



Columbia Shuswap Invasive Species Society: *Year End Report 2014*



Invasive yellow hawkweed species along the Revelstoke Greenbelt

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ACKNOWLEDGEMENTS

The accomplishments and success of this organization can be attributed to our dedicated Board of Directors, the generous funding agencies that contributed to the project, our expert contractors, consultants and numerous volunteers.

Special thanks to our 2013-2014 knowledgeable and diverse Board of Directors whose dedication and direction has put CSISS on the map including: Hamish Kassa of the CSRD, Joyce deBoer of Wildsight Golden, Chris Cochran of the Town of Golden, Catherine MacRae of MFLNRO, Bryan Chruszcz of Parks Canada, Brad Ackerman of the City of Salmon Arm, Darren Komonoski of the City of Revelstoke, David Rooney of the Illecillewaet Greenbelt Society, Margaret Gibson of Eagle Bay, John McCloud of the Shuswap Agricultural Advisory Group, Doug Adama of Golden and Adam Croxall of BC Hydro. We are excited to welcome Bruce Husband to the 2014-2015 CSISS Board.

Special thanks also to Robyn Hooper, CSISS Education and Outreach Officer who worked tirelessly to engage local residents, expand awareness of invasive species in our region, and support operational field work.



Chair of CSISS Board of Directors, Hamish Kassa and Education and Outreach Officer, Robyn Hooper after completing an aquatic invasive plant survey in Trout Lake.

We would like to thank the Central Kootenay Invasive Plant Council (CKIPC) for supplying the template for this annual report.

We are extremely grateful to the Columbia Basin Trust, MFLNRO, MOTI the CSRD and the Invasive Species Council of BC for providing funding for this project and to the City of Revelstoke, City of Salmon Arm, Town of Golden, Parks Canada, the Illecillewaet Greenbelt Society and Wildsight Golden for their support in kind to the CSISS.



EXECUTIVE SUMMARY

April, 2014 marked the start of the second operational season of the Columbia Shuswap Invasive Species Society (CSISS). Since then, CISSS has actively pursued the goals identified in the 2013 Strategic Plan:

- 1) Implement a collaborative and coordinated program
- 2) Educate, engage and inspire residents and others to participate in invasive plant management
- 3) Prevent the introduction of new invasive species
- 4) Maximize the probability of detection and eradication of new invasive species
- 5) Slow or reverse the spread of existing invasive species and reduce their harmful impacts
- 6) Ensure program sustainability

In 2014, the CISSS continued to develop a **collaborative and coordinated program** in the CSRD through its partnerships with government, the Invasive Species Council of BC, other regional invasive species groups, local stakeholders and NGOs. This led to productive partnerships, such as the Columbia Basin Invasive Species Collaboration, which kick-started the development of a Basin-wide Aquatic Invasive Species Strategy.

Educating and engaging local residents was a priority in 2014. Many new and existing partnerships were established and strengthened. CISSS presented to and conducted targeted outreach to various stakeholders and First Nations. The CISSS has supported numerous community events and weed pulls, hosted training workshops and events to build capacity amongst partner organizations, re-designed and replaced highway invasive species interpretive signage, and delivered school programs to youth across the region. Through these outreach activities, CISSS engaged with over 1,800 people in the region. In addition, CISSS and the ISCBC partnered to staff a booth at Salute-to-the-Sockeye, a major regional event occurring every 4 years that attracted over 10,000 people to the environmental education tent where CISSS was set-up.

The CISSS approached 9 garden centres and nurseries and presented the “PlantWise” message to various target groups to **prevent new invasives from establishing in the region**. CISSS staff also spread the “Clean-Drain-Dry” message to water stewardship and boating groups to help prevent aquatic invaders such as Zebra/Quagga Mussels. Since January 2014, CISSS was mentioned in 25 local news, radio and web pieces. Through this media coverage CISSS raised awareness of invasives and the importance of prevention.

CISSS has been developing capacity and training partner organizations on plant ID and survey techniques to **maximize the probability of detection and eradication of invasives**. Many residents and relevant partner agencies have engaged with and become involved in CISSS. The CISSS currently maintains a mailing list with 120 interested members who receive updates via e-newsletter about upcoming events, plant profiles and any other info relevant to the invasive species world.

The CISSS works with key partners to **slow and reverse the spread of invasive species**. Although CISSS does not oversee spray contractors, it shares the priority plant list with multiple agencies including, CP Rail, BC Hydro, Parks Canada, MFLRNO and MOTI. To increase the quality of data available, CISSS conducts targeted invasive plant inventories and enters them into the Invasive Alien Plant Program (IAPP) database. In 2014, the CISSS documented and entered over 130 sites into IAPP.

