



2013 Annual Report

February 27, 2014

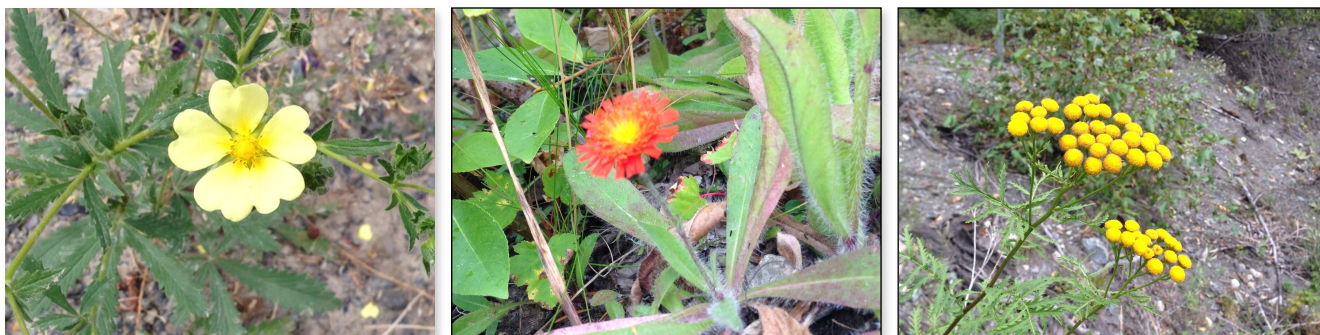


Introduction

The Lillooet Regional Invasive Species Society's (LRISS) main program areas include Field work, Education & Outreach, Data Management, Funding, and Coordination.

Field Work 2013

Our 2013 field season was our second year of invasive plant survey and inventory. Watersheds were prioritized for survey/inventory based on gaps in information as well as species found in our 2012 field season and the Ministry of Forests, Lands & Natural Resource Operation's (MoFLNRO) Invasive Alien Plant Program's database. Our main target was to



cover as much ground as possible to detect any MoFLNRO Early Detection, Rapid Response species (please refer to attached list) as well as any of LRISS's top priority species including those found in the photos above (L-R: Sulphur Cinquefoil, Orange Hawkweed, Common Tansy). The ranking of invasive plant species can be found attached at the end of this document.

We covered 358.02 kilometres (km) of road in the 2013 field season. The total hectares surveyed were 297.243. A total of 285 new sites were entered into IAPP including new invasive species sites, monitored sites and mechanical treatment. Table 1.0 gives a summary of the 2013 field data and the general watershed names where we did the work.

Five of the Ministry of Transportation and Infrastructure's (MOTI) gravel pits were also inventoried. They included Bryce, Gun Creek, Sucker, Terazaghi and Tyax. The gravel pits were surveyed for invasive plant species on the gravel pit features. These features included access roads, buildings/structures, product stock piles, spoil piles, quarry extraction areas, vehicle parking, storage areas, pit edge and pit internal areas. Due to the very nature of the operations in gravel pits, invasive plants can readily establish on these features because of the

