Central Kootenay Invasive Plant Committee

2011 Summary Report

Field Tour participants enjoying lunch at Buckley's Campground in the Pend D'Oreille

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www.kootenayweeds.com

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Funding Provided By:

Executive Summary

The Central Kootenay Invasive Plant Committee (CKIPC) was formally established as a non-profit society in February 2005 with the goals of education and awareness, preventing new species introduction, promoting coordinated and collaborative management, working toward control/containment of highly invasive plants, providing a conduit of information, and developing and maintaining an inventory of invasive plant species. CKIPC pursues these goals by focusing on four program areas: 1) inventory (including mapping), 2) on-the-ground treatments, 3) coordination (including administration), and 4) education and awareness. CKIPC's activities focus on the Regional District of the Central Kootenay (RDCK) geographic area, and Areas A and B of the Regional District of the Kootenay Boundary (RDKB), in collaboration with the Boundary Weed Management Committee.

With support from the Ministry of Transportation and Infrastructure, FortisBC Inc., Regional District of the Kootenay Boundary, Ministry of Forests, Lands and Natural Resource Operations, Columbia Power Corporation, Waneta Expansion Ltd. Partnership, Fish and Wildlife Compensation Program, BC Parks (Community Legacy Program), and BC Hydro, multi-species inventories and treatments were completed throughout the CKIPC region. Target species included those listed in Appendices 3 and 4. Activities completed in RDKB Areas A and B were coordinated with the Boundary Weed Management Committee and the Fish and Wildlife Compensation Program. CKIPC's involvement in on-the-ground treatments was primarily focused on coordinating crews and management activities on behalf of partner organizations.

The Program Manager managed CKIPC programs and projects with guidance from the Board of Directors and support from the Program Assistant and qualified contractors, as required. CKIPC was further supported by a free and open membership policy with over 380 members to date.

CKIPC's education and awareness program included the delivery of presentations and workshops, participation in community events, landowner contact, and distribution of outreach tools, articles and publications. CKIPC also conducted several media interviews. Much of these activities were made possible through the funding opportunities provided by FortisBC Inc., BC Hydro, Community Legacy Program, Columbia Power Corporation, RDKB, Teck Metals Ltd., and the Columbia Basin Trust. In total, 7 Youth and Communities Pulling Together events and 11 workshops/presentations were hosted by CKIPC in 2011. Through these events, which were held around the region, approximately 516 people were reached. CKIPC also hosted the informational display booth at 6 regional events reaching about 167 people.

Provincial, regional and international partnerships were supported and fostered by CKIPC in 2011 through representation on working groups and participation in forums and workshops. CKIPC does not deliver a compliance and enforcement program, and no research activities were completed in 2011. Financially, CKIPC delivered 2011 programs and projects on time and within budget. Overall, 2011 was a successful year for CKIPC thanks to the generous support and funding from a diversity of sponsors and members.

For 2012, CKIPC aims to continue expanding its on-the-ground program, delivering high-quality education and outreach programs, increasing its on-line presence through an updated website and blog, and fostering coordination and collaboration among landowners, land managers, and others involved in invasive plant management.

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Introduction

The Central Kootenay Invasive Plant Committee (CKIPC) was formed by a group of residents and company/agency representatives who were interested in promoting a collaborative approach to invasive plant management. CKIPC became a non-profit society in February, 2005 and currently has over 380 members from a diversity of perspectives including industry, all levels of government, concerned citizens and landowners, utilities, consultants, and non-government organizations. CKIPC's overall program goals are to:

- Raise awareness and educate the public, government agencies, and other land managers about invasive plants and their impacts in the area;
- Prevent the further introduction and spread of invasive plants through education and awareness, early detection and control, and coordinated integrated weed management efforts;
- Promote coordinated and collaborative management of invasive plants between agencies and land occupiers;
- Work toward the control/containment of highly invasive non-native plant species;
- Provide a conduit for information and a source of expertise on invasive plants; and
- Develop and maintain a comprehensive inventory of invasive plant species within the CKIPC area.

CKIPC pursues these goals by focusing on four program areas: 1) inventory (including mapping), 2) on-the-ground treatments, 3) coordination (including administration), and 4) education and awareness. CKIPC intends to continue expanding its collaborative on-the-ground operations over the next few years. CKIPC's activities focus on the Regional District of the Central Kootenay (RDCK) geographic area, and Areas A and B of the Regional District of the Kootenay Boundary (RDKB). Activities that occur within RDKB are coordinated in collaboration with the Boundary Weed Management Committee.

The purpose of this report is to summarize activities completed by CKIPC from January to December, 2011 including inventory and mapping, on-the-ground treatments, administration and coordination, education and awareness, provincial and regional collaboration initiatives, and financial statements. Additionally, program activities are proposed for 2012.

Inventory and Mapping

Similar to 2010, the strategy for inventory in 2011 was to work toward completion of multi-species inventories on high priority sites and/or where inventory gaps existed in the region. Where possible, multiple jurisdictions were inventoried within an area to increase program efficiencies. Site assessments and inventories were conducted, as required, prior to treatment activities (i.e., mechanical and/or chemical control). Provincial Invasive Alien Plant Program (IAPP) inventory standards (Ministry of Forests, Lands and Natural Resource Operations, 2011) were used and a Site and Invasive Plant Inventory Record was completed for each site. All inventory data has been entered into IAPP.

