



Columbia Shuswap Invasive Species Society

Year End Report 2017

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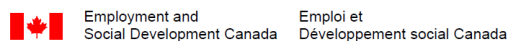
ACKNOWLEDGMENTS



Figure 1: CSISS 2016- 17 Board Directors left to right John Braisher, Bruce Husband, Hamish Kassa, David Rooney, Valene Kolt (alternate for Darren Komonoski), Adam Croxall, Bryan Chruszcz, and Chris Cochran. 2016 CSISS staff front row Laura Gaster, Aimee Barre, and Robyn Hooper. (Not pictured Emily Spiler, Diane Millar, Darren Komonoski, and Margaret Gibson, and new 2017-2018 Directors Chris Gill and Laurel Corrigan, and 2017 staff Sue Davies, and Braden Lamoureux).

The accomplishments and success of this organization can be attributed to our dedicated staff, Board Directors, the generous funding agencies that contributed to the project, our expert contractors, consultants and numerous volunteers. Special thanks to our 2016-2017 outstanding Board Directors whose dedication and direction has continued to guide the CSISS on its trajectory of continuing growth: Hamish Kassa (CSRSD), Chris Cochran (Town of Golden), Diane Millar (MFLNRO), Bryan Chruszcz and Natalie Stafl (Parks Canada), John Braisher (Golden Area Rancher), Darren Komonoski (City of Revelstoke), David Rooney (Illecillewaet Greenbelt Society), Bruce Husband (Shuswap Agricultural Strategy Group), and Adam Croxall (BC Hydro) (Figure 1 and Appendix A). A special thank you to Board member David Rooney for his five years on the Board of Directors, and condolences to his family and friends with his passing this past summer. We are excited to welcome Chris Gill (Shuswap resident and environmental consultant) and Laurel Corrigan (Revelstoke resident) as new directors on the 2017-2018 CSISS Board. We would like to thank Emily Spiler, Education Officer, and Braden Lamoureux, CSISS Summer student through Canada Summer Jobs, for their exceptional efforts engaging residents across the CSRSD in invasive species outreach activities and invasive plant field work this summer!

We are extremely grateful to the Columbia Basin Trust (CBT), Ministry of Forests, Lands and Natural Resource Operations (MFLNRO), Ministry of Environment (MoE), Ministry of Transportation and Infrastructure (MOTI), the Columbia Shuswap Regional District (CSRSD), BC Parks, City of Salmon Arm, Employment and Social Development Canada (Canada Summer Jobs Program), Stella Jones Inc., Parks Canada, BC Hydro Community Grant, RBC Blue Water Grant, and the Public Conservation Assistance Fund (HCTF) for providing funding and partnership. Additional thanks are due to the City of Revelstoke, Town of Golden, Central Kootenay Invasive Species Society, East Kootenay Invasive Species Council, Columbia Basin Environmental Education Network, Kootenay Conservation Partnership, Shuswap Trail Alliance (White Lake Stewards), Friends of Gardom Lake, RBC Salmon Arm, Shuswap Trails Roundtable and Working Group, the Illecillewaet Greenbelt Society, Invasive Species Council of BC and Wildsight Golden for their support in-kind and partnerships with the CSISS.



EXECUTIVE SUMMARY

April 2017 marked the start of the fifth operational season of the Columbia Shuswap Invasive Species Society (CISIS). Thanks to dedicated staff, diligent Directors, knowledgeable partners and inspired volunteers, the CISIS expanded its programming and made significant progress on each goal identified in the 2013 CISIS Strategic Plan:



Goal 1: Implement a collaborative and coordinated program

- CISIS strengthened and expanded its network of partners;
- CISIS Partnered with all levels of government, ISCBC, other regional invasive species groups, local stakeholders, residents and NGO's;
- CISIS worked with over 222 partner organizations, 44 of whom were new in 2017



Goal 2: Educate, engage and inspire local residents

- CISIS completed targeted outreach to stakeholders, First Nations and landowners;
- CISIS hosted training workshops for government staff, contractors and the public;
- CISIS directly engaged with over 4,673 people in the region and attended 184 events;
- CISIS specifically directed new targeted outreach to florists, hunting shops and realtors, newly identified as potential vectors for invasive spread.



Goal 3: Prevent the introduction of new invasive species

- CISIS visited 25 garden centers and florists with 'Plant Wise' message;
- CISIS actively visited boat launches, boat industry and marinas with 'Clean Drain Dry';
- CISIS worked with various trail associations, funding 32 'Play Clean Go' trailhead signs;
- CISIS completed 6 press releases and was featured in 42 news pieces;
- CISIS regularly created engaging posts on Facebook and Instagram and Twitter.



Goal 4: Maximize the probability of detection and eradication

- CISIS worked with many agencies to complete priority invasive plant management;
- CISIS completed mechanical treatment at 32 priority sites;
- CISIS completed two bio agent releases at purple loosestrife infestations;
- CISIS completed 51 zebra and quagga veliger samples at 26 locations;
- CISIS completed aquatic invasive plant surveys at 26 locations.



Goal 5: Slow or reverse the spread of existing invasive species

- CISIS hosted a land manager meeting to discuss priority species;
- CISIS responded to 166 invasive species reports and requests for information;
- CISIS visited 201 landowners, 58 of whom are threatening their knotweed;
- CISIS visited CSRD landfills to educate about correct disposal of invasives;
- CISIS completed 12 weed pulls, removing around 386 bags of invasive plant material.



Goal 6: Ensure program sustainability

- CISIS employed five staff members in 2017
- CISIS added \$17,225 to its operating budget
- New funding sources and increases from existing funding sources allow CISIS to continue work in the Columbia Shuswap region
- New CISIS Funding Strategy in development

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INTRODUCTION

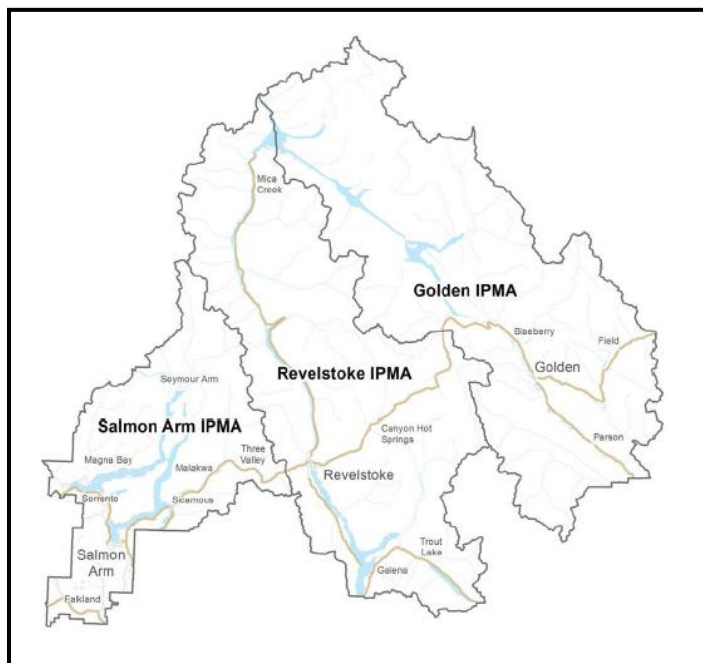
The CSISS was established in April of 2013 after a series of meetings and consultations with land managers, residents and other stakeholders with the aim to develop a collaborative and coordinated approach to invasive species management in the region. The CSISS joined a network of 13 regional invasive species groups in BC. These groups work in cooperation with each other, the Invasive Species Council of BC (ISCBC) and government agencies to inspire action, coordinate management and prevent the spread of invasive species within their jurisdictions.

Based on its constitution, the objectives of the CSISS are:

- To educate and engage public, private landowners, land and aquatic managers, First Nations and others about invasive species and their impacts.
- To establish and operate invasive species management programs.
- To do all other things as are incidental and ancillary to the attainment of the above purposes.

The summer of 2017 marked the Society's fifth season in operation. The CSISS staff team continued with five staff members in 2017, including three returning staff members, greatly increasing the organization's ability to engage community members and residents as well as invest a presence in smaller communities across the regional district. The CSISS built and expanded connections within local communities and filled knowledge gaps regarding invasives on the landscape. In 2017, the CSISS also expanded into operations, providing fee for service contract work to treat and monitor invasive plants.

PROJECT AREA



The jurisdiction encompassed by the Society includes the boundaries of the Columbia Shuswap Regional District (electoral areas A, B, C, D, E and F). The CSISS operational area has been further divided into three Invasive Plant Management Areas (IPMAs) for planning purposes (Craig, 2013). This broad, ecologically diverse area includes the Ponderosa Pine (PP), Interior Douglas Fir (IDF), Interior Cedar Hemlock (ICH), Montane Spruce (MS) and high elevation Engelmann Spruce-Subalpine Fir (ESSF) biogeoclimatic zones (Craig, 2013).

Figure 2: The CSISS operating area, including the three IPMA boundaries in the region (Craig, 2013).

GOAL 1: COLLABORATIVE AND COORDINATED PROGRAMMING

The CSISS maintains a priority plant list for each Invasive Plant Management Area within the CSRD (Figure 2) to help partners coordinate programming and treatments. In addition to the plant lists, the CSISS continues to seek and engage partners to participate in collaborative planning and management. In doing so, the CSISS has become the “one-stop-shop” for invasives in the CSRD and is the point of contact and lead on many invasive species-related issues in the region.

To maximize efficiencies and ensure program sustainability, the CSISS collaborated with invasive species groups within the Columbia Basin, regional committees across the province, the Invasive Species Council of BC (ISCBC), the Columbia Basin Trust (CBT), First Nations and various stewardship groups and NGOs. The CSISS currently partners with over 222 groups, including over 609 individual contacts and 383 subscribers to the CSISS newsletter. These partnerships expanded successful outreach programs including PlantWise, Clean-Drain-Dry, Play Clean Go, and Don't Let It Loose, and continued to secure joint funding (Columbia Basin Collaboration).



Figure 3: Regional invasive species organizations and local land managers discuss priority invasive plants within the Columbia Basin at the CKISS Operational Planning Meeting.

The CSISS has been working in collaboration with the East Kootenay Invasive Species Council (EKISC), Central Kootenay Invasive Species Society (CKISS) and Northwest Invasive Plant Council (NWIPC) to implement coordinated invasive species strategies within the Basin (Figure 3). This includes designing shared outreach materials to maintain consistent messaging throughout the region, collaborating on advertising and promotion, and attending regional meetings and training opportunities. For example, in 2017 two half page colour advertisements for Clean-Drain-Dry and Play Clean Go was developed and published in Kootenay Mountain Culture, a popular, free magazine, through this Columbia Basin regional collaboration.

To maintain and grow presence across the region, CSISS staff attended and/or hosted more than 30 regional meetings, training opportunities and workshops (Appendix D). The CSISS worked closely with the regional municipalities (City of Salmon Arm, City of Revelstoke, District of Sicamous, Town of Golden's Wildsight Weed Coordinator) to provide staff training on invasive plant identification, provide high priority treatment lists (particularly for invasive knotweed) and discuss other invasive plant management options. CSISS continued to work

closely with the Columbia Shuswap Regional District to conduct extensive invasive plant surveys and respond to landowner requests/reports.

As part of the CSISS outreach program, CSISS staff delivered the Invasive Species Council's PlantWise, Don't Let It Loose, and Clean-Drain-Dry programming throughout the region, additionally, CSISS delivered Play Clean Go programming in collaboration with BC Parks and local trail stewardship groups. The CSISS also helped train and provide resources to the Wildsight Golden Weed Coordinator and the regional Invasive Species Council's Job Creation Partnership (employment training) crew. To enhance collaboration, CSISS staff participated in regular conference calls between regional invasive species groups, the BC government and the ISCBC.

AQUATIC INVASIVE SPECIES PARTNERSHIPS

The 2017 season continued to see program growth and refinement of the Aquatic Invasive Species (AIS) program both for the CSISS and for the Columbia Basin as a whole. CSISS Aquatic Invasive Species Executive Director and Program Coordinator continue to participate in the Steering Committee Meetings for AIS in the Columbia Basin. Steering Committee members have a combined wealth of knowledge and increase communication and collaboration between regional, provincial and international governing bodies, stakeholders and First Nations.