In 2014, huge strides were made to **ensure program sustainability** including entering into multi-year funding agreements with the Columbia Shuswap Regional District (CSRD) and the Columbia Basin Trust (CBT). These advances will enable CISSS to continue to expand, improve its programming, and meet its goals.

Through all of the above activities, CISSS has successfully established itself as a “One-stop-shop” for invasives, making it an invaluable resource in the region.

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INTRODUCTION

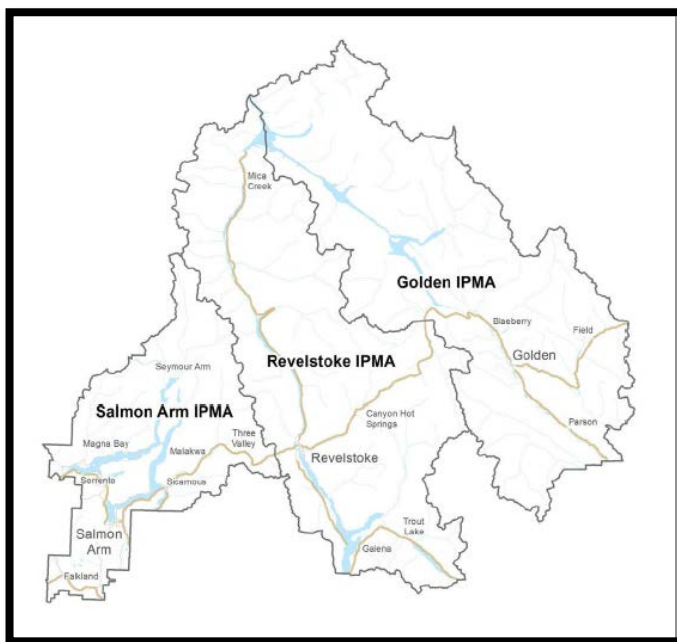
The CSISS was established in April of 2013 after a series of meetings and consultations with land managers, residents and other stakeholders with the aim to develop a collaborative and coordinated approach to invasive species management in the region. The CSISS joined a network of 17 regional invasive species groups in BC. These groups work in cooperation with each other, the Invasive Species Council of BC 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:

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

The summer of 2014 marked the Society's second season in operation. Having developed a platform of services as well as strategic and operational plans the previous year, CSISS was able to greatly expand its outreach and inventory activities in 2014. CSISS built and expanded connections within local communities and filled knowledge gaps regarding invasives on the landscape. CSISS continues to work towards its strategic goals.

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 among others (Craig, 2013).

Figure 1: CSISS Jurisdiction, including the three IPMA boundaries in the region (CSISS Operational Plan, 2013).

EDUCATION AND OUTREACH

CSISS hired Education and Outreach Officer, Robyn Hooper in the spring of 2014 to lead outreach activities and engage residents across the region. Since then CSISS has put together school visits, e-newsletters, workshops, press releases, interviews and display booths at community events and community weed pulls. In 2014, CSISS interacted with over 1,800 people (up from 375 in 2013); approximately 350 of whom were youth. At the October 2014 Salute to the Sockeye regional event, CSISS partnered with the ISCBC for an information booth that was visited by over 10,000 people, including thousands of regional school children.

MEDIA COVERAGE AND PRESS RELEASES

Since April, the CSISS has delivered 4 press releases and has been mentioned in 25 news, radio and web pieces including: The Salmon Arm Observer, the Revelstoke Current, the Golden Star, the North Shuswap Kicker, Friday AM, Columbia Shuswap EZ Rock, Stoke FM as well as multiple websites, Facebook pages and E-newsletters. Through these platforms, CSISS raised awareness of invasives and the importance of preventing their establishment.

Table 1: Articles, radio interviews and internet platforms spreading the message of invasives species in 2014.

