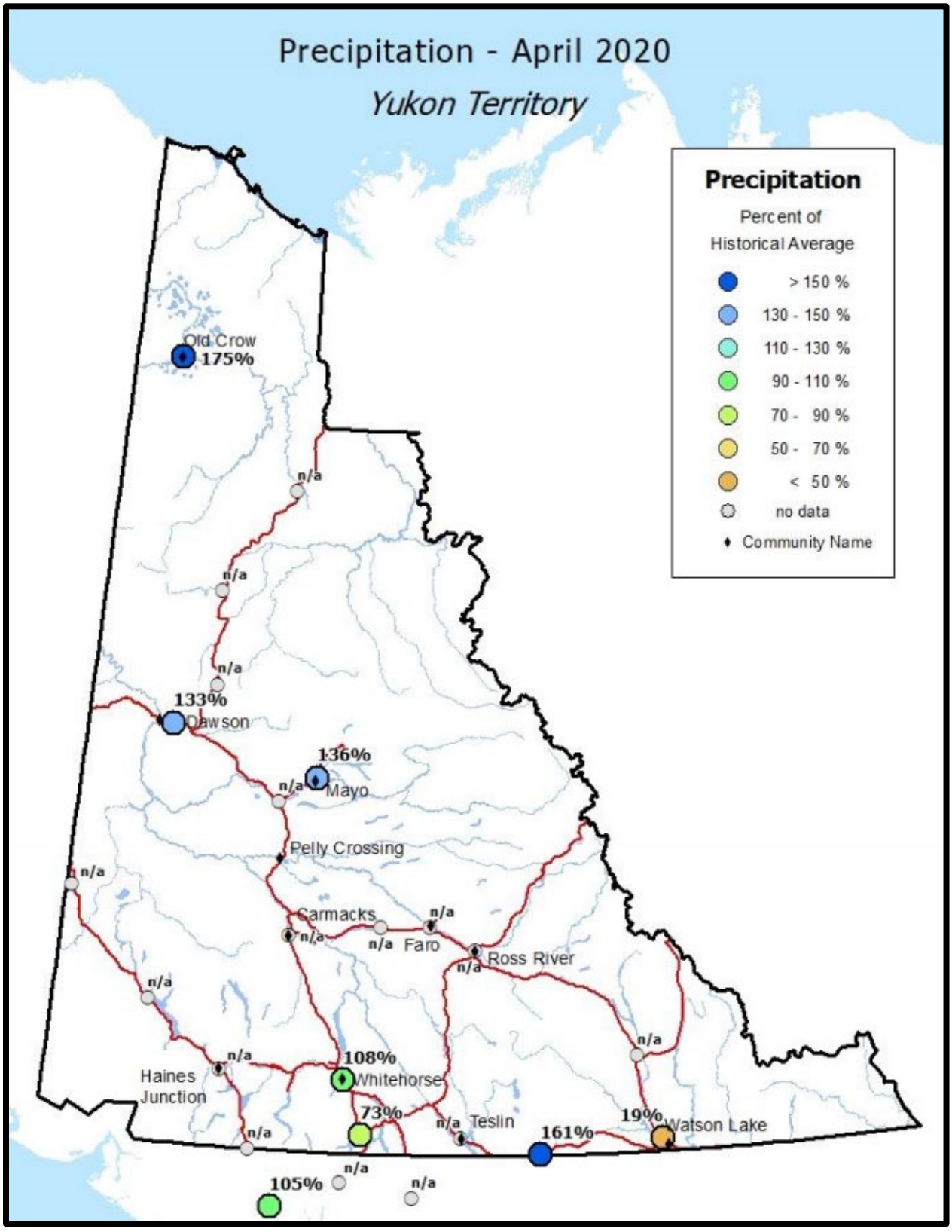
Yukon Community	2020 Contacts and Certified Applicators
• Grizzly Subdivison	- Jackie Taylor, Local Volunteer. Uncertified. Telephone # 867-689-5169. Email: Jackie.Taylor@whitehorse.ca - Christiana Bruie, Local Volunteer. Uncertified. Telephone # 867-689-2148 (home)
• 1385 Klondike Hwy	- Charmynn and Dale Gunn, Local Volunteer. Uncertified. Telephone # 867-334-3308 (cell)
• Goldenhorne	- Monti Patterson, Local Applicator /Community Contact, Certificate # 210307, Expiry 22 March 2023 Telephone # 867-334-2319 (cell) monti.patterson@gov.yk.ca
• Haines Junction	-Brent Behm. Local Applicator /Community Contact, Certificate # 184613, Expiry 13 March 2019 Telephone # 867-634-5315 (cel - Jeff Power, Local Applicator /Community Contact, Certificate # 197559, Expiry 22 March 2018 Telephone # 867-634-5353 (wk); Cell # 867-634-5311 jpower@northwesttel.net
• Ibex Valley	- Sheila Dodd. Local Volunteer. Uncertified. Telephone # 867-633-5656
• Old Crow	- Darius Elias, Fish and Wildlife VGFN, Uncertified / Community Contact Telephone # 867-332-0111 fwman@vgfn.net
• Pelly Crossing	- Darcy Marcott – Selkirk First Nation, Uncertified / Community Contact Telephone # 867-334-6997
• Ross River	- No Local Applicator/Community Contact,
• Tagish	- Bonnitta Ritchie, 2019 Community Contact Telephone # 867-335-8135; Cell - Bonnitta Ritchie, Co-Chair, TAC. Email: sundogshows@live.com - Tagish Advisory Committee. Email tacadmin@tagishyukon.org - Laura Davidson, Local Applicator / Community Contact Certificate # 229724, Expiry 26 March 2021 Telephone # 867-335-8135; Cell