Table 1.0: 2013 Field Data Summary

Watershed	Hectares	Total Kilometers	Jurisdiction - Primary	Jurisdiction - Secondary	IAPP Sites Created	Mech Treated Sites	Sites Monitored
Gun Creek Rec Site	2.5	0	Hydro		5	3	0
Seton Canal Corridor	9.3062	11.01	Hydro		30	4	0
Seton Lake	1	0	Hydro	First Nations	2	2	0
Ama Creek	16.9224	15.61	MoFLNRO		4	0	0
Blue Hill	6.8847	3.59	MoFLNRO		11	2	0
Camoo	32.7832	22.666	MoFLNRO		13	8	0
Downton	15.6177	21	MoFLNRO		23	7	1
Gott Creek	1.3311	8	MoFLNRO		2	2	3
Junction	4.2676	8.25	MoFLNRO		6	2	0
Kirby Flats	0.6427	8.66	MoFLNRO		10	0	1
Lac LaMare Left Fork	2.7107	2.67	MoFLNRO		4	1	0
LaRochelle	18.1574	33.57	MoFLNRO		34	17	0
Lee	0.1717	17.5	MoFLNRO		11	3	1
Leon	3.5063	20.5	MoFLNRO		5	3	0
Slim	5.1243	28.725	MoFLNRO	Parks	4	1	1
Tiffin	3.0047	21.5	MoFLNRO		3	0	0
Upper McKay	5.3437	15	MoFLNRO		5	2	0
Verbenkov	4.8439	11.4	MoFLNRO		7	7	0
West Pavilion	0.1631	0	MoFLNRO		0	2	4
Wick Creek	5.5031	5.451	MoFLNRO		11	5	0
Fountain	73.3083	27.9	MOTI		0	0	0
GP Bryce	1.5	0	MOTI		3	0	0
GP Gun Creek	2.48	0	MOTI		3	0	0
GP Sucker	2.1	0	MOTI		5	0	0
GP Terazaghi	6.03	0	MOTI		1	0	0
GP Tyax	1.89	0	MOTI		1	0	0
Highway 12	12.996	28.4	MOTI		0	0	0
Highway 99	57.1542	46.6	MOTI		0	0	0
TOTALS	297.243	358.002			203	71	11

high frequency of disturbance. The movement of material out of the pit can also cause the spread of invasives to other areas.

On areas where BC Hydro had jurisdiction, LRISS focussed on the Seton River corridor that includes the Seton Lake Hydro Campsite as well as the Gun Creek Hydro Recreation Site on Highway 40. These areas are not only high value recreational and camping sites but the Seton corridor has been highly disturbed and contains a variety of linear vectors including Highway 99 (the main highway between Lillooet and Whistler).

Species of Concern

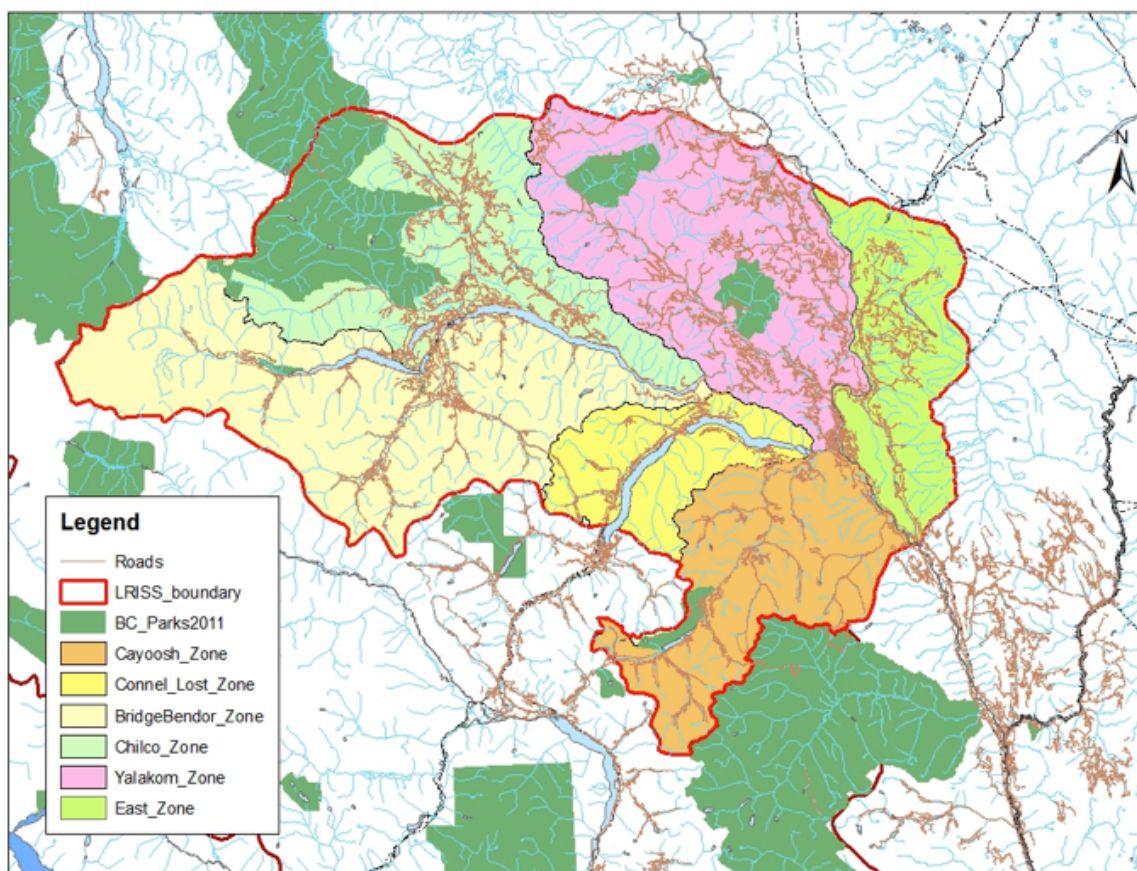
Table 2.0 lists the species of concern by management unit for LRISS's interest area. This is based on inventory data in IAPP and collected in the 2012 and 2013 field seasons. It will

