



Annual Report 2016

Photo: Hydro line survey Marble Range, Pavilion-Clinton Road area.



Overview

The Lillooet Regional Invasive Species Society's (LRISS) program continues to focus on two main programs: Outreach & Education and Field Operations. This report outlines our major activities and summarizes our successes in the management of invasive species in the Lillooet region for 2016.



Photo Credits (L to R top to bottom): Common Bugloss & Common Tansy: BC Ministry of Agriculture; Hoary Alyssum: Flicker; Hoary Cress: Joseph M. Ditomaso, University of California - Davis, Bugwood.org

Field Operations

The top 25 invasive plant list issued by the Ministry of Forests, Lands and Natural Resource Operations (MoFLNRO; see Appendix 1 for plant list) was used to prioritize our field work. There was a significant shift in the type of work completed from inventory to survey and treatment. We have completed inventory work on most of the main corridors for the top species. More time was spent reviewing these known sites for changes and treating them. Table 1 shows the target species that are a priority in the Lillooet region and their general locations.

Table 1. Target invasive plants and locations.

Invasive Plant Name	Latin Name	General areas targeted for Field Work
Blueweed	<i>Echium vulgare</i>	Upper McKay FSR (Forest Service Road), West Pavilion FSR, LaRoche FSR, Yalakom FSR
Common Bugloss	<i>Anchusa officinale</i>	Highway 12
Common Tansy	<i>Tanacetum vulgare</i>	Gun Lake Road, Slim Creek FSR, Downton Gravel Pit, Blowdown FSR, West Pavilion FSR
Himalayan Blackberry		Seton Lake, Seton-Shalath, Anderson Lake
Hoary Alyssum	<i>Betseroa incana</i>	West Pavilion Road, Hwy 40, Texas Creek Road, Gun Lake Road, Highline, Mud Lake FSR, Texas Creek FSR, Downton & Tergazhi Gravel pits.
Hoary Cress	<i>Cardaria draba</i>	HWYs 12 & 99N, Pavilion-Clinton Road
Leafy Spurge	<i>Euphorbia esula</i>	Pear Lake - Edge Hills Provincial Park
Orange Hawkweed	<i>Hieracium aurantiacum</i>	HWY 99N, Bridge River Hydro Line, Highline, Texas Creek FSR, Sucker Creek Gravel Pit, Downton FSR, Gott Creek FSR, Blowdown FSR
Spotted Knapweed	<i>Centaurea biebersteinii</i>	HWY 40, Gun Lake Road, Fountain Valley Road, Mud Lake FSR, HWY 99N
Tansy Ragwort	<i>Senecio jacobaea</i>	Yalakom FSR, LaRoche FSR, Texas Creek FSR, Carpenter South FSR, Downton FSR
Knotweed	<i>Fallopia spp.</i>	Tyughton & Seton Lakes
Yellow Flag Iris	<i>Iris pseudacorus</i>	Anderson, Tyughton & Seton Lakes

Table 2 below summarizes the field work completed including the numbers of surveys/treatment and the areas in hectares (ha).

Table 2. Field Data Summary.

Jurisdiction	New IAPP Sites Created	Hectares - New Sites	Sites Surveyed	Sites Surveyed with 0 ha	Biocontrol Surveys	Number of Bioagents found#	Mech Treated Sites	Hectares Treated
MoFLNRO	53	8.1463	163	78	44	229	81	11.1654
MOTI	37	45.1474	92	30	11	58	46	37.9648
BC Hydro	7	0.9544	22	3	0	0	15	0.3992
FWCP-Aquatics	9	0.113	14	1	0	0	19	1.0923
TOTALS	106	55.3611	291	112	55	287	161	50.6217

Over the 4 jurisdictions, LRISS crews created 106 new invasive plant sites and surveyed 291 sites. All of these were entered into MoFLNRO's Invasive Alien Plant Program's (IAPP) database. Surveys are the review of IAPP sites already in the system. It is important to note that of the 291 sites surveyed, 112 (38%) were found to have no invasive plants (0 hectares recorded).