CSISS staff have continued to implement the AIS Framework within the Columbia Basin in collaboration with the other regional Columbia Basin invasive species organizations (EKISC, CKISS, NWIPC) with support from the Columbia Basin Trust and the Ministry of Environment. This involved updating AIS priority ranking matrices and carrying out AIS surveys in priority water bodies, as well as collaborating on AIS outreach programs, including outreach materials for the Basin, delivering the ISCBC Clean, Drain, Dry program, as well as conducting outreach at boat launches and marinas.

Close communication was maintained with the Ministry of Environment and BC Hydro to coordinate AIS survey efforts and identify gaps.

GOAL 2: EDUCATE, ENGAGE AND INSPIRE

The CSISS continues to educate, engage and inspire residents and others to participate in invasive species management. CSISS staff received over 170 requests for information and presentations in the past year. In 2017, our education and outreach activities continued to increase (Figure 4) and became more focused on particular target audiences and their potential pathways of invasion. CSISS staff targeted cyclists with the Play Clean Go program, through setting up bike washing stations at some regional race meetings. We met with real estate agents and city and district planners to deliver PlantWise information particularly regarding knotweed, which can impact properties.

As well, the CSISS met with Columbia Shuswap Regional District staff, and city staff in Salmon Arm, Sicamous, Revelstoke and Golden, and contacted all First Nations in the region.

In 2017, the CSISS was represented at over 182 community events and meetings (See Appendix B for a complete list of events attended), distributed 10 e-newsletters, hosted 11 workshops and training events, visited 25 garden centers, 40 boat launches and marinas, and supported 10 community weed pulls. New in 2017, CSISS also visited florists as part of the PlantWise program, and hunting and fishing stores as part of the Don't Let It Loose program. Targeted outreach was provided during the free CSRD yard waste days to promote proper disposal (landfill not yard waste) of invasive plants during October and November.

Number of Events and Requests

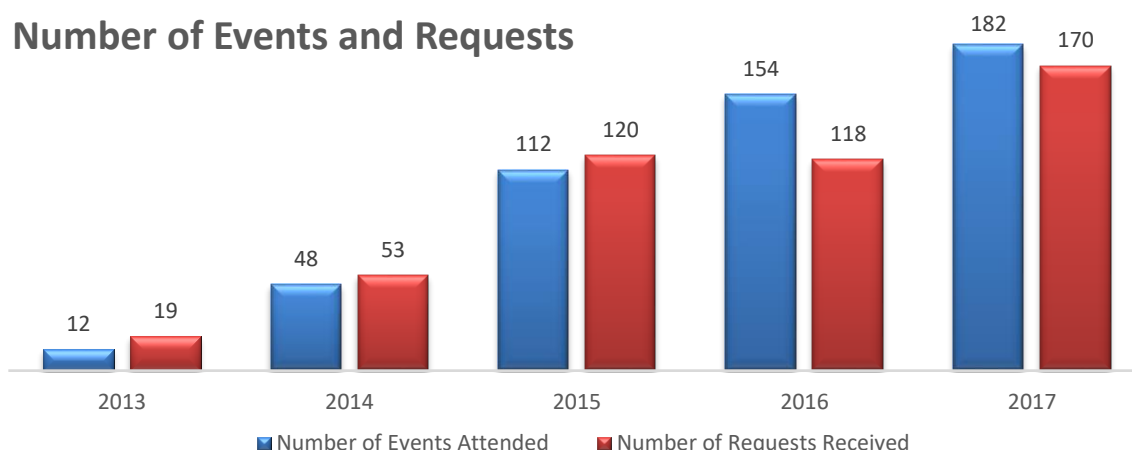


Figure 4: Chart showing the number of Events CSISS attended and requests for presentations or information received from 2013-2017

In addition, the CSISS began researching new ways to encourage the treatment of knotweed and correct disposal of invasive plants at landfills based on Community Based Social Marketing approach, in association with other invasive species groups based in the Columbia Basin.

The CSISS also partnered closely for a second year with the Invasive Species Council Job Creation Partnership Crew in the Revelstoke area, and with the Vernon crew to help deliver information at events.

In total, the CSISS had direct interactions with 4,673 people (Table 1). The CSISS outreach programs continue to be reviewed and evaluated for improvements annually. After presentations and workshops, CSISS staff distributed feedback forms to participants and will work to incorporate suggestions for the 2018 season.

Table 1: Community Events and Meetings Attended by CSISS Jan- Dec 2017

Number of Events	# Attendees	Direct Interactions
27 Youth Events and Environmental Educator Workshops (10 within Columbia Basin)	1,965	1,465
12 Weed Pulls (6 within Columbia Basin)	173	173
96 Aquatic-related Outreach events (43 within Columbia Basin) (27 Boat launches visited, 11 within Columbia Basin)	7,999	3,252
78 Play Clean Go Outreach Events (40 within Columbia Basin)	7,743	3,036
89 PlantWise Outreach events (45 within Columbia Basin) (25 Garden Centres and florists visited, 10 within Columbia Basin)	7,639	3,023
109 Events total in the Columbia Basin	5,631	2,430
184 Events total for CSISS 2017	10,063	4,673

MEDIA COVERAGE

Since January, the CSISS has delivered 6 press releases, and has been mentioned in 42 news and radio pieces including: Revelstoke Times Review, Revelstoke Mountaineer, Castanet, The Salmon Arm Observer, the Revelstoke Current, Columbia Shuswap/Salmon Arm EZ Rock, Stoke FM, Reved Quarterly (See Appendix C for a full listing of media interactions). Adds with strong 'Play Clean Go' and 'Clean Drain Dry' messaging placed in the popular Kootenay Mountain Culture magazine in collaboration with other Columbia Basin invasive groups (Figure 5).



Figure 5: Play Clean Go (left) and Clean Drain Dry (right) adds were placed in Kootenay Mountain Culture this season.

CSISS invasives messaging has also been added to many partner websites, Facebook pages and e-newsletters including Sexqéltkmc te Secwepemc First Nations website and Facebook page, and the Paddlesport Classic webpage. Through these platforms, the CSISS raised awareness of invasives and the importance of preventing their establishment and spread.

WEBSITE AND SOCIAL MEDIA

CSISS staff have been updating the CSISS website (www.columbiashuswapinvasives.org) and using it as a platform to engage the public and land managers, enabling people to connect to events and resources for the management of invasive species.

The website includes general information about priority invasives, how to get involved, a method of contacting the CSISS and news of upcoming events and meetings. New resource pages were added this year for boaters and real estate professionals (including land developers) (Figure 6). The website was viewed over 8,371 times this year.

The CSISS also hosts a Facebook page and posts updates of events, happenings, information, interesting information and reminders of behavior change activities throughout the year. Our Facebook page now has 239 people who like the page. The CSISS continues to deliver quarterly e-newsletters to more than 383 recipients highlighting our local and regional events and activities.

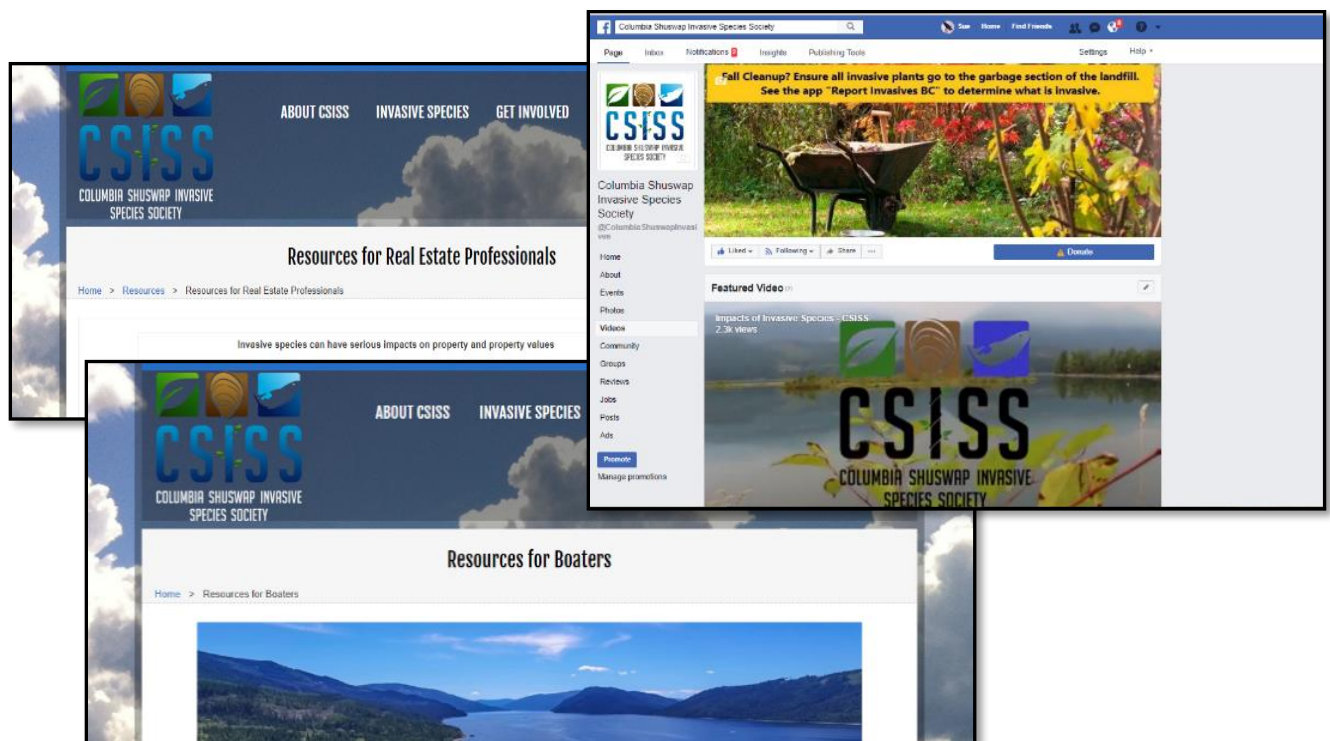


Figure 6: The CSISS website has new target audience resources pages for boaters and real estate professionals (left) and our Facebook page (right) was regularly updated with engaging and informative messages.

COMMUNITY OUTREACH

The CSISS partnered with numerous non-profit groups to raise awareness of invasive species in the Columbia-Shuswap region. CSISS outreach brochures were provided to partner organizations to distribute at workshops and information booths throughout the region, as well as at municipal offices, the CSRD office, at Service BC locations and on the Shelter Bay/Galena ferry.

In addition to community weed pulls (Table 2), CSISS staff set up information booths at Farmers Markets and community events in Golden, Salmon Arm, Revelstoke, Blind Bay, Carlin, Sicamous, Scotch Creek, Blind Bay, Celista, and Sorrento to raise awareness of invasive species issues and educate the public on how to prevent their spread. We presented to a variety of community groups, youth groups, clubs, stewardship and recreation groups, reaching some of the smaller rural locations in the CSRD (Appendix B).



Figure 7: Golden Wildsight and Motocross Dirtriders Club at a weed pull near Reflection Lake, Golden (left) and Wild Wonders student group at North Fork Wild (Left).

Table 2: The CSISS supported 12 weed pulls in collaboration with community groups

Target Species	Location	In Collaboration with:
Yellow Flag Iris	Turner Creek	Royal Bank of Canada, Salmon Arm Branch
Yellow Flag Iris	Little White Lake	White Lake Stewards
Yellow Flag Iris	Gardom Lake	Friends of Gardom Lake
Yellow Flag Iris	White Lake	Invasive Species Council JCP team
Himalayan Balsam	Selkirk Saddle Club	NCES and the Selkirk Saddle Club
Himalayan Balsam	Illecillewaet Walkway	Royal Bank of Canada, Revelstoke Branch
Himalayan Balsam	Illecillewaet Walkway	Invasive Species Council
Spotted Knapweed	Martha Creek Provincial Park	Invasive Species Council and BC Parks
General	SABNES Restoration Site	Shuswap Naturalists Club
Bittersweet Nightshade	SABNES Trail	Shuswap Naturalists Club
Burdock, Canada thistle	Reflection Lake	Wildsight Golden & Golden Motocross club
Spotted Knapweed	Kicking Horse River banks	Wildsight Golden

WORKSHOPS AND EVENTS

To build capacity amongst partners, interested residents and stewardship groups, the CSISS hosted various workshops and training opportunities (Figure 8).



Figure 8: Wetland Restoration and Invasive Species Workshop run in partnership with the BC Wildlife Federation and Columbia Mountains Institute.