Date	Publisher	Headline
22-Apr-14	Revelstoke Current	In honour of Earth Day: keep out the invaders!
24-Apr-14	Revelstoke Current	Reclaim Downie Marsh from the invaders! Help plant native vegetation!
27-Apr-14	Revelstoke Current	Regenerating Native Vegetation
30-Apr-14	Revelstoke Current	Local groups acquire CBT Environmental Initiatives Program
18-Apr-14	Salmon Arm Observer	Gardeners cautioned about invasive species
5-Jun-14	Columbia Shuswap Easy Rock	Interview with Columbia Shuswap Easy Rock FM
5-Jun-14	Salmon Arm Observer	Invasive Species Week
5-Jun-14	Revelstoke Current	Next week is Invasive Species Week
9-Jun-14	Shuswap Kicker (Facebook)	Invasive Species Week
5-Jun-14	ISCBC Website	Invasive Species Week
29-May-14	Hanna and Hanna's E-news	Advertising the Invasive Species Week presentation
5-Jun-14	Hanna and Hanna's E-news	Advertising the Invasive Species Week presentation
12-Jun-14	Hanna and Hanna's E-news	Advertising the Invasive Species Week presentation
13-Jun-14	Stoke FM	Interview with Stoke FM for Invasive Species Week
24-Jun-14	Golden Star	Annual weed pull needs volunteers
15-Jul-14	Golden Star	Weed pull volunteers collect 35 bags of invasive weeds in Golden
23-Jul-14	Revelstoke Current	Stopping the invasives Is a community job
29-Sep-14	Salmon Arm Observer	Targeting invasives
1-Sep-14	North Shuswap Kicker	Local stewards partner to learn about invasives
26-Sep-14	Revelstoke Current	Invasive Species Society AGM to focus on mechanical, chemical and biological controls
26-Sep-14	Friday AM (Salmon Arm)	Bugs that eat noxious weeds
1-Oct-14	Golden Star	Regional group fighting invasive weeds
21-Oct-14	Lakeshore News	Shuswap Naturalists Meeting- Invasive Species
21-Oct-14	Friday AM (Salmon Arm)	Shuswap Naturalists Meeting- Invasive Species
31-Oct-14	Columbia Shuswap EZ Rock	Shuswap Naturalists Meeting- Invasive Species

WEBSITE AND SOCIAL MEDIA

CSISS staff have been updating and utilizing the CSISS website (www.columbiashuswapinvasives.org) as a platform to engage the public and land managers and enable them to connect to events and local information pertaining to invasive species management (Fig 3). The homepage was updated approximately twice monthly during the summer to advertise current events and has been viewed over 3,100 times this year. 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. The CSISS also hosts a Facebook page and posts social media updates (1-2 times/ week in the summer) relevant to the organization in order to reach a larger audience and advertise events.

CSISS has also begun delivering quarterly e-newsletters to more than 120 recipients highlighting our local and regional events and activities.

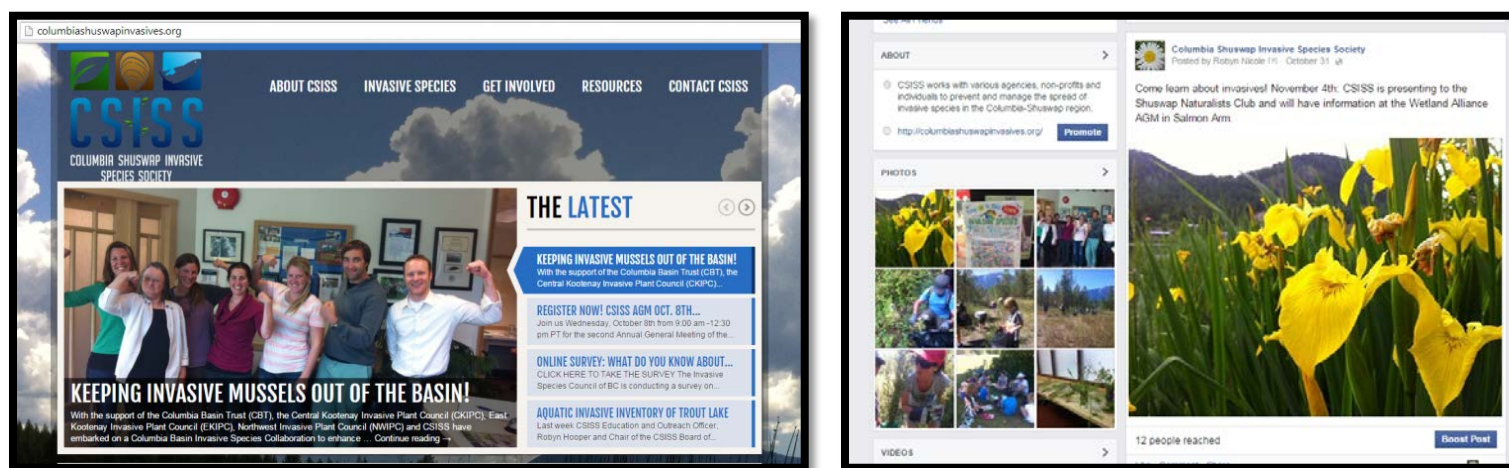


Figure 2: Image of CSISS website (left) and facebook page (right) used to help spread the word about invasives.

COMMUNITY OUTREACH

The CSISS partnered with numerous non-profit groups to raise awareness of invasive species in the Columbia-Shuswap region: the Wildsight Weed Crew out of Golden, the North Columbia Environmental Society out of Revelstoke, White Lake Stewardship Group and Shuswap Trail Alliance near Salmon Arm and the Invasive Species Council of BC (ISCBC) in the Shuswap. CSISS outreach brochures were provided to partner organizations to distribute at workshops and information booths throughout the region.

