



Anglophone West School District (ASD-W) *Multi-year infrastructure planning*

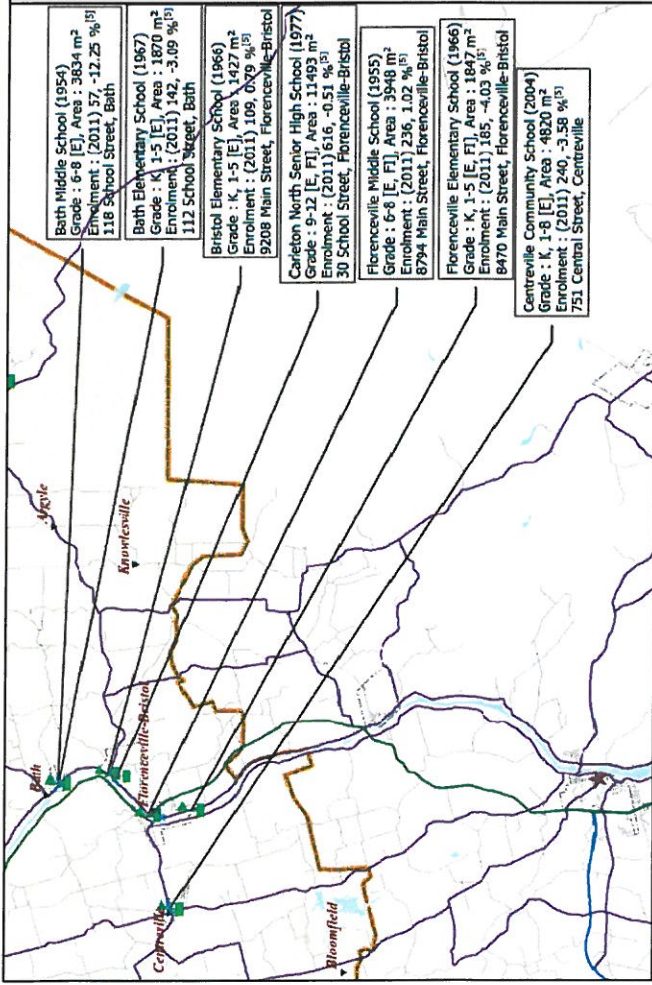
Carleton North Drawing Area (K to 12)

New Brunswick Department of Education
and Early Childhood Development (EECD)

11 April 2019
Presentation



Scope – ASD-W has initiated a review of the six schools in the Carleton North drawing area to examine potential scenarios for long-term infrastructure planning



Note: Bath Community School was formed from an amalgamation of Bath Elementary School and Bath Middle School in 2015-16. The school was undergoing a \$4.56M renovation in 2018 (excluding the demolition costs of the elementary school or any of the proposed future site work – currently under review).

Centreville Community School was initially built in 1952, and had a two-storey (4 classrooms) addition in 2003. Five out of six schools in the study are considered small by EECD Planning standards based on their total enrollment.

Carleton North Feed Schools

Subject schools – year built

Florenceville Elementary School (K to 5 – 1966)

Florenceville Middle School (6 to 8 – 1955)

Considered a small middle school (< 300)

Bristol Elementary School (K to 5 – 1966)

Considered a small elementary school (< 200)

Centreville Community School (K to 8 – 1952)

Considered a small mixed school (< 300)

Bath Community School (K to 8 – 1954)

Considered a small mixed school (< 300)

Carleton North High School (9 to 12 – 1977)

Considered a small high school (< 500)

Average age of the subject infrastructure:

57 years

Note: Early French Immersion (EFI) entry point is at Florenceville Elementary School and the Late French Immersion (LFI) entry point is at Florenceville Middle School.

Scope – Consultations between the District and EY narrowed the scope to six potential scenarios to be summarized for the infrastructure review (1/3)

The following scenarios were included within the scope of the Carleton North drawing area infrastructure planning review. Each scenario was based on space requirements identified in the EECD Planning Guidelines for Educational Facilities, with enrolment projections for the schools developed by mapping 2016 Census data (Statistics Canada) to the school boundaries in order to determine future space requirements:

- **Scenario 1:** Close Florenceville Elementary, Florenceville Middle School, and Bristol Elementary schools. Replace them with a new K-5 elementary school (321 combined student enrolment in 2017-18) and re-configure Carleton North High School to a 6-12 school. Determine what renovations/additions would be required based on the EECD Planning Guidelines for Educational Facilities (648 combined 6-12 student enrolment in 2017-18). Develop a Class “D” ($\pm 30\%$) estimate for the construction costs of the new school/renovations.
- **Scenario 2:** Close Florenceville Elementary, Florenceville Middle School, Centreville Community School, and Bristol Elementary School. Replace them with a new K-5 elementary school (458 combined student enrolment in 2017-18) and re-configure Carleton North High School to a 6-12 school. Determine what renovations/additions would be required based on the EECD Planning Guidelines for Educational Facilities (696 combined 6-12 student enrolment in 2017-18). Develop a Class “D” ($\pm 30\%$) estimate for the construction costs of the new school/renovations.