guide us for future treatment and management options. Map 1.0 shows LRISS's area of interest and the management unit boundaries.

Table 2.0: Species of Concern by Management Area

Management Zone	Primary Species	Secondary	Tertiary
Bridge Bendor	Yellow Toadflax	Orange Hawkweed	Scentless Chamomile
Cayoosh	Yellow Flag Iris	Hoary Alyssum	Orange Hawkweed
Chilco	Yellow Toadflax	Common Tansy	Hound's Tongue
Connel-Lost	Japanese Knotweed	Tansy Ragwort	Orange Hawkweed
East	Blueweed	Leafy Spurge	Hoary Cress
Yalakom	Blueweed	Orange Hawkweed	Tansy Ragwort

Map 1.0: LRISS's Area of Interest and Management Unit Boundaries



Invasive Plant Treatment

Treatment of specific infestations was limited to mechanical treatment. We concentrated on covering gaps in our area of interest for inventory and targeting a few high priority sites from 2012 for treatment. We treated isolated patches of high priority species as well. Overall we treated 0.9829 of a hectare. The number of treatment sites entered into IAPP totalled 71.

There are sites where the LRISS board of directors would like to consider the use of chemicals as a treatment option. The LRISS Board has honoured the St'at'imc Chief's Council memorandum on the use of herbicides. In order to use herbicides, each case must be presented to the Chief's council for consideration. LRISS plans to present to the St'at'imc Chiefs' Council in order to treat a few isolated and high priority sites. These sites cannot be treated effectively using mechanical treatment and a small amount of herbicides would likely eradicate these infestations.

LRISS did treat a Japanese Knotweed site on the west beach of Seton lake near the private cabins. Due to the location of the infestation, the only treatment that was available at this time was mechanical treatment. We cut down 2 patches while they were flowering. The literature did indicate that this was the best time to cut because the roots would have less reserves to send up new shoots.

Invasive Species

LRISS acknowledges other invasive species that have the potential to invade our region. The coordinators have sought out information from the experts in their field on many species in order to assess the risk of invasion and a better understanding of the species habitat and impacts. Species that we are currently focussed on include European Fire Ants (*Myrmica rubra*), Eastern Grey Squirrel (*Sciurus carolinensis*), agriculture invasive insects & disease, invasive fish, Zebra Mussels and Quagga Mussels.

It is our understanding that none of these species have yet to be found in our region. We will continue to include them in our outreach & education programming and monitor their locations to assess the risk of infestation to our region. European Fire Ants have been found in Naramata, BC this past year and Eastern Grey Squirrel are found in the Sea to Sky corridor. Invasive mussels have yet to be found in BC but recently they were confirmed in Lake Manitoba so they are moving west from the Great Lakes systems. More concerning is the movement of boats from the south across the border that could be contaminated by mussels.