Through these partnerships CSISS supported 7 weed pulls: a yellow flag iris weed pull at Little White Lake; two Community Weed Pulls in and around Golden; three weed pulls and native re-vegetation events in Revelstoke; and a weed pull along a popular trail network in Salmon Arm.

In addition to community weed pulls, CSISS has set up booths at Farmers Markets in Golden, Salmon Arm, Sorrento and Revelstoke to raise awareness of invasive species and educate the public on how to prevent their spread. CSISS also delivered information and educational materials at the Columbia Wetlands Event in Revelstoke, the Revelstoke Garlic Festival, Canada Day celebration in Blind Bay, the Sicamous Moosemouse Sandfest, the Trailstoke Event in Revelstoke and edible Garden Tour in Golden.

Table 2: Community events involving CSISS in 2014. *Events highlighted in blue engaged primarily youth. Note that Salute to the Sockeye, a month-long event with a CSISS display booth reached more than 10,000 people but was not included in the total outreach numbers.*

Date	Name of Event	Location	# People
20-Feb-14	CSRD Board meeting	Salmon Arm	30
17-Apr-14	Presentation to CSRD Board about Mussels	Salmon Arm	30
27-Apr-14	Native Re-vegetation workshop with NCEs	Revelstoke	24
28-Apr-14	Native Re-vegetation workshop with Grade 5 Class	Revelstoke	20
2-May-14	Columbia Wetlands Event	Revelstoke	60
20-May-14	School Presentation Columbia Park Elementary	Revelstoke	26
20-May-14	School Presentation Begbie View Elementary	Revelstoke	26
21-May-14	White Lakes Turtle Day Carlin Elementary	White Lake	53
21-May-14	White Lakes Residents AGM	White Lake	58
23-May-14	Salmon Arm Farmers Market	Salmon Arm	45
6-Jun-14	Presentation to Lower Shuswap Stewardship Society	Enderby	27
8-Jun-14	iLearn Education Booth	Salmon Arm	125
9-Jun-14	School Presentation Silver Creek Elementary	Silver Creek	23
9-Jun-14	White Lake Stewardship Presentation and Yellow Flag Iris Weed Pull	White Lake	20
14-Jun-14	Hanna and Hanna's Orchard Garden Centre Plant Wise Presentation	Salmon Arm	6
14-Jun-14	Revelstoke Farmers Market	Revelstoke	101
18-Jun-14	Golden Farmers Market	Golden	70
21-Jun-14	National Aboriginal Day	Revelstoke	25
24-Jun-14	Golden Garden Centres and Nurseries	Golden	6
24-Jun-14	Golden City Council Presentation	Golden	20
1-Jul-14	Blind Bay Canada Day	Blind Bay	286
2-Jul-14	Edible Invasives Workshop	Revelstoke	16
3-Jul-14	HMC Services Invasive Plant ID Training	Golden	4
7-Jul-14	IAPP Training Workshop -Field day	Revelstoke	15
8-Jul-14	IAPP Training Workshop - Data entry day	Revelstoke	15
9-Jul-14	Junior Naturalists Invasive Species Field Day and Weed Pull	Revelstoke	10
11-Jul-14	Golden Wildsight Community Weed Pull	Golden	8
19-Jul-14	Revelstoke TrailStoke Event	Revelstoke	30
22-Jul-14	Revelstoke City Council Meeting	Revelstoke	16
23-Jul-14	Sicamous City Council Meeting	Sicamous	18
28-Jul-14	Salmon Arm Garden Centres Outreach	Salmon Arm	6
30-Jul-14	Golden Farmers Market	Golden	60
1-Aug-14	Sicamous Moosemouse Sandfest Public Event	Sicamous	124
13-Aug-14	Golden Edible Garden Tour	Golden	14
21-Aug-14	Shuswap Trail Alliance Field Day	White Lake	14
23-Aug-14	Love Your Columbia Weed Pull Day	Revelstoke	5
25-Aug-14	Salmon Arm City Council Presentation	Salmon Arm	25
10-Sep-14	City of Salmon Arm and CSRD Bylaw Officer Plant ID Training	Salmon Arm	11
10-Sep-14	Shuswap Stewardship Meeting	Salmon Arm	10
11-Sep-14	Garlic Festival	Revelstoke	40
13-Sep-14	Sorrento Farmers Market	Sorrento	70
17-Sep-14	Town of Golden Staff Training	Golden	4
19-Sep-14	Presentation to CSRD All staff	Salmon Arm	35
25-Sep-14	District of Sicamous Staff Plant training	Sicamous	15
26-Sep-14	Revelstoke Youth Kokanee Festival	Revelstoke	70
30-Sep-14	Human Dimensions on Natural Resource Management Info Booth	Kimberley	60
3-Oct-14	Salmon Arm Environmental Advisory Committee	Salmon Arm	12
3-Nov-14	Shuswap Naturalists Club Presentation	Salmon Arm	25
3-Nov-14	Wetland Alliance AGM Presentation	Salmon Arm	25
2014	Total CSISS Outreach (including youth)		1,808
2014	Total CSISS Youth Outreach		353
3-26 October 2014	Salute to the Sockeye Festival	Adams River	10,000