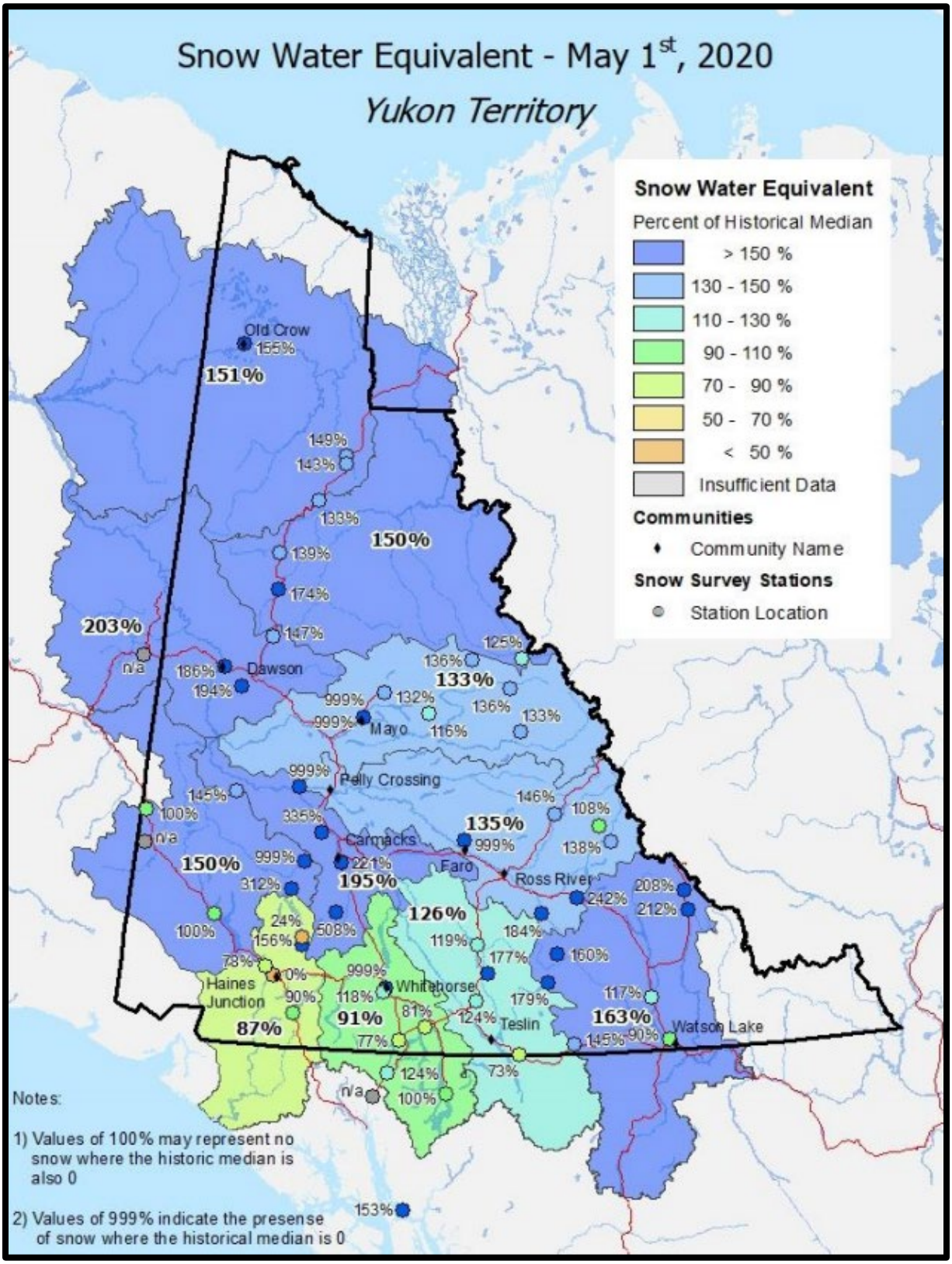
Yukon Community	2020 Contacts and Certified Applicators
• Teslin	- Cole Hunking, Community Contact Certificate # 204178, Expiry 09 May 2022 Telephone # 867-390-2439, 867-332-2050 cole.hunking@northwestel.net - Jordan Marston, Local Applicator Certificate # 204177, Expiry 09 May 2022 - Kevin Johnston, Local Applicator Certificate # 204179, Expiry 09 May 2022 - Stacey Cletheroe, Local Applicator Certificate # 204176, Expiry 09 May 2022

APPENDIX 3

Yukon Weather Summary
Temperature, Precipitation (April 2020)
and
Snow Course Data (01 May 2020


Temperature Anomalies - April 2020
Yukon Territory
Temperature
Temperature Deviation °C
From Historical Average
> +5.0
+2.0 - +5.0
+0.5 - +2.0
-0.5 - +0.5
-2.0 - -0.5
-5.0 - -2.0
< -5.0
no data
Community Name
Old Crow
+2
+2.8
n/a
n/a
-1.4
Dawson
-2.2
+0.1
Mayo
Pelly Crossing
+1.3
-0.8
Carmacks
-0.7
-0.4
Faro
-1.4
+0.2
Ross River
-0.1
+0.6
Haines Junction
+0.3
Whitehorse
+0.1
n/a
Teslin
-0.6
+1.2
-0.8
Watson Lake
-1.3
-1.3
-2.4
n/a


Precipitation - April 2020
Yukon Territory
Precipitation
Percent of Historical Average
> 150 %
130 - 150 %
110 - 130 %
90 - 110 %
70 - 90 %
50 - 70 %
< 50 %
no data
Community Name
Old Crow
175%
133%
Dawson
136%
Mayo
Pelly Crossing
Carmacks
Faro
Ross River
Haines Junction
108%
Whitehorse
73%
Teslin
161%
19%
Watson Lake
105%
n/a


