



GREENING OUR SCHOOLS :
REPORT OF NEW BRUNSWICK SCHOOLS
ENVIRONMENTAL EDUCATIONAL INITIATIVES

Comparisons from 2004-2008

July 2008

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Abbreviations

In order of appearance in report:

ASF – Atlantic Salmon Federation

CCNB – Conservation Council of New Brunswick

DU – Ducks Unlimited

KC – Kindness Club

NBFN/NNB – NB Federation of Naturalists (now Nature NB)

AEC – Atomic Energy of Canada

CNA – Canadian Nuclear Association

FPA – Forest Products Association

JDI – J.D. Irving

NBP – NB Power

Greening Our Schools :
Report of New Brunswick Schools Environmental Education Initiatives
2004-2008

Surveys completed:

2004 – 108 schools responded

2005 – 138 schools in database (an increase of 30 schools)

2006 *No survey was completed in 2006

2007 – 159 schools in database (an increase of 21 schools)

2008 – 160 schools in database (an increase of 1 school) (57 responses this year)

Total number of schools in the province: 326.¹

This report considers values in percentages as a result of the increase in the number of schools included in the database from year to year. This will help to make each year comparable to others.

Environmental Curriculum Linked Activities

Guest Speakers

No significant change was noted in schools that invite guest speakers to present on environmental matters.

Field Trips

Although a decrease was noted among schools that conduct field trips with an environmental focus, it was not significant.

Earth Ed

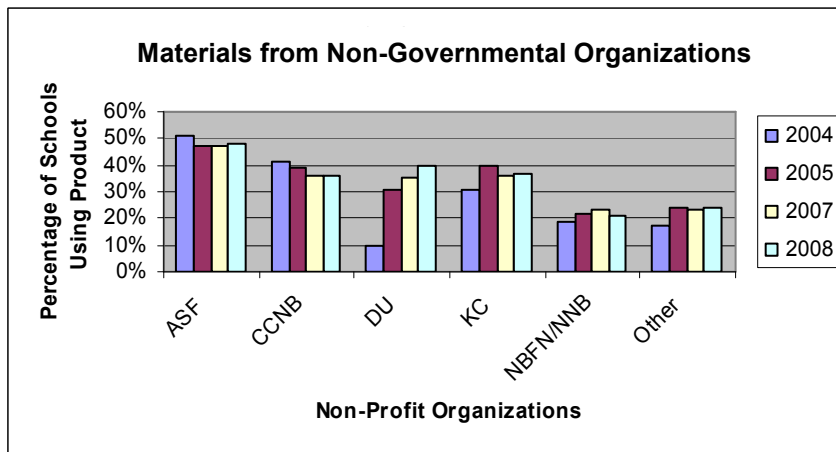
In 2008, no schools stated that they made use of Earth Ed. Twenty schools replied that they do not use the resource, and all comments pertained to the fact that they had never heard of it, or were unaware of it. Some did not even realize that it was an on-line database, as one responded that they did “not have the catalogue;” another said there was no committee at the school. This suggests marketing is needed if this resource is going to be utilized by educators in this province.

¹ Summary Statistics : School Year 2007-2008. Policy & Planning Division. Department of Education. March 2008.

Material Resources

Non-Governmental Organizations

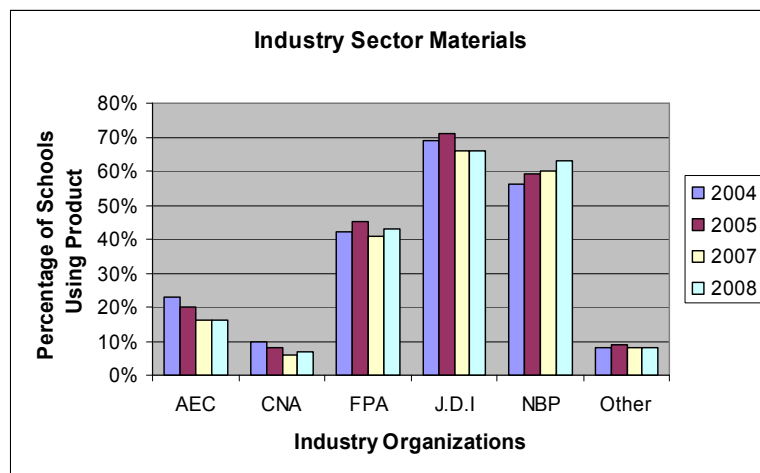
The use of materials from Ducks Unlimited rose 30% between 2004-2008. The two major suppliers to note decreases included the Atlantic Salmon Federation and the Conservation Council of NB; however, the Atlantic Salmon Federation remains the most commonly used resource for materials, at 48% of schools.