YOUTH OUTREACH AND SCHOOL PROGRAMS

CSISS advertised its school programs and lesson plans through letters to school districts and principals in the region as well as direct contact with teachers. There was a fairly good response, although some of the school activities CSISS planned for later in June were affected by the BC Teachers' strike. Silver Creek Elementary, Arrow Heights Elementary, Columbia Park Elementary, Begbie View Elementary and Carlin Elementary were all involved in CSISS school events both in and out of the classroom. Six classroom visits at Lady Gray Elementary were cancelled due to Teacher Strikes.

CSISS and ISCBC partnered with an educational booth at the successful iLearn Street Salmon Arm youth education event. As well, the Revelstoke Junior Naturalists participated in a weed pull and invasive species education program. CSISS gave invasive species presentations during the Revelstoke Annual Kokanee Festival for local school children in September. Thousands of youth (as part of the school program) dropped by the CSISS booth at Salute to the Sockeye and made a commitment to help stop the spread of invasives. That event aside, CSISS engaged over 350 youth in the region in 2014.



Figure 3: An Example of an over-flowing commitment form signed by youth (left) and the display booth (right) set-up at Salute to the Sockeye.

WORKSHOPS AND TRAINING EVENTS

To build capacity amongst partners, interested residents and stewardship groups, CSISS held various workshops and training opportunities. These efforts led to an increase in reporting, awareness and identification of invasive species in our region.

In July, CSISS hosted a two day Invasive Alien Plant Program (IAPP) workshop in Revelstoke that brought in experts Laura Kristiansen from MFLRNO and Juliet Craig from Silverwing Ecological Consulting. The workshop covered invasive plant identification, survey techniques, data management and data entry among other topics. In collaboration with the ISCBC, CSISS delivered a "Grow Me Instead" workshop at a local Nursery in Salmon Arm. The North Columbia Environmental Society hosted a CSISS-led Edible Invasives Workshop as part of their Garden Guru series in Revelstoke.

The CSISS also provided training to the Wildsight Weed Crew at the start of their operational season and continued to support the Wildsight Weed Coordinator throughout the season. CSISS staff met with HMC

Services, a local highway Maintenance Contractor in Golden to train their Quality Assurance Supervisor and general staff on invasive plant ID and best practices for removal. The staff from HMC also participated in a CSISS facilitated weed pull at a popular rest stop in Kicking Horse Canyon.

In addition to these training events, the Education and Outreach Officer delivered invasive plant training workshops to Municipal Park and Landscaping staff in Salmon Arm, Golden and Sicamous, as well as the Shuswap Trail Alliance Trail Crew in Salmon Arm. Revelstoke city staff participated in the local IAPP workshop mentioned above. The CSISS also provided invasive plant training for regional Bylaw Enforcement officers from the CSRD.



Figure 4: Participants compare survey notes (left) and examine a biocontrol agent (right) at an IAPP training session.

TARGETED OUTREACH

The CSISS conducted specific outreach activities tailored to the needs of individual groups. For example, CSISS delivered the PlantWise program to gardening groups and garden centres. In addition, CSISS delivered the Clean, Drain, Dry (CDD) program and messaging to boating associations as well as lake and water stewardship groups. To boost familiarity of invasive species issues amongst municipalities, the Education and Outreach Officer presented as a delegate at Town and City Councils in Golden, Salmon Arm, Revelstoke and Sicamous.

The CSISS met with the Lower Shuswap Stewardship Society in June to present information about local aquatic invasives and spread the CDD message. The Little White Lake Stewardship Group and Shuswap Trail Alliance received a briefing on priority plants (both aquatic and terrestrial) and the importance of CDD prior to a Yellow Flag Iris weed pull. In September, CSISS presented to the Shuswap Trail Stewards at their annual meeting regarding invasive plant management on trails. The CSISS is working with the Shuswap Trail Alliance on their Trail Environmental Screening Tool to include elements on invasive species identification and management, which will likely become a provincial environmental monitoring tool for trail stewardship groups.

In October, CSISS provided an overview of invasive plant management to the Salmon Arm Environmental Advisory Committee, which included several Shuswap Naturalist and Environmental Organizations. CSISS attended the Columbia Mountains Institute conference on Human Dimensions in Natural Resource Management with a display booth, and networked with over 50 participants from the Columbia Basin region, including biologists, land managers, First Nations, and stewardship groups. In November, CSISS presented to the Shuswap Naturalist Club as well as WA:TER (Wetland Alliance: The Ecological Response) highlighting the impacts invasive species can have on native biodiversity.