Snow Water Equivalent - May 1st, 2020
Yukon Territory
Snow Water Equivalent
Percent of Historical Median
> 150 %
130 - 150 %
110 - 130 %
90 - 110 %
70 - 90 %
50 - 70 %
< 50 %
Insufficient Data
Communities
Community Name
Snow Survey Stations
Station Location
Old Crow
155%
151%
149%
143%
133%
150%
139%
174%
203%
147%
n/a
186%
Dawson
194%
125%
136%
133%
999%
132%
136%
133%
999%
Mayo
116%
999%
Pelly Crossing
145%
146%
108%
100%
335%
135%
n/a
Carmacks
999%
138%
150%
999%
221%
Faro
312%
195%
Ross River
208%
242%
212%
126%
24%
508%
184%
100%
156%
119%
160%
73%
177%
0%
999%
Whitehorse
Haines
Junction
90%
118%
179%
117%
91%
81%
124%
Teslin
163%
87%
77%
Watson Lake
145%
90%
124%
73%
n/a
100%
Notes:
1) Values of 100% may represent no snow where the historic median is also 0
2) Values of 999% indicate the presense of snow where the historical median is 0
153%

APPENDIX 4

Town of Faro and Village of Teslin (Level 1 Participants) Community Services 2020 Mosquito Control Program - Summary of Services and Program Operations

TOWN OF FARO

The community of Faro's involvement in the Yukon Government Community Services, 2020 Mosquito Control Program was as a Level 1 participant. With this level of participation, the community and its certified applicators were expected to complete the majority of program services largely independent of Community Services, and the program consultants, *Duka Environmental Services Ltd.*

The community was responsible to follow all of the requirements of it's Yukon Environment, Pesticide Use Permit # 22-008, expiry date 31 December 2020. This included public education/notification of control program operations, surveillance and sampling of mosquito populations, application of larvicides, liaison with, notifications and reporting to the Yukon Environment.

Community Services and *Duka Ltd.* provided Faro with VectoBac 200G larvicides, light trap sampling equipment, field training, mosquito taxonomy (larvae and adult) and reporting.

- **Appplicator Contacts**

Duka Ltd. program biologists first met with Mr. Adam Minder, the local applicators on 13 May 2020 to deliver adult mosquito sampling equipment, provide training on its use, and to collect any samples of larvae he had retained. Light trap sampling equipment was delivered 09 May and larval mosquito samples he had collected for retrieved for identification. Light trap equipment and adult samples were retrieved on 15 July 2020.

- **Sampling and Taxonomy**

Table 1: Faro; Larval Mosquito Temporal Distribution and Occurrence, by Species - 2020

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. cataphylla	0	1	2	1.2%	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. communis	0	1	1	0.6%	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. impiger	0	2	69	41.1%	0	0	0	0	0	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. implicatus	0	3	69	41.1%	0	0	0	0	0	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. spp	N/A	1	27	16.1%	0	0	0	0	0	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		8	168	100%	0	0	0	0	0	168	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value — Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Larvae identified from the samples collected by local applicators on 07 and 08 May were: *Aedes implicatus, Aedes cataphylla, Aedes impiger,* and *Aedes communis.* Collection of additional samples throughout the season would yield greater diversity.

Table 2: Faro; Adult Mosquito Temporal Distribution and Occurrence, by Species - 2020

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. communis	0	3	5	19.2%	0	0	0	0	0	0	0	0	0	0	1	2	2	0	0	0	0	0	0	0
Ae. sticticus	+?	4	10	38.5%	0	0	0	0	0	0	0	0	0	0	2	5	1	0	2	0	0	0	0	0
Cs. incidens	++?	3	11	42.3%	0	0	0	0	0	0	0	0	0	0	6	1	4	0	0	0	0	0	0	0
	Adult Total	10	26	100%	0	0	0	0	0	0	0	0	0	0	9	8	7	0	2	0	0	0	0	0

Notes: ·Species Occurrence: Lowest Value — Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

Adult mosquito sampling was completed by the local applicator. Adults identified from local applicator samples completed during June and July were: *Aedes communis, Aedes sticticus* and *Culiseta incidens.*

Table 3: Ground-Based VectoBac 200G Applications; Faro; 2020 Mosquito Control Program

Date	Location	Area Size (ha)	Amount Applied (kg)
7-May-20	* Mitchell Rd N Junction	0.010	0.08
7-May-20	* Mitchell Rd S Junction	0.010	0.08
7-May-20	* Campbell St above ball fields	0.200	1.50
7-May-20	* New ball field	0.010	0.08
7-May-20	* School North	0.030	0.23
7-May-20	* Arena NE corner	0.001	0.01
8-May-20	* Mitchell Rd North/South	0.010	0.08
8-May-20	* Golf course	0.005	0.04
8-May-20	* Yates South	0.030	0.23
8-May-20	* RV Park	0.030	0.23
8-May-20	* Fish Eye Lake	0.112	0.84
11-May-20	* New #9 hole East of Faro	0.010	0.08
11-May-20	* Swamp behind truck pullout	0.200	1.50
11-May-20	* Sewage Lagoon	0.003	0.03
11-May-20	* Mitchell Rd towards mine	0.010	0.08
11-May-20	* Swamp South of Yates	0.030	0.23
11-May-20	* Dena Cho trail South of Yates	0.010	0.08
11-May-20	* Dena Cho trail South	0.100	0.75
15-May-20	* Campbell street North	0.003	0.03
15-May-20	* Campbell street South	0.004	0.03
19-May-20	* Yates South	0.010	0.08
19-May-20	* Swamp South of Yates	0.010	0.08
19-May-20	* Golf course	0.005	0.04
	Faro Totals	**0.844 ha**	**6.33 kg**

* Community applicator completed treatments. All other applications completed by Duka Ltd. biologist.