In efforts to be proactive in the prevention of the establishment of these invasive mussels and other aquatic invasives, the BC Government updated the Controlled Alien Species Regulations under the Wildlife Act. The focus of the new regulations is on aquatic species that “pose a risk to property, wildlife or wildlife habitat” (refer to <http://www.env.gov.bc.ca/fw/wildlifeactreview/cas/>). These regulations allow Conservation Officers to stop, inspect and seize equipment and species that are illegal to possess including dead or alive Zebra, Quagga and Conrad False mussels. There are fines for possession ranging from \$2,500 to \$250,000 and possible jail time. The updates have shown that the BC Government understand the serious threat that these invasive species pose.

The photos below include (left to right), the Eastern Grey Squirrel (source: oldislandpestcontrol), the European Fire Ant, Zebra Mussel on top and below the Quagga Mussel (source: nas.er.usgs.gov).



Education and Outreach

LRISS focused on presentations, training, advertising and community events. The majority of our outreach was driven by requests from local community groups and First Nations. In Lillooet, there are many organizations and groups that have been involved with invasive species management for many years. There is also no shortage of community events and programs in which LRISS can participate in order to reach a wide variety of audiences and individuals. The LRISS coordinators also participated in educational forums to stay abreast of current invasive species management research and knowledge. Table 3.0 lists the outreach and education that was completed in the 2013-2014 fiscal year and the approximate number of people reached as a result.

LRISS also launched our website in early 2013 that links to our social media including Facebook, Twitter and Pinterest. We acknowledge the power of social media to connect with people about our messages of prevention, management and restoration. Our Facebook page

has 85 likes and we reached we had over 500 views of our 60 posts throughout the year. On Twitter, we posted 40 tweets and are followed by 43 people or organizations. Our Pinterest account is relatively new but it has the potential to share photos and ideas with like organizations and share our message with individual followers.

Data Management

Data management consisted primarily of the review and input of data in MoFLNRO's Invasive Alien Plant Program. It includes invasive plant sites, biocontrol release sites as well as treatment of sites (chemical, biological or mechanical). This data can be queried by site or by species for a specific geographical region. It also has an accompanying map view program that allows you to see where the sites are located in British Columbia and within the LRISS boundaries.

As mentioned above in the Field Work section, 285 sites were entered in total for the 2013 field season. Of these sites, 203 were operational inventory sites, 11 were monitoring surveys and 71 were mechanical treatment sites.

Data collection took a different form this year with the purchase of an iPad. In efforts to collect data using digital means and use less paper, we purchased an application called GIS Kit to collect data and take photos. It was very successful and made data summary very efficient. We still, however, used paper IAPP forms and had to enter them individually.

Research in cooperation with other Regional Committees, have lead us to upgrade to GIS KitPro which will allow us to collect all of the IAPP data digitally as well as upload shape and raster files to an open source Geographical Information System called QGIS. QGIS will allow us to make maps and analyse data with the same capabilities as ARC GIS but for no cost at all (ARC costs \$2800 initially and has a \$1000 annual upgrade fee). These capabilities will not only save us money and time (less time for data entry) but the mapping capabilities will enhance our management decisions and education program.