Although an average of 22% schools stated that they receive materials from “other” non-governmental organizations not listed on the survey, some of these groups are governmental organizations, such as Kouchibouguac National Park and Parks Canada, all-terrain vehicle safety, and a few others.

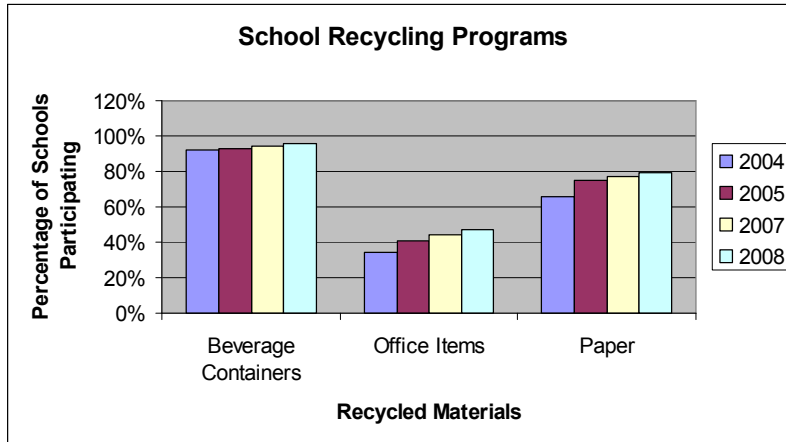
Industry Sector

J. D. Irving is the most used industrial resource for materials among New Brunswick schools, with 66% of schools using materials from the company. Although the use of Irving materials has decreased 5% over the past three years, it remains the most common resource. NB Power is not far behind at 63% in 2008 (compared to Irving’s 66%), and Forest Products Association is third at 43%.



Recycling and Composting

Recycling Programs



Number of schools implementing a recycling program to date: 156 out of 160.

Note the high participation levels in beverage container recycling programs. The recycling of office items could be increased (48% in 2008), while paper programs (79% participation) could also be encouraged. Little change has been noted between 2004-2008

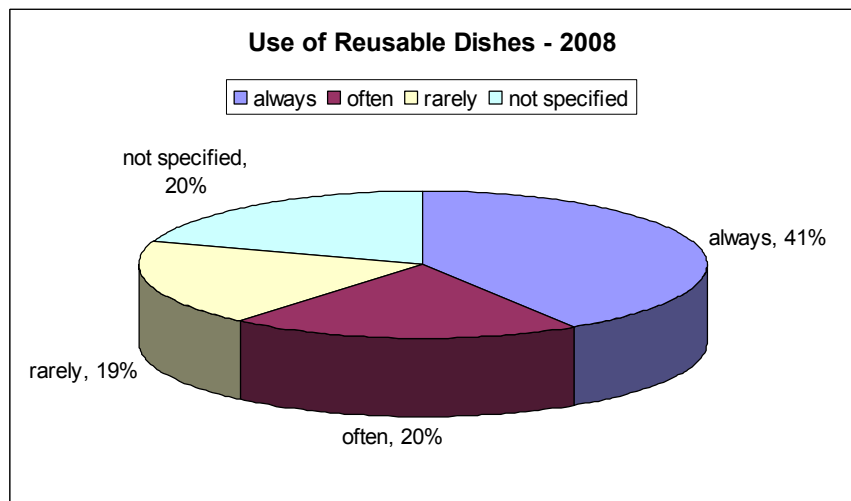
in any of the three items, yet all three have been increasing in participation.

A number of schools also mentioned that they have implemented recycling programs for ink cartridges (possibly included under “office items”). Batteries were also mentioned as a recycled item.

Reasons for not implementing a recycling program include: concerns about hygiene, lack of physical space/infrastructure, employee time, and no recycling depot in the area for materials other than bottles.