Note: Construction estimates in the report are for planning purposes only to be used in scenario comparison. Actual costs can be wide-ranging depending on soft costs (design work, real estate costs, project management, etc.), size, topography, geotechnical engineering, and other existing conditions. Estimates are considered class “D” ($\pm 30\%$) estimate for the construction costs of the new schools based on the space requirements identified in the EECD Planning Guidelines for Educational Facilities.

Scope – Consultations between the District and EY narrowed the scope to six potential scenarios to be summarized for the infrastructure review (2/3)

- **Scenario 3:** Close Florenceville Elementary, Florenceville Middle School, and Bristol Elementary School. Replace them with a new K-8 school (528 combined student enrolment in 2017-18) and plan for mid-life upgrade of Carleton North High School based on the structural review recommendations (school remains 9-12 school with 441 students based on enrolment in 2017-18, with a potential of a school wing closure). Develop a Class “D” (\pm 30%) estimate for the construction costs of the new school/renovations.
- **Scenario 4:** Close Florenceville Elementary, Florenceville Middle School, Centreville Community School, and Bristol Elementary School. Replace them with a new K-8 school (713 combined student enrolment in 2017-18) and plan for mid-life upgrade of Carleton North High School based on the structural review recommendations (school remains 9-12 school with 441 students based on enrolment in 2017-18, with a potential of a school wing closure). Develop a Class “D” (\pm 30%) estimate for the construction costs of the new school/renovations.

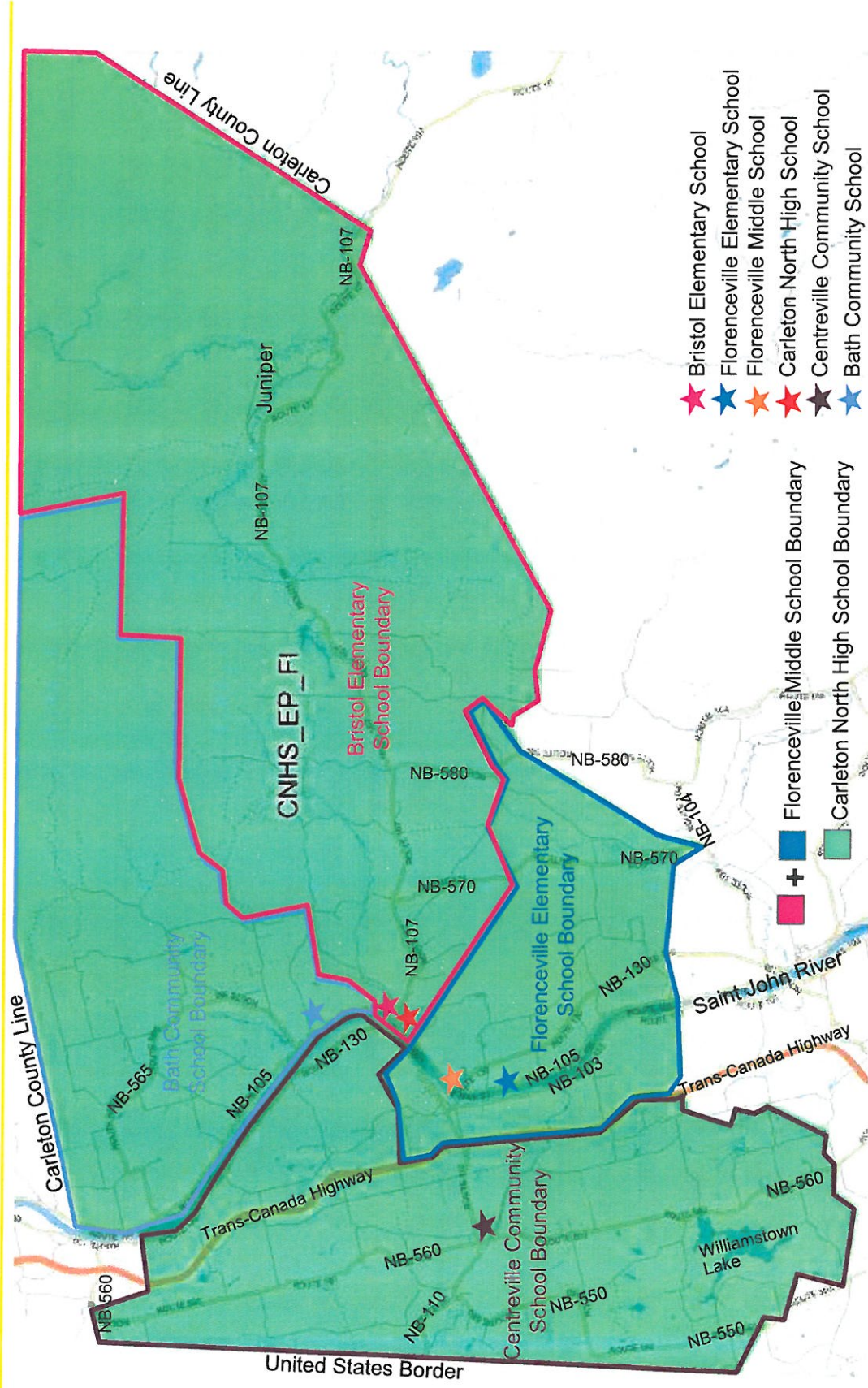
Note: Construction estimates in the report are for planning purposes only to be used in scenario comparison. Actual costs can be wide-ranging depending on soft costs (design work, real estate costs, project management, etc.), size, topography, geotechnical engineering, and other existing conditions. Estimates are considered class “D” (\pm 30%) estimate for the construction costs of the new schools based on the space requirements identified in the EECD Planning Guidelines for Educational Facilities.