The attached Figure presents larval and adult sampling locations and treatments.

Yukon
Faro

Mosquito Control Program
Duka Environmental Services

Legend

Aerial Treatment Area

Light Trapping

Samples Taken

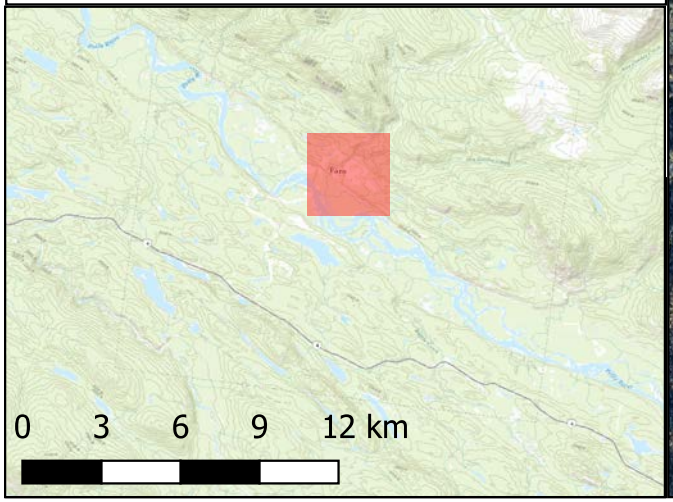
Hand Treatments

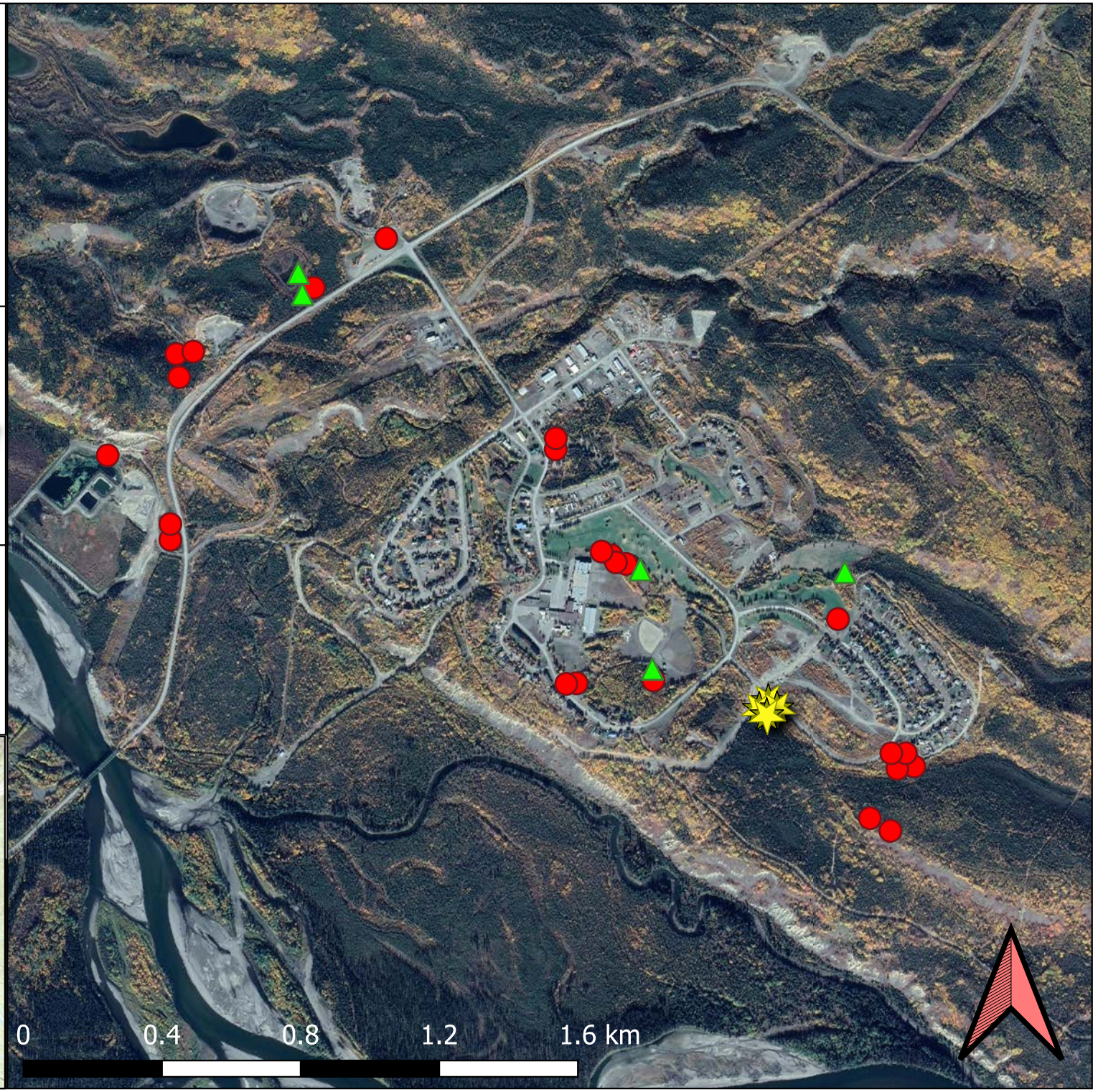
2020 Totals:

5 Sampled Locations

4 Light Trap Captures

23 Hand Treatments





VILLAGE OF TESLIN

The community of Teslin's involvement in the Yukon Government Community Services, 2020 Mosquito Control Program was as a Level 1 participant. With this level of participation, the community and its certified applicators were expected to complete the majority of program services largely independent of Community Services, and the program consultants, *Duka Environmental Services Ltd.*

The community was responsible to follow all of the requirements of it's Yukon Environment, Pesticide Use Permit # 22-003, expiry date 31 December 2020. This included public education/notification of control program operations, surveillance and sampling of mosquito populations, application of larvicides, liaison with, notifications and reporting to the Yukon Environment.

