



## K-12 STUDENT LEARNING ABOUT BC FORESTS

### 2016 Summary Report

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#### BACKGROUND

The National Forest Week-BC Coalition (*Coalition*) promotes K-12 student learning of BC forests and the forest environment as part of the National Forest Week (NFW) celebrations. We have learned there are a number of other organizations across BC with programs to introduce students to the forest. This is encouraging as the human well-being benefits of exposure to the forest environment are broadly recognized. Also, building this knowledge from an early time in the life of children are life-long influences. It also provides students with an understanding of the importance of BC's forests to the economy, environment and social values forests they provide the citizens of the Province.

Knowing the level of the K-12 student population involvement and the contributions of the various organizations who provide these opportunities will inform all involved of lessons learned regarding how we can progress and improve. In addition, the data has the potential of being helpful to organizations involved in K-12 forest education from the perspective of encouraging sponsorship or internal funding support. These factors were the basis for compiling estimates regarding the number of students participating in programs that focus on learning about BC forests and the forest environment.

#### DATA COLLECTION METHODOLOGY

Organizations known to have K-12 student programs were contacted asking for actual data or estimates of the number of students participating in their 2016 program(s). During the data collection, additional organizations were identified with programs and added to the list of requests. **This data should be considered as a low estimate, as some organizations did not respond and we know there are others not included in the survey.** Over the next few years, the data will be improved upon but the 2016 data provides us with a base to use in improving K-12 student education opportunities.

It was recognized that some organizations keep records of the number of students who participated in their programs while others do not. Where no specific data was available, estimates were requested using the factor of 30 students/class. Students attending forest camps were also included.



## SUMMARY RESULTS

The organizations were categorized based on the focus of the lead organization, specifically:

- Forestry (forest companies, Ministry of Forests, Lands and Natural Resource Operations-MFLNRO, municipal forest operations, community forest licensees, woodlot licensees)
- Forest environment (NGOs, Municipal Parks and Recreation Departments)
- Teacher interest (teacher initiated and led events)
- Public and private school forest related programs

The number of students involved in the 108 participating organizations and event organizers are presented in Table 1.

**Table 1 Distribution and magnitude of student participation**

PROGRAM FOCUS	NUMBER OF PARTICIPATING ORGANIZATIONS/EVENTS	NUMBER OF STUDENTS INVOLVED		TOTALS
		Grades K-7	Grades 8-12	
<b>Forestry</b>				
Classroom lessons delivered across BC	36	1,088		1,088
Vancouver Island & Coastal Mainland	4	374	77	451
Metro Vancouver	2	350	90	440
Southern Interior	5	726	30	756
Central Interior	1	900		900
Northern Interior	7	1,026	6	1,032
Sub-total	55	4,464	203	4,667
<b>Forest environment</b>				
NGO programs delivered across BC	687	2,061		2,061
Metro Vancouver	7	26,842	939	27,781
Southern Interior	1	1,742	34	1,776
Sub-total	8	30,645	973	31,618
<b>Teacher interest</b>				
Metro Vancouver	39	1,178		1,178
Sub-total	39	1,178		1,178
<b>School forest programs</b>				
Vancouver Island & Coastal Mainland	2		87	87
Metro Vancouver	1	120		120
Southern Interior	2		30	30
Northern Interior	1		24	24
Sub-total	6	120	141	261
<b>TOTALS</b>	<b>108</b>	<b>36,407</b>	<b>1,317</b>	<b>37,724</b>



The BC K-12 student enrollment for 2015-2016 (latest data available and used as an approximate for school year 2016-2017) was:

All Grades	629,557 students
Grades K-7	364,943 students
Grades 8-12	264,614 students

## **DISCUSSION**

Although the number of students exposed to learning about BC forests was significant, it represents a small percentage (6%) of the total K-12 student population. Having said this, it should be remembered that the data is not complete and the expectation is more students learned about BC forests than the data indicates. However, even if the database includes only 50% of the total participation, the numbers are still low if the objective is to build forest understanding and a forest culture within the student and BC population.