Scope – Consultations between the District and EY narrowed the scope to six potential scenarios to be summarized for the infrastructure review (3/3)

- **Scenario 5:** Close Florenceville Elementary, Florenceville Middle School, Centreville Community School, Bath Community School, and Bristol Elementary School. Replace them with a new K-5 elementary school (559 combined student enrolment in 2017-18) and re-configure Carleton North High School to a 6-12 school. Determine what renovations/additions would be required based on the EECDD Planning Guidelines for Educational Facilities (768 combined 6-12 student enrolment in 2017-18). Develop a Class “D” ($\pm 30\%$) estimate for the construction costs of the new school/renovations.
- **Scenario 6:** Close Florenceville Elementary, Florenceville Middle School, Centreville Community School, Bath Community School, and Bristol Elementary School. Replace them with two new K-8 schools (886 combined student enrolment in 2017-18 split between the two schools). Plan to have a mid-life upgrade of Carleton North High School based on the structural review recommendations (school remains 9-12 school with 441 students based on enrolment in 2017-18 with a potential of a school wing closure). Develop a Class “D” ($\pm 30\%$) estimate for the construction costs of the new school/renovations. (*Note: upon review of enrolment projection numbers- Scenario 6 was changed to one new K-8 and a mid-life upgrade of Carleton North High School*).
- Determine the pros and cons of each scenario considering both pedagogical and fiscal requirements.

Note: Construction estimates in the report are for planning purposes only to be used in scenario comparison. Actual costs can be wide-ranging depending on soft costs (design work, real estate costs, project management, etc.), size, topography, geotechnical engineering, and other existing conditions. Estimates are considered class “D” ($\pm 30\%$) estimate for the construction costs of the new schools based on the space requirements identified in the EECDD Planning Guidelines for Educational Facilities.

Overview of feed schools in the Carleton North Catchment Area – Existing school boundaries



Source: ASD-W school transportation software - Busplanner.



2016 Census data – Florenceville-Bristol schools projected to see a decrease in enrolment (based on the population age grouping census data), excluding any net migration (2 of 2)

Boundary for Florenceville-Bristol (T)



Boundary. Census subdivisions selected: Florenceville-Bristol, TV [CSDJ, N.B.

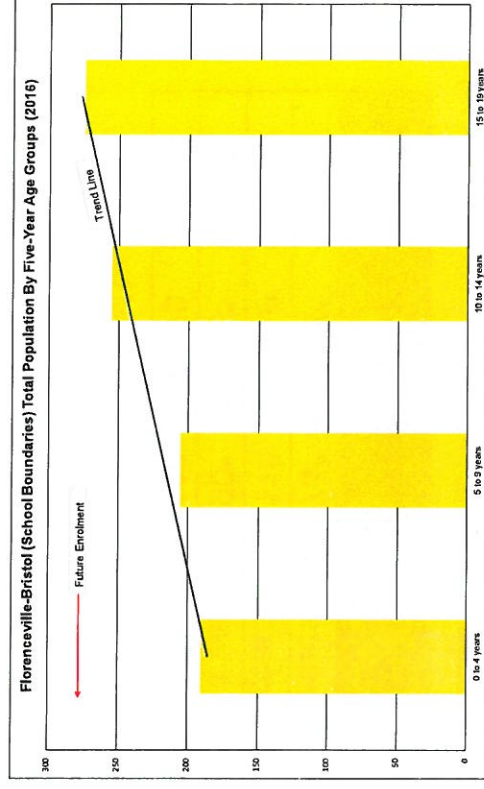
Enrolment decrease has come from the birth decline in both the surrounding parishes and Florenceville-Bristol town. The largest birth decline is between the 5 to 9 and the 10 to 14 age groups.