The following CSISS workshops were held in 2017:

- Knotweed focused workshops in Revelstoke and Salmon Arm (March)
- Watershed educators workshop (April)
- Boater workshop in collaboration with ISCBC (April)
- Invasive species identification workshops in Salmon Arm, Revelstoke, Sicamous and Golden (May)
- Sampling for aquatic invasives workshop (July)
- Wetland restoration and invasive species workshop (July)
- Edible invasives workshop (September)
- Regional Invasive Species Organizations annual meeting (September).

Workshops were well attended and provided useful skills development for various groups of land managers, educators, and the general public. Participants in these workshops included: Parks Canada, municipal and regional government staff, stewardship groups, recreation groups, landscapers, industry groups, and others. The CSISS provided training to the Golden Wildsight Weed Coordinator and Invasive Species Council of BC's Revelstoke JCP crew at the start of their operational season and continued to support them throughout the season.



Figure 9: Invasive Plant ID workshop (left), Edible Invasives workshop poster (centre) and Sampling for Aquatic Invasives workshop (right).

FIRST NATIONS ENGAGEMENT

In 2017, CSISS staff continued to develop First Nations partnerships and collaborations. Staff presented to the Sexqeltkemc Te Secwepemc People's Assembly (included Councillors and Chiefs from Splat sin, Neskonlith, Little Shuswap, and Adams Lake Indian Bands) and have begun developing a strategy to introduce the Play Clean Go messaging into schools and hunter/gatherer areas of Band lands.

- Presentation to Sexqeltkemc te Secwepemc Lakes Division (included Councillors and Chiefs from Splat sin, Neskonlith, Little Shuswap, and Adams Lake Indian Bands);
- Shuswap Trails Roundtable, First Nations participants included Splat sin, Neskonlith, Little Shuswap, and Adams Lake Indian Bands.
- Meeting with ASETS Aboriginal Employment group.

All First Nations within the CSISS region were invited to our Annual General Meeting and Workshops. Any First Nations interested in participating in the CSISS or receiving training within the CSISS region are encouraged to contact CSISS staff.

OUTREACH PROGRAM EVALUATIONS

The CSISS continues to use feedback forms as a first step to evaluate the effectiveness of our workshops and programs. The majority of participants surveyed found the workshop speakers engaging and learned something about invasive species. People reported that they are more likely to take action to prevent the spread and reduce impacts of invasives (Table 3). The results from our surveys will also help to guide our future outreach programming (Figure 10).

Table 3: Survey Results from CSISS Evaluation Forms in 2017

	I will try to reduce the spread of invasives at work	I will try to reduce the spread of invasives at home	I have decided to be Plant-Wise in my garden	I will now Clean, Drain, and Dry my boat	I will talk to others about invasive species	I now have a better idea of which weeds to remove	I am now able to identify some invasive species
YES	93%	87%	92%	93%	79%	82%	81%
Sometimes	7%	12%	8%	5%	20%	17%	17%
No	0%	1.3%	0%	1.8%	1.3%	1.4%	1.3%

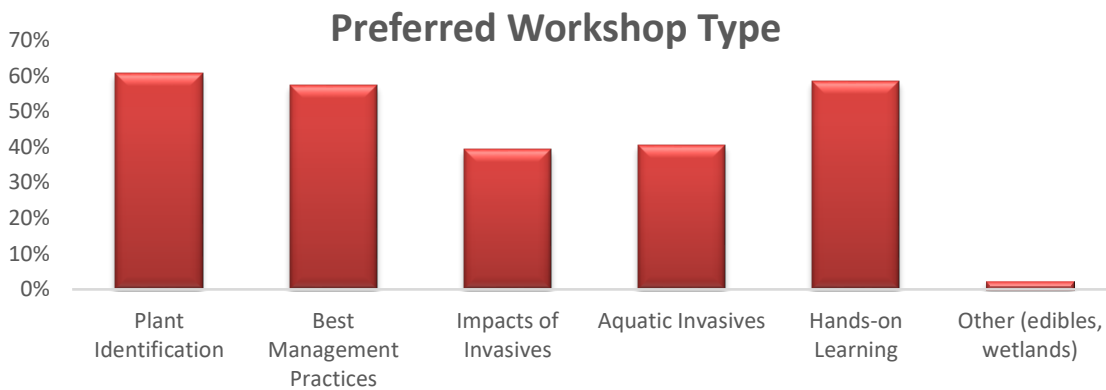


Figure 10: Survey results from workshop participants regarding future CSISS event types.

Staff are currently designing new ways to measure actual behavior change such as the number of people actually brushing boots at trail heads and cleaning boats leaving waterbodies. This approach is the gold standard of determining whether an outreach program is actually achieving the desired results of reducing the spread and impact of invasive species in our region. Often, self-reporting can be much higher than actual behavior, so it is best to measure the final end-state behavior directly when possible.

GOAL 3: PREVENT THE INTRODUCTION OF NEW SPECIES

The CSISS has been focusing on various behaviour change programs in partnership with others to help prevent the introduction of new species. The CSISS also provides training, resources and best management practices to partners in order to help prevent new introductions (*see Workshops and Events section above*).

PLANTWISE PROGRAM

The CSISS continued to actively partner with the Invasive Species Council of British Columbia (ISCBC) to deliver the PlantWise Program, encouraging key groups such as the horticulture industry and consumers to commit to choosing and utilizing only native or non-invasive plants instead of their invasive alternatives.

CSISS staff delivered the PlantWise message at 89 community-based events, workshops and meetings, speaking to youth, home gardeners, land managers, and stewardship groups directly reaching 3,023 individuals. CSISS hosted workshops for land managers, garden centers and gardening clubs which were very well received.

Additionally, the CSISS approached garden centers and nurseries with the PlantWise message. Materials and information were provided to these businesses. Staff encouraged the horticulture industry to sell only native or non-invasive plants to help prevent new invasives from establishing in the region. The CSISS found 7 garden centers selling ivy, 5 selling Virginia creeper, 3 selling periwinkle, 2 selling butterfly bush, and one each selling *Lamium*, and mountain bluet. One garden center was selling a seed jug which contained blueweed seeds. In addition, seed packs were found in several garden centers which contained baby's breath, morning glory and bachelor's buttons.

Florists were approached in 2017 and were found to use spurge laurel (known in the industry as Madrona), baby's breath and teasel. One florist also mentioned that Scotch broom is commonly on the purchase list for many florists though none was found within the CSISS region.



Figure 11: Virginia creeper for sale in a garden centre

CLEAN DRAIN DRY PROGRAM

In 2017, the CSISS delivered its Aquatic Invasive Species (AIS) programs, bringing the Clean, Drain, Dry message to marinas, boaters at busy boat ramps, the paddle-sport community, water stewardship groups, youth, and local residents to help prevent the spread of aquatic invasive plants and organisms to BC waters.

Boater outreach was primarily conducted at the busiest and highest risk boat ramps in the region, with fewer resources spent on less busy sites. Seventy-nine boaters were directly contacted at 27 boat launches across the region.

Marinas are a focus point for boaters, both local BC boaters and those from out of Province. Eighteen marinas across the region were visited with information about both zebra and quagga mussels, and other invasive species with potential for transportation by recreational boat users. Marina owners and staff were given information and asked to help their clients avoid transmission of invasives by promoting Clean, Drain, Dry. Brochures and wallet cards were provided to all marinas to pass out to boaters using their marinas.



Figure 12: Busy marinas across the region received outreach information and materials.

In 2017, it was recognized that paddlers often don't realize that their craft must be cleaned, drained and dried, so an effort was made to reach this group. At a Revelstoke paddling event, it was noted that some paddlers were attending from high risk waterbodies in Eastern Canada. Several high profile paddlers and paddle sport organizers in the Revelstoke IPMA have taken up the Clean Drain Dry message and helped CSISS to promote it to their colleagues. CSISS will bring this strategy forward to the Shuswap and Golden areas in 2018.

The CSISS directly reached over 3,252 individuals at 96 community-based aquatic related events encouraging boaters to 'Clean, Drain, and Dry' all watercraft and equipment to help reduce the spread of aquatic invaders such as Zebra/Quagga mussels.

Boater surveys were again used to collect data on attitudes to the Clean Drain Dry (CDD) program. CSISS staff surveyed boaters about if they CDD, where they CDD, and their point of origin. Of those surveyed (53 in total), 79% reported that they CDD their boat, and 54% said they usually drained at the lake but cleaned at home. However, often self-reports are higher than actual behaviours, so we hope to measure actual CDD behaviours when possible in the future. None of the surveyed boaters were from high risk provinces, with 21% coming from Alberta and the remaining 79% being from British Columbia. All but one of the boats originating in Alberta had been inspected at the provincial inspection stations. The uninspected boat has been in BC for several years.

In addition, boaters were asked about the perceived barriers and benefits of cleaning, draining and drying their boats. The perceived barriers to CDD were mainly: lack of time, lack of resources, and forgetting. By far the most common perceived benefit (43% of those surveyed) was that performing CDD on a boat would keep it looking clean and well maintained. Knowledge of the perceived barriers and benefits will help inform the approach CSISS takes to promoting the program in 2018 and beyond.

Knowledge about aquatic invasive species was high among survey participants, 75% were aware of the Clean Drain Dry program with the majority of information coming from highway signage, and information provided by inspection stations (Figure 13).

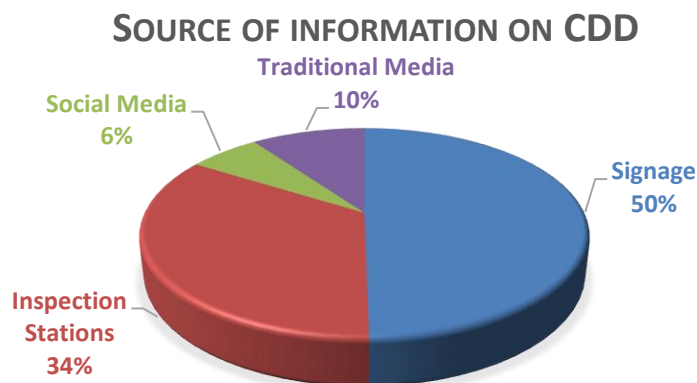


Figure 13: Boater survey data on sources of information regarding Clean Drain Dry practices.

DON'T LET IT LOOSE PROGRAM

The 'Don't Let It Loose' program promotes returning or rehoming unwanted pets, rather than releasing them into the environment where they may become invasive. It also focuses on ensuring that live bait fish or other non-native species are not released by anglers/hunters. The CSISS promoted this program through visits to aquariums and pet stores and some hunting and fishing stores. CSISS staff provide information to help owners refrain from

trading invasive species, and provide brochures to give out to customers. The only invasive species found for sale was a single European collared dove which was ordered in error by a shop in Salmon Arm. The seller intends to ensure that this dove will never be let loose.

The CSISS also promoted the Don't Let It Loose message directly to youth at various related events such as school presentations and youth focused events. In 2018 the CSISS intends to also promote the Don't Let It Loose message to more angling and fishing clubs and at fishing completions throughout the region. During early 2018, the CSISS will also begin a program of outreach to organizations that potentially could use invasive bullfrogs as dissection specimens in order to prevent the release of this species, currently not recorded as present in this region.

PLAY, CLEAN, GO PROGRAM

In 2017, the CSISS promoted Play Clean Go, a program encouraging all those who use the natural environment to practice trail etiquette that reduces the spread of invasive species by cleaning equipment, clothing, vehicles and pets when arriving at and leaving a recreational site.

Through strong community partnerships with trail user groups, race organizers, First Nations, and youth outdoor education programs the CSISS successfully delivered 78 Play Clean Go community events directly reaching 3,036 individuals (Figure 14). The CSISS also worked with trail groups, regional districts, the MFLNRO and BC Parks towards installing 32 trailhead signs with attached boot brushes after the success of the pilot installation of similar signs and brushes at Roderick Haig Provincial Park in 2016. Stella Jones donated funds for the purchase of this signage in Revelstoke. The Shuswap Trail Alliance, the CSRD and other regional trail and cycling associations have agreed to install the signage (by latest spring 2018). A partnership with Secwepemc First Nations is looking into further signs and brushes installed at high use hunting and gathering areas, and at First Nation schools.



Figure 14: CSISS staff using the brush provided with the Play Clean Go signage (left) and Participants at the BC Enduro mountain bike race cleaning their bikes prior to a race in the alpine near Revelstoke (right).

Table 4: Trailheads where Play Clean Go signs and boot brushes have been (*) or will be installed.