As part of level 1 participation Community Services and *Duka Ltd.* offered Teslin the use of light trap (adult mosquito) sampling equipment and materials, mosquito taxonomy (larvae and adult) and reporting.

- **Appplicator Contacts**

Duka Ltd. program biologists maintained contact with Mr. Cole Hunking during the course of the season. Light trap sampling equipment and materials were offered on 26 May 2020. This offer was declined. No larval samples were collected or retained for identification by local applicators.

- **Sampling and Taxonomy**

Table 1: Teslin; Larval Mosquito Temporal Distribution and Occurrence, by Species - 2020

Species	WNv compentence	Species Occurrence # of Samples	Total # of Individuals	% occurrence	April				May					June				July				August		
				Week # →	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Ae. communis	0	2	61	98.4%	0	0	0	0	0	0	61	0	0	0	0	0	0	0	0	0	0	0	0	0
Ae. implicatus	0	1	1	1.6%	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Total		3	62	100%	0	0	0	0	0	0	62	0	0	0	0	0	0	0	0	0	0	0	0	0

Notes: ·**Species Occurrence:** Lowest Value Highest Value

·West Nile Virus (WNv) competency was ranked by the BC Centres for Disease Control (2005) and Belton (2015). Mosquito species were ranked from (0), or no potential to transmit the disease, to (++++), or the ability to readily, and effectively transmit the disease.

On 12 May 2020 Duka personnel collected larval samples containing between 2 and 50 larvae/dip sample that were 3rd and 4th instars from the end of the Airport runway and roadside ditches in town. *Aedes communis* and *Aedes implicatus* are common mosquitos of the north and use temporary snowmelt and precipitation filled depression as development habitat. Sampling by community applicators completed on 13 May and on 08 July found larval populations ranging from 0 – 50+ larvae/dip sample, (Table 2, below).

Community applicators completed all ground-based treatments within the community. During treatments on 13 May and 08 July 2020 community volunteers used a total of 18 kg of Vectobac 200G to treat 2.4 ha of ditches and various power/distribution lines and fire breaks "cut-lines" around Teslin.

Table 2: Larval Sampling and Identifications; Teslin; 2020 Mosquito Control Program

		# Larvae Dip	Instar Stage	Sample Size	# identified	Species
12-May-20	End of runway	0-2	3-4.	50	50	*Ae. communis*
12-May-20	Ditches on way out of town (west end)	5-50	3-4	12	11	*Ae. communis*
					1	*Ae. implicatus*
13-May-20	* Southwest of Nisutlin Sub	>50	-	-	-	
	* Between Airport and Nisutlin Sub	>50	-	-	-	
	* Nitsutlin Rd ditches	>50	-	-	-	
	* Alaska Hwy ditches before Airport Dr	0	-	-	-	
8-Jul-20	* Between Airport and Nisutlin Sub	<50	-	-	-	
	* Nisutlin Rd ditches	>50	-	-	-	
			Teslin larvae totals		62	

* Community Applicator completed sampling.

Table 3: Ground-Based VectoBac 200G Applications; Teslin; 2020 Mosquito Control Program

Date	Location	Area Size	(ha)	Amount Applied	(kg)
13-May-20	*Ditches and cutlines throughout Teslin	1.200		9.00	
8-Jul-20	*Ditches and cutlines throughout Teslin	1.200		9.00	
	Teslin Totals	**2.400**	**ha**	**18.00**	**kg**

* Community applicator completed all treatments. See Figure for locations.

The attached Figure presents larval sampling and treatment locations.