FortisBC Energy Inc. (Gas)

CKIPC has been coordinating and delivering invasive plant control services on behalf of FortisBC Energy (formally Terasen Gas) since 2009. Activities focused on the Southern Crossing Pipeline (SCP) right-of-way (ROW) from Yahk to the Santa Rosa Summit (west of Big Sheep Creek). Additional activities were

completed, as needed, along the Main Gas Line (MGL) as it transects the CKIPC region (www.kootenayweeds.com/images/map_large.jpg).

In 2011, invasive plant inventory and management activities focused on areas where landowners reported concerns and where the FortisBC Energy ROW represented important wildlife habitat or was found in close proximity to sensitive wildlife habitat potentially impacted by invasive plants. Areas of extensive inventory occurred from Santa Rosa Summit to Violin Lake, from Violin Lake to Casino Road and from Yahk to Creston. In total, approximately 125 km of ROW was surveyed and 91.65 ha of the total survey area had invasive plant infestations of significant amount.

Only one small section of ROW near Violin Lake could not be inventoried due to access issues; this area will be inventoried in 2012 in collaboration with landowners. Further inventories to be completed in 2012 include the area through Stagleap Provincial Park from Hwy 3 to the Village of Salmo; this will complete inventory gaps for the Southern Crossing Pipeline ROW west of Kootenay Pass.

FortisBC Inc. (Power)

This was the first year that CKIPC partnered with FortisBC Inc. to conduct inventories and manual treatments on high priority powerline ROWs throughout the Central/West Kootenay region. This included all electoral areas of the RDCK and the Areas A and B of the RDKB.

CKIPC completed extensive multi-species invasive plant inventories. Approximately 65.9 km was surveyed and 100 ha of the surveyed area had invasive plant species present in significant amounts (as per IAPP standards). Based on these inventories, inventory and control recommendations were provided for the 2012 field season.

Regional District of Kootenay Boundary (Area A)

This was the second year that the CKIPC coordinated the *RDKB Area A Invasive Plant Program* in collaboration with Boundary Weed Management Committee[1]. During the 2011 season, CKIPC coordinated chemical and manual treatments, conducted inventories and efficacy checks, and provided information and educational resources to landowners and the general public. In addition, all relevant data was entered into IAPP and reports for the RDKB and associated funding partners were created.

CKIPC completed several extensive invasive plant inventories in 2011, to ascertain priority areas and to provide data for the spring 2012 strategic planning process. These inventories were carried out on both private and partner lands. All participants of the *RDKB Area A Invasive Plant Program* were offered a thorough inventory of their lands in the 2011 field season through the circulation of an information package and relevant contact information. CKIPC will be sending out a similar landowner information package in March of 2012; the letter will outline invasive plant management strategies and the process required to book inventories and/or treatment(s) on private property.

CKIPC was able to direct some funds received through the Waneta Expansion Ltd. Partnership towards manual treatment of high priority invasive plant species on private property within the Waneta Expansion Area. Through this opportunity, CKIPC inventoried and pulled the only known infestation of the highly invasive policeman's helmet in the Pend D'Oreille area. This site will be monitored in 2012 and subsequent years to ensure eradication.

[1] RDKB will be submitting an Invasive Plant Grant Program report for 2011.

Ministry of Transportation and Infrastructure

CKIPC conducted inventories for the Ministry of Transportation and Infrastructure (MOTI) throughout the RDKB (Areas A and B) and the RDCK. Activities focused on inventory gaps, invasive knotweed and gravel pits. As required, inventories and site assessments were completed prior to chemical treatments within the RDKB (Macleod Road, Seven Mile Road, Hwy 22A, Columbia Gardens Road, Casino Road, Station Road, Waneta-Nelway Road, Handley Road, Hwy 3Bm and Hutchison Pit). Target species included invasive knotweeds, hoary alyssum, common tansy, Himalayan balsam, yellow/orange hawkweed, and spotted /diffuse knapweed.

An extensive invasive knotweed inventory was completed along transportation corridors throughout the RDKB and RDCK electoral areas. Inventory details such as stem density, stem diameter, propensity of infestation to obstruct site lines along ROW and adjacency to private property, was collected. This information will assist CKIPC and the MOTI in determining appropriate site management options for knotweed control throughout the CKIPC management area. CKIPC will be providing landowners who have knotweed infestations adjacent to MOTI ROW's with a *Landowner Information Package* in early 2012, which will provide knotweed management resources and treatment options.

CKIPC began inventorying gravel pits within West Kootenay Highways District Contract Area #9 Kootenay Boundary and Area #10 Central Kootenay. Prior to 2011, very limited inventory data was available for gravel pits in these areas therefore it was deemed a high priority. A gravel pit inventory protocol will be developed in consultation with MOTI for the 2012 field season, and UTM coordinates will be requested from MOTI for all gravel pits in the area that require inventory. Further inventories are scheduled for 2012.