CSISS, the ISCBC and the Wildsight Weed Crew Coordinator visited a total of 9 nurseries and garden stores in Salmon Arm, Revelstoke and Golden to review their seed lists and plant inventories. The PlantWise program was shared with the retailers and information packets were provided for both the suppliers and customers to prevent the introduction of invasive plants. Garden centres responded positively to the educational opportunity and outreach materials were put on display for customers.

FIRST NATIONS ENGAGEMENT

In August, letters of introduction were sent to 28 First Nations in the region. These packets included a letter of introduction, invasive plant ID brochure and information about how to get in touch with CSISS as well as the on-line resources currently available to them.

CSISS also met with Aboriginal Educators in Revelstoke and Little White Lake. The CSISS hosted a booth at the National Aboriginal Day event in Revelstoke, highlighting important native plants as well as the value in protecting them and our native biodiversity from the threats of invasives.

In October, EKIPC and CSISS had a joint meeting with the Akisqnuq First Nation, whose territory encompasses Golden and the surrounding area. They expressed interest in possible Spring and Summer invasive plant training sessions, as well as collecting detailed mapping information about where invasive plants are found within their traditional territory.

CSISS has also partnered with Switzmalph Cultural Society on phase two of the Salmon River - Shuswap Lake Delta Fish Passage and Riparian Improvement Project (funded by Department of Fisheries and Oceans), which will include invasive plant removal program in the 2015 field season.

INTERPRETIVE SIGNAGE

Outdated CSRD noxious weed signs along highway pullouts were redesigned and replaced to reflect current information and help raise the profile of invasive species in the region. The signs' content was also broadened to include aquatic invasive species such as zebra/ quagga mussels and invasive fish. This will hopefully encourage residents to prevent the spread of and report invasive species.

A total of five highway pull-out signs were replaced with the new design and one new boat launch sign was installed in the Shuswap (Fig 5).



Figure 5: Invasive Species Interpretive Signage Installed along highway pullouts throughout the CSRD (left) and the Harbour Road Boat Launch in the Shuswap (right).

RESPONDING TO INVASIVE SPECIES REPORTS

An Invasive Species Reporting Protocol was developed (CISISS, 2014) to help streamline reports and complaints so that CISISS staff could respond in an appropriate manner. Complaints and reports were received through the CISISS toll free number, Report-a-Weed form on the CISISS website or through CISISS partners and members via e-mail. Depending on the nature 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 EDRR protocol. All reports were entered into IAPP.

LANDOWNER VISITS

As well as raising awareness through community and public events, another primary goal of the CISISS is to provide information to landowners and land managers on how best to manage their infestations of invasive plants and respond to noxious weed complaints.

The Education and Outreach Officer met with 3 landowners with questions about the weeds on their properties and delivered relevant information packages about how best to manage their infestations. Multiple other landowners were contacted by phone to resolve their questions and still others were sent informative material by post/e-mail.

NOXIOUS WEED OUTREACH

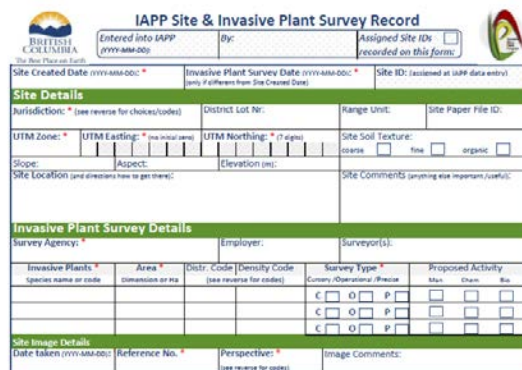
There were 12 weed complaints that were brought to the attention of CISISS in 2014. All of the reports were visited by CISISS staff. Four of the complaints either did not contain listed noxious weeds, pertained to a property with multiple jurisdictions or were adjacent to untreated Crown land. Eight properties were found to contain listed regional or provincial noxious weeds and were sent informational letters on how best to control the noxious weeds. Half of the properties were in compliance with the BC Weed Control Act and made noticeable, effective efforts to control invasive species on their properties.

The CISISS is working with Municipal and CSRD by-law enforcement officers to improve compliance associated with noxious weed complaints. Research into a more comprehensive invasive species bylaw is currently underway.

INVASIVE PLANT INVENTORIES

Throughout the 2014 operational season CISISS conducted inventories of priority invasive plants species identified in the 2013 CISISS Operational Plan and entered them into the provincial Invasive Alien Plant Program (IAPP) database. All landowner site visits were documented and entered into IAPP. A subset of CSRD properties were inventoried, as well as many priority locations along the Ministry of Transportation and Infrastructure Right-of-Way.