Shuswap IPMA	Revelstoke IPMA	Golden IPMA
*Roderick Haig Brown Park	McPherson Trailhead	Rotary Trailhead
*Evelyn Falls Trailhead	Begbie Creek Trailhead	Cedar Lake Trailhead
*Rocky Martinson Trailhead	Flowdown Trailhead	Gudjonson Trailhead
*Wild Rose Bay Rec Site	Frisbee Ridge Trailhead	CBT Mainline Trailhead
*Shannon Beach Rec Site	Griffith Creek Trailhead	Reflection Lake Trailhead
Park Hill East Rec Site	Sail Mountain	Mt 7 Trailhead
Larch Hills Rec Site	McCrae Trailhead	Gorman Lake Trailhead
Pileated Woods Park	Keystone Trailhead	Thompson Falls Trailhead
*John Evdokimoff Bike Park	Mt Cartier Trailhead	Quartz Lake Trailhead
Coyote Park Trailhead	Sol Mountain (2)	Wolverine Pass Trailhead
Mt Baldy		Dainard Creek Trailhead
Scotch Creek		Prairie Hills Trailhead
*North Fork Wild (2)		Certainty Mine Trailhead
*South Canoe		
*Balmoral Trailhead		
*McArthur Heights Trailhead		
Ferral's Field Trailhead		

GOAL 4: MAXIMIZE THE PROBABILITY OF DETECTION AND ERADICATION OF NEW INVASIVES

The CSISS maximized the probability of detection and eradication of new invasives by raising public awareness and delivering invasive species workshops described above. Additionally, CSISS staff responded to invasive species reports and conducted terrestrial and aquatic targeted invasive species surveys on behalf of partner agencies.

INVASIVE SPECIES REPORTS AND LANDOWNER OUTREACH

In 2017, the CSISS responded to 166 invasive species reports and requests for information. Depending on the nature and priority of the report, it was confirmed by a site visit and/or responded to with landowner extension, an outreach letter, or by enacting the provincial Early Detection Rapid Response (EDRR) protocol.

Knotweed continues to be a high priority species for the Columbia Shuswap Region, each year CSISS receives more knotweed reports as compared to other invasive plants. To date, CSISS has surveyed 276 knotweed sites, including 42 new sites this year.

In 2017, all private property owners with known knotweed infestations were mailed an outreach letter detailing the impacts and implications of a knotweed infestation, best management practices for treating knotweed and other informational resources. In addition to the outreach letter, CSISS staff completed 201 landowner visits, directly visiting and speaking to landowners providing helpful resources and information (Figure 15). CSISS staff

spoke to 58 private landowners who were in the process of treating knotweed or preparing to treat knotweed the following year.



Figure 15: CSISS staff visit a residence with a knotweed infestation (left). A knotweed infestation in flower (center). A close look at knotweed stems which resemble bamboo (right).

TARGETED INVASIVE PLANT SURVEYS

In February 2017, the CSISS hosted a land manager meeting for all stakeholders and interested members of the public to provide feedback for the annual review of the 'Priority Invasive Plant List' from the 2013 CSISS Operational Plan (Craig 2013). The updated lists were used as guidelines to fill key information gaps on the presence, spatial extent, and distribution of priority invasive plants within the CSISS region (Figure 16).



Figure 16: Priority species within the CSISS region. Himalayan balsam (left), leafy spurge (center) and blueweed (right).

In 2017, the CSISS completed 100 new site surveys and 493 invasive plant surveys (Figure 17) for the CSRD, BC Parks and City of Salmon Arm, including responding to Provincial Early Detection Rapid Response (EDRR) reports for the Ministry of Forests Lands and Natural Resources Operations.

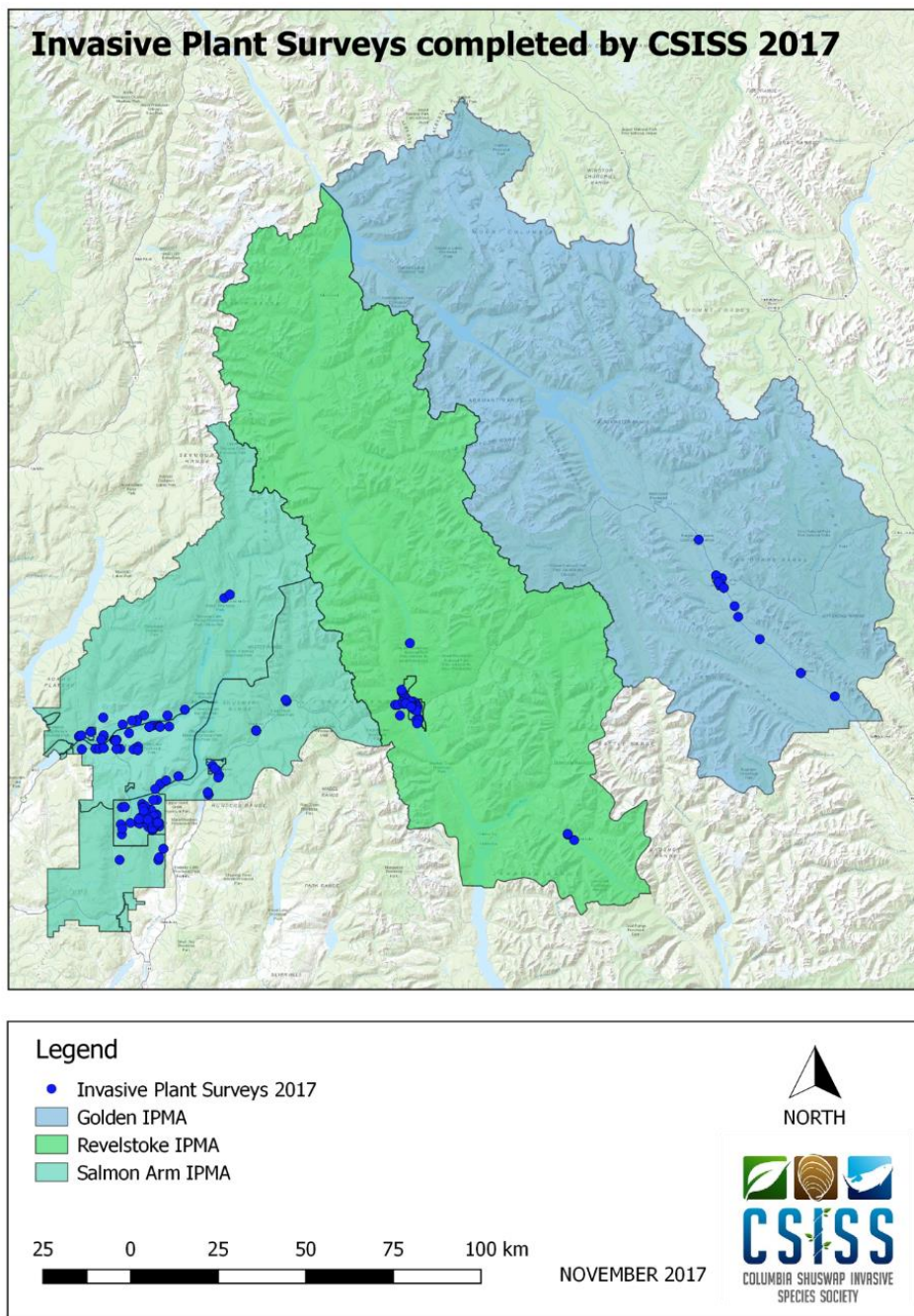


Figure 17: Invasive Plant Surveys completed by the CSISS in 2017.

CSISS staff completed two biological agent releases for the CSRD and the City of Salmon Arm, treating purple loosestrife, a riparian species. In addition, two biological dispersal monitoring surveys were completed within the BC Parks jurisdiction.

Mechanical treatments were completed at 43 locations across the Columbia Shuswap region, treating a total of 0.35 hectares. Furthermore, CSISS administered 2 herbicide spray contracts, treating 29 priority sites, and completed herbicide monitoring at 23 sites for the CSRD, the City of Salmon Arm and Parks Canada (Table 5 and Figure 18).

Table 5: Priority Invasive Plants surveyed and Treated by the CSISS in 2017 including Provincial and Regional EDRR. Species

Priority Invasive Plants Surveyed and Treated* in 2017:		Provincial and Regional* EDRR Species Reported to CSISS in 2017:
Baby's breath	Knotweeds*	Phragmites- Surveyed, None Found
Bighead knapweed*	Leafy spurge*	Perennial Pepperweed- Surveyed, None Found
Blueweed*	Policeman's helmet*	Scotch Broom*- Surveyed- None Found
Cypress spurge*	Purple loosestrife*	
English Ivy*	Rush Skeletonweed*	
Field scabious*	Scotch thistle*	
Fragrant waterlily	Spotted knapweed*	
Giant Hogweed	Yellow archangel	
Himalayan blackberry*	Yellow flag iris*	

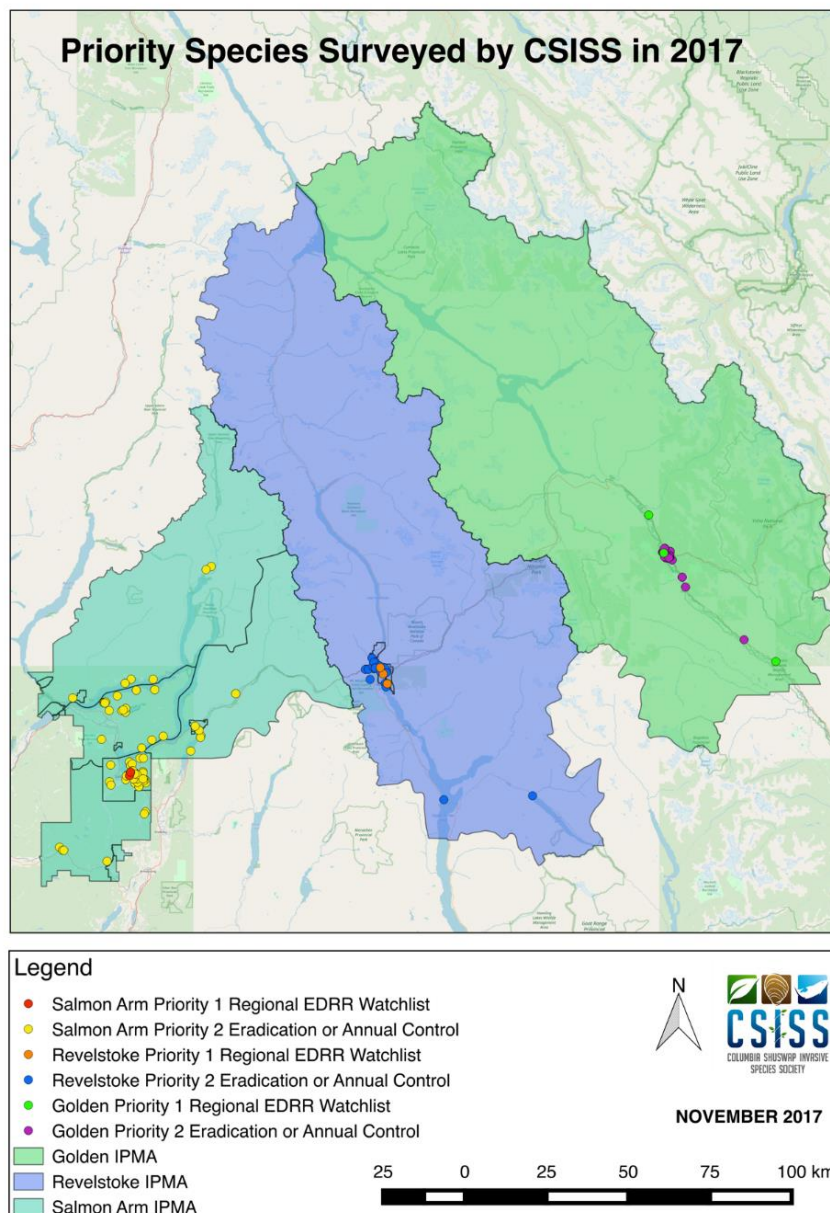


Figure 18: Priority 1 Regional EDRR Watchlist species and Priority 2 Eradication or Annual Control species surveyed by CSISS in 2017 by IPMA.

CSRD OWNED LAND AND PROPERTIES

As part of the Society's important partnership with the CSRD, CSISS staff continue to complete invasive plant inventories on CSRD Properties. In addition to the inventories, CSISS staff administered and monitored the landfill and transfer station invasive plant treatment, completed mechanical removal of priority invasive plants, released biological control agents to treat a purple loosestrife site and completed landowner outreach, inclusive of landowner visits, mailing outreach letters and responding to weed complaints.