BC Hydro

During the 2011 season, CKIPC coordinated and conducted inventories and efficacy checks, and provided information and educational resources to landowners and the general public within the boundaries of the *RDKB Area A Invasive Plant Program.* CKIPC completed additional inventories along the ROW near the Waneta expansion area as well as the Pend D'Oreille, the Village of Fruitvale and approximately 21.8km of ROW where it paralleled Little Slocan Forest Service Road and Koch Creek Forest Service Road. Further inventory and treatment activities are scheduled for the 2012 field season.

Community Legacy Fund (BC Parks, Kokanee Creek Provincial Park)

CKIPC, in communication with BC Parks staff, conducted invasive plant inventories in Kokanee Creek Provincial Park from July to September 2011. Target invasive plant species included Scotch broom, Himalayan blackberry, and hoary alyssum. All inventory and treatment data was entered into IAPP.

Fish and Wildlife Compensation Program (Casino Road, Knotweed Control)

This unique project, which was funded by the Fish and Wildlife Compensation Program with support from Teck Metals Ltd., RDKB and MOTI, was developed to treat a large infestation of Bohemian knotweed along the Columbia River. This is the only known infestation east of the City of Trail and is a high priority treatment site due to the proximity of this infestation to the high water mark and the potential for downstream infestation. Coordination of mechanical and chemical treatments were completed by CKIPC with support from Marlene Machmer of Pandion Ecological Services. With support from the Fish and Wildlife Compensation program, MOTI and Teck Metals Ltd., extensive inventory was completed along Casino Road in June and July from the old Trail bridge to 2 km past the furthest (east) infestation using IAPP standards for operational inventories. Seventeen patches of knotweed covering 5789 m^2 were inventoried ranging in size from 1 m^2 to 1187m^2. The majority of the infestation (84%)

was on private land belonging to Teck Metals Ltd. The remaining 16% was on MOTI. Partnerships were developed with these organizations to assist with mechanical and chemical treatments on their land, while CKIPC conducted inventory, mapping, coordination and monitoring activities.

To determine long-term treatment efficacy of future treatments, CKIPC established permanent transects within six patches. For each transect, CKIPC counted the number of stems and measured stem diameter. Photopoints were also established at these six sites as well as an additional three sites. It is anticipated that sites will be re-vegetated when full knotweed control has been achieved. CKIPC anticipates that re-vegetation will occur in 2013. This project requires follow up monitoring and treatments for at least three years and continued coordination with landowners.

Early Detection and Rapid Response (EDRR)

Following up on reports of Early Detection and Rapid Response (EDRR) species, such as giant hogweed, mouse-ear hawkweed, and tansy ragwort was a priority for CKIPC. Where feasible, infestations of reported species are inventoried, removed and monitored.

In 2011, the following EDRR activities were accomplished:

- An isolated infestation of giant hogweed, which was reported, confirmed and controlled in 2010, was monitored and re-treated north of New Denver. Landowners were consulted and the site will be monitored and re-treated, as required, in 2012.
- Another small infestation of giant hogweed was reported, confirmed and controlled in Kaslo. This site will be monitored and re-treated, as required, in 2012.
- One tansy ragwort plant was reported, identified, inventoried, and controlled in Kaslo in 2010. An efficacy check was completed in 2011 and no plant was located. This site will be monitored again in 2012.
- Mouse-ear hawkweed infestations were inventoried and treated in Kokanee Creek Provincial Park. Treatments completed in 2010 were monitored for efficacy and re-treated as needed.

On-the-Ground Treatments

The majority of CKIPC's involvement in on-the-ground treatments involved coordinating crews on behalf of partner organizations as well as conducting inventories and treatments on high priority sites (Table 1). It is important to note that all treatments were monitored for efficacy and contractor compliance.

Table 1: CKIPC on-the-Ground Treatment and Expenditure Summary (Estimates) by Land Class (Report for 2011)[2]

Land Class	Chemical Treatments[3]		Mechanical Treatments[4]	
E.g.: Crown land tenure, utility corridors, transportation rights-of-ways, parks, private land	**Area (ha)**	**Cost**	**Area (ha)**	**Cost**
Crown Land	0	$0	0.8	$5,000
Utility Corridors (FLNRO PMP 402-0649 10/15)	7.2	$6,000	3.8	$7,000
Transportation	0	$0	1.5	$6,000
BC Parks	0	$0	0.2	$4,500
Private Land	0	$0	2.4	$7,800
Totals	**7.2**	**$6,000**	**8.7**	**$30,300**

**Costs are estimated. See financial statement for a detailed breakdown of revenues and expenditures.*

FortisBC Energy Inc.

Kootenay Weed Control (KWC) completed all chemical treatments on the ROW west of Kootenay Pass for 2011. The SCP ROW east of Kootenay Pass was not treated chemically in 2011. CKIPC is currently working with the Creston Valley Beef Growers Association to increase and maintain collaborative approaches to invasive plant management in the Creston area, which has been prioritized for treatment in 2012.