In total, 135 new invasive plant surveys were entered into IAPP in 2014. Many more sites were entered into IAPP by our partners after the 2014 IAPP workshop.



The form is titled "IAPP Site & Invasive Plant Survey Record" and includes logos for British Columbia and the Ministry of Environment. It contains several sections for data entry:

- Header:** Fields for "Entered into IAPP (YYYY-MM-DD)", "By:", "Assigned Site ID# recorded on this form", and "Site ID# (assigned at IAPP data entry)".
- Site Details:** Fields for "Site Created Date (YYYY-MM-DD)", "Invasive Plant Survey Date (YYYY-MM-DD)", "Jurisdiction", "District Lot No.", "Range Unit", "Site Paper File ID", "UTM Zone", "UTM Easting", "UTM Northing", "Site Soil Texture", "Slope", "Aspect", "Elevation (m)", and "Site Location (and directions how to get there)".
- Invasive Plant Survey Details:** Fields for "Survey Agency", "Employer", and "Surveyor(s)".
- Invasive Plants:** A table with columns for "Invasive Plants (Species name or code)", "Area (Dimension or size)", "Dist. Code", "Density Code", "Survey Type (C, O, P)", and "Proposed Activity (M, D, R)".
- Site Image Details:** Fields for "Date taken (YYYY-MM-DD)", "Reference No.", "Perspective", and "Image Comments".

Figure 6: Example of an Invasive Plant Survey Record sheet.

STRATEGIC AND OPERATIONAL PLANNING

During the summer and fall of 2013, CSISS hosted strategic and operational planning sessions throughout the region to solidify the vision, purpose and goals of CSISS and to develop a coordinated approach to invasive plant management in the region. The 2014 operational season made significant progress in meeting the objectives outlined in the Strategic Plan. These plans were referenced in the development of the 2014 workplan and the priority invasive plant lists were reviewed at the 2014 CSISS AGM.

STRATEGIC PLAN

The following main goals were identified in the 2013 CSISS Strategic Plan:

- 1) Implement a collaborative and coordinated program
- 2) Educate, engage and inspire residents and others to participate in invasive plant management
- 3) Prevent the introduction of new invasive species
- 4) Maximize the probability of detection and eradication of new invasive species
- 5) Slow or reverse the spread of existing invasive species and reduce their harmful impacts
- 6) Ensure program sustainability

OPERATIONAL PLAN



Figure 7: Stakeholders consider a species occurrence map at a 2013 Salmon Arm operational planning meeting.

In the fall of 2013, the CSISS hosted a series of three operational planning meetings in Salmon Arm, Golden and Revelstoke to identify priority invasive plants in each Invasive Plant Management Area (IPMA). Priority plant lists and a generalized work-plan were developed for each IPMA (Craig, 2013). These lists helped inform 2014 priority plant inventories and were reviewed and revised at the CSISS AGM in 2014.

COLLABORATION AND FUNDING

To maximize efficiencies and ensure program sustainability, the CSISS collaborated with invasive species groups within the Columbia Basin, other regional committees across the province, the Invasive Species Council of BC (ISCBC), the Columbia Basin Trust (CBT) and various stewardship groups and NGO's. These partnerships expanded successful programs (PlantWise, Clean-Drain-Dry) and secured joint funding (Columbia Basin Collaboration).

COLLABORATION

To remain up to date on invasive species issues and developments in BC, the CSISS Coordinator attended the annual ISCBC Winter Forum. The CSISS Education and Outreach Officer attended a Regional Professional Development opportunity along with invasive species groups across the province to learn new mapping techniques, coordinate Invasive Species Week and share educational resources.

CSISS Staff participated in PlantWise and Clean-Drain-Dry training and delivered the programs throughout the region along with an ISCBC regional summer student. The CSISS also helped train and provide resources to Wildsight Weed Crew staff members. When possible, CSISS staff participated in conference calls between regional invasive species groups, government and ISCBC to enhance collaboration.

In 2014, CSISS worked closely with invasive species groups in the Columbia Basin to leverage funding and enhance collaboration between committees (see Fund development section). Several joint meetings facilitated by the CBT between CSISS, the Central Kootenay Invasive Plant Committee (CKIPC), the East Kootenay Invasive Plant Council (EKIPC) and the Northwest Invasive Plant Council (NWIPC) kick-started the development of a Canadian Columbia Basin Aquatic Invasive Species Strategy. These meetings and subsequent partnerships also served to enhance networking, sharing of educational and operational resources and communication between neighbouring committees.