Vital statistics and census data indicates the enrolment will trend downwards for K-8 in the Florenceville-Bristol schools (excluding any net migration).

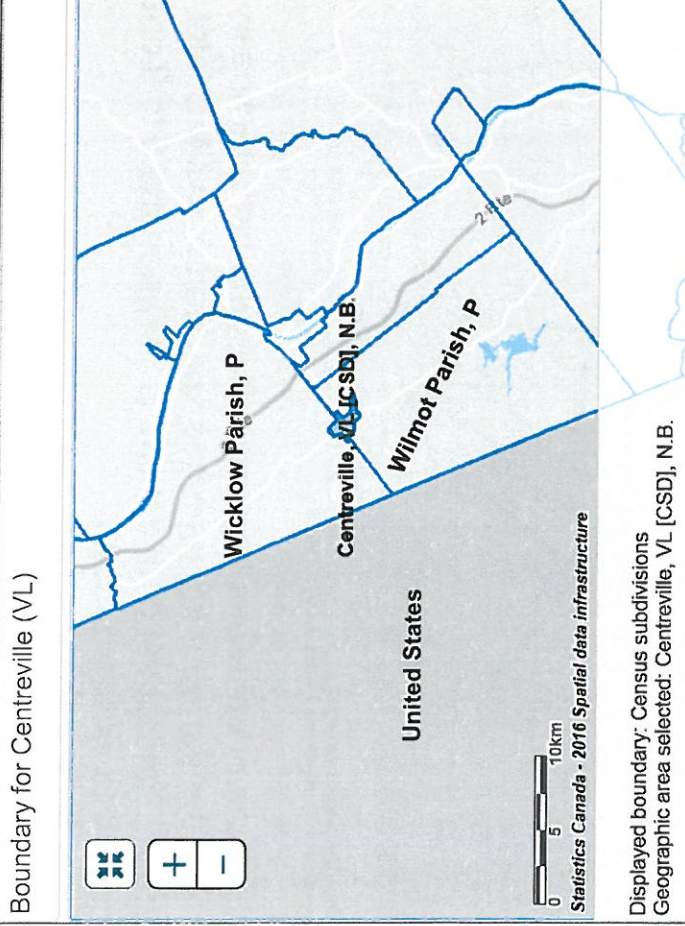
Data for Florenceville-Bristol (T), Peel (P), Simonds (P) and Aberdeen (P) census profiles:

Population By Five-Year Age Groups, 2016			
Age Groups	Male	Female	Total
0 to 4 years	80*	105*	190
5 to 9 years	105*	110*	205
10 to 14 years	120*	130*	255
15 to 19 years	145*	120*	275

*Rounding errors (to groups of 5), does not add to total.



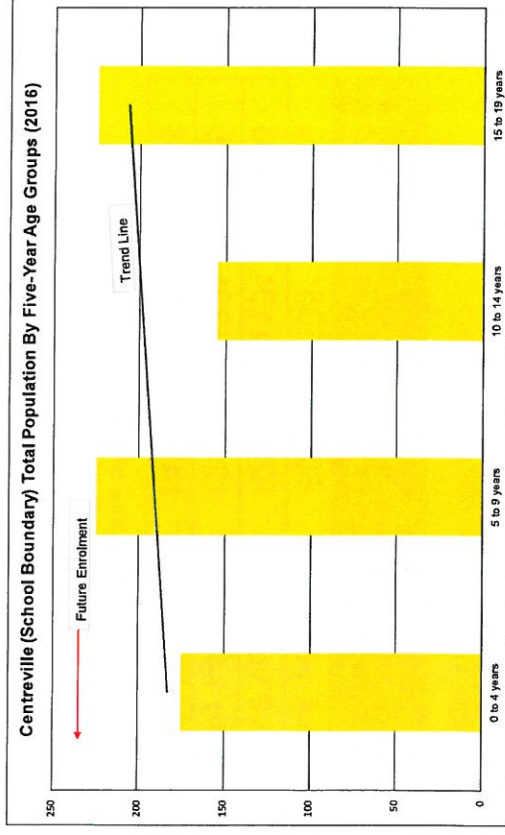
2016 Census data – Centreville Community School projected to see a decrease in enrolment (based on the population age grouping census data), excluding any net migration (2 of 2)