Reusable Dishes

Forty-one percent (41%) of schools surveyed stated they use reusable dishes all of the time, while an additional 20% said they use reusable dishes “often.” There has not been much change in responses between 2004-2005. As a result, even in 2008, as many schools answered that they “rarely” use reusable dishes as did those that responded that they “often” do. This leaves

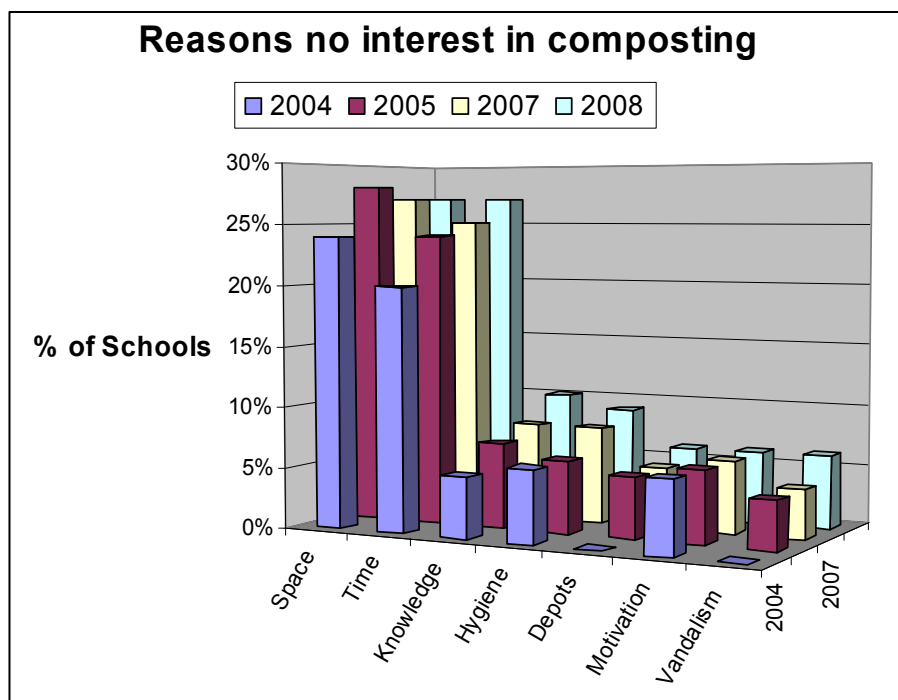


room for improvement; district or provincial standards could be put in place so that schools use reusable dishes in their cafeterias, eliminating a significant amount of waste.

Composting Programs

Twenty (20) of 160 schools responding stated that they are implementing a composting program. Between 2004 and 2008, participation in municipal composting programs rose from 4% to 6%, on-site food waste composting programs rose from 3% to 7%, while on-site yard waste programs rose from 0% participation to 2%. It is expected that municipal participation will increase in next year's data as a result of the implementation of the Westmorland-Albert Solid Waste Corporation's Wet/Dry Program in all District 2 schools as part of their District 2 Goes Green – Small Steps...Big Change environmental plan,² as a few schools mentioned their upcoming participation.

A few schools also stated that they participate in vermicomposting.



The top two concerns with regards to composting have not changed between 2004 and 2008, those being a lack of employee time and a lack of physical space. At 27% respectively, the degree of these concerns is not so high that it cannot be changed. Perhaps a sort of mentoring program would be useful to help schools implement a composting program, then direct them in its continuation.

Energy and Water Conservation

Energy Conservation

The largest participation increase occurred between 2004 and 2005, although most programs have continued to rise steadily since then. Note the increases in closing doors which rose 17%;

² "District 2 Schools are Going Green!". Schools District 2. http://www.district2.nbed.nb.ca/news_0708.asp.

having computers controlling the heat increased 20%; and turning off computers increased 21% in that one year.

Drawing shades is the second least common method of energy conservation, surprising considering how easy it is to do. Over 4 years, an increase of 8% was noted in the drawing of shades, compared to an average increase of 27% for all other methods.

Turning off the lights has the highest participation rate at 67%. There is no one program which is predominant among the schools, perhaps allowing for the possibility of the implementation of district or provincial standards.

Energy Conservation Programs				
	2004	2005	2007	2008
Close doors	5%	22%	25%	30%
Draw Shades	3%	12%	14%	17%
Energy conservation awareness	11%	22%	26%	29%
Have computers controlling the heat	5%	32%	33%	38%
Turn off computers	4%	25%	30%	39%
Turn Off lights	32%	55%	61%	67%

Some schools also noted that they are changing all of the light bulbs in their light fixtures as part of an energy conservation initiative. This could be done gradually as bulbs need to be replaced to cut down on the cost of the change-over to Compact Fluorescent

Lightbulbs (CFLs).