Several fuller teasel, invasive knotweed and policeman's helmet sites in the Rossland area were treated on FortisBC Energy and MOTI ROW's. Small infestations of diffuse knapweed and hoary alyssum were also treated on utility ROWs. A total of 16 liters of mix of Milestone (0.765L), Vanquish (4.425L), Tordon (4.815L) and Escort (6L) treated 3.7 ha of invasive plants in 2011. Treatments were completed along the ROW in the following areas: Sunshine FSR and Nine Mile Road near Fruitvale; Santa Rosa and Swehaw FSRs west of Big Sheep Creek; Old Cascade Road west of Rossland, near the junction of Highway 22A and lower Columbia Gardens Road; Hutchison Road off Columbia Gardens Road; and three private properties within the RDKB Area A Program area were. Chemical treatment efficacy was either 8 (80-89%) or 9 (90-99%), using the IAPP system. While undertaking efficacy monitoring at the various sites, any remaining isolated/individual plants were removed manually and deposited in the Trail landfill.

Four releases of *Cyphocleonus achates* weevils were made in the Rossland Seven Summits and Santa Rosa area. These weevils are used to manage spotted knapweed and were released at sites where chemical and/or manual control were not feasible options. Due to the low numbers of available biocontrol agents in 2011, more releases are scheduled for 2012 at priority sites.

Regional District of Kootenay Boundary (Area A)

CKIPC coordinates chemical and manual treatments and efficacy monitoring within the *RDKB Area A Invasive Plant Program*. Traditionally funds were not allocated to manual treatment however, CKIPC was able to direct some funds in 2011 received through the Waneta Expansion Ltd. Partnership towards manual treatment of high priority invasive plant species on private property within the Waneta Expansion Area. Through this opportunity, CKIPC inventoried and pulled the only known infestation of

[2] This table is only for funds that flowed through CKIPC. Any treatments conducted by partners in direct contract with herbicide applicators or other contractors/consultants are not included here.
[3] RDKB will be reporting on chemical and mechanical treatments completed as part of the Area A Program. Totals solely reflect works completed by CKIPC and/or qualified contractors on behalf of CKIPC.
[4] Costs are estimated as mechanical control and inventories were often completed together.

the highly invasive Policeman's helmet in the Pend D'Oreille area. This site will be monitored in 2012 and subsequent years to ensure eradication. In addition, several fuller teasel, invasive knotweed and policeman's helmet sites in the Rossland area were treated on FortisBC Energy and MOTI ROW. Small infestations of diffuse knapweed and hoary alyssum were also treated on utility ROWs.

Overall the chemical portion of the RDKB Area A Invasive Plant Program ran smoothly. KWC carried out the chemical program very professionally, particularly in the areas of record keeping and herbicide application. Efficiencies in travel time were realized due to cooperation with the Teck Metals Ltd., FortisBC Energy Inc., BC Hydro and MOTI invasive plant treatment programs.

In 2011, 28 sites on private properties were treated chemically by KWC. Herbicide quantities and total hectares treated will be reported on by RDKB. Efficacy on chemically treated sites was either 8 (80-89%) or 9 (90-99%) using the IAPP system. All landowners contacted were pleased with the timing of treatments and the professionalism of KWC. While undertaking efficacy monitoring at the various sites, isolated, individual invasive plants missed by KWC were removed manually. All manually treated weeds were bagged and deposited in the Trail landfill.

Ministry of Transportation and Infrastructure

CKIPC coordinated chemical treatments throughout the RDKB Areas A and B. Roads within the RDKB that were chemically and/or manually treated, included Macleod Road, Seven Mile Road, Hwy 22A, Columbia Gardens Road, Casino Road, Station Road, Waneta-Nelway Road, Handley Road, Hwy 3B and Hutchison Pit. Target species included Bohemian knotweed, hoary alyssum, common tansy, Himalayan balsam, yellow/orange hawkweed and spotted /diffuse knapweed. Incidental species such as sulphur cinquefoil, oxeye daisy and St. Johns wort were also treated if they were growing with target species. Herbicide quantities and hectares treated will be reported on by RDKB.

Mowing activities were coordinated with chemical treatments in the RDKB Area A, and collaboration with Emcon will occur in March 2012 to ensure effectiveness of treatments and safety of contractors. The Creston Valley Beef Growers Association, with input from CKIPC, completed chemical treatments between Salmo and Yahk along MOTI ROW. The Creston Valley Beef Growers Association will report on these activities.

BC Hydro

CKIPC coordinated BC Hydro invasive plant management activities throughout RDKB Areas A and B. In 2011, the Pend d'Oreille Valley 500kV right-of-way near Handley Road and Nine Mile creek west of Selkirk Substation was treated chemically. Target species included spotted knapweed, St. John's wort and sulphur cinquefoil. Incidental species such as Canada thistle and oxeye daisy were also treated if they were growing with target species. In total, 3.5 hectares of invasive plant species were treated with 8.0 L of Tordon 22K.

Three releases of *Cyphocleonus achates* weevils were made in 2011 on the BC Hydro ROW in the Pend D'Oreille and Slocan Valley. Biological control was used where chemical and/or manual control were not feasible options due to access or landowner concerns with herbicide treatments. Due to lower numbers of available biocontrol agents in 2011, more releases are recommended for 2012.

Ministry of Forests, Lands and Natural Resource Operations

Through a contribution agreement from the Ministry of Forests, Lands and Natural Resource Operations (FLNRO), CKIPC provides bioagent collection services for both the CKIPC area and other parts of the province. CKIPC collected 7 releases of *Cyphocleonus achates* weevils in the summer of 2011, which were distributed to key locations in RDKB and RDCK. Unfortunately agents were very limited in 2011;

therefore, no releases were shipped outside of the CKIPC region. It is hoped that populations will increase in 2012.