Data for Centreville (VL), Wicklow (P) and Wilmot (P) census profiles:

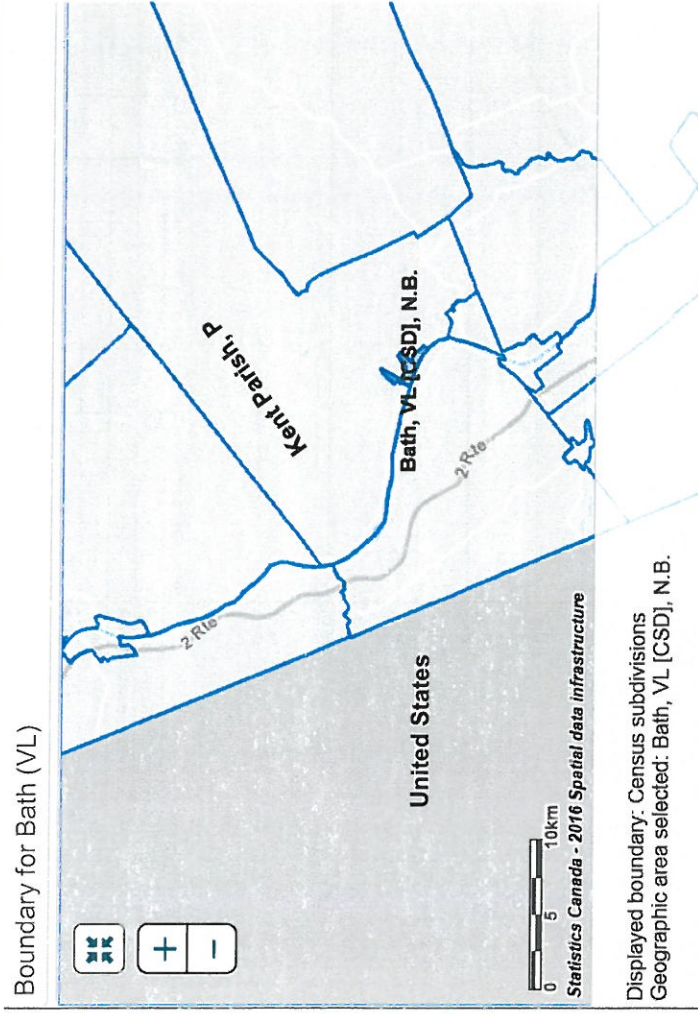
Population By Five-Year Age Groups, 2016			
Age Groups	Male	Female	Total
0 to 4 years	75*	95*	175
5 to 9 years	115	110	225
10 to 14 years	90*	75*	155
15 to 19 years	115	110	225

*Rounding errors (to groups of 5), does not add to total.



- ▶ Centreville Community School enrolment trend expected to decline, when the parishes of Wicklow and Wilmot are included in the five-year age group trending.
- ▶ However, the vital statistics and census data indicates a downward trend in enrolment for K-8 in the Centreville Community School boundary (excluding any net migration).

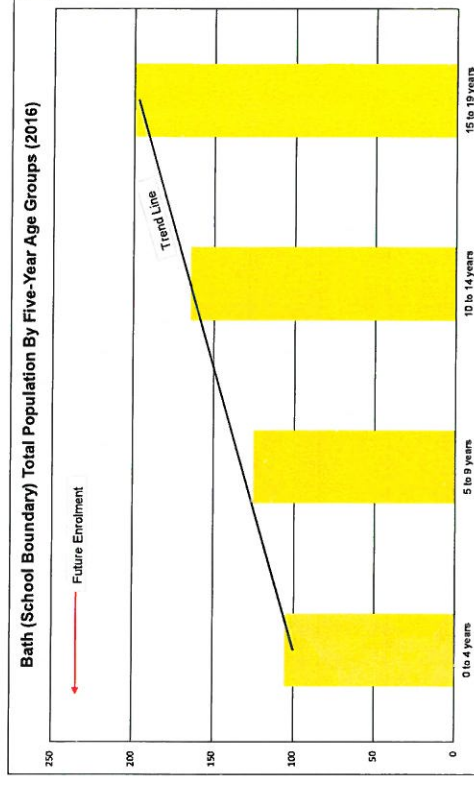
2016 Census data – Bath Community School projected to see a decrease in enrolment (based on the population age grouping census data), excluding any net migration (2 of 2)



Boundary for Bath (VL), and Kent (P) census profiles:

Population By Five-Year Age Groups, 2016			
Age Groups	Male	Female	Total
0 to 4 years	55	50	105
5 to 9 years	60	65	125
10 to 14 years	80*	80*	165
15 to 19 years	105*	100*	200

*Rounding errors (to groups of 5), does not add to total.