The following were key points arising from analysis of the data:

- Overall BC student enrollment experiencing BC forests was:
  - Elementary students – 10%,
  - Secondary students – 0.5%, and
  - Total K-12 student enrollment – 6%.
- The majority of students experiencing forests were elementary (97%) and only 3% secondary students.
  - The large drop-off in experiences of students from elementary to secondary Grades is a concern. Teachers have commented that a program of continuing education on a topic such as forestry needs to be consistent with increased detail throughout the school years to acquire a good understanding of the topic.
  - The small secondary student participation was associated with:
    - NGO and Municipal Parks and Recreation programs – 74%,
    - Forestry focused events - 15%, and
    - Forestry classes – 11%.
- Forestry focused events included learning about the forest environment but with a bent toward forest management. No fee was charged for these events.
  - Leaders of these events frequently came from the forest sector (forest companies, MFLNRO and municipal forest operations).
  - Forestry led events were attended by 12% of the total students experiencing BC forests.
  - The majority of the student participation in this category was in the interior with a lesser amount on Vancouver Island and the coastal mainland and a small amount in the Metro Vancouver area.



- Demand for field trips and classroom visits, especially for elementary students, was in excess of available forest volunteer capacity. This mirrors the situation with forest environment focused organizations.
- Forest environment focused events concentrate on learning about the forest environment.
  - NGOs and Municipal Parks and Recreation Department leaders reported there continues to be an over subscription for teachers wanting to take their students into the forest, regardless of whether a fee was charged or not. Limited staff resources, due to budget limitations, was the reason provided for not meeting the demand.
  - The teacher demand for these events suggests it is easier to have a forest related teaching professional lead the field trip compared to doing it themselves.
  - Metro Vancouver NGOs and Municipal Parks and Recreation Departments dominate the programs in getting students into the forest. They accounted for almost 84% of the student participation.
- Teacher generated field trips were low in number but did occur, especially in Metro Vancouver. These involve experienced teachers who see the value of taking students into the forest and feel comfortable doing so on their own or in partnership with another forest teaching organization.
- Even though there is a large amount of forest related teaching material available to teachers, the general preference of teachers appears to be to utilize forest related teaching professionals as leaders of field trips or classroom lessons. However, making teachers aware of the teaching materials is important to provide assistance to those who prefer to conduct their own field trips and classroom lessons. This awareness was and continues to be lacking and contributes to the limitation of students experiencing BC forests.
- There are currently six (6) schools that have forest related classes.
  - One (1) school has a focus on elementary (K-7) environmental education where the whole school of 120 students conduct their education focused on the outdoors.
  - Five (5) schools focus on secondary forestry classes designed for those students who are considering a forest sector career.
    - An additional secondary level class program is being developed for Northern Vancouver Island.
    - Class size ranges from 14-62 students with most in the 14-25 range and have a significant component of outdoor lessons.
    - Many of these school programs have their own woodlots or work in collaboration with a woodlot licensee.



## **LESSONS LEARNED**

- 1) There is a significant amount of effort being expended by a wide range of BC organizations to educate K-12 students about BC forests.
- 2) BC has a great asset in the existence of the large number of organizations providing the service to teachers interested in both educating their students about BC forests and using the forest as a tool in delivering the curriculum. This asset should be supported by all BC organizations that benefit from a well-educated student population regarding BC forests.
- 3) Although the BC K-12 student and teacher resources and services are provided through many rather than one central organization, as in the case of other locations in Canada, the BC model is successful. However, it requires a commitment to collaboration, cooperation and communications, if the current and future needs of teachers and students are to be met.
- 4) Capacity to support the teacher interest in educating their students about forests and forestry is greatly deficient, mainly due to lack of service provider funding.
- 5) Increasing awareness of teachers regarding the available forest related teaching materials has the potential to contribute to the deficiency of resources for forest professional led classroom lessons and field trips.
- 6) The forest sector has, for some time, identified the need for more young workers to enter the workforce. An understanding of the forest, its environment and values to BC are critical to encouraging students to move in this direction. Unfortunately, the data identifies little is being done to continue the education of students regarding forests at the secondary level. This does not bode well for attracting new workers into the Sector.



## **PARTICIPATING ORGANIZATIONS**

<b>Forestry focused</b>
District of Mission Tree Farm Licence
Nakusp and Area Community Forest
National Forest Week-BC Coalition local event organizers
North Cowichan Demonstration Forest
<b>Forest environment focused</b>
Alouette River Management Society
City of North Vancouver
District of North Vancouver-Lynn Valley Centre
Evans Lake Forestry Society
Metro Vancouver Parks & Recreation Department
Northwest Wildlife Preservation Society
Regional District Central Okanagan
Stanley Park Ecology Society
Wild BC
<b>Teacher interest</b>
Metro Vancouver school district teachers-CIF Vancouver Section student program
Mission School District teachers
<b>School forest programs</b>
Alberni District Secondary School
Carihi Secondary School
Charles Bloom Secondary School
Environmental Elementary School
Rutland Senior Secondary School
Nechako Lakes School District