In collaboration with BC Parks and MOTI, FLNRO provided funding to monitor, inventory and control mouse-ear hawkweed infestations in Kokanee Creek Provincial Park. Historical sites were re-treated if needed, and new infestations were staked and controlled. This control program is expected to continue in 2012.

Monitoring and mechanical control was completed on Crown Land for priority invasive plants including blueweed (Nakusp, Powder Creek, Whatshan Lake); giant hogweed (New Denver); greater celandine (Little Slocan Lake Rec. Site); rush skeletonweed (Goose and Garrity Creek, South Slocan, Lasca Creek); and invasive knotweed (Champion Creek, Rossland, Slocan, Retallack-Whitewater Forest Service Road). These sites were visited several times over the field season to ensure efficacy and control.

CKIPC also re-measured three knapweed density plot transects that were established in 1994 by the BC Forest Service to monitor the effectiveness of biological control agents on spotted knapweed, and to observe and record the change in invasive plant composition, density and height over time. These plots are scheduled to be re-measured every 5-years (i.e., 2016).

Community Legacy Fund (BC Parks)

CKIPC conducted invasive plant mechanical treatments under the guidance of provincial government staff. Safety and work plans were developed prior to on-the-ground operations and contractor updates were provided on a regular basis for the duration of the project. CKIPC, with support from BC Parks, monitored contractor activities to ensure compliance and efficacy. Target invasive plant species included Scotch broom, Himalayan blackberry, and hoary alyssum. Control of these species benefited the community by protecting recreation values that exist within Kokanee Creek Provincial Park by restoring campsite and trail access. Project activities also assisted in the protection of native plant communities and habitats thereby ensuring healthy, functioning ecosystems for future generations and the species that rely on them. Additionally, management activities conducted under this project supported a collaborative approach to invasive plant management, which is critical for the successful delivery of projects and programs. All inventory and treatment data will be entered into the provincial Invasive Alien Plant Program in early 2012.

Fish and Wildlife Compensation Program (Casino Road, Knotweed Control)

Based on inventories conducted in early summer 2011, chemical and manual treatment strategies for each patch were assessed and developed based on a number of patch and site-level considerations including: 1) patch size and stem density; 2) proximity to riparian areas and legally defined pesticide-free zones; 3) accessibility of an excavator; 4) degree of stream bank stability; 5) percent slope; 6) stem size; and 7) efficacy of treatment methodology (Hallworth and Sellentin 2011). With the exception of one patch of knotweed, on private land, portions of all patches (0.58 ha total area covered by infestation) were treated chemically or mechanically in 2011. Five types of treatments were used: cutting, hand digging, foliar spray, wipe on, cut and insert and stem injection; the majority of treatments included herbicide application. Mechanical treatments only were carried out in patches that were small (less than .0003 ha), and/or within the pesticide-free zone.

Chemical treatments occurred along Casino Road, on both Teck Metals Ltd. and MOTI lands, from August through to October 2011. All chemical treatments were completed by KWC. Vantage, 36% glyphosate was used on all chemically treated sites, and 133.8 L were used to treat approximately 0.47 ha of knotweed. CKIPC worked closely with KWC to provide mechanical treatment to sites in preparation for stem injection and cut & insert treatments. Treatments on MOTI ROW were in

compliance with MOTI's Pest Management Plan (PMP File # 102-0668-07/12), and were conducted under the RDKB Area A Program. Treatments on Teck Metals Ltd. land were carried out by Teck Metals Ltd., but coordinated with CKIPC.

Invasive knotweed mechanical control at Casino Road

The Fish and Wildlife Compensation Program's summer crew and JL Crowe Grade 10 Work Experience class completed mechanical treatments with CKIPC. Removed plant material was brought to the RDKB landfill for deep burial disposal (deeper than 2 meters). All mechanical treatments will be inventoried in the spring and summer of 2012.

In addition to treatment of knotweed, infestations species of purple loosestrife and policeman's helmet in this area were treated mechanically. This site is the only known purple loosestrife infestation along this section of the Columbia River and was treated in August; this site will be monitored in 2012 for efficacy and treatment if required. Policeman's helmet is prevalent upslope from Casino Road and throughout the Trail area, however only two infestations of this plant were located.

Administration and Coordination

As of December 31st, 2011, CKIPC's Board of Directors include:

- Carol Bell (President);
- Catherine MacRae, FLNRO (Vice-President);
- Terry Anderson, FLNRO (Treasurer);
- Laurie Carr (Secretary);
- Tom Bradley, Slocan Integral Forestry Co-Operative & West Kootenay Woodlot Association (Past President);
- Rob Davidson, Creston Valley Beef Growers Association;
- Allan Freeborn, Kootenay Weed Control;
- Jim May, Contractor; and
- Eileen Senyk, Benchmark Environmental Services.

Crystal Klym, Program Manager and Jennifer Vogel, Program Assistant provided overall program management and coordination. CKIPC has continued to grow its on-the-ground operations and educational programs in 2011 with successful funding collaborations and partnerships that have been fostered by Crystal Klym, Jennifer Vogel, and the Board of Directors. Juliet Craig of Silverwing Ecological Consulting joined CKIPC as a consulting biologist, and provided invaluable expertise to the CKIPC team. As a result of increased on-the-ground activities, CKIPC hired qualified contractors to conduct inventories and treatments on applicable partner lands.