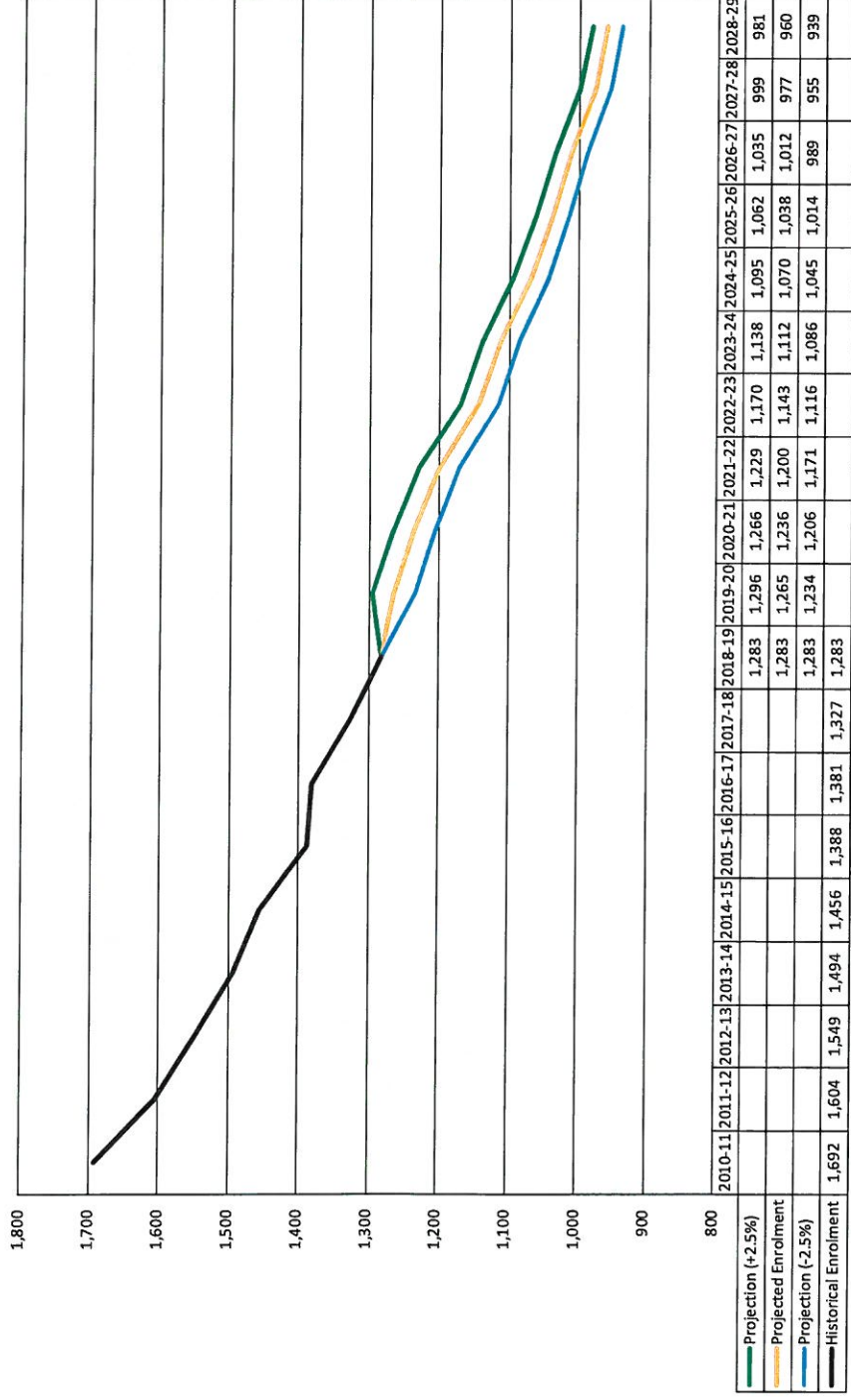
▶ The vital statistics and census data indicates that the K-8 enrolment will continue to trend downwards in the Bath Community School boundary (excluding any net migration).

Source: Statistics Canada. 2017. Bath, VL [Census subdivision], Kent, P [Census subdivision], New Brunswick and Carleton, CT [Census division], New Brunswick (table). Census Profile. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001. Ottawa. Released November 29, 2017.