CSRD LANDFILLS AND TRANSFER STATIONS

CSISS coordinated a contract for invasive plant treatment work at CSRD landfills and transfer stations, which included overseeing and monitoring a professional herbicide applicator contractor. In total, 6 sites and 290 m² were treated over three passes from May to September 2017. Herbicide monitoring at each of the 6 sites was completed 2 weeks after treatment, all sites passed inspection. CSISS staff conducted mechanical treatment at four CSRD landfills and transfer stations with a total of 50 m² of invasive plant material removed.

CSRD INVENTORIES, OUTREACH, AND MECHANICAL/ BIOLOGICAL TREATMENT

In 2017, CSISS staff inventoried 31 CSRD properties, and completed 254 invasive plant records. CSRD Fire halls and Parks are being surveyed every 3 years, unless priority species are found. Where high priority species were found on CSRD properties, CSISS staff surveyed and alerted the required personnel/ contractor to treat the infested sites. CSISS staff completed mechanical treatment at 5 CSRD Parks treating a total of 20 m².

The biological agent release was completed on CSRD Land near Eagle Bay. Approximately 250 bio agents (*Galerucella californiensis*) were released on site to treat purple loosestrife. CSISS will continually monitor this site in future years to determine the efficacy of treatment.

CSISS staff continued to provide knotweed education and awareness to CSRD landfill and transfer station operators including knotweed TIPS sheets and CSISS resources for staff and members of the public. During the CSRD free yard waste event happening October through November 2017, the CSISS partnered with the Invasive Species Council to visit busy landfills and transfer stations providing informational resources and direction on where to correctly dispose of invasive plant material. For more information regarding landowner outreach, see the invasive species reports and landowner outreach section in previous pages.

BC PARKS INVENTORIES

In 2017, the CSISS surveyed Martha Creek Provincial Park expansion project area and Blanket Creek and Shelter Bay Provincial Parks recent construction works for invasive plants. In addition to the surveys, CSISS completed multiple mechanical treatments at each of the Parks and conducted 2 biological agent dispersal monitoring inventories at Martha Creek and Blanket Creek respectively.

MARTHA CREEK PROVINCIAL PARK

A full invasive plant inventory was completed at the Martha Creek Expansion Project Area in July of 2017. The invasive plants found at the Project Area consist of: orange hawkweed, St. John's wort, bull thistle, spotted knapweed, king devil hawkweed, and oxeye daisy. All species found are low priority species, categorized as 'Established' on the 2017 CSISS Priority Species List, meaning species are widespread beyond landscape level control but land managers may choose to treat these species at priority sites, such as parks.

In addition to invasive plant surveys, mechanical treatments of spotted knapweed were conducted at the Project Area's gravel pit and road sides, two garbage bags of invasive plants were removed from the site. Biological agent dispersal monitoring was completed at the gravel pit in the Project Area for the invasive plant St. John's wort and bio agent *Chrysolina quadrigemina*. In total, 15 adult foliar feeding bio agents were found on 8 mature flowering St. John's wort plants (Figure 19).



Figure 19: Bio agent on St. John's wort (left). Mechanical treatment of spotted knapweed (center). Gravel pit with high density of invasive plants (right).

BLANKET CREEK PROVINCIAL PARK

A full invasive plant inventory was completed at Blanket Creek Provincial Park at the newly developed campground, group sites, spoil site near operator's campground and the new gravel site near the trailhead to Sutherland Falls. The invasive plants found at Blanket Creek consist of bladder campion, bull thistle, burdock, curled dock, meadow buttercup, mullein, orange hawkweed, king devil hawkweed, oxeye daisy, spotted knapweed, St. John's wort, sheep sorrel and cudweed. All species found are low priority species, categorized as 'Established' on the 2017 CSISS Priority Species List, meaning species are widespread beyond landscape level control but land managers may choose to treat these species at priority sites, such as parks.

Comparing pre-development to post-development, many new invasive plants were found to establish and increase in density and distribution at each of the recently developed sites (Table 6). New invasive plants, cudweed and curled dock were not found within Blanket Creek Provincial Park boundaries during CSISS's 2016 invasive plant surveys. Introductions such as these and an overall increase of invasive plants at new construction sites may have originated from construction equipment, personnel or materials such as sand or gravel fill.

Table 6: Comparing pre development (2016) to post development (2017) invasive plants at Blanket Creek Provincial Park.

Before Development	Total Area (m ²)	After Development	Total Area (m ²)
Meadow Buttercup	40	Bladder campion	6
King devil hawkweed	20	Bull thistle	30
Oxeye Daisy	10	Burdock	1
Orange Hawkweed	10	Curled dock	11
		Meadow buttercup	150
		Mullein	12
		Orange hawkweed	79
		King devil hawkweed	476
		Oxeye daisy	540
		Spotted knapweed	1016
		St. John's wort	28
		Sheep sorrel	14
		Cudweed	25

In addition to invasive plant surveys, CSISS staff completed mechanical treatments of mullein, curled dock, sheep sorrel, cudweed, burdock, bladder campion and 10 large bags of bull thistle. The introduction and rampant expansion of bull thistle in the recently developed campground area should be continually monitored and mechanically treated in following years. Biological agent dispersal monitoring was completed at the Sutherland Falls Trailhead for the invasive plant St. John's wort and bio agent *Chrysolina quadrigemina*. In total, 10 adult foliar feeding bio agents were found on 7 mature flowering St. John's wort plants over two minutes of surveys.

SHELTER BAY PROVINCIAL PARK

A full invasive plant inventory was completed at Shelter Bay Provincial Park at the newly developed parking lots, upgraded campground facilities and along the beach waterfront. The invasive plants found at Shelter Bay consist of bladder campion, chicory, king devil hawkweed, hoary alyssum, mullein, orange hawkweed, oxeye daisy, sheep sorrel, spotted knapweed, St. John's wort, sulphur cinquefoil, white cockle. All species found, except hoary alyssum, are low priority species, categorized as 'Established' on the 2017 CSISS Priority Species List, meaning species are widespread beyond landscape level control but land managers may choose to treat these species at priority sites, such as parks. Hoary alyssum is categorized as 'Eradication or Annual Control' in the Revelstoke Invasive Plant Management Area, and has limited distribution in the Revelstoke area and is recommended for control annually.

Comparing pre-development to post development in Shelter Bay Provincial Park, only hoary alyssum was newly introduced with a total of 25 m² and is located around the new gravel parking lot and boat launch. Introductions such as this may have originated from construction equipment, personnel or materials such as sand or gravel fill.

CSISS staff completed mechanical treatments of all hoary alyssum plants at Shelter Bay Provincial Park (Figure 20), and completed removal of a small infestation of bladder campion and 3 large bags of spotted knapweed along the waterfront



Figure 20: Hoary alyssum found in Shelter Bay Provincial Park. All plants found were mechanically removed.

RECOMMENDATIONS FOR PROVINCIAL PARKS

Due to the large amount of disturbance and soil movement in the Martha Creek and Blanket Creek Expansion Areas, it is recommended to complete pre-herbicide treatment along with dedicated site monitoring. This will decrease invasive plant and seed movement throughout the construction areas and aim to control established invasive plant sites within these areas. Reasons include:

- Large portion of the construction areas are forested with no invasives found, a pre-herbicide treatment would be beneficial to maintain this intact invasive-free ecosystem.
- Pre-treating smaller infestations found in the construction areas is more cost effective and environmentally beneficial than treating potentially larger infestations post-construction.
- The majority of the invasives surveyed within the construction areas can be found along human disturbed areas (roadsides and the gravel pit), these sites are easy to access and would greatly benefit from pre-treatment as these are access points for the remainder of the construction areas.
- Controlling invasive plants within BC Parks will decrease the probability of park users inadvertently transporting invasives to other locations both inside and outside the Province of British Columbia.

In addition to herbicide treatments, it is recommended to follow best management practices for areas where soil disturbance has resulted from removal of invasives, or due to construction sites and heavy equipment operations within the park. This includes:

- Thoroughly cleaning equipment and machinery to remove seeds and vegetative plant material before entering site;
- Ensuring sand, gravel and fill material originates from invasive plant-free pits or locations;
- Maintain invasive plant-free buffer zones between construction areas and remainder of Provincial Park;
- Re-seed bare soil after disturbance with invasive free seed mixes or native plants and minimize further disturbance on restoration sites as seedlings establish;
- Where possible, retain natural regeneration and understory vegetation where activities could affect native plant communities;
- Conduct invasive plant surveys or monitoring for 1 – 3 years after completion of project and complete appropriate invasive plant treatments and restoration activities.
- Encourage park visitors to stay on designated trails and roadways to encourage understory vegetation growth and development;
- Educate park visitors about Play, Clean, Go to reduce potential spread and introduction of invasive plants into newly developed and established areas within the park.

CITY OF SALMON ARM

CSISS staff completed invasive plant inventories for City of Salmon Arm municipal properties, administered and monitored the City's herbicide spray contract, completed mechanical removal of priority invasive plants, released biological control agents to treat purple loosestrife and installed Do Not Mow signage for knotweed infestations along city right-of-ways.

In 2017, CSISS staff inventoried 41 high priority sites throughout the City of Salmon Arm and contacted the appropriate personnel/ contractor or completed the required action to remove the infestation. Additionally, 14 Do Not Mow Signs were installed along city roadways where knotweed infestations exist. CSISS staff re-installed or fixed the signage throughout the season when necessary.

The CSISS hired a certified professional applicator for chemical treatments of high priority invasive plants on City properties. In total, 16 sites and 2,880 m² were treated over two passes from May to September 2017. Herbicide monitoring at each of the 16 sites was completed 2 weeks after treatment, and all sites passed inspection. Mechanical treatment was conducted by CSISS staff at 20 municipal properties with a total of 419 m² of invasive plant material removed.

In total, 20 blueweed sites, 8 bohemian knotweed sites, 3 yellow flag iris sites, 1 leafy spurge site, 1 bighead knapweed site, 1 nightshade site, 1 watercress site, and 1 teasel site were treated totaling 3,319 m².

The biological agent release was completed on municipal land at a wetland located near the crossroads of 70th Ave NE and 49th Street NE Canoe for the invasive plant purple loosestrife. Approximately 250 bio agents (*Galerucella californiensis*) were released on site. CSISS will continually monitor this site in future years to determine the efficacy of treatment (Figure 21).



Figure 21: Bio agent release on purple loosestrife (left). Purple loosestrife in flower (centre). Bio agents feeding on purple loosestrife leaves (right).

From the successful surveys and treatments of invasive plants on municipal land in 2017, it is recommended to:

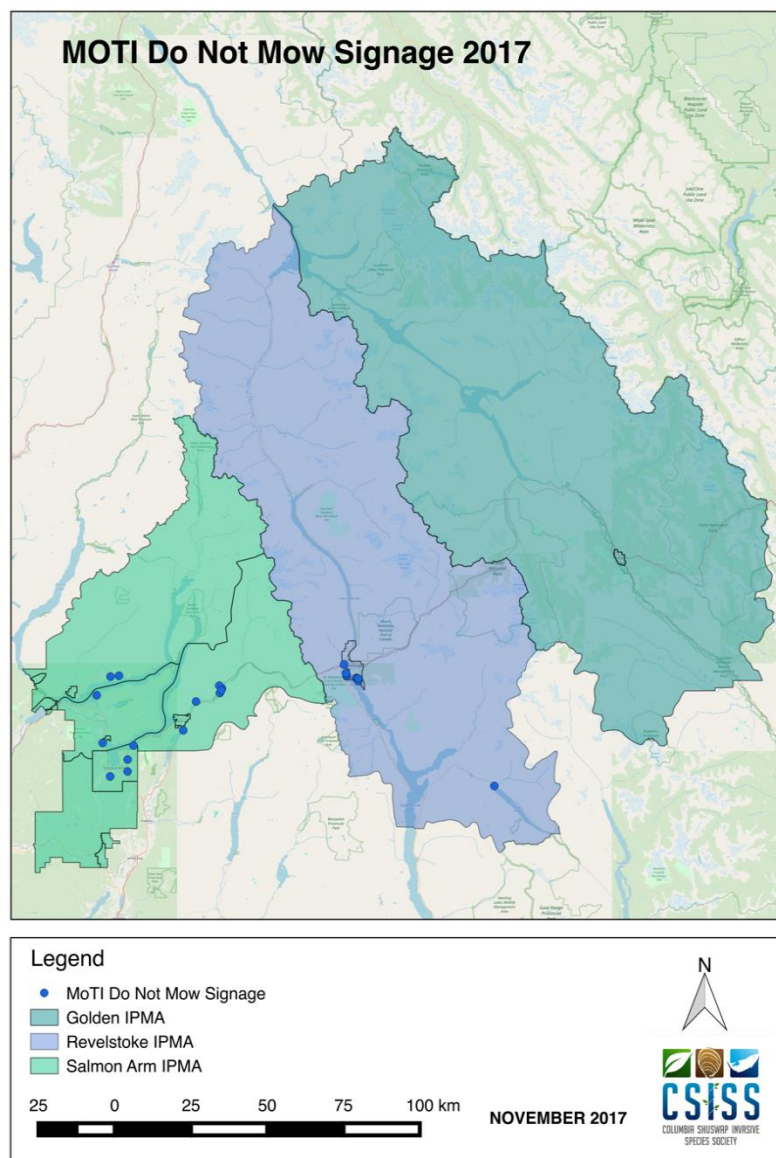
- Continue monitoring and surveying invasive plants on municipal properties;
- Continue chemical treatment of high priority species on municipal lands (most infestations require follow-up treatment due to large size and nature of the plant);
- Continue mechanical treatment of high priority species on municipal lands (seed banks for infestations can remain viable for many years);
- Continue to monitor and survey for biological agents and assess potential new treatment sites on municipal lands;
- Continue to provide support and information to City staff and members of the public about invasive plants, identification and removal techniques;
- Continue to install Do Not Mow signs at knotweed infestations located near city right-of-ways.

MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

CSISS staff completed installation of Do Not Mow Signs for the Ministry of Transportation and Infrastructure (MoTI). In total, 25 signs were installed on MoTI right-of-ways where knotweed infestations exist. During signage installation, CSISS staff directly spoke with adjoining private landowners delivering information about knotweed. During site visits throughout the season, CSISS staff re-installed or fixed the signage when necessary and removed signage in October for winter storage (Figure 21). During the mowing season, continued communication was maintained with mowing contractors and MoTI staff respectively. Additionally, information sessions and tailgate sessions were offered throughout the season for contractors.

CSISS staff continued to monitor for Early Detection Rapid Response species and reported them on the provincial Report-A-Weed App.

Figure 21: Ministry of Transportation and Infrastructure Do Not Mow Sign locations across the CSISS region in 2017.



PARKS CANADA

In 2017, the CSISS worked for Parks Canada –Mount Revelstoke Glacier National Park to assist with their invasive plant management program including monitoring of invasive plant treatment, mechanical control, outreach, and data entry.

CSISS staff completed first and second pass herbicide monitoring at four sites. Mechanical treatments were completed for any remaining invasive plants at each of the sites after completion of second pass herbicide treatments.

CSISS staff also reviewed and re-formatted 6,494 pieces of data for Parks Canada-MRGNP invasive plant records, and worked with Parks staff to re-organize and upload 36 sites and 287 Plant records to IAPP.

AQUATIC INVASIVE SPECIES SURVEYS

The CSISS collected 51 samples from 26 locations, which were analyzed for zebra and quagga mussels (ZQM) in 2017 as part of the provincial mussel defense program with the Province of BC (Figure 23).

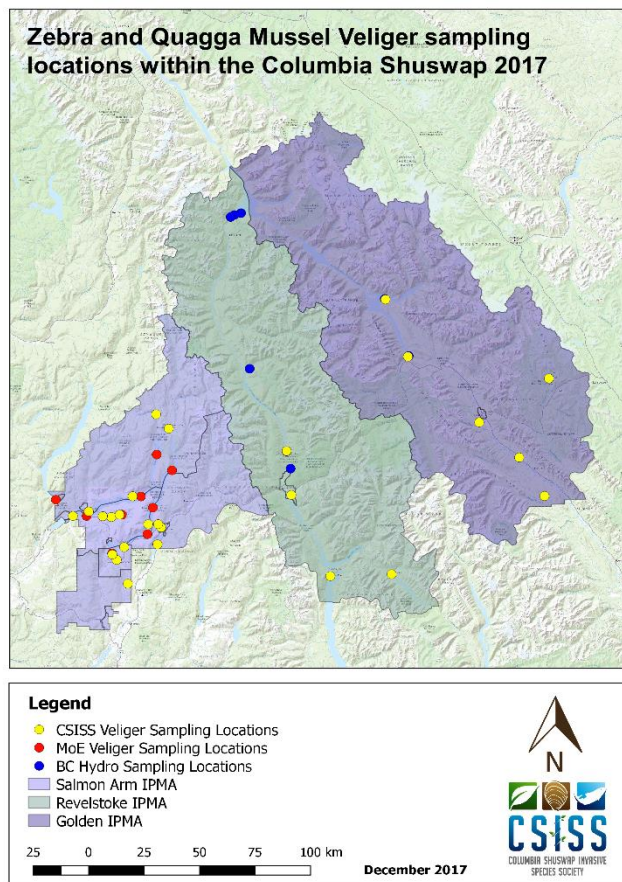


Figure 23: Sampling locations for AIS surveys carried out by CSISS (yellow), BC Hydro (blue) and M.O.E. (red) in 2017.

The provincial AIS sampling structure called for the majority of samples to be taken at higher risk sites in 2017. Risk level was determined using the Ranking Matrix for Monitoring Priority of Water Bodies (Craig 2015). Across the 35 sites sampled by CSISS, BC Hydro and M.O.E., 6 sites were determined to be highest risk and were sampled four times during the season. A further, 5 high risk sites were sampled three times each, 4 medium risk sites were sampled twice and 18 lower risk sites were sampled once during the season (Figure 24, Table 7).

Eight of the sites sampled by CSISS were new in 2017.

Sixteen of CSISS' sites were in the Shuswap and 10 in the Columbia Basin. The CSISS worked closely with BC Hydro and the Ministry of Environment (M.O.E.) to fill in gaps in the sampling schedule and to ensure that there was no duplication of sampling. Between BC Hydro and the M.O.E., there were a further 9 locations sampled across the region, bringing the total number of sample sites in the Columbia Shuswap region to 35.

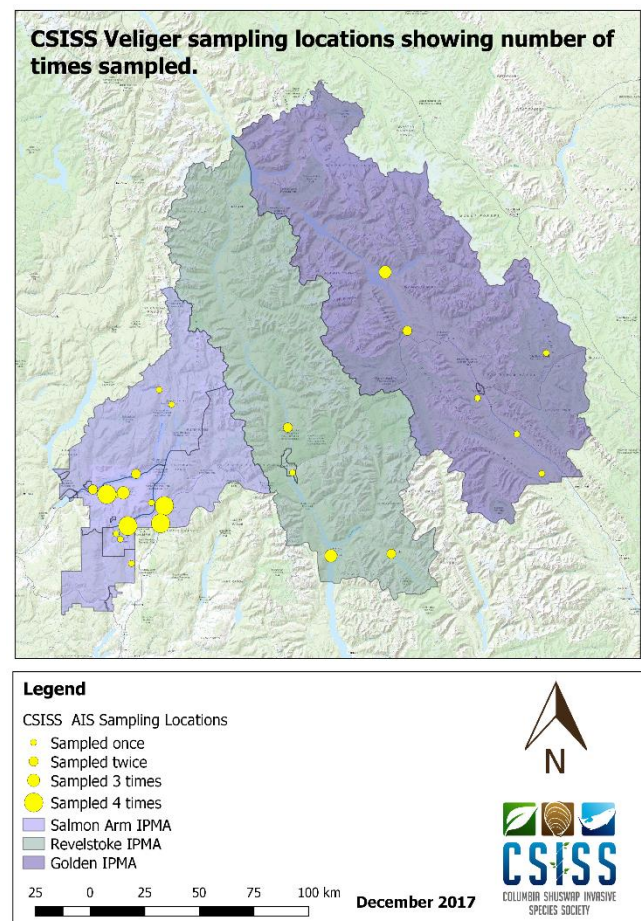


Figure 24: Higher priority sites (larger symbols) were sampled more often than lower priority sites (smaller symbols) in 2017.

Table 7: Zebra and Quagga Mussel Veliger Sampling Locations and dates 2017

Locations highlighted in grey pertain to the Columbia Basin Region of the CSISS Area

Waterbody	Location	Dates Sampled			
Shuswap Lake	Sorrento	28-Jun	22-Aug	25-Sep	16-Oct
Shuswap Lake	Canoe	11-Jul	23-Aug	26-Sep	16-Oct
Shuswap Lake	Blind Bay	11-Jul	22-Aug	25-Sep	16-Oct
Mara Lake	Sicamous, main launch	06-Jul	23-Aug	26-Sep	18-Oct
Mara Lake	Swansea Pt	20-Jul	23-Aug	26-Sep	18-Oct
White Lake	White Lake PP	20-Jul	22-Aug	25-Sep	M.O.E.
Upper Arrow	Shelter Bay PP	18-Jul	15-Aug		11-Oct
Lake Revelstoke	Martha Creek PP	27-Jun	BC Hydro	27-Sep	
Kinbasket Lake	Bush Harbour	07-Jul	BC Hydro	05-Sep	
Kinbasket lake	Kinbasket Resort	07-Jul	BC Hydro	06-Sep	
Shuswap Lake	Scotch Creek		22-Aug	25-Sep	
Shuswap Lake	Anglemont	28-Jun		25-Sep	M.O.E.
Shuswap Lake	Sandy Point		23-Aug		M.O.E.
Shuswap Lake	Sunny Brae		23-Aug		M.O.E.
Trout Lake	Trout Lake	18-Jul			11-Oct
Shuswap Lake	Seymour Arm	18-Jul			M.O.E.
Humamilt Lake	Humamilt Lake	18-Jul			
Little White Lake	Little White Lake	20-Jul			
Columbia Wetlands	Columbia Wetland Adventures	25-Jul			
Cedar Lake	Cedar Lake	25-Jul			
Gardom Lake	Gardom Lake	10-Jul			
Mitten Lake	Mitten Lake	26-Jul			
Williamson Lake	Williamson Lake		03-Aug		
McGuire Lake	McGuire Lake		22-Aug		
Emerald Lake	Emerald Lake			06-Sep	
Shuswap Lake	Sicamous, Twin Anchors				18-Oct
Lake Revelstoke	Sprague Bay		BC Hydro		
Kinbasket Lake	Potlach Creek		BC Hydro		
Lake Revelstoke	Downie Loop		BC Hydro		
Lake Revelstoke	Forebay, Mica Creek		BC Hydro		
Lake Revelstoke	5 Mile launch		BC Hydro		
Adams Lake	Brennon Point				M.O.E.
Shuswap Lake	Canoe point				M.O.E.
Shuswap Lake	Marble point				M.O.E.
Shuswap Lake	Broken point				M.O.E.

Several potential sampling sites at smaller lakes (Kernaghan Lake, Arthur Lake, Spanish Lake, Wallenstein Lake, and Spa Lake) were researched and found to have walking access only. Given the lower risk of infestation and the difficulties of access, these sites were not sampled in 2017.

No ZQM were found in any of the samples collected by the CSISS or other regional partners, currently there are no known cases of ZQM infestation in the Province of BC.

All sites sampled by CSISS for zebra and quagga mussels were also surveyed for invasive aquatic plants. A number of invasive plants are present in the Columbia Shuswap Region including: Eurasian watermilfoil, yellow flag iris, curly-leaf pondweed and fragrant waterlily. Water cress was found at one sampling location near McGuire Lake in the City of Salmon Arm. The new site was put into the IAPP provincial database.

GOAL 5: SLOW AND REVERSE THE SPREAD AND MINIMIZE THE IMPACT OF EXISTING INVASIVES

The CSISS works hard to slow and reverse the spread of existing invasive species and reduce their impacts. This is done in coordination with CSISS partners by coordinating priorities for control, as well as having staff respond to reports in the region and engage with landowners. The CSISS hosted a land manager's meeting to facilitate the process of prioritizing control of invasives in the region.

In 2017, the CSISS responded to 166 invasive species reports and requests for information. Depending on the nature and priority of the report, it was confirmed by a site visit and/or responded to with landowner extension, an outreach letter, or by enacting the provincial Early Detection Rapid Response (EDRR) protocol.