CKIPC currently has a free and open membership with over 380 members to date. Any person who wishes to join CKIPC needs to provide their email address to the CKIPC Coordinator so that they are added to the CKIPC membership list-serv. Members receive E-Newsletters, press releases, notification of upcoming events, and other "weedy" tidbits via the CKIPC list-serv. CKIPC aims to update its membership policy and contact list in 2012, and continue to improve communications and opportunities for collaboration across jurisdictions.

CKIPC recently secured funding through the Columbia Basin Trust to update the current website to include a Blog and events page in 2012. CKIPC looks forward to increasing its professional online presence and providing applicable and up to date resources to its memberships and partners.

All inventory, monitoring and treatment data was recorded as per IAPP guidelines and has been entered into the Invasive Alien Plant Program. The CKIPC data manager is Crystal Klym. Catherine MacRae and Barb Stewart provided IAPP expertise and training to Jennifer Vogel, to ensure accuracy of data. Priority invasive species (terrestrial, riparian and aquatic) are listed in Appendices 3[5] and 4.

CKIPC provided a contractor training session in June 2011, which focused on inventory protocol, invasive plant identification and management best practices, and the importance of collaboration. David Ralph, FLNRO and Juliet Craig provided expertise at this event. Jennifer Vogel attended the 2011 Invasive Plant Council of BC forum and post-forum workshop on behalf of CKIPC. Professional development opportunities for core CKIPC contractors and Directors will be prioritized in early 2012.

Education and Awareness

One of CKIPC's main program areas is education and awareness. Key messages include:

- Invasive plants threaten our ecosystems and economy;
- Humans are the biggest source of spread of invasive plants;
- Prevention is the best control option; and
- Collaboration and cooperation is the key to successful invasive plant management in the central Kootenay region and across the province.

As with previous years, activities undertaken in 2011 include delivery of presentations and workshops, participation in community events, landowner contact, and distribution of outreach tools and publications. Much of these activities were made possible through the funding opportunities provided by FortisBC Inc., BC Hydro, Community Legacy Program, Columbia Power Corporation, RDKB, Teck Metals Ltd., and the Columbia Basin Trust.

RDCK's "No Tipping Fee"

With input from CKIPC, the RDCK passed a Bylaw (no. 2221) to amend the existing "[RDCK] Solid Waste Management Facilities Regulatory Bylaw (no. 1750, 2005)" thereby waiving disposal fees for designated noxious weeds and other high priority invasive plants. Educational materials were provided to landfill technicians for distribution to RDCK staff and the public. CKIPC proposed a training session for RDCK staff in spring of 2012.

[5] Currently under review, to be finalized in March 2012. Both priority lists are "living" and will be revised as needed to reflect regional priorities.

Press Releases and Media Interviews

Media releases and articles[6] were developed and circulated to the CKIPC membership list-serv and media contacts throughout 2011 to raise awareness of priority species and committee activities. CKIPC was very fortunate in 2011 to garner much media attention from local sources including KBS Radio, Kootenay Co-op Radio, Nelson Daily News, Trail Daily Times, BCTV Kootenays.com, Rossland Telegraph, CBC, Arrow Lakes News, Shaw Cable, and EZ Rock Radio.

Topics included:

- Aquatic and riparian invasive species including Eurasian watermilfoil, invasive knotweeds, giant hogweed, zebra/quagga mussels and didymo (impacts, priority species, etc)
- Invasive plant management planning and cross-jurisdiction collaboration
- 2011 AGM and Speaker Series
- Non-invasive alternatives to "unwanted" horticulture species
- Responsible disposal of garden waste
- How to get involved with local initiatives
- Highway information signs
- BC Parks Community Legacy Program
- CKIPC Aquatic Invasive Species Workshop
- Kokanee Creek Provincial Park Community Weed Pull
- General CKIPC activities – overview of 2011 activities

Examples are included in Appendix 5.

Outreach Materials, Publications, and Resources

Several new resources were developed in 2011 with funds received from FortisBC Inc., the Community Legacy Program, BC Hydro, RDKB, and Columbia Basin Trust. These tools proved to be very useful throughout the field season and will continue to be well into the future. Below is a list of **outreach materials** that were created or completed in 2011:

- Invasive Plant Program (RDKB Area A) Landowner Information Package
- Aquatic invasive species display booth (Appendix 1)
- Terrestrial invasive species display booth (in progress)
- CKIPC reusable bags, T-shirts, vehicle magnets
- New business cards (Program Manager, Program Assistant and Directors)
- New website (in progress, release date March 31, 2012)
- Boat launch signs (Appendix 2)
- Interpretive posters (BC Parks) (Appendix 6)

[6] Copies of press releases, articles or any other CKIPC publication are available upon request: coordinator@kootenayweeds.ca or 250-352-1160.

Examples of the above mentioned outreach materials are available upon request and digital copies, as appropriate, will be made available once the updated website is live.