Yukon
Teslin

Mosquito Control Program
Duka Environmental Services

Legend

Aerial Treatment Area

Light Trapping

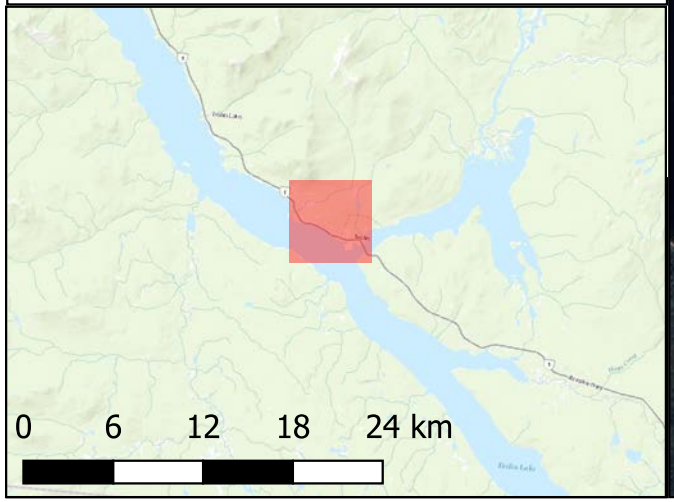
Samples Taken

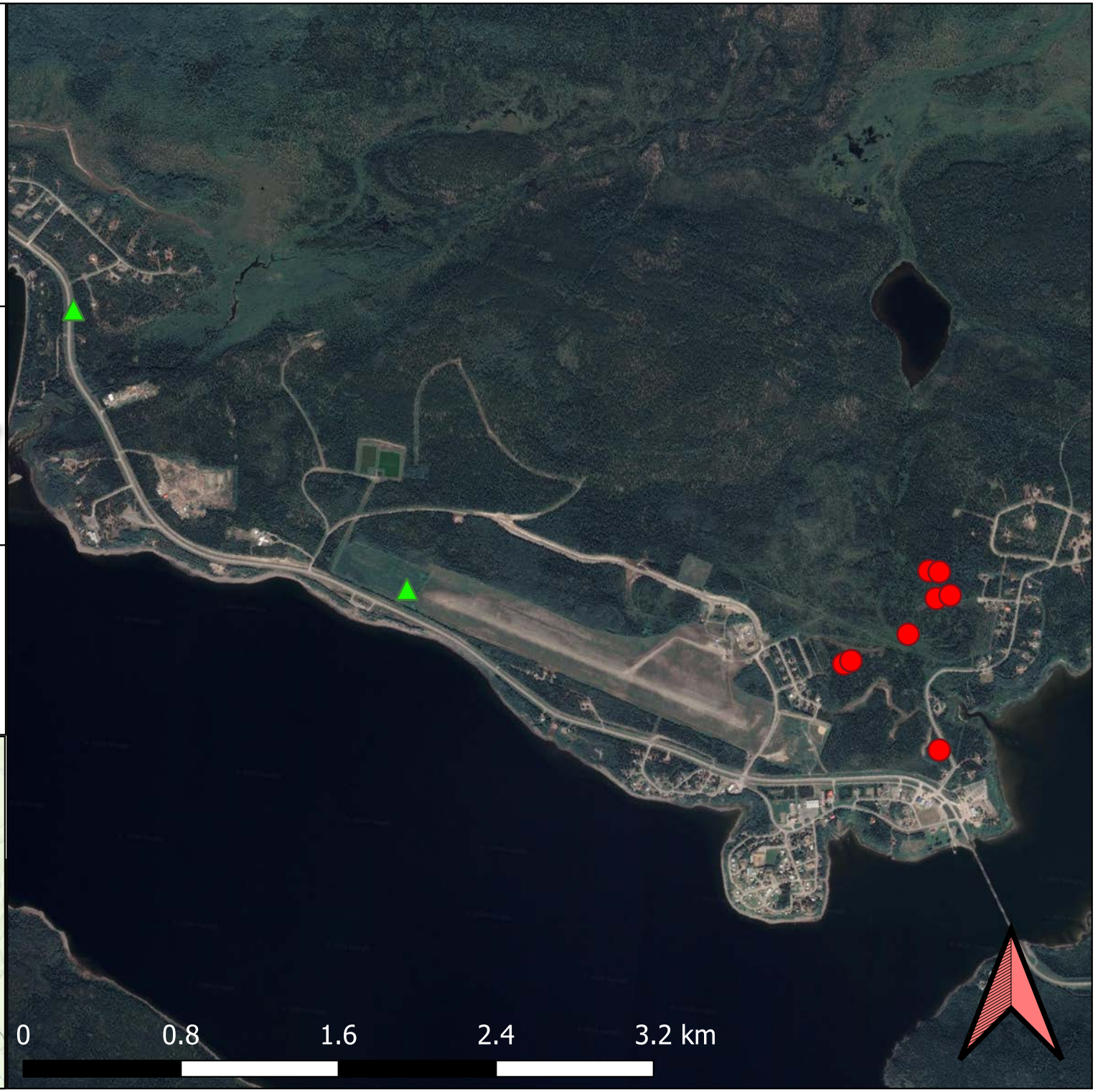
Hand Treatments

2020 Totals:

2 Sampled Locations

8 Hand Treatments





Committee Minutes

WEDNESDAY September 16th 2020
19:00

Meeting Type: Regular **Meeting:** # HAC 20-16
Facilitators: Stephanie Pawluk, CDO
Attendees: Eve Dewald, Megan Gamble, Angharad Wenz, Jim Williams
Regrets: Patrik Pikálek
Meeting Called to order at 6:59 PM.

Minutes

Agenda Item: Agenda Adoption **Presenter:** Eve Dewald
Resolution: #20-16-01 **Seconder:** Jim Williams

THAT the Agenda for Heritage Advisory Committee Meeting 20-16 has been adopted as presented.

Discussion: None.
Votes For: 4 Votes Against: 0 Abstained: 0
CARRIED

Agenda Item: Conflict of Interest

Discussion: None.

Agenda Item: Committee of the Whole
Resolution: #20-16-02

THAT the Heritage Advisory Committee move into the Committee of the Whole to hear delegations.

Discussion:
- None

Agenda Item: Delegations **Presenter:** Eve Dewald
Resolution: #20-16-03 **Seconder:** Megan Gamble

Discussion:
- Applicant Stephen Lancaster attended the meeting to present development application #20-103 to construct a fence around the Midnight Sun's smoking area.
- The Committee indicated the desire to have a fence that it indicative of the Downton Core. A key element of appropriate fencing is for the top of the fence to be even. As a result of this conversation, Mr. Lancaster agreed to make the top of the fence even.

Agenda Item: Delegations **Presenter:** Eve Dewald
Resolution: #20-16-04 **Seconder:** Megan Gamble

Discussion:
- Applicant Jeremy Lancaster attended the meeting via Zoom to present development application #20-106 to relocate the old Dawson City Music Festival building to Lot 2, Block 3, North End, renovate the structure to bring it to residential standards, and construct a new landing and stairs.
- Jeremy proposed a secondary option of putting the side of the building as the frontage. He asked the Committee what he would have to do to create a new frontage on the side. The Committee requested a canopy roof on the entrance -either gable or shed-, larger steps and a larger landing, or preferably, a porch

that runs the length of the building, and a window to improve the symmetry. The Committee requested the submission of new drawings for approval should the applicant wish to pursue this secondary building orientation.

- The Committee asked about the proposed 30 foot front setback. The applicant advised that this setback accommodates parking in the front. The Committee did not have an issue with this.