Knotweed continues to be a high priority species for the Columbia Shuswap Region, each year CSISS receives more knotweed reports than other invasive plant reports. To date, CSISS has surveyed 276 knotweed sites, including 42 new sites this year.

In 2017, all private property owners with knotweed infestations were mailed an outreach letter detailing the impacts and implications of a knotweed infestation, best management practices for treating knotweed and other informational resources. In addition to the outreach letter, CSISS staff completed 201 landowner visits, directly visiting and speaking to landowners providing helpful resources and information. CSISS staff spoke to 58 private landowners who were in the process of treating knotweed or preparing to treat knotweed the following year.



Figure 25: Chemically treated knotweed

CSISS staff continued to provide knotweed education and awareness to CSRD landfill and transfer station operators including knotweed TIPS sheets and CSISS resources for staff and members of the public. Additionally, CSISS staff ensured 'Do Not Compost Invasive Plants' signage was visible at landfills and transfer stations throughout the season.

During the CSRD free yard waste event happening October through November 2017, the CSISS partnered with the Invasive Species Council to visit busy landfills and transfer stations providing informational resources and direction on where to correctly dispose of invasive plant material to both operators and members of the public.

The CSISS hosted or supported 12 weed pulls throughout the season, targeting yellow flag iris, Himalayan balsam, spotted knapweed, burdock, and bittersweet nightshade. A total of 386 bags of weeds were removed by 173 volunteers.



Figure 26: Volunteer at the bittersweet nightshade weed pull on SABNES trail in Salmon Arm.

GOAL 6: PROGRAM SUSTAINABILITY

During the 2017 season, the CSISS gratefully received increased support for invasive species related programming in the region. The CSISS received funds from the Ministry of Forests, Lands and Natural Resource Operations (MFNLRO), the Ministry of Transportation and Infrastructure (MOTI), Ministry of Environment (MOE), Parks Canada, HCTF Public Conservation Assistance Fund, City of Salmon Arm, BC Hydro, and BC Parks (Parks Enhancement Funds and special capital project in Columbia region). In addition to funding from the provincial government, the CSISS continued multi-year funding agreements from both the Columbia Shuswap Regional District (CSRD) and the Columbia Basin Trust (CBT). CSISS received funding for a summer student from the federal government through the 'Canada Summer Jobs' program. Small contributions were also received from: Stella Jones Inc., North Columbia Environmental Society, Shuswap Trail Alliance (RBC Water Grant partnership), and Okanagan Library.

Additional funding sources are being pursued for the 2018 season. There are plans to seek funding from a variety of other funding sources beyond grant applications.

The CSISS staff team in 2017 included three returning staff members, Robyn Hooper (Executive Director), Laura Gaster (Field Operations Program Coordinator) and Emily Spiler (Education Officer). Two additional staff members were hired, Sue Davies as Outreach and Aquatics Program Coordinator, and Braden Lamoureux as Invasive Species Program Assistant. Staff helped greatly enhance the level of service the CSISS was able to deliver in the region (Figure 25). Retaining a quality staff team is important for the CSISS which has thus far been exceptionally successful. Similarly, the CSISS has been fortunate to have received direction from a knowledgeable, diverse Board of Directors. Each individual brings a unique perspective to the organization and has been instrumental in helping the CSISS address many aspects of invasive species management in the region.

The CSISS Policy Manual was reviewed and updated in 2017; the manual helps to facilitate orientation of new staff and directors (Stafl, 2015, updated Hooper 2017). The manual is reviewed and signed by the Board Directors

annually and updated as necessary. CSISS staff have created and maintained an Outreach Framework 2015-2020. This framework informs CSISS outreach targets, performance measures, staff work plans, calendars for specific outreach programming, and helps to determine gaps in stakeholder groups and pathways of spread (Hooper et al. 2015 updated by Sue Davies 2017).



Figure 27: CSISS Staff members (from left to right): Sue Davies (Aquatic Invasive Species and Outreach Program Coordinator); Braden Lamoreux (Invasive Species Program Assistant); Robyn Hooper (Executive Director); Laura Gaster (Field Operations Program Coordinator); Emily Spiler (Education Officer).

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Additional Resources:

CSISS Resources (Operational and Strategic Plans, Aquatic Survey Reports): <http://columbiashuswapinvasives.org/about-csiss/csis-resources/>

Information on high priority regional species: <http://columbiashuswapinvasives.org/invasive-species/high-priority-invasives/>

APPENDIX A: CSISS STAFF AND BOARD DIRECTORS 2017

Current CSISS Board Directors (2017- 2018)

Hamish Kassa	Chair, CSISS	Columbia Shuswap Regional District
Chris Cochran	Vice-Chair, CSISS	Town of Golden
John Braisher	Board Directors, CSISS	Rancher and Golden resident
Bruce Husband	Board Directors, CSISS	Shuswap Agricultural Strategy Group
Bryan Chruszcz	Board Directors, CSISS	Parks Canada
Adam Croxall	Board Directors, CSISS	BC Hydro
Darren Komonski	Board Directors, CSISS	City of Revelstoke
Diane Millar	Board Directors, CSISS	Ministry of Forests, Lands and Natural Resource Operations
Chris Gill	Board Directors, CSISS	Shuswap resident and environmental consultant
Laurel Corrigan	Board Directors, CSISS	Revelstoke resident

2016-2017 CSISS Board

Hamish Kassa	Chair, CSISS	Columbia Shuswap Regional District
Chris Cochran	Vice-Chair, CSISS	Town of Golden
Bruce Husband	Board Directors, CSISS	Shuswap Agricultural Strategy Group
Bryan Chruszcz	Board Directors, CSISS	Parks Canada
David Rooney	Board Directors, CSISS	Illecillewaet Greenbelt Society
Adam Croxall	Board Directors, CSISS	BC Hydro
Darren Komonski	Board Directors, CSISS	City of Revelstoke
Diane Millar	Board Directors, CSISS	Ministry of Forests, Lands and Natural Resource Operations
David Rooney	Board Directors, CSISS	Illecillewaet Greenbelt Society
John Braisher	Board Directors, CSISS	Rancher and Golden resident

CSISS Staff 2017

Robyn Hooper	Executive Director, CSISS
Laura Gaster	Field Operations Program Coordinator, CSISS
Sue Davies	Aquatic Invasive Species and Outreach Program Coordinator, CSISS
Emily Spiler	Education Program Officer, CSISS
Braden Lamoureux	Invasive Species Program Assistant (Summer Student), CSISS

APPENDIX B: EVENTS ATTENDED BY CSISS AND PARTNERS 2017

Events highlighted in grey pertain to the Columbia Basin Region of the CSlSS Area

Date	Event	# Attendees	# Direct Interactions
Jan-17	Email/phone meetings with 21 garden centres	21	21
10-Jan-17	Columbia Basin Invasive Species Team Meeting	14	14
31-Jan-17	Regional Invasive Species monthly phone call	15	15
3-Feb-17	AIS Provincial phone call	15	15
6-Feb-17	Invasive Species Strategic Meeting	20	20
7-Feb-17	ISCBC Annual Forum and EDRR boot camp	200	50
7-Feb-17	ISCBC Memorandum of Understanding meeting	6	6
10-Feb-17	DFO Aquatic Invasive Species presentation	4	4
15-Feb-17	Columbia Park Elementary grade 4/5	26	26
15-Feb-17	Shuswap Together: First Nations and Partners	165	40
20-Feb-17	Kootenay Mountain Culture media outreach	4	4
22-Feb-17	Outdoor Education, Eagle River Secondary	18	18
23-Feb-17	Rotary presentation	31	31
23-Feb-17	CSISS Board of Directors meeting	10	10
23-Feb-17	CSISS Land Manager's meeting	25	25
1-Mar-17	Knotweed Workshop	11	11
1-Mar-17	Regional Invasive Species monthly phone call	15	15
2-Mar-17	Revelstoke Farmers Market	40	40
2-Mar-17	Knotweed Workshop	16	16
6-Mar-17	Columbia Park Elementary Grade 4/5	25	25
16-Mar-17	Revelstoke Winter Farmers Market and Seed Swap	200	75
3-Apr-17	CB AIS Steering Committee meeting	8	8
4-Apr-17	CBT Climate Change meeting	40	40
5-Apr-17	SABNES trail hummock planting	260	260
5-Apr-17	Regional Invasive Species monthly phone call	20	20
6-Apr-17	Know Your Watershed educator presentation	10	10
13-Apr-17	Invasive Species Action Month phone call	7	7
15-Apr-17	Communities in Bloom - Sicamous	20	20
19-Apr-17	Sicamous Career Fair	55	55
20-Apr-17	ISCBC Boating Workshop	8	8
27-Apr-17	Salmon Arm Career Fair	350	120
27-Apr-17	STS youth trail building, Cemetery trails	75	75
29-Apr-17	Revelstoke Bike Swap	120	21
2-May-17	CSISS invasive species ID workshop, Salmon Arm	26	26
2-May-17	Provincial Strategic Call	20	20
3-May-17	Regional Invasive Species monthly phone call	20	20
4-May-17	Wild Wonders youth presentation	36	34

Date	Event	# Attendees	# Direct Interactions
8-May-17	STA youth trail building, Cemetery trails	79	75
10-May-17	CSISS invasive species ID workshop, Revelstoke	20	20
10-May-17	Sicamous Marine Search & Rescue presentation	12	12
11-May-17	CSISS invasive species ID workshop, Sicamous	7	7
13-May-17	Salty Dog Street Fest	250	85
16-May-17	Garden center/ florist outreach, Salmon Arm	12	12
16-May-17	Garden centre outreach Salmon Arm	16	16
18-May-17	Garden centre outreach, Revelstoke	8	8
18-May-17	Wild Wonders youth presentations	51	49
20-May-17	Revelstoke Timber Days	200	74
24-May-17	Know Your Watershed youth presentation	20	20
25-May-17	Wild Wonders youth presentation	49	49
25-May-17	Marina outreach Salmon Arm	6	6
26-May-17	Carlin Country Market	200	50
26-May-17	Wild Wonders youth presentations	51	51
29-May-17	Revelstoke Cycling Association board meeting	6	6
30-May-17	CSISS invasive species ID workshop, Golden	11	11
30-May-17	Marina outreach Shuswap	12	12
31-May-17	Revelstoke Secondary School grade 10 field trip	22	22
1-Jun-17	Know Your Watershed youth presentation	18	18
1-Jun-17	Boater outreach while AIS sampling	15	15
1 to 2 Jun-17	CBEEN CBSM workshop	30	30
2-Jun-17	Wild Wonders youth presentation	45	40
3-Jun-17	Revelstoke Show 'n shine	200	43
4-Jun-17	Scotch Creek Farmer's Market	150	51
6-Jun-17	Meet with NCES to discuss workshop collaboration	1	1
7-Jun-17	Eco Stewards youth education	25	25
8-Jun-17	Science 10 Salmon Arm Secondary weed walk	24	24
14-Jun-17	Golden Farmers Market	70	15
14-Jun-17	Partner meeting with Wildsight Golden	2	2
15-Jun-17	Saddle Club /NCES Himalayan Balsam weed pull	12	12
15-Jun-17	Wild Wonders youth presentations	67	67
16-Jun-17	Wild Wonders youth presentations	57	57
17-Jun-17	Paddling Film Fest	50	50
18-Jun-17	Hannah and Hannah garden centre presentation	14	14
18-Jun-17	Little White Lake YFI, weed pull	9	9
19-Jun-17	Williamson Lake Fishing Derby	80	30
20-Jun-17	Shuswap Trails Working Group meeting	28	28
20 to 21 Jun-17	TRU Invasive Species Research Conference	150	50