All treatments were mechanical in nature which includes primarily hand pulling and digging. There was 161 sites were treated which equated to over 50 hectares of area. Fifteen species were treated in the Lillooet Region (see Table 3). As with all surveys, the MoFLNRO top 25 plant list was used to prioritize treatment species. A small amount of sites were treated that were not on this list because of local priorities. For example, a Cypress Spurge (*Euphorbia cyparissias*) was treated in Edge Hills Provincial Park because there are only 2 sites of this species known in our region. Table 3 shows the total number of sites in the LRISS region for each species treated for comparison purposes. It is important to note that there was one suspected Tansy Ragwort site treated but the majority of these sites have been surveyed and have been found to be the native species Dryland Ragwort* (*Senecio eremophilus var. eremophilus*).

Table 3. Summary of Number of Sites treated per Species in 2017.

Invasive Plant	Number of Sites Treated	Hectares Treated	Total # of Sites in the LRISS region	MoFLNRO 2016 Priority Ranking
Japanese Knotweed	2	0.0451	3	1
Yellow Flag Iris	17	0.9504	22	7
Tansy Ragwort*	1	0.01	34	10
Common Tansy	15	0.2555	78	14
Spotted Knapweed	26	0.8701	341	15
Blueweed	12	1.318	15	17
Hoary Alyssum	47	1.1745	123	18
Himalayan Blackberry	2	0.097	4	20
Leafy Spurge	1	0.0002	2	22
Hoary Cress	4	0.0022	16	23
Orange Hawkweed	9	6.1192	46	24
Burdock Species	18	39.7754	98	NA
Cypress Spurge	1	0.0012	2	NA
Hound's Tongue	2	0.0011	53	NA

Invasive Plant	Number of Sites Treated	Hectares Treated	Total # of Sites in the LRISS region	MoFLNRO 2016 Priority Ranking
Oxeye Daisy	4	0.0018	118	NA

Burdock species are not usually a priority in the Lillooet region but local stakeholders have elevated its importance for removal. For example, sites were treated in the Fountain Valley by the Xaxli'p Community Forest Crews because this plant is a priority to remove along the road right-of-way. It is very dense in many areas and continues to spread. In addition, the Bridge River Valley residents identified the 5 Mile Ridge area as a priority for Burdock removal. This area has high recreational use and is used for grazing cattle and horses. The Wilderness Stewardship Foundation and Firefighters from the Lillooet Fire zone assisted LRISS crews to remove Burdock over 2.4 ha of roadside on 5 Mile Ridge.



Spotted Knapweed, Blueweed & Orange Hawkweed. All photos taken by Jacquie Rasmussen

Aquatic Invasive Species

LRISS, with the BC Hydro Fish and Wildlife Compensation Program (FWCP) grant, has completed the second year of an Aquatic Invasives Project. The Aquatic Invasive Strategy & Action Plan for the LRISS region is the guiding document for this project. Aquatic invasive species have been detected in the LRISS region and they have the potential to take over shorelines of lakes and creeks. Invasives, like Yellow Flag Iris, can create monocultures along riparian areas that displace native plants and degrade fish and wildlife habitat. This project concentrated on Yellow Flag Iris, Japanese Knotweed and Himalayan Blackberry removal. There was also an inventory and outreach component.

In total, 19 sites were treated. This includes 1.0923 ha of area. Over 7,000 kilograms (kg) of plant matter was taken to the Lillooet Landfill for disposal. The material from

Tyaughton Lake alone was a dump truck load that weighed 6,360 kg. Yellow Flag Iris has a dense mat with tubers that are normally waterlogged and this added to the weight of the material.

Treatment was mechanical in nature and primarily consisted of hand digging of infestations. An excavator was used on one site on Tyaughton Lake. Permits and permissions from private landowners, Ministry of Environment and the Squamish Lillooet Regional District were obtained for all removal work. Our partnership with the Tsal'alh and our LRISS crew member Brad Oleman made it possible to hire 3 other crew members to assist with the hard labour of removing these species from important shoreline ecosystems.

As a result of our fieldwork, we did find 9 new invasive sites. Eight of these sites were Yellow Flag Iris and one was Himalayan Blackberry. Seven of these sites were treated and this work is described in the treatment section. Only 4 new Yellow Flag Iris sites were detected as a result of our inventory of Anderson Lake and Tyaughton Creek. The largest sites included the Himalayan Blackberry found on the west side Seton Lake that had spread from private/Reserve land and a Yellow Flag Iris site on Tyaughton Creek (319048). This site has a large footprint but contains only 2 patches that will be treated in 2017.