FUND DEVELOPMENT

The 2014 season saw two main exciting new developments in terms of long-term funding. In addition to the funding the CSISS has been grateful to receive from the Ministry of Forests, Lands and Natural Resource Operations (MFNLRO) and the Ministry of Transportation and Infrastructure (MOTI) over the last two years, the CSISS has received confirmed multi-year funding agreements from both the Columbia Shuswap Regional District (CSRD) and the Columbia Basin Trust (CBT).

The CSRD has confirmed funding CSISS at a level of \$50,000 per year for continued work on invasive plants and noxious weeds within the region over a five year term. The CBT has likewise approved a joint multi-year funding proposal from CKIPC, EKIPC and CSISS in the amount of \$75,000 annually per committee with additional funds to be allocated towards developing and delivering a Basin-wide Aquatic Invasive Strategy (Columbia Basin Invasive Species Program Proposal 2014-2017).

SUMMARY

While 2013 was a year of immense growth for CSISS as it became established and solidified its purpose and goals, 2014 was a huge step forward in getting many of those action items off the ground. Huge strides were made in implementing a collaborative and coordinated program, establishing and maintaining local connections, as well as educating, engaging and inspiring residents to participate in invasive plant management. Forward progress has also been made in preventing the introduction of new invasive species, maximizing the probability of detection and eradication of new invasive species, slowing the spread of existing invasive species, reducing their harmful impacts, and ensuring program sustainability.

CSISS has become a local fixture and is well on its way to becoming the “One stop shop” for invasive species in the Columbia-Shuswap through the services it provides. In 2014, CSISS greatly increased its capacity to deliver invasive species outreach and education programs, as well as to conduct site inventories and respond to noxious weed complaints.

Recommendations for 2015 include:

- 1) Consider seasonal staff support through Canada Summer Works.
- 2) Continue to offer community programs to engage residents in invasive species issues.
- 3) Continue to inventory high priority invasive plants.
- 4) Create a speaker series targeting smaller communities throughout the CSRD.
- 5) Monitor CSRD owned lands for invasive plants.
- 6) Provide bio-control training for interested residents and partner agencies.
- 7) Deliver invasive species identification workshops to municipal and provincial government staff and contractors (EG. highways, municipal landscaper, etc).
- 8) Continue to collaborate with regional and provincial invasive species groups to ensure up-to-date information.
- 9) Deliver local Aquatic Invasive Species (AIS) programming.
- 10) Develop First Nations training and collaboration materials.

REFERENCES

Columbia Shuswap Invasive Species Society. 2014. CSISS Invasive Species Reporting Protocol.

Columbia Shuswap Invasive Species Society. 2013. CSISS Strategic Plan.

Central Kootenay Invasive Plant Committee, East Kootenay Invasive Plant Council and Columbia Shuswap Invasive Species Society. 2014. Columbia Basin Invasive Species Program Proposal 2014-2017.

Craig, J.A. 2013. Operational Plan for Terrestrial Invasive Plants in the Columbia Shuswap 2014 to 2019. Prepared for Columbia Shuswap Invasive Species Society.

Current CSISS Board (October-Present 2014)

Hamish Kassa	Chair, CSISS	Columbia Shuswap Regional District
Chris Cochran	Vice-Chair, CSISS	Town of Golden
Joyce deBoer	Treasurer, CSISS	Wildsight Golden
Margaret Gibson	Secretary, CSISS	Independent Biologist
Catherine MacRae	Board of Directors, CSISS	MFLNRO
Bruce Husband	Board of Directors, CSISS	Shuswap Agricultural Strategy Group
Bryan Chruszcz	Board of Directors, CSISS	Parks Canada
David Rooney	Board of Directors, CSISS	Illecillewaet Greenbelt Society
Adam Croxall	Board of Directors, CSISS	BC Hydro
Darren Komonski	Board of Directors, CSISS	City of Revelstoke
Phil McIntyre-Paul*	Board of Directors, CSISS	Shuswap Trail Alliance

** Phil is awaiting word from the Board of the Shuswap Trails Alliance before he accepts CSISS Board nomination*

2013-2014 CSISS Board

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Margaret Gibson	Secretary, CSISS	Independent Biologist
Catherine MacRae	Board of Directors, CSISS	MFLNRO
John McCloud	Board of Directors, CSISS	Shuswap Agricultural Strategy Group
Bryan Chruszcz	Board of Directors, CSISS	Parks Canada
David Rooney	Board of Directors, CSISS	Illecillewaet Greenbelt Society
Adam Croxall	Board of Directors, CSISS	BC Hydro
Darren Komonski	Board of Directors, CSISS	City of Revelstoke
Brad Ackerman	Board of Directors, CSISS	City of Salmon Arm
Doug Adama	Board of Directors, CSISS	Independent consultant

CSISS Staff (April-Present 2014)

Natalie Staffl	Program Coordinator, CSISS
Robyn Hooper	Education and Outreach Officer, CSISS