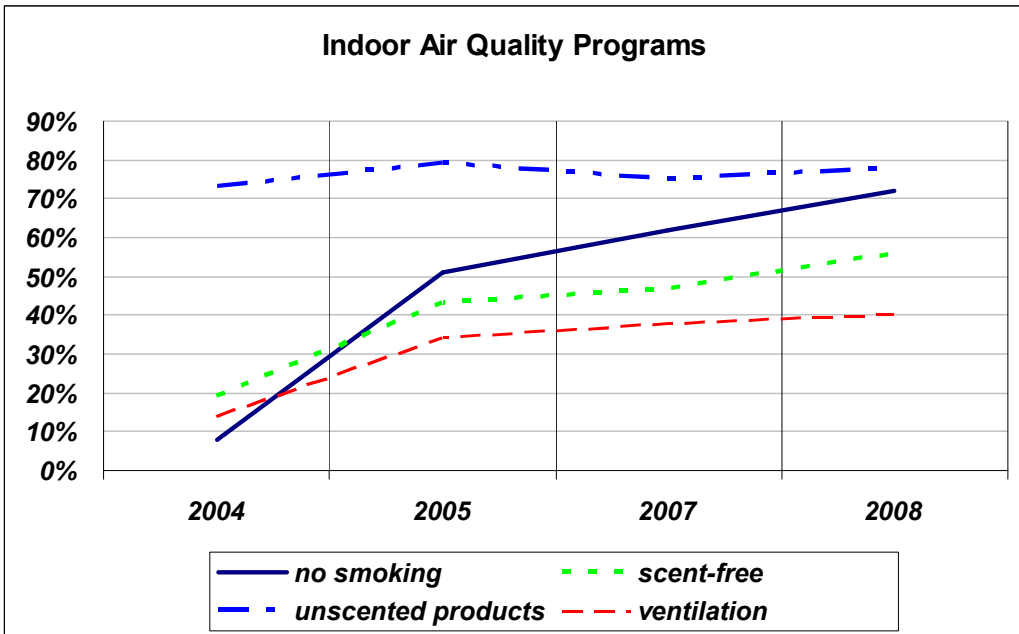
Water Conservation

Water conservation programs include low flush toilets, timed flushes, and water saving devices in taps. Although there has been a rise in the use of such devices (from 2004 to 2008, low flush toilets rose 5%, timed flushes rose 7%, water saving devices in taps rose 9%), there is no significant use of any of these three techniques. Tap devices are the most popular with 14% of schools using them, while low flush toilets are in use in 13% of schools. Of the 160 schools that have responded to the survey, 43 stated that they have a water conservation program in place.

Air Quality

Indoor Air Quality

Of all 160 school which have responded to the survey, 148 stated that they have some form of indoor air quality program, making indoor air quality controls one of the most predominant programs schools have implemented and increased since this survey began.



From 2004 to 2008, New Brunswick schools have increased their use of ventilation to control indoor air quality by 26% (from 14% to 40%), and the designation of Scent-Free Schools has increased 37%.

The prohibition of smoking on school grounds has increased by 64%

(to 72%) from 2004-2008. A large increase was expected since Policy 702 “Tobacco-Free Schools” has prohibited smoking in all school buildings and on school grounds, since October 2004.³

Outdoor Air Quality

Healthy outdoor air quality was not considered in the 2004 edition of the survey. The two most common activities in which schools participate are: anti-idling zones for buses which has risen 9% in participation over the past 3 years to 39%, and banning the use of cosmetic pesticides which has risen 3% in the same amount of years to 38% participation (from 35%). There should be high rates of schools with anti-idling zones for buses since the 2007 implementation of anti-idling rules by the Department of Transportation for its government fleet of vehicles includes school buses.⁴ This regulation should be enforced considering only 39% of schools claim to practice this regulation. Schools could create anti-idling zones for all vehicles as part of district or provincial standards in an effort to continue to improve outdoor air quality, a regulation which would be much easier to implement now that buses are also not able to idle.

Of the 160 schools surveyed, 94 stated they participate in healthy outdoor environment programs.