A report was produced for the FWCP that contains all of our results with more detailed information and recommendations.

Outreach & Education

LRISS was able to reach over 70,000 with the outreach and education program.

Table 5 gives an overview of our activities in four different categories. Appendix 2 shows our activities in more detail.

Photo: Example of bootbrush signs for installation at trail heads to the South Chilcotin Mountains Park.

GIVE INVASIVE SPECIES THE BRUSH OFF

Help Prevent The Spread Of Invasive Plants And Animals

- REMOVE** plants, animals & mud from boots, gear, pets & vehicle
- CLEAN** your gear before entering & leaving the recreation site
- STAY** on designated roads & trails
- USE CERTIFIED** or local firewood & hay

 www.lriiss.ca
 
BC Parks Enhancement Fund PlayCleanGo.org



Table 5. Total number of Outreach types completed by LRISS in 2016-17.

Communications-Media	Presentation-Events	Publications	Workshops
11	16	4	4

The communications-media category included articles in community newsletters, news features and social media. In the months of May through to October, LRISS submitted articles to the Mountain Telegraph and St’at’imc Community newsletters. Topics included: Know what you grow, Integrated Pest Management, Impacts to Wildlife, Outdoor Recreation and Invasive Mussels. LRISS is most active on Facebook but also has a Twitter, Pinterest and Instagram account. We follow many other invasive species organizations and re-post news articles and invasives information. We also place 4 features in the local Bridge River Lillooet News to highlight invasive species and raise the awareness of our society.

LRISS attends many local events in addition to giving presentations. Many of these events are annual but the Gold Country Geocaching Event was new to our region this year. Walking with the Smolts, a local children’s event, had the most amount of participants. LRISS took advantage of the ***Don’t Let it Loose (ISCBC)*** program to tell children that pets can become invasive if they are “set free” in the wild. Our display featured live baby bunnies and red eared slider turtles.

Publications give us the most amount of reach and target tourism. We focus on the Play,Clean,Go messages and advertise in the Lillooet and Gold Country tourism guides. Our region offers many outdoor activities that can be potential vectors that can spread invasives. We are often described as the “backyard” of the Lower Mainland (Greater Vancouver-Fraser Valley) because so many people travel here to motor bike, mountain bike, hike, boat and fish. The Play,Clean,Go messages target all types of outdoor activities and the tourism guides offer information about businesses and recreation to locals and tourists alike.

LRISS was involved in three workshops this year: our Annual General Meeting workshops, a Youth Outdoor camp and an Agriculture & Invasives workshop.

Partnerships

LRISS continues to build partnerships as one of the highest priorities for the entire program. In 2016, partnerships played an integral role in projects completed by LRISS. The following projects had key partnerships that contributed to the overall success of our program.

Project: Outreach in the Bridge River Valley

Partners: Bridge River Valley Community Association

Funders: Squamish Lillooet Regional District - Area A.

LRISS partnered with the Bridge River Valley Community Association (BRVCA) to deliver our outreach and education program in the Bridge River Valley. LRISS held a training session for the BRVCA staff that included invasive species identification and the key

messages for the outreach programs that LRISS delivers. The BRVCA runs a tourist hub at local historic site called the Haylmore Site. At this site, the staff meets with locals and the public to give them information about local activities. They stocked invasives information booklets and brochures and a Play,Clean,Go Sign was installed at the building site. The main premise for this project is to use the BRVCA staff to extend the reach and consistency of the LRISS outreach program because they are in a remote are of our region. Any detailed questions or expertise that would be needed regarding invasives could be referred to LRISS to provide.

Photo: LRISS Outreach & Field Technician Marianne Gagnon at Haylmore Site in Gold Bridge, BC.



Project: Invasive Plant Survey & Removal

Partners: Xaxli'p Community Forest Corporation

Funders: Ministry of Transportation and Infrastructure

The Ministry Transportation and Infrastructure (MOTI) funded the Xaxli'p Community Forestry Crews to survey and remove invasives from the Fountain Road right-of-way. Robin Strong is their Executive Director and worked with LRISS as a Field Technician for two years. This is the third year that LRISS has partnered with Xaxli'p. The crews were trained two field seasons in a row to identify and survey (using IAPP procedures). The Xaxli'p Community Forest also developed an invasive strategy that was incorporated into their official land use plan. The over-arching goal of the community is to manage invasives independently. This project funded by MOTI is progress toward this goal.