Funding

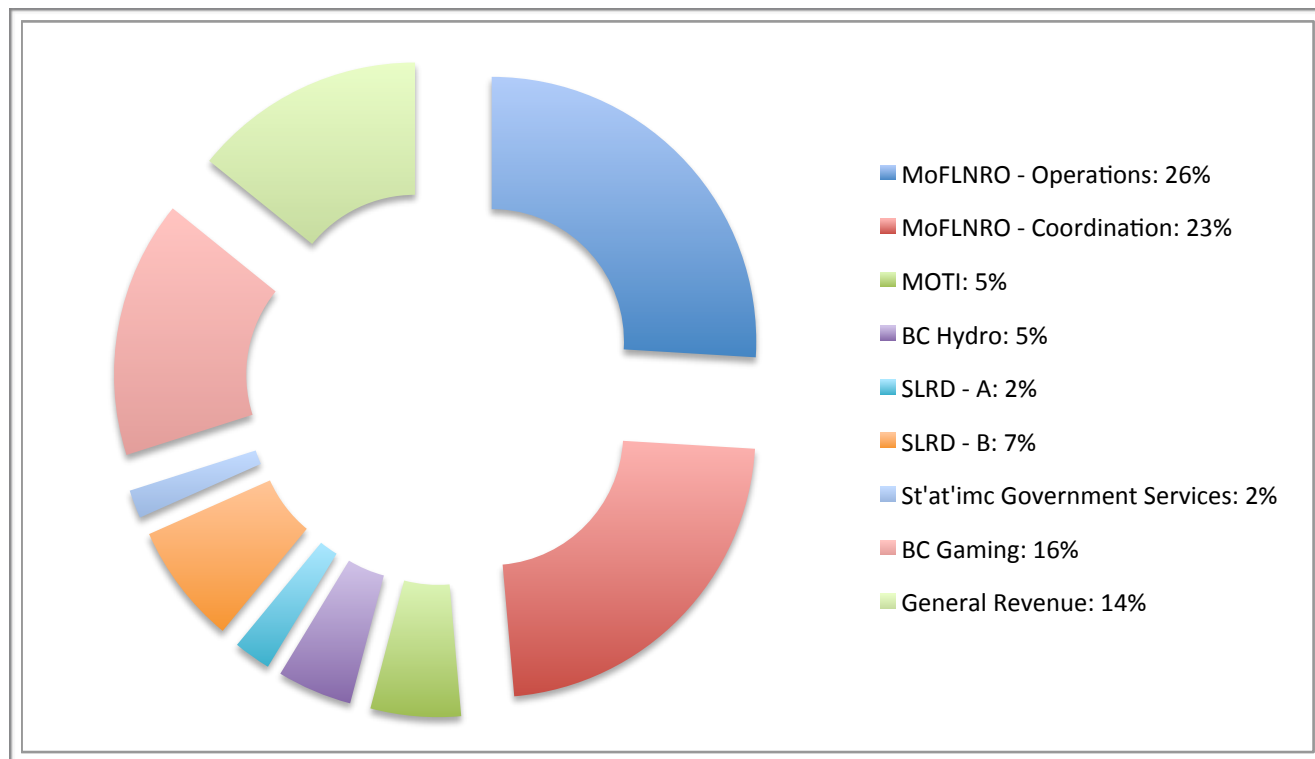
Under the program heading "Funding," this includes all activities related to the management of funds and acquisition of funds. This year we have hired a book keeper that has starting tracking all of our finances in Sage Accounting program. This system has already proven its worth for tracking expeditors, budgeting and reporting.

Table 3.0: Education & Outreach Events 2013-2014

Date	Name	Participants or Reach
30-Apr-13	District of Lillooet Staff Presentation	6
May 30-31, 2013	Walking with the Smolts	300
15-Jun-13	Lillooet Garden Tour	100
24-Jun-13	Delegation presentation to Squamish-Lillooet Regional District	10
27-Jun-13	Training presentation to St'at'imc Government Services Staff and Heritage Crews	8
28-Jul-13	Training Presentation to District of Lillooet works staff	10
Jul-13	Display features at the Lillooet Library	1607
03-Aug-13	Bridge River Days display – Bralorne, BC	75
11-Aug-13	Lion's Fishing Derby, Pavilion Lake	50
18-Aug-13	Salmon in Canyon Community Event	125
01-Sep-13	Gun Lake Rage Payer's Meeting - presentation	20
22-Oct-13	Weed pull and education event for George M. Murray	90
23-Oct-13	Invasive Plant training in cooperation with Livestock Depredation course	10
01-Nov-13	Lillooet Livestock Meeting – update presentation	10
10-Jan-14	Thompson Rivers University Horticulture Program: Training Presentation	8
12-Jan-14	Lillooet Naturalist AGM	30
01-Mar-14	Seedy Saturday	125
14-Jun-13	LRIS AGM & Speakers	23
2013	Lillooet Tourism Guide Ad (distribution)	20,000
Aug-13	Local Paper Invasive Features	1900
Feb-14	Seedy Saturday Postcards	1200
11-Oct-13	Select Standing Committee on Governance & Finance submission.	10
2013-2014	Facebook Page: 85 likes. 60 posts	500
2013-2014	Twitter Feed: Following 87. Followers 43.	40
Estimated Total Number of Participants or those Reached		24371

LRISS secured \$63,000 of funding from the Ministry of Forests, Lands, and Natural Resources Operations, Ministry of Transportation and Infrastructure, BC Hydro, Squamish Lillooet Regional District - Area A and B, St'at'imc Government Services and BC Gaming. Chart 1.0 shows expenditures by percentage by funder that also reflects the amount of funding given by each of the funders.