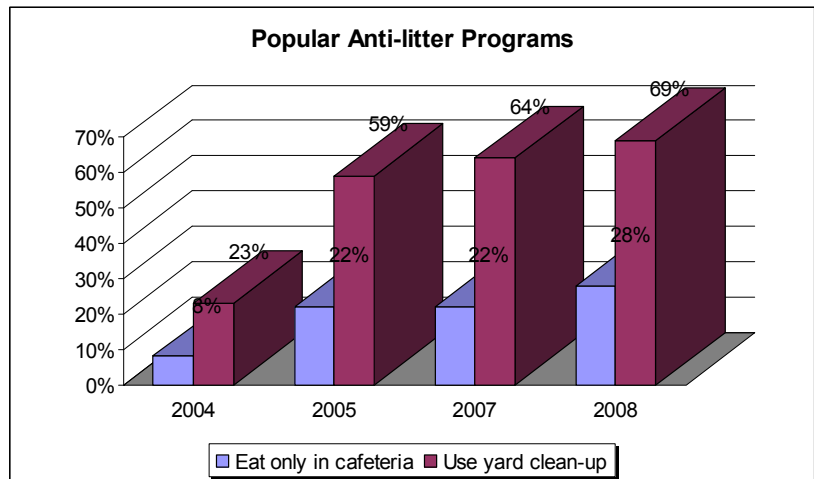
³ Tobacco-Free Schools – Policy 702. NB Department of Education. September 6, 2005.
⁴ “Transport minister implements anti-idling rules for government fleet.” NB Department of Transportation. June 13, 2007 <http://www.gnb.ca/cnb/news/tran/2007e0755tr.htm>

Anti-litter programs

Anti-litter

Of the 160 schools surveyed, 122 stated that they have in place an anti-litter program. Such programs include the Adopt a Highway program, using biodegradeable products in the school, eating only in the cafeteria, using PR such as signs or fancy cans, and yard clean-ups.

Of particular note are the use of regulations on eating only in the cafeteria, and the use of yard clean-up, both of which have much higher participation rates than the other programs.



Schools Grounds Programs

	School Ground Programs			
	2004	2005	2007	2008
Naturalization	17%	21%	21%	21%
Beautification	57%	62%	64%	67%
Vegetable Gardening	3%	4%	6%	6%

Drinking Water Supply

An average of 31% of schools have experienced problems with their drinking water supply. Since a third of New Brunswick students do not have access to safe drinking water, schools should ensure that their water is tested regularly, to avoid health issues among students.

Student Environmental Groups

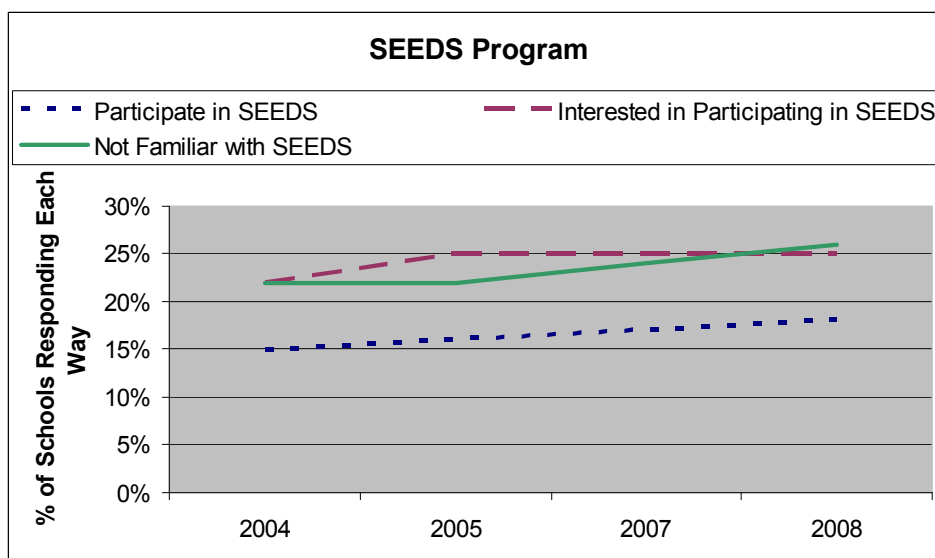
With each additional year surveyed, more schools had a student environmental group in operation, an increase of 35%, from 45% of schools with groups in 2004, to 80% of schools with environmental groups in 2008.

In 2008, of the 80 student environmental groups, 84% of them were supported by teachers, and 58% of them functioned independently (not part of the class curriculum or part of the student council).

Student Justice Groups

This was not considered prior to the 2008 survey. Eight of the 57 schools responding in 2008 stated that they have a student social justice group, each are supported by different groups (ie: administration, student council, teachers).