Agenda Item: Revert to Heritage Advisory Committee **Presenter:** Eve Dewald
Resolution: #20-16-05 **Seconder:** Megan Gamble

THAT the Committee of the Whole revert to the Heritage Advisory Committee.

Discussion: None.

Agenda Item: Business Arising from Delegations **Presenter:** Eve Dewald
Resolution: #20-16-06 **Seconder:** Megan Gamble

Discussion:

- None

Agenda Item: Adoption of the Minutes **Presenter:** Eve Dewald
Resolution: #20-16-07 **Seconder:** Megan Gamble

THAT the Minutes for HAC meeting 20-15 are accepted as amended.

Discussion:

- Amendment: remove Patrik from 'regrets' as he attended meeting #20-15 via Zoom.

Votes For: 4 Votes Against: 0 Abstained:0
CARRIED

Agenda Item: Business Arising from the Minutes **Presenter:** Eve Dewald
Resolution: #20-16-08 **Seconder:** Megan Gamble

Discussion:

- None

Agenda Item: Applications **Presenter:** Eve Dewald
Resolution: #20-16-09 **Seconder:** Megan Gamble

THAT the Heritage Advisory Committee move to approve 20-103 subject to the fence top being flush and the parking requirement being met, as per the Zoning Bylaw.

Discussion:

- Flush top required.
- The committee questioned whether the fences remove any required parking spaces. Administration directed to assess prior to approval.

Votes For: 4 Votes Against: 0 Abstained:0

Agenda Item: Applications **Presenter:** Eve Dewald
Resolution: #20-16-10 **Seconder:** Megan Gamble

THAT the Heritage Advisory Committee move to approve 20-106: option #1.

Discussion:

- The applicant proposed two options for the orientation of the building:
- Option #1: existing frontage to face Third Street.
    - This is the option that the Committee preferred.
- Option #2: narrow side of building to face Third Street.
    - The Committee agreed that this option could, in theory, be approved, subject to an amended application showing completed site plans and drawings to make the façade an appropriate frontage.
    - Having the narrow end of the building face the street would be in line with historic residential building placement. If this option is selected, the Committee requires a larger and wider landing and stairs, canopy roof -either gable or shed roof, or most ideally, a porch across the entire front.

Votes For: 4 Votes Against: 0 Abstained:0

Agenda Item: New Business **Presenter:** Eve Dewald
Resolution: #20-16-11 **Seconder:** Megan Gamble

Discussion:

- None.

Agenda Item: Unfinished Business **Presenter:** Eve Dewald
Resolution: #20-16-12 **Seconder:** Megan Gamble

Discussion:

- Committee asked for an Eliza building update: Administration to provide updates as they come.
- HAC positions up for renewal: Administration advised Megan Gamble to submit a short statement of intent should she wish to be reappointed by Council. Patrik Pikálek submitted a statement of intent for reappointment.

Agenda Item: Adjournment **Presenter:** Eve Dewald
Resolution: #20-16-13 **Seconder:** Megan Gamble

That Heritage Advisory Committee meeting HAC 20-15 be adjourned at 20:22 hours on the September 16th, 2020.

Discussion: None.

Minutes accepted on: 2nd October 2020

Committee Minutes

THURSDAY 2ND OCTOBER, 2020
19:00

Meeting Type: Regular **Meeting:** # HAC 20-17
Facilitators: Charlotte Luscombe, Planning Assistant
Attendees: Eve Dewald, Megan Gamble, Angharad Wenz, Jim Williams, Patrik Pikálek, Rebecca Jansen
Regrets:
Meeting Called to order at 7:02 PM.

Minutes

Agenda Item: Agenda Adoption **Presenter:** Eve Dewald
Resolution: #20-17-01 **Seconder:** Jim Williams

THAT the Agenda for Heritage Advisory Committee Meeting 20-17 has been adopted as presented.

Discussion: None.
Votes For: 5 Votes Against: 0 Abstained: 0
CARRIED

Agenda Item: Conflict of Interest

Discussion: None.

Agenda Item: Committee of the Whole
Resolution: #20-17-02

THAT the Heritage Advisory Committee move into the Committee of the Whole to hear delegations.

Discussion:
- None

Agenda Item: Delegations **Presenter:** Eve Dewald
Resolution: #20-17-03 **Seconder:** Megan Gamble

Discussion:
- Applicant Alex Hakonson attended meeting on behalf of Dawson City Music Festival and outlined the proposal for an amended building
- Outlined that new addition would be constructed of rough lumber and corrugated metal, and would reduce the rear setback to 48ft (within what is permitted according to ZBL)
- HAC noted that congestion in the back alley may be an issue and Alex acknowledged that the pins are in the laneway, Administration acknowledged that Laneways are an ongoing project and the CDO will be advised this issue came up

Agenda Item: Revert to Heritage Advisory Committee **Presenter:** Eve Dewald
Resolution: #20-17-04 **Seconder:** Megan Gamble

THAT the Committee of the Whole revert to the Heritage Advisory Committee.

Discussion: None.

Agenda Item: Business Arising from Delegations **Presenter:** Eve Dewald

Resolution: #20-17-05 **Seconder:** Megan Gamble

Discussion:

- Alleyways were discussed – typically are 10ft in Downtown Core

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Agenda Item: Adoption of the Minutes **Presenter:** Eve Dewald
Resolution: #20-17-06 **Seconder:** Megan Gamble

THAT the Minutes for HAC meeting 20-16 are accepted.

Discussion:

- None

Votes For: 5 Votes Against: 0 Abstained:0
CARRIED

Agenda Item: Business Arising from the Minutes **Presenter:** Eve Dewald
Resolution: #20-17-07 **Seconder:** Megan Gamble

Discussion:

- Administration confirmed parking was sufficient for Midnight Sun permit but that application hasn't yet been approved.