Mapping 2016 Census data – Total enrolment for K-12 in the Carleton North catchment area is projected to continue downward based on census mapping and vital statistics

Total Enrolment In Carleton North Catchment Area



Note: The Census data quality reported by Statistics Canada of 3.4% to 4.5% for Carleton County (was rounded to +/-2.5%) and used to project the upper and lower limits in the enrolment projections.

Source: Statistics Canada. 2017. Carleton, CT [County Census subdivision], New Brunswick and New Brunswick (table). Census Profile. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001. Ottawa. Released November 29, 2017, Service New Brunswick, Vital Statistics, Table 2A: Vital Statistics by County of Residence, Page 10 New Brunswick (1998-2017), Fredericton, NB, and ASD-W 2010-2018 enrolment data.



Scenarios 1, 2 and 5 which include a re-configuration and mid-life upgrade of Carleton North High School to 6-12 are deemed unviable due to high cost; would require a new 6-12

	Scenario 1		Scenario 2		Scenario 5	
	Florenceville Elementary, Bristol Elementary and Florenceville Middle School Replacement and Carleton North High Re-configured to 6-12/Mid-life Upgrade	Re-configured 6-12	Florenceville, Bristol, Centreville and Florenceville Middle School Replacement and Carleton North High Re-configured to 6-12/Mid-life Upgrade	Re-configured 6-12	Florenceville, Bristol, Centreville, Bath and Florenceville Middle School Replacement and Carleton North High Re-configured to 6-12/Mid-life Upgrade	Re-configured 6-12
Enrollment	New K-5 School 325 (2018-19)	638 (2018-19)	New K-5 School 449 (2018-19)	692 (2018-19)	New K-5 School 534 (2018-19)	749 (2018-19)
Projections	285 (2023-24)	605 (2022-23)	380 (2023-24)	660 (2022-23)	440 (2023-24)	700 (2022-23)
Recommended Upper Limit - Number of Students	500	<300 Middle, <500 High	500	<300 Middle, <500 High	500	<300 Middle, <500 High
Benchmark	Yes	Yes - Two Schools	Yes	Yes - One School	Yes	Yes - One School
General	10	15	13	17	17	19
Classrooms	9	10	9	10	9	10
Utilization	0	7	0	7	0	7
Schools	19	32	22	34	26	36
For New Schools	63%	70%	72%	72%	71%	71%
Number to Build	1	0	1	0	1	0
Number to Close	2	1	3	1	4	1
Area	Existing 3,274 m ²	3,948 m ² and 11,493 m ²	8,094 m ²	3,948 m ² and 11,493 m ²	11,928 m ²	3,948 m ² and 11,493 m ²
Addition/New Schools	New: 5,186 m ²	Addition: 2,174 m ²	New: 6,432 m ²	Addition: 2,422 m ²	New: 7,120 m ²	Addition: 2,671 m ²
Net Increase/(Decrease)	1,912 m ²	(1,774 m ²)	(1,662 m ²)	(1,526 m ²)	(4,808 m ²)	(1,277 m ²)
Cost Avoidance	\$1.5M	\$1.1M	\$1.5M	\$1.2M	\$1.5M	\$1.2M
Estimated Cost*	\$16.0M to \$17.0M*	\$16.0M to \$17.0M*	\$19.3M to \$20.3M*	\$19.3M to \$20.3M*	\$21.2M to \$22.2M*	\$21.2M to \$22.2M*
Operational Costs	\$50.5M to \$51.5M*	\$50.5M to \$51.5M*	\$54.5M to \$55.5M*	\$54.5M to \$55.5M*	\$57.1M to \$58.1M*	\$57.1M to \$58.1M*
Percentage of Replacement Cost for Same Area	(\$64K)	(\$64K)	(\$164K)	(\$164K)	(\$257K)	(\$257K)
Estimated Cost for New 6-12 School		86%		86%		87%
Estimated Cost for Two New Schools	\$50.7M to \$52.7M*	\$34.7M to \$35.7M*	\$55.5M to \$57.5M*	\$36.2M to \$37.2M*	\$58.4 to \$60.4M*	\$37.2M to \$38.2M*
**Mid-Life Upgrade Estimate Based on Building Assessment Study Performed for Department of Transportation and Infrastructure (DTI)						

Although Carleton North High School was built for a larger capacity than current enrolments (681 in 2000 and 434 in 2018), there are not enough general classrooms to add the middle school program into the existing school based on the curriculum. Each of scenarios 1, 2 and 5 would require an addition to the school. Additionally, some of the vocational shop space may be converted into middle school space as well.