Financial Summary

LRISS secured approximately \$113,484 for our program this year. This is the most amount of funding that we have received in a fiscal year to date. There were 12 different funders and the revenue from each is shown in Table 6 below. Each year LRISS applies for grants to operate our program. MoFLNRO, MOTI, BC Hydro, SLRD, BC Gaming and SGS are annual contributors. This funding has been relatively stable, however, we do need to apply each year for the funds. LRISS continually searches for new funding especially for outreach and education.

Table 6. Overview of LRISS Primary Funders 2016-17

Source of Revenue	Amount
MoFLNRO - Coordination and Awareness	\$15,500
MoFLNRO - Operations	\$26,000
Ministry of Transportation and Infrastructure (MOTI)	\$17,000
Squamish Lillooet Regional District – Area A	\$3,250
Squamish Lillooet Regional District – Area B	\$5,500
St’at’imc Government Services	\$2,500
BC Hydro	\$5,000
BC Hydro Fish and Wildlife Compensation Program	\$18,495
Park Enhancement Fund	\$3,652
BC Gaming Community Grant	\$11,618
Lillooet Naturalists	\$500
Rural Dividend Fund	\$337
Xaxli’p Community Forest	\$1,500
Revenue from Deferred Income	\$2,632
TOTAL	\$113,484

Our fiscal year starts annually on April 1 and runs until March 31. All expenditures are tracked using Sage Accounting program. Annual work plans are created using budgets for each funder and Sage tracks our expenses for each funder over a number of categories. In Appendix 3, the Income report for this fiscal shows all of the accounts, revenue and expenses tracked for the 2016-2017 fiscal year. LRISS receive 150 hours of in-kind volunteer hours which are estimated to be worth just over \$12,000.

In Chart 1, it shows the summary of revenue and sources that LRISS received in the 2017-17 fiscal year. In Chart 2, the expenditures for the 2016-2017 have been summarized into categories according to the Income statement provided in Appendix 3.

Chart 1. Summary of 2016-17 Revenue (% of total revenue)