SEEDS Program⁵



Little change has been noted with regards to the SEEDS Program, suggesting that familiarity with the national program has not increased. The rise in participation in the program was a total of 3%, increasing to 18% in 2008. In 2008, 25% of schools claimed to be interested in participating in SEEDS. This was up

3% from 2004. Since ¼ of all schools are interested in a program that 26% of all schools are not familiar with, perhaps it suggests that schools are simply interested in a form of environmental or sustainable program rather than more specific involvement in the SEEDS program. If the SEEDS Program is deemed a useful resource, perhaps it should be marketed further to the schools.

Health and Social Programs

Twenty-six percent (26 %) and 27% of responding schools stated that they have an anti-bullying program and a healthy eating program, respectively. Some schools also have programs such as a Breakfast Program, in addition to the other health and social programs included in the survey:

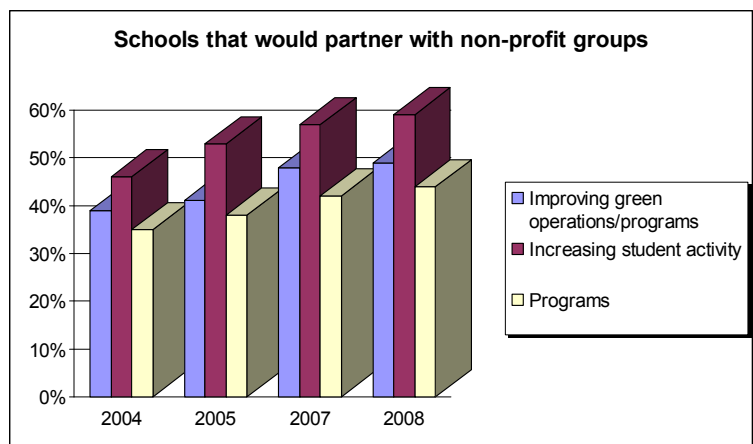
⁵ SEEDS Foundation GREEN Schools Program. SEEDS Foundation. <http://www.seedsfoundation.ca/index.html>

volunteer and multi-culturalism programs. Previous years of this survey did not consider health and social programs, therefore data is only available from 2008.

Other non-profit or community groups listed as associates/partners for programs include: local food banks, legions, assisting with local events such as the World Pond Hockey Tournament, interactions with local businesses, and Junior Achievement.

Interest in Partnering with Non-Profit Groups

Increasing student activity is the most common interest for schools when it comes to their interest in partnering with non-profit groups. At 59% interest in 2008, this might be something worth considering. All three interest areas have increased steadily since 2004, rising an average of 11% over the 4 years surveyed.



Forty-nine (49) schools (of 160 who completed the survey) have stated that they are involved in additional environmental programs, other than those listed in this survey, including one school which is planning an energy audit.

Summary of Recommendations

- A. Since Earth Ed was not very well-known, marketing is needed if this resource is going to be utilized by educators in the province.
- B. The recycling of office items could be encouraged, and information as to what items can be recycled should be made available.
- C. Participation in paper programs can also be encouraged; suggestions of “scrap paper” piles in classrooms could also be incorporated so paper is well-used prior to being recycled.
- D. District or provincial standards could be created with respect to reusable dishes, so that schools eliminate a significant amount of waste created by disposable dishes in cafeterias. Particularly in schools which have already implemented an “eating only in the cafeteria” policy, this should be fairly easy to accomplish.

- E. A mentoring program for composting could be implemented, whereby schools are mentored in beginning a composting program which suits them, then directed in its continuation. This would also increase the knowledge surrounding the benefits of composting.
- F. The energy conservation program of drawing shades in rooms is surprisingly low in participation considering how easy it is to do. This could be encouraged further.
- G. With respect to energy conservation programs, no one program is predominant among the schools. Perhaps implementing district or provincial standards is a possibility.
- H. Some schools mentioned that they are changing the light bulbs in their buildings in an effort to be more energy efficient, which could be encouraged among all schools. As light bulbs need to be replaced they could be replaced with compact fluorescent bulbs (CFLs), as this gradual change would decrease the cost of the change-over.
- I. Education about what constitutes some environmental improvement programs may be necessary. Although the provincial Policy 702 “Tobacco-Free Schools” has prohibited smoking in all school buildings and on school grounds since 2004, only 72% of schools stated that this was an indoor-air quality program in which they participate.
- J. The two most common outdoor air quality programs which are: the use of anti-idling zones for buses and banning the use of cosmetic pesticides, could easily be made standard across the province. Buses could be required to park and have their engines turned off while waiting for, or loading, students.
- K. If deemed a useful resource, the SEEDS Program should be marketed further to schools so more schools become familiar with the program, since few knew of it.
- L. Fairly high interest was expressed with respect to partnering with non-profit groups, which may be something worth considering.