A building assessment performed for DTI estimated that option B mid-life upgrade for Carleton North High School including priority 1 – immediate repairs, priority 2 – repairs within the next 10 years with classroom refurbishment would be \$27.0M*.

All three scenarios were deemed unviable with the re-configuration, as the estimated costs were more than 75% of the replacement cost for the same sized building area. Therefore, K-5 / 6-12 scenario would require two new schools.

*Note: Class "D" estimate (± 30%) based on the EECDD Planning Guidelines for Educational Facilities, as an estimate for this report only. Estimates will be adjusted when EECDD infrastructure and the project team establish the actual space allocation.



Scenarios 3, 4 and 6 which include a mid-life upgrade of Carleton North High School are deemed viable as they are < 75% of the replacement costs of the high school area

	Scenario 3		Scenario 4		Scenario 5	
	Florenceville Elementary, Bristol Elementary and Florenceville Middle School Replacement and Carleton North High Mid-Life Upgrade	Mid-Life Upgrade 9-12	Florenceville, Bristol, Centreville and Florenceville Middle School Replacement and Carleton North High Mid-Life Upgrade	Mid-Life Upgrade 9-12	Florenceville, Bristol, Centreville, Bath and Florenceville Middle School Replacement and Carleton North High Mid-Life Upgrade	Mid-Life Upgrade 9-12
Enrollment Projections	New K-8 School 529 (2018-19) 455 (2023-24)	434 (2018-19) 415 (2022-23) > 500 High School	New K-8 School 707 (2018-19) 600 (2023-24)	434 (2018-19) 415 (2022-23) > 500 High School	New K-8 School 849 (2018-19) 690 (2023-24)	434 (2018-19) 415 (2022-23) > 500 High School
Recommended Upper Limit - Number of Students	650	> 500 High School	650	> 500 High School	650	> 500 High School
Benchmark	Yes	Yes	Yes	Yes	Yes - 4 Schools	Yes
English Prime	13	11	19	11	24	11
Early French Immersion (EFI)	13	5	13	5	13	5
Late French Immersion (LFI)	3	4	3	4	3	4
Total	29	20	35	20	40	20
Utilization For New Schools	62%	69%	67%	69%	68%	69%
Schools	Number to Build 1	0	1	0	1	0
	Number to Close 3	0	4	0	5	0
Area	Existing 7,222 m ²	11,493 m ²	Existing 12,042 m ²	11,493 m ²	Existing 15,876 m ²	11,493 m ²
	New: 9,028 m ²		New: 10,559 m ²		New: 11,689 m ²	
Cost Avoidance	Net Increase/(Decrease) 1,806 m ²		Net Increase/(Decrease) (1,483 m ²)		Net Increase/(Decrease) (4,187 m ²)	
Deferred Maintenance	\$2.6M		\$2.7M		\$2.7M	
Estimated Cost*	New School \$26.3M to \$27.3M*		New School \$30.4M to \$31.4M*		New School \$33.5M to \$34.5M*	
	Addition		Addition		Addition	
Mid-Life Upgrade (Option A)**		\$24.0M**		\$24.0M**		\$24.0M**
Total for Scenario	\$50.3M to \$51.3M*		\$54.4M to \$55.4M*		\$57.5M to \$58.5M*	
Operational Costs Increase (excluding staffing)	(\$86K)		(\$198K)		(\$295K)	
Percentage of Replacement Cost for Same Area		70%		70%		70%
**Mid-Life Upgrade Estimate Based on Building Assessment Study Performed for Department of Transportation and Infrastructure (DTI)						

Scenarios 3, 4, and 6 keep Carleton North classified as high school (9-12). There is a possibility that general classrooms could be closed/removed from the school during a mid-life upgrade in order to match the classroom specifications of the EECD Planning Guidelines. The reduction would depend on if and when a mid-life upgrade is scheduled.

One community group has made a presentation in 2018 to the DEC requesting a new K-8 school be constructed next to Carleton North High School to develop a shared learning campus. (Centreville and Bath were not included in this group).

A building assessment performed for DTI estimated that option A mid-life upgrade for Carleton North High School including priority 1 – immediate repairs, priority 2 – repairs within the next 10 years with some classroom demolition would be \$24.0M*.

All three scenarios were deemed viable with a mid-life upgrade, as the estimated costs were less than 75% of the replacement cost for the same sized building area.

*Note: Class "D" estimate (± 30%) based on the EECD Planning Guidelines for Educational Facilities, as an estimate for this report only. Estimates will be adjusted when EECD Infrastructure and the project team establish the actual space allocation.



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