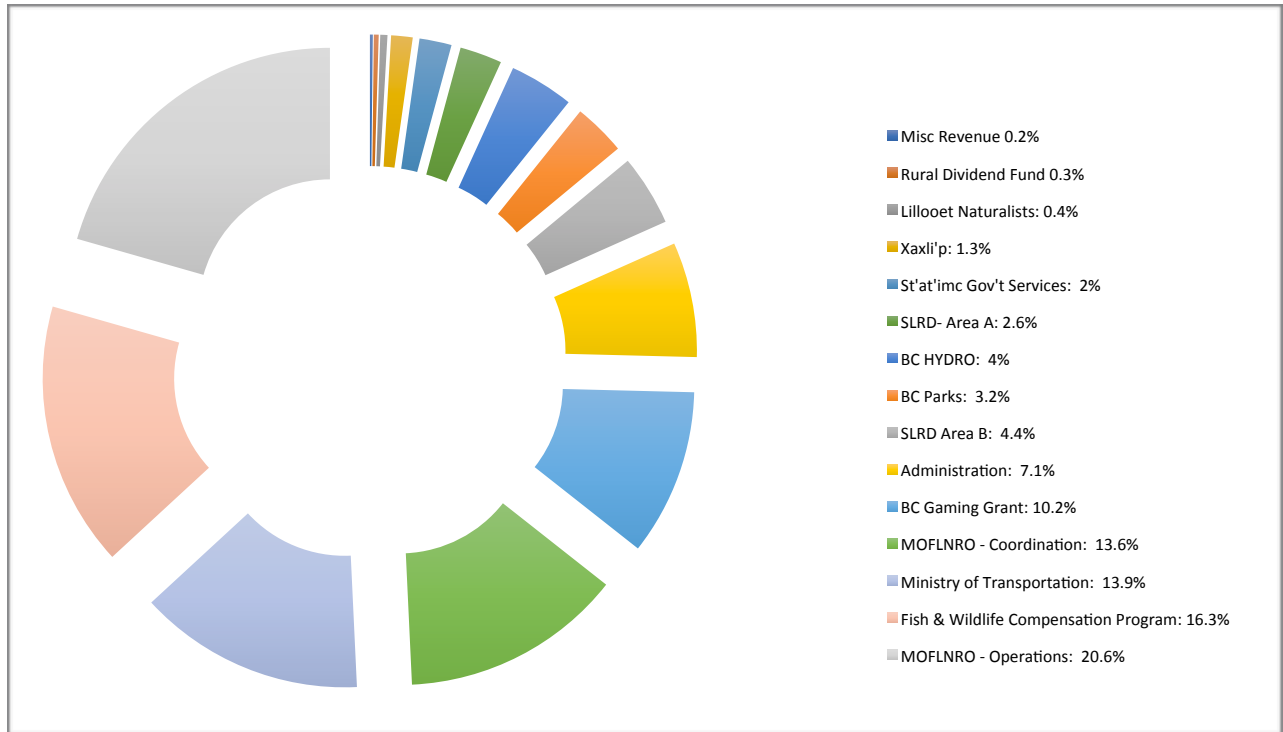
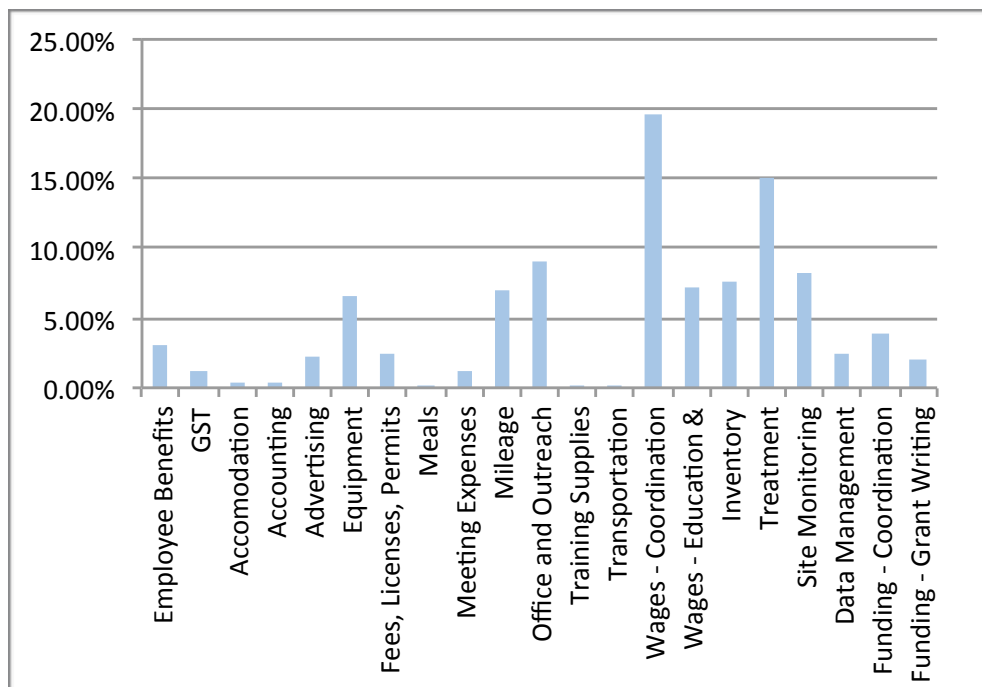


Chart 2: Summary of Expenses 2016-17 Fiscal Year (% of total expenses)



Acknowledgements

The LRISS Board of Directors is ultimately responsible for all of the operations and direction of our organization. The majority of their participation is on a volunteer basis. Our Board includes:

Sue Senger, Chair
Ken Wright, Vice-chair
Bill Spencer, Treasurer-Secretary
Gerald Michel, Director
Mandi Rogers, Director
Matt Manual, Director
Jennifer Keir, Director
Jolene Rendolic, Director

LRISS would like to thank the following organizations for their partnership, funding and/or in-kind contributions to our program. It is extremely important to the success of our overall program that we have these contributions.