Two **E-Newsletters** were sent to the CKIPC membership in 2011, via the list-serve. The E-Newsletter contains information such as: upcoming events (local, regional, provincial, national, and international); outreach updates; regionally specific news and articles; an interesting national or international press release or article; interesting news links and tidbits from around BC and beyond; and a featured invasive species. In 2012, CKIPC aims to circulate quarterly E-Newsletters.

CKIPC distributed approximately **1600 brochures** throughout the region to private landowners, partners, event participants, storefronts, recreation groups, nurseries, post-secondary institutions, garden clubs, stewardship groups, garden centers, municipalities, RDKB/RDCK, contractors, coffee shops, and landscape architects. Circulated resources included Targeted Invasive Plant Solutions (activity and species), best practices, Grow Me Instead, CKIPC brochures, Local Government Guidebook, and aquatic and terrestrial carabiners. Overall, resources were well received and CKIPC aims to increase dissemination of outreach materials in 2012.

The **highway information sign project** continued in 2011; however, the number of signs installed was much less than 2010. As with previous years, the signs generated interest and inquiries from the public about invasive plants and CKIPC aims to improve this program in 2012. Overall, 17 signs were posted along major road corridors in the central Kootenay, timed to coincide with the flowering of each species. Signs were removed once the plant finished flowering.

The **CKIPC website**, www.kootenayweeds.com, is currently undergoing a comprehensive revision, and will be on-line in March of 2012. Proposed revisions include a user-friendly interface, increased linkages to other invasive species organizations and resources, current news and events, an interactive blog and an aquatic invasive species webpage. With these revisions, and the transition to a Content Management System based website, CKIPC will have an improved ability to keep content and resources current and reduce overall costs associated with website management.

The CKIPC **invasive plant hotline**, 1-250-352-1160, was well advertised in 2011. CKIPC received over 140 phone calls between June and December, and about 30 emails from people inquiring about invasive plant identification and management, requesting membership information, or expressing general concern about the perceived lack of management of invasive plants in the region. Many calls this year were regarding disposal of garden waste, giant hogweed sightings, media press releases, registration for events, and management options for invasive knotweed and hawkweeds.

Youth Educational Programs

Trafalgar Middle School Grade 7 students mechanically treating Scotch Broom at Kokanee Creek Provincial Park in September, 2011 (J.Craig)

With support from the Columbia Basin Trust, the Communities Pulling Together and Youth Pulling Together programs raised awareness about invasive plants in the Central Kootenay region, and engaged community groups and youth in invasive plant management and environmental stewardship. In 2011, CKIPC focused on providing larger events that incorporated a focused educational component on invasive plant management (Table 2).

The Communities Pulling Together program encourages community groups to commit three hours to manual

treatment of a high priority invasive plant site. The program includes an introduction to invasive plants and information on identification, appropriate methods of treatment, and disposal. In recognition of the group's efforts, each receives a $250 honorarium, refreshments, invasive plant carabiners, and other invasive plant educational resources. The Youth Pulling Together program was developed in 2009 with the goal of targeting young people and school groups. This program utilizes the Fraser Basin Council's "Nab the Bully" program and other teaching tools to meet learning outcomes in Science and Social Studies for Grades 3 to 6 in our region. In 2011, both programs continued to build on past successes and lessons learned.

Overall, 2011 proved to be a very successful year for the CKIPC's youth educational programs. In total, CKIPC completed 7 events throughout the Kootenay region – from Crawford Bay to Trail – teaching approximately 200 youth about invasive species and their impacts on biodiversity. CKIPC's largest event took place on September 26, 2011 at Kokanee Creek Provincial Park where Trafalgar Middle School students paired up with the Selkirk College Recreation, Fish and Wildlife Program students to manually treat a large infestation of Scotch Broom. Over 140 youth and adult volunteers took part in the event, and CKIPC looks forward to working with Trafalgar School on a similar program in 2012. In addition to classroom and field events, 10 teaching kits were developed and dispersed to local schools and school districts.

Table 2: Youth and Communities Pulling Together Events for 2011

Group or Organization Name	Site Location	Species treated	# Participants	# of Hours	# People Hours	Area Treated (ha)	# of Kg
Ministry of Environment Social Committee	Kokanee Creek Provincial Park	Scotch broom and mouse-ear hawkweed	30	3	90	1	500
Air Cadet League of Canada	Oasis Wetland	Policeman's helmet	30	4	120	0.5	*Plants left on site to desiccate.*
JL Crowe Secondary Class*	Casino Road	Bohemian knotweed	9	6	54	.05	650
Selkirk College; Fish, Recreation and Wildlife Class	Kokanee Creek Provincial Park	Scotch broom	14	3	45	1	*MOE disposed of plant material.*
Trafalgar Middle School**	Kokanee Creek Provincial Park	Scotch broom	140	3	420	1	*MOE disposed of plant material*
Crawford Bay Secondary**	Crawford Bay	Scotch broom	18	2	36	0.5	*Plants left on site.*
Crawford Bay Elementary**	Crawford Bay	Oxeye daisy	12	NA	NA	NA	*Plants left on site.*
TOTAL			**253**	**21**	**769**	**4.05**	**1150**

***No stipend provided, educational and work experience programs**

****Youth Pulling Together programs**

Informational Display Booth

During 2011 the CKIPC display booth (Appendix 1) was hosted at five events (Table 3). Given the invitations we receive to host our display booth at a variety of venues, and the cost associated with transporting and hosting the booth, CKIPC is following a rotation schedule to ensure that over a three to five year period, the booth will have a presence at each community in our area.