Agenda Item: Applications **Presenter:** Eve Dewald
Resolution: #20-17-08 **Seconder:** Jim Williams

THAT the Heritage Advisory Committee move to approve the amendment to development permit 20-095.

Discussion:

- Adds interest to the building and HAC favourable to bringing the Third / Harper corner into more use

Votes For: 5 Votes Against: 0 Abstained:0

Agenda Item: New Business **Presenter:** Eve Dewald
Resolution: #20-17-09 **Seconder:** Megan Gamble

Administration confirmed that Megan Gamble and Patrik Pikálek were reappointed to HAC until September 30 2022 by resolution C20-17-02.

Discussion:

- None.

Agenda Item: Unfinished Business **Presenter:** Eve Dewald
Resolution: #20-17-10 **Seconder:** Megan Gamble

Discussion:

- Trailers are going to be looked at by Administration but will be a much larger project and so don't have a big update yet. Administration acknowledged there has been discussion about how to proceed but more research is required.

Agenda Item: Adjournment **Presenter:** Eve Dewald
Resolution: #20-17-11 **Seconder:** Megan Gamble

That Heritage Advisory Committee meeting HAC 20-17 be adjourned at 20:12 hours on the October 1st, 2020.

Discussion: None.

Minutes accepted on: 15th October 2020

Committee Minutes

THURSDAY 15TH OCTOBER, 2020
19:00

Meeting Type: Regular **Meeting:** # HAC 20-18
Facilitators: Charlotte Luscombe, Planning Assistant
Attendees: Megan Gamble, Angharad Wenz, Jim Williams (Chair), Patrik Pikálek
Regrets: Eve Dewald, Rebecca Jansen
Meeting Called to order at 7:16 PM.

Minutes

Agenda Item: Agenda Adoption **Presenter:** Jim Williams
Resolution: #20-18-01 **Seconder:** Megan Gamble

THAT the Agenda for Heritage Advisory Committee Meeting 20-18 has been adopted as amended.

Discussion:

- Add Brodie Klemm as a delegate for Development Permit Application 20-074

Discussion: None.
Votes For: 4 Votes Against: 0 Abstained: 0
CARRIED

Agenda Item: Conflict of Interest

Discussion: None.

Agenda Item: Committee of the Whole
Resolution: #20-18-02

THAT the Heritage Advisory Committee move into the Committee of the Whole to hear delegations.

Discussion:
- None

Agenda Item: Delegations **Presenter:** Jim Williams
Resolution: #20-18-03 **Seconder:** Megan Gamble

Discussion:
- Brodie Klemm on behalf of City of Dawson came to present information on application 20-074 (not yet approved) and get HAC advice regarding the replacement / repair of the corbels on the Canadian Bank of Commerce NHS
- Work has been postponed until May – part of this involves installing 21 replica corbels, Brodie seeking advice on material
- Advised that $13000 was price for customised replica or $4000 for a standard catalogue piece
- HAC asked what the City's intention was – cement and fibreglass would be okay so long as the final result looks authentic
- Of materials reviewed, copper was the preferred option especially as this was priced at $486 per corbel

Agenda Item: Revert to Heritage Advisory Committee **Presenter:** Jim Williams
Resolution: #20-18-04 **Seconder:** Megan Gamble

THAT the Committee of the Whole revert to the Heritage Advisory Committee.

Discussion: None.

Agenda Item: Business Arising from Delegations **Presenter:** Jim Williams
Resolution: #20-18-05 **Seconder:** Megan Gamble

Discussion:

- Corbels discussed and original material determined that it was sheet metal with strong zinc element but this is brittle and subject to easy damage
- No formal amendment or change to the application has been proposed. Brodie will be required to submit an amendment if anything material changes from the original application

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Agenda Item: Adoption of the Minutes **Presenter:** Jim Williams
Resolution: #20-18-06 **Seconder:** Megan Gamble

THAT the Minutes for HAC meeting 20-17 are accepted.

Discussion:

- None

Votes For: 4 Votes Against: 0 Abstained:0
CARRIED

Agenda Item: Business Arising from the Minutes **Presenter:** Jim Williams
Resolution: #20-18-07 **Seconder:** Megan Gamble

Discussion:

- Jim Williams wanted to make a comment overall as to the DCMF building and how a simple building is welcomed and if its done well, it could be a strong benchmark for what we want to see in the Downtown Core

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Agenda Item: Applications **Presenter:** Jim Williams
Resolution: #20-18-08 **Seconder:** Megan Gamble

THAT the Heritage Advisory Committee move to approve the amendment to development permit 20-114.

Discussion:

- Angharad Wenz commented that we should see if the historic cabin can have a statement of significance attached to it and be added to the Municipal Register. The YHSI designation subjects it to review and scrutinization where changes are proposed but does not officially protect it.
- Megan Gamble concerned that the lot wouldn't be useable even with demolition but administration advised that the proposed lot configuration for the North End plan will produce useable lots.

Votes For: 4 Votes Against: 0 Abstained:0

Agenda Item: New Business **Presenter:** Jim Williams
Resolution: #20-18-09 **Seconder:** Megan Gamble

Discussion:

- Administration advised there is the ability to produce YG lists / maps of historic sites – could be used for significance statements.

Agenda Item: Unfinished Business **Presenter:** Jim Williams
Resolution: #20-18-10 **Seconder:** Megan Gamble

Discussion:

- Ags advised she will be still be attending electronically until she is out of quarantine

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Agenda Item: Adjournment **Presenter:** Jim Williams
Resolution: #20-18-11 **Seconder:** Megan Gamble

That Heritage Advisory Committee meeting HAC 20-18 be adjourned at 20:01 hours on the October 15th, 2020.

Discussion: None.

Minutes accepted as amended on 5th November 2020