Date	Event	# Attendees	# Direct Interactions
21-Jun-17	RBC Illecillewaet Himalayan balsam weed pull	9	9
22-Jun-17	Blind Bay Farmer's Market	30	12
23-Jun-17	Salmon Arm Farm & Craft Market	100	25
24-Jun-17	Wildsight Kicking Horse river weed pull	16	16
25-Jun-17	RBC Turner Creek YFI weed pull	15	15
26-Jun-17	Revelstoke Property Services presentation	13	13
28-Jun-17	Celista Farmer's Market	200	60
28-Jun-17	Marina outreach	6	6
28-Jun-17	JCP Vernon Meeting	1	1
29-Jun-17	CBT Ecosystems meeting	35	35
29-Jun-17	June provincial AIS Call	15	15
30-Jun-17	Salmon Arm Community Market	40	14
30-Jun-17	CB Regional Executive Director meeting	3	3
1-Jul-17	Canada Day - Revelstoke Farmer's Market	200	50
1-Jul-17	Canada Day - Blind Bay	300	26
1-Jul-17	Canada Day - Sicamous	350	32
4-Jul-17	Weed walk with NCES	12	12
6-Jul-17	Presentation to Eagle Bay Garden Club	10	10
6-Jul-17	AIS sampling workshop	11	11
7-Jul-17	Boater outreach while AIS sampling	6	6
8-Jul-17	Revelstoke Local Food Initiative market	200	45
8-Jul-17	Shuswap Garden Club annual flower show	50	13
9-Jul-17	Boater outreach - Sicamous	50	17
11-Jul-17	Boater outreach while AIS sampling	5	5
11-Jul-17	Library Summer Reading Club - Blind Bay	27	27
15-Jul-17	Boater outreach - Martha Creek	50	19
16-Jul-17	Boater outreach - North Shuswap	50	12
18-Jul-17	Boater outreach - Trout Lake	9	9
19-Jul-17	Mt. MacPherson trailhead outreach	30	13
20-Jul-17	Marina outreach - Blind Bay	15	15
22-Jul-17	Boater outreach - Shelter Bay	15	9
23-Jul-17	Boater outreach - Blind Bay and Sorrento	20	13
25-Jul-17	Marina and boater outreach - Golden	6	6
26-Jul-17	Garden centre outreach - Golden	7	7
26-Jul-17	Wildsight Golden Motocross Dirtriders weed pull	12	12
26-Jul-17	Library Summer Reading Club - Salmon Arm	15	15
27-Jul-17	Wetland and Invasives Restoration Workshop	50	50
28-Jul-17	Martha Creek weed pull	16	16
29-Jul-17	Revelstoke Farmers Market	200	56

Date	Event	# Attendees	# Direct Interactions
29-Jul-17	Revelstoke Art & Garden Tour	5	5
29-Jul-17	Sorrento Farmer's Market	100	49
1-Aug-17	Boater outreach – Sicamous	50	13
3-Aug-17	Revelstoke Remax presentation	3	3
3-Aug-17	Boater outreach - Williamson Lake campground	50	19
3-Aug-17	Town of Golden planners meeting	3	3
5-Aug-17	Mt. MacPherson Bio Blitz	38	38
8-Aug-17	Junior Naturalists Revelstoke	13	13
10-Aug-17	Illecillewaet Greenbelt Himalayan Balsam weed pull	5	5
11-Aug-17	Community interaction, Meadows in the Sky	17	17
12-Aug-17	Hummocks youth event and weed pull	30	30
18-Aug-17	Salmon Arm Roots & Blues Festival	300	30
19-Aug-17	Revelstoke Train Museum Fun Day	50	18
20-Aug-17	Paddlesport Classic	50	25
22-Aug-17	Marina outreach - Captain's village	2	2
23-Aug-17	Boater outreach while AIS sampling	19	19
28-Aug-17	Meeting with JCP to discuss fall outreach	3	3
29-Aug-17	Community interaction, wild parsnip treatment	84	25
31-Aug-17	Columbia Basin region Bullfrog call	2	2
2-Sep-17	3-Day Enduro Race - Info Booth / Wash Station	80	45
5-Sep-17	Golden Remax and Town of Golden planners	7	7
6-Sep-17	Boater outreach while AIS sampling	7	7
6-Sep-17	Eat your weeds! - Edible Invasives Workshop	16	14
8-Sep-17	Salmon Arm Fall Fair	300	123
10-Sep-17	Revelstoke Cycling Association race meeting	14	14
12 to 14 Sep-17	RISO Tour - hosted by CSISS	20	20
14-Sep-17	CSISS AGM	35	35
14-Sep-17	CSISS Board of Directors meeting	9	9
16-Sep-17	White Lake Fun Day	100	70
17-Sep-17	Revelstoke Garlic Festival	1513	106
20-Sep-17	City of Revelstoke planning meeting	2	2
23-Sep-17	Kokanee Fish Fest	160	150
26-Sep-17	Boater outreach while AIS sampling	10	10
26-Sep-17	CSRD planning meeting	13	13
2-Oct-17	Beekeepers Association meeting	27	27
2-Oct-17	Don't Let it Loose outreach - Salmon Arm	10	10
4-Oct-17	CSRD Golden regional trail meeting	12	5
4-Oct-17	Don't Let it Loose outreach – Golden	3	3
4-Oct-17	Regional Invasive Species monthly phone call	20	20

Date	Event	# Attendees	# Direct Interactions
7-Oct-17	Revelstoke landfill outreach	18	18
7-Oct-17	CBSM surveys Revelstoke mall	14	14
16-Oct-17	Skimikin landfill outreach	8	8
16-Oct-17	SABNES survey outreach	5	5
17-Oct-17	Land Use and Real Estate provincial call	10	10
18-Oct-17	SABNES Bittersweet nightshade weed pull	21	21
18-Oct-17	Boater outreach while AIS sampling	6	6
18-Oct-17	Marina outreach	4	4
20-Oct-17	Shuswap Trail Alliance meeting	18	18
21-Oct-17	Sexqeltkemc Te Secwepemc peoples assembly	25	25
23-Oct-17	Revelstoke landfill outreach	14	14
25-Oct-17	Shuswap Watershed meeting	20	20
26-Oct-17	Revelstoke and Malakwa landfill outreach	2	2
26-Oct-17	October provincial AIS call	15	15
2 to 3 Nov-17	Board Governance workshop	20	20
8-Nov-17	Revelstoke Chamber of Commerce meeting	40	8
9-Nov-17	Revelstoke Winter Market	150	58
15-Nov-17	Fund Development Meeting with Shuswap partners	2	2
21-Nov-17	Columbia Region Ecological Discussion (CRED) talk	27	27
22-Nov-17	CSISS Board of Directors meeting	8	8
23-Nov-17	Revelstoke Winter Market	30	30
26 to 30 Nov-17	CBSM program development workshop	30	30
29-Nov-17	Shuswap Trail Alliance round table	50	50
5-Dec-17	JCP partner Meeting	10	10
6-Dec-17	CB AIS Steering Committee meeting	10	10
7-Dec-17	Revelstoke Winter Market	30	30
7-Dec-17	Realtor Presentation Shuswap Zone	50	50
7-Dec-17	Meeting with ASETS Aboriginal Employment	2	2

APPENDIX C: MEDIA COVERAGE OF CSISS ACTIVITIES IN 2017

Date	Publisher	Headline
3-Jan-17	CSISS	Ring in the New Year
6-Jan-17	Stoke FM	Invasive Rats
12-Jan-17	Stoke FM	Feral Pigs and other Invasive Animals
19-Jan-17	CSISS	You're Invited: CSISS Land Manager Meeting
6-Mar-17	CSISS	CSISS is Hiring
29-Mar-17	CastaNet	Money to stop nasty plants
29-Mar-17	Salmon Arm Observer	Funding Targets Invasive Plants
3-Apr-17	CSISS	Updated CSISS Priority Lists and CSISS Spring Invasive Species Workshops
20-Apr-17	CSISS	Happy Earth Day: 5 Ways to Help the Planet
25-Apr-17	Revelstoke Mountaineer	Recreation, Conservation, and Participation: The Key Ingredients in Revelstoke's Thriving Cycling Community
1-May-17	CSISS	May is Invasive Species Action Month
1-May-17	Revelstoke Current	You can stop invasive species in their tracks
2-May-17	CSISS press release	Columbia Shuswap Invasive Species Society takes action to prevent the introduction and spread of invasive species during Invasive Species Action Month in May
2-May-17	Revelstoke Mountaineer	Workshops being hosted as part of Invasive Species Action month
3-May-17	Revelstoke Review	CSISS hosting workshops on invasive species
31-May-17	Stoke FM	Radio morning show - weedy Wednesday
1-Jun-17	Reved Quarterly	Pigs on the Lam - something invasive this way comes
7-Jun-17	Stoke FM	Radio morning show - weedy Wednesday
13-Jun-17	Revelstoke Mountaineer	Community Weed pull event post
14-Jun-17	Revelstoke Mountaineer	Students explore nature with EcoStewards program
14-Jun-17	Revelstoke Mountaineer	Event post - Community Weed Pull
16-Jun-17	CSISS press release	Keeping invasive mussels out of the Columbia Shuswap: What's at stake and what we can do to help
16-Jun-17	CSISS press release	Revelstoke takes action against invasive species!
16-Jun-17	Revelstoke Mountaineer	Keeping invasive mussels out of the Columbia Shuswap: What's at stake and what we can do to help
16-Jun-17	Revelstoke Mountaineer	Volunteers remove invasive Himalayan Balsam at the Selkirk Saddle Club during a community weed pull
20-Jun-17	CSISS press release	Revelstoke calls for volunteers to subdue invasive plants
21-Jun-17	EZ Rock	CSISS Weed pull event this Sunday in Salmon Arm
21-Jun-17	Stoke FM	Radio morning show - weedy Wednesday
26-Jun-17	CSISS press release	Royal Bank of Canada employees and concerned citizens take action to protect our waterways
26-Jun-17	Revelstoke Current	RBC employees help bag invasive species
5-Jul-17	Stoke FM	Radio morning show - weedy Wednesday

Date	Publisher	Headline
13-Jul-17	CSISS	Updated CSISS Operational Plan
19-Jul-17	Stoke FM	Radio morning show - weedy Wednesday
29-Jul-17	Salmon Arm Observer	Pretty but potentially deadly
31-Jul-17	Stoke FM	Radio morning show - weedy Wednesday
14-Aug-17	CSISS	Invasive Species Update – Upcoming AGM
21-Aug-17	Stoke FM	Radio morning show - weedy Wednesday
31-Aug-17	CSISS	CSISS AGM Invite
19-Sep-17	Salmon Arm Observer	Letter: Invasive Japanese Knotweed threatens properties
27-Sep-17	Stoke FM	Radio morning show - weedy Wednesday
6-Oct-17	Revelstoke Review	Foreshore habitat choking on invasive vine
6-Oct-17	Salmon Arm Observer	Foreshore habitat choking on invasive vine
11-Oct-17	Stoke FM	Radio morning show - weedy Wednesday
20-Oct-17	CSISS	Fall happenings e-Newsletter
26-Oct-17	CSISS Press release	Invasive Rats
26-Oct-17	Revelstoke Mountaineer	Invasive Rats Looking to Invade Your Property This Fall
6-Nov-17	Stoke FM	Radio morning show - Invasive Rats
16-Nov-17	Revelstoke Review	CRED Talks kick off for another season
21-Nov-17	Stoke FM	Radio News Brief about Invasives Presentation by CSISS

APPENDIX D: COLLABORATION, WORKSHOPS AND TRAINING OPPORTUNITIES ATTENDED OR HOSTED BY CSISS IN 2017

- Monthly conference calls and meetings with Columbia Basin invasive species groups
- Monthly conference calls with BC Regional invasive species groups
- Invasive Species Council of BC Annual Forum
- Participation in Invasive Species Action Month planning
- Invasive Species Webinars for training purposes, e.g. ISCBC webinars, Aquatic Invasives webinars
- Coordination calls with ISCBC for PlantWise, Clean Drain Dry, and Don't Let It Loose Programs, and coordination with Revelstoke and Vernon Job Creation Partnership crews
- Knotweed focused workshops in Revelstoke and Salmon Arm
- Watershed educators workshop
- Boater workshop in collaboration with ISCBC
- CSISS Invasive species identification workshops in Salmon Arm, Revelstoke, Sicamous and Golden
- Sampling for aquatic invasives workshop
- Wetland restoration and invasive species workshop
- Edible invasives workshop
- Regional Invasive Species Organizations field tour and annual meeting (hosted by CSISS)
- CBSM workshops in June and November
- First Nations meetings - Presentation to Sexqéltkemc te Secwepemc Lakes Division (included Councillors and Chiefs from Splatshin, Neskonlith, Little Shuswap, and Adams Lake Indian Bands); Meeting with ASETS Aboriginal Employment group; First Nations participation in Shuswap Trails Roundtable (participants included Splatshin, Neskonlith, Little Shuswap, and Adams Lake Indian Bands.)
- Shuswap Trails Roundtable and Working Group meetings
- CSISS Annual General Meeting
- Canadian Columbia Basin Aquatic Invasive Species Steering Committee Meetings (spring and fall)