Our Funders:

Ministry of Forests, Lands and Natural Resource Operations
Ministry of Transportation and Infrastructure
Squamish Lillooet Regional District
Lillooet Naturalist Society
St'at'imc Government Services
Fish and Wildlife Restoration Program
BC Hydro
BC Parks- Park Enhancement Fund
BC Gaming

In-Kind Contributors:

Lillooet Library Association
Wilderness Stewardship Society - Burdock removal on Five Mile Ridge
Lillooet Fire Zone Crews - Burdock removal on Five Mile Ridge
District of Lillooet

Appendix 1

MoFLNRO BC's Top 25 List of Invasive Plants

Invasive Plant Species	Provincial Rank (2017)
Bohemian knotweed	1
Giant knotweed	1
Japanese knotweed	1
Giant hogweed	2
Marsh plume thistle	3
Wild chervil	4
Himalayan knotweed	5
Garlic mustard	6
Common tansy	7
Rush skeletonweed	8
Yellow flag iris	9
Common bugloss	10
Blueweed	11
Tansy ragwort	12
Field scabious	13
Puncturevine	14
Spotted knapweed	15
Scotch broom	16
Hoary alyssum	17
Policeman's helmet/himalayan balsam	18
Himalayan blackberry	19
Teasel	20
Leafy spurge	21
Hoary cress	22
Orange hawkweed	23
Whiplash hawkweed	23
Tall Yellow Hawkweeds	24
Yellow archangel	25

Appendix 2.

Outreach and Education List 2016-2017

Date	Event	Approximate Reach	Category
01-Apr-16	April Article Mountain Telegraph: Play,Clean,Go; Know what you grow.	185	Communications/Media
01-May-16	May Article on Gardening & Invasives: Local FN newsletter and Mountain Telegraph	1045	Communications/Media
01-Jun-16	June Article in local FN Community newsletters on Integrated Pest Management	645	Communications/Media
01-Jul-16	Article for Mountain Telegraph and FN Newsletters on Play,Clean,Go & recreation	1345	Communications/Media
01-Aug-16	August LRISS Newsletter: Blueweed	1370	Communications/Media
01-Sep-16	September LRISS Newsletter: Impacts to Wildlife	935	Communications/Media
01-Oct-16	October Mountain Telegraph Article: Update on Field work completed in the Bridge River Valley region	185	Communications/Media
15-Jan-17	January_17 Mountain Telegraph Article: Invasive Mussels	185	Communications/Media
01-Mar-17	March Mountain Telegraph article: Seedy Saturday and Invasives hiding in your seed.	185	Communications/Media
August	Bridge River Lillooet News Features (4 in August)	1900	Communications/Media
Summer 2016	Bridge River Community Bus Sign	100	Communications/Media
Ongoing	Social Media posting ~100 posts	1000	Communications/Media
25-May-16	Bralorne Mine Invasives Presentation	3	Presentations/Event
29-May-16	Walking with the Smolts	282	Presentations/Event
05-Jun-16	Gold Bridge Presentation: Tyax Adventure Staff, Chilcotin Holidays and Local Residents	40	Presentations/Event
01-Jul-16	Farmer's Market Display Canada Day	19	Presentations/Event
23-Jul-16	Farmer's Market Display Apricot Festival	25	Presentations/Event
31-Jul-16	Haylmore Wine and Cheese Event	29	Presentations/Event
07-Aug-16	Park Enhancement Fund Marble Canyon Weed Pull	12	Presentations/Event
07-Aug-16	Lion's Fishing Derby	50	Presentations/Event
21-Aug-16	Bridge River Summer Festival	11	Presentations/Event
26-Aug-16	Farmer's Market Display	26	Presentations/Event
02-Sep-16	Gold Country Geocaching Event	100	Presentations/Event
19-Oct-16	Park Enhancement Fund Ts'kw'aylaxw Event	12	Presentations/Event
04-Nov-16	Lillooet Livestock Association meeting	10	Presentations/Event
22-Jan-17	Lillooet's Alive Event	50	Presentations/Event
29-Jan-17	Lillooet Naturalist Society AGM	40	Presentations/Event
03-Mar-17	Lillooet Real Estate Agents	5	Presentations/Event
11-Mar-17	Seedy Saturday	126	Presentations/Event
July 25-28	Committees Operational Field Tour and Speakers	NA	Professional Development
June	Lillooet Tourism Guide	20,000	Publication
Spring 2016	Bridge River Tourism Guide Ad	3000	Publication
Spring 2016	Gold Country Tourism Guide Ad	39000	Publication
Spring 2016	Gold Country Website Ad	50	Publication
04-May-16	LRISS AGM and Speakers	25	Workshop
15-Jul-16	Bridge River Valley Community Association Training	6	Workshop
07-Oct-16	Youth Outdoor Camp Workshop	25	Workshop
16-Nov-16	Lillooet Agriculture & Food Society Invasives Workshop	5	Workshop
	Total Reach	72031	