APPENDIX 1
Data Responses 2004-2008

Year of Survey Response	2004	2005	2007	2008
Total Number of Schools Responding	108	138	159	160
Invite Guest Speakers to talk on Environmental Matters	94 (87%)	124 (90%)	142 (89%)	142 (89%)
Conduct Field Trips with an Environmental Focus	100 (93%)	125 (91%)	146 (92%)	145 (91%)
Schools Using Non-Governmental Organizations Materials from:				
Atlantic Salmon Federation	55 (51%)	65 (47%)	75 (47%)	77 (48%)
Conservation Council of NB	44 (41%)	54 (39%)	57 (36%)	57 (36%)
Ducks Unlimited	11 (10%)	43 (31%)	55 (35%)	64 (40%)
Kindness Club	33 (31%)	55 (40%)	58 (36%)	59 (37%)
NB Federation of Naturalists	20 (19%)	31 (22%)	36 (23%)	34 (21%)
NB Protected Natural Areas Coalition	8 (1%)	-	-	-
Canadian Parks & Wilderness Society - NB	-	17 (12%)	22 (14%)	21 (13%)
Other	18 (17%)	33 (24%)	37 (23%)	39 (24%)
Schools Using Industry Sector Materials from:				
Atomic Energy of Canada Ltd	25 (23%)	27 (20%)	25 (16%)	25 (16%)
Canadian Nuclear Association	11 (10%)	11 (8%)	9 (6%)	11 (7%)
Forest Products Association	45 (42%)	62 (45%)	65 (41%)	68 (43%)
			105	106
J.D. Irving	75 (69%)	98 (71%)	(66%)	(66%)
			101	101
NB Power	60 (56%)	82 (59%)	96 (60%)	(63%)
Other	9 (8%)	12 (9%)	12 (8%)	12 (8%)
Schools with Recycling Programs				
		129	150	153
Beverage Containers	99 (92%)	(93%)	(94%)	(96%)
Office Items	37 (34%)	57 (41%)	70 (44%)	76 (48%)
		104	122	126
Paper	71 (66%)	(75%)	(77%)	(79%)
Schools that are interested in starting a recycling program	5	3	5	8
Schools that are not interested in starting a recycling program	-	1	6	9
Reasons Schools are not interested in Recycling Programs				
Concerns about hygiene	7	0	2	2
Employee time	2	0	1	1
Lack of knowledge	1	0	0	0
Lack of motivation	1	0	1	0
Lack of physical space/ infrastructure	2	0	3	3

Poor access to recycling depots	3	0	1	1
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Schools Using Reusable Dishes

Always	38 (35%)	51 (37%)	62 (39%)	66 (41%)
Often	23 (21%)	29 (21%)	35 (22%)	32 (20%)
Sometimes	11 (10%)	0	0	0
Rarely	18 (17%)	28 (20%)	30 (19%)	30 (19%)
Not Specified	18 (17%)	30 (22%)	32 (20%)	32 (20%)

Schools Implementing a Composting Program

Municipal composting program	4 (4%)	6 (4%)	8 (5%)	9 (6%)
On-site food waste composting program	3 (3%)	8 (6%)	9 (6%)	11 (7%)
On-site yard waste composting program	1 (0%)	3 (2%)	3 (2%)	3 (2%)

Schools Interested in Starting a Composting Program	35 (32%)	43 (31%)	55 (35%)	56 (35%)
Schools Not Interested in Starting a Composting Program	41 (38%)	63 (46%)	73 (46%)	78 (49%)

Reasons Schools are not Interested in Composting Programs

Concerns about hygiene	3 (6%)	8 (6%)	12 (8%)	15 (9%)
Employee time	22 (20%)	33 (24%)	39 (25%)	43 (27%)
Few compostables in the waste stream	1	4 (3%)	3 (2%)	3 (2%)
Lack of access to recycling depots	1	7 (5%)	8 (5%)	9 (6%)
Lack of knowledge	5 (5%)	9 (7%)	13 (8%)	16 (10%)
Lack of motivation	6 (6%)	8 (6%)	9 (6%)	10 (6%)
Lack of physical space	26 (24%)	38 (28%)	43 (27%)	43 (27%)
Vandalism	1	6 (4%)	7 (4%)	9 (6%)