Chart 1.0: Percentage of Total Expenditures by Funder



Coordination

An essential program component for LRISS is coordination. The coordinators were responsible for this exclusively and included all of the communications, networking and administrative duties. It is the coordinators' responsibility to keep the LRISS board informed of not only the local workplan, but of regional and provincial initiatives. Every month, there is a conference call for all of the coordinators in the province. Participation in these calls allows the coordinators to learn about other regions and their programs. Representatives from the Invasive Species Council of BC and MoFLNRO also give updates on these calls.

Partnership development, work plan and budget development, communication (website & social media, for example) and networking with all levels of government is all parts of coordination. Table 4.0 summarizes the activities that the coordinators complete under this program heading.

Table 4.0: Coordination Activities

Workplan Development	Budget Development
Presentation Preparation	Partnership Development
Board Meeting Coordination	Strategy Development
Participation in meetings: MoFLNRO, Livestock, adjacent Weed Committees, Local Gov't, Weed Committee Working Group	Communications (Social Media included)
Board Meeting Coordination	Display Development & Creation
Stakeholder Communication/ Networking	Referral response (eg. Forest Management Plans)
Invasive Species Information Research	Treatment Options Research
Management of Supply Inventory	Funding Research / Acquisition
Report to Funders	Website Development
Equipment/Supply Purchase	Display Development & Creation

Equipment

Equipment was purchased for our field operations in this fiscal year. Another Ipad was acquired so that two field crews could work at the same time. Other resources purchased to increase our options for invasive plant treatment including: Stihl trimmer with brush blade and gas can, a backpack sprayer, in addition to a Tiger torch (and propane tank). Safety equipment was also purchased including: Wildfire backpack pump, hard hat with hearing protection, safety vest, traffic cones, strobe light for truck, and surveyor at work highway sign. The cones, strobe light and sign was necessary to survey on highways in accordance with safe procedures as required by our Ministry of Transportation and Infrastructure contract.

Ongoing Projects

Bridge River Valley Partnerships: LRISS is currently working with several groups in the Bridge River Valley and Squamish Lillooet Regional District Area A representative, Debbie Demare regarding invasives. The Gun Lake Rate Payers are very interested in having an invasives committee and is seeking LRISS's assistance to set up and support the committee. The Wilderness Stewardship Foundation has also shown interest in helping to inventory and manage invasives in the region. LRISS is currently working with Debbie Demare and the Bridge River Valley Community Association on "Pitch-in Week" event that will include an LRISS display and staff time for a community clean-up that will include invasives.

Xaxli'p Community Forest Training Pilot: LRISS is working with Andra Forney to develop a pilot for invasive species training (including field portion). The short term goal is to train the Community Forest technicians to inventory their area for invasives and ultimately develop a management plan. LRISS sees this as an opportunity to train other First Nations' technicians to build capacity within their own community. Partnerships with the communities will build employment opportunities and expand operations within our region.

Regional Committee Partnerships: LRISS actively participates on monthly calls and networking with other regional committees. We are currently partnering with the Southern Interior Weed management Committee and the Okanagan and Similkameen Invasive Species Society in the development and print of a regional invasive plant guide. It will hopefully be out this summer.

LRISS is also participating in discussions with Regional Committees and the Invasive Species Council of BC to collaborate on Education, Aquatics and Horticulture programs. It is in the best interest of LRISS to connect with those committees that already have strong programs in these areas. We are a relative new committee and the other committees are very open to sharing their resources and collaborating on projects in order that key messaging is consistent. For example, the Invasive Species Council of Metro Vancouver, Sea to Sky Invasive Species Council, Fraser Valley Invasive Plant Council and Coastal Invasive Species Committee are partnering on a Knotweed campaign called "Knot on my Property". LRISS has been invited to discussions on the roll out of this campaign and how we can participate.