Appendix 3

Financial Statements for LRISS 2016_17 Fiscal Year

Lillooet Regional Invasive Species Society Balance Sheet As at 31/03/2017

ASSET

Current Assets

Gaming Equity Shares	5.83	
Gaming Bank Account	8,566.36	
Chequing Equity Shares	6.02	
Chequing Bank Account	<u>21,061.30</u>	
TOTAL CASH		29,639.51
Accounts Receivable	<u>648.58</u>	
TOTAL RECEIVABLES		<u>648.58</u>
Total Current Assets		<u><u>30,288.09</u></u>
TOTAL ASSET		<u><u>30,288.09</u></u>

LIABILITY

Current Liabilities

Retained Earnings	20,050.63	
Accounts Payable	6,548.66	
WCB Payable	<u>1.67</u>	
Total Current Liabilities		<u><u>26,600.96</u></u>
TOTAL LIABILITY		<u><u>26,600.96</u></u>

EQUITY

Retained Earnings

Retained Earnings - Previous Year	506.85	
Current Earnings	<u>3,180.28</u>	
Total Retained Earnings		<u><u>3,687.13</u></u>
TOTAL EQUITY		<u><u>3,687.13</u></u>

LIABILITIES AND EQUITY		<u><u>30,288.09</u></u>
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Generated On: 25/04/2017

Lillooet Regional Invasive Species Society Income Statement 01/04/2016 to 31/03/2017

REVENUE

Revenue from Funding

ADMIN 10%	8,030.23
MOFLNRO - COORDINATION	15,500.00
MOFLNRO - OPERATIONS	23,400.00
MOTI	15,800.00
HYDRO	4,500.00
Rural Dividend	337.83
SLRD- Area A	2,950.00
SLRD Area B	4,950.00
St'at'imc Gov't Services	2,250.00
BC Gaming Grant	11,618.39
Naturalists	500.00
PARKS	3,652.42
FWCP	18,495.80
XAXLI'P	1,500.00
Net Funding Revenue	113,484.67

Other Revenue

Bank Interest Revenue	13.09
Miscellaneous Revenue	189.58
Total Other Revenue	202.67

TOTAL REVENUE 113,687.34

EXPENSE

Operating Expenses

EI Expense	843.46
CPP Expense	1,302.45
WCB Expense	105.10
GST Expense	1,307.95
Vac Expense	1,198.72
Accommodation	318.54
Accounting	473.35
Advertising	2,437.60
Equipment	7,199.23
Fees, Licenses, Permits	2,795.81
Meals	260.00
Meeting Expenses	1,290.03
Mileage - kms	7,798.10
Office and Outreach	9,969.36
Training	20.80
Transportation	61.56
TOTAL EXPENSES	32,624.38
Total Operating Expenses	37,382.06

Contract Wages

Communication	4,267.00
Coordination - Meeting	7,496.25
Coordination - Planning	9,805.75
Education & Awareness	7,877.50
Inventory	8,425.25
Treatment	16,610.00
Monitor	9,133.50
Data	2,766.50
Funding - Coordination	4,400.25
Funding - Grants	2,343.00
Wages - SubTotal	73,125.00
Total Contract Wages	73,125.00

TOTAL EXPENSE 110,507.06

NET INCOME 3,180.28

Generated On: 25/04/2017

LRISS In-Kind Contributions Summary 2016-17

Volunteer or Organization	Activity	Estimated number of hours	Estimated Value
Board Members 5	April 8 Board Meeting	2.5	\$312.50
Board Members 5	AGM	5	\$625.00
Board Members 5	May 4 Board Meeting	1.5	\$187.50
Board Members 6	Sept 22 Board Meeting	4	\$600.00
Treasurer	Finances	40	\$1,000.00
Chair	Board Business	40	\$3,000.00
NA	Room rental for 3 meetings	0	\$450.00
Bridge River Valley Community Association Staff	Outreach at Haylmore Site for 5 months	15	\$375.00
Lillooet Fire Zone Crews 4	Burdock pull - 5 Mile Ridge	10	\$1,000.00
Wilderness Stewardship Foundation	Burdock pull - 5 Mile Ridge	32	\$4,800.00
TOTALS		150	\$12,350.00