Energy Conservation Programs

Close doors	5 (5%)	30 (22%)	40 (25%)	48 (30%)
Destination Conservation	4 (4%)	17 (12%)	18 (11%)	19 (12%)
Draw Shades	3 (3%)	16 (12%)	22 (14%)	27 (17%)
Energy conservation awareness	12 (11%)	30 (22%)	41 (26%)	46 (29%)
Have computers controlling the heat	5 (5%)	44 (32%)	52 (33%)	60 (38%)
Turn off computers	4 (4%)	35 (25%)	48 (30%)	63 (39%)
Turn Off lights	35 (32%)	76 (55%)	97 (61%)	107 (67%)

Water Conservation Programs

Low flush toilets	9 (8%)	15 (11%)	19 (12%)	20 (13%)
Timed flushes	2 (2%)	9 (7%)	13 (8%)	15 (9%)
Water saving devices in taps	5 (5%)	13 (9%)	18 (11%)	22 (14%)

Indoor Air Quality Programs

Not smoking on school property	9 (8%)	70 (51%)	99 (62%)	115(72%)
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	Scent-free controls	21 (19%)	59 (43%)	75 (47%)	89 (56%)
			109	119	124
	Use unscented/non-toxic cleaning products	79 (73%)	(79%)	(75%)	(78%)
	Use ventilation to control indoor air quality	15 (14%)	47 (34%)	60 (38%)	64 (40%)
Healthy Outdoor Environment Programs					
	Anti-Idling Zones for Buses	-	42 (30%)	50 (34%)	63 (39%)
	Ban the Use of Cosmetic Pesticides on School Grounds	-	48 (35%)	52 (33%)	60 (38%)
Anti-litter programs					
	Adopt a Highway	2 (2%)	5 (4%)	8 (5%)	8 (5%)
	Use biodegradable products	3 (3%)	5 (4%)	6 (4%)	8 (5%)
	Eat only in cafeteria	9 (8%)	30 (22%)	35 (22%)	44 (28%)
	Use PR (signs/fancy cans)	6 (6%)	11 (8%)	16 (10%)	19 (12%)
				101	110
	Use yard clean-up	25 (23%)	81 (59%)	(64%)	(69%)
School Ground Programs					
	School Ground Naturalization	18 (17%)	29 (21%)	33 (21%)	34 (21%)
				102	107
	Beautification	62 (57%)	86 (62%)	(64%)	(67%)
	Vegetable Gardening	3 (3%)	6 (4%)	9 (6%)	9 (6%)
Schools that have experienced problems with the drinking water supply		35 (32%)	42 (30%)	50 (31%)	52 (33%)
Number of schools with a student environmental group		45 (42%)	64 (46%)	77 (48%)	80 (50%)
Of those that have environmental groups:					
	Supported by Administration	25 (56%)	40 (63%)	45 (58%)	49 (61%)
	Supported by Student Council	15 (33%)	21 (33%)	25 (32%)	26 (33%)
	Supported by Teacher Advisors	41 (91%)	54 (84%)	64 (83%)	67 (84%)
These groups:					
	Functions as part of the Class Curriculum	12 (27%)	17 (27%)	20 (26%)	22 (28%)
	Functions Independently	22 (49%)	33 (52%)	42 (55%)	46 (58%)
	Functions as part of the Student Council	11 (24%)	13 (20%)	15 (19%)	16 (20%)
SEEDS Program					
	Participate in SEEDS Program	16 (15%)	22 (16%)	27 (17%)	29 (18%)
	Interested in participating in the SEEDS program in the future	24 (22%)	35 (25%)	39 (15%)	40 (25%)
	Not familiar with the SEEDS program	24 (22%)	31 (22%)	38 (24%)	41 (26%)
Schools that would partner with non-profit groups for:					
	Improving green operations/programs	42 (39%)	56 (41%)	77 (48%)	79 (49%)
	Increasing student activity	50 (46%)	73 (53%)	90 (57%)	94 (59%)
	Programs	38 (35%)	52 (38%)	67 (42%)	70 (44%)