Table 3: Events attended with Terrestrial and/or Aquatic Booth in 2011.

Event Location	Date	Number of Reached
Kaslo May Days	May 21-23	40
Kootenay Whitewater Festival	June 25	5
Hills Garlic Festival	September 11	67
Aquatic Invasive Species Workshop	September 16	45
Waneta Mall	Feb, 22	Unmanned booth-estimated 60
Aquatic Booth at Kokanee Creek Provincial Park	September 26	10
TOTAL		**167**

Presentations and Workshops

CKIPC delivered workshops and training sessions to a variety of interested groups, including funding and educational partners, land managers, contractors and consultants, recreation groups (Table 4).

Table 4: Workshops and Presentations delivered in 2011.

Group/Event	Location	Date	Audience	Type
Land Managers Workshop	Nelson	February 15	22	Workshop
CKIPC 2011 Annual General Meeting and Speaker Series	Castlegar	April 6	40	Meeting/Speaker Series
Selkirk College – Integrated Environmental Planning students	Nelson waterfront	April 18	20	Workshop/Training
Weeds and Roads, MOTI Contractors	Trail	May 25	20	Workshop/Training
CKIPC Contractor Training Day	Salmo	June 8	12	Workshop/Training
CKIPC 6th Annual Field Tour	Pend D'Oreille	June 23	45	Field Day/Tour
City of Rossland, Council Meeting	Rossland	July 17	15	Presentation
City of Rossland, Municipal Contractor Workshop	Rossland	August 16	18	Workshop/Training
Creston Valley Quad Squad	Creston	September 7	18	Presentation
Village of Fruitvale, Council Meeting	Fruitvale	September 12	8	Presentation
Aquatic Invasive Species Workshop	Castlegar	September 16	45	Workshop/Training
TOTAL			**263**	

Land Manager Workshop

Land managers from provincial, regional and local organizations met on February 15th, 2011 to develop invasive plant management areas (IPMAs) for the Central Kootenay. In summary, CKIPC proposed the development of sub-regional plans that would identify priority sites and species for inventory, treatment and monitoring. The initial meeting brought together land managers from Provincial agencies, utility companies, forestry companies, fish and wildlife agencies, agricultural groups, non-profit societies, invasive plant committees, and local government. After providing updates on current activities, the participants discussed the benefits of having a collaborative plan, broken out into manageable areas that they could work from. During the meeting, participants delineated smaller sub-regional areas within the Central Kootenay called "Invasive Plant Management Areas" that were a more reasonable size for planning and on-the-ground operations. Ideally, priority sites, plants, inventory, treatments and monitoring will be described for each management area. This coordinated approach to planning and delivery is being used in the Boundary and East Kootenay areas as well as other parts of the province. With support from the Waneta Expansion Ltd. Partnership and partners, CKIPC is in the process of developing an operational plan for the Lower Arrow – Pend D'Oreille Invasive Plant Management Area. This will serve as the pilot and template for future management area plans.

Annual General Meeting and Speaker Series

The CKIPC *Annual General Meeting (AGM)* was held April 6, 2011 in Castlegar. The event brought together government and non-government agencies, biologists, and interested citizens who had the opportunity to learn about the latest invasive plant issues and find out more about CKIPC; 45 CKIPC members attended the AGM. Keynote Speaker, Katie Spellman from the University of Alaska Fairbanks gave a fascinating presentation on how wildfires affect invasive plants. Matthias Herborg, from the Ministry of Environment in Victoria, raised awareness about some of the aquatic invaders that could arrive to the Central Kootenay and their potential impacts. Barry Gibbs from the Invasive Plant Council of BC provided a provincial perspective on invasive plant management, giving ideas on how the IPCBC can support regional committees like CKIPC. After the lunch break, which provided an opportunity for participants to network, CKIPC held its 6th Annual General Meeting. Based on the success of the 2011 AGM, CKIPC will be holding the 2012 AGM in the Village of Nakusp.

Annual Field Tour

The CKIPC *Annual Field Tour* was held June 23, 2011 in the Pend D'Orielle Valley outside of Trail. Over 35 participants attended, and speakers and participants discussed collaborative and cooperative approaches to invasive plant management in the CKIPC region. Funded by the Columbia Power Corporation and the SFI Implementation Committee, the tour focused on the Trail-Waneta-Pend D'Oreille area and included topics ranging from holistic farming practices and prescribed grazing techniques to the relationships between native bees and invasive plants. Overall, the 6th annual Weed tour was a success, and CKIPC looks forward to the 2012 Weed Tour.

Weeds and Roads Workshop

Held on May 25, 2011, CKIPC partnered with IPCBC to deliver a *Weeds and Roads* workshop to interested MOTI staff and maintenance contractors. Speakers included, Pam Jorgenson, Invasive Plant Council of BC (IPCBC), Crystal Wheeler, MOTI, and Jennifer Vogel, CKIPC. This full day event included presentations highlighting the following key messages:

- Invasive plants and their impacts on roadways and ecosystems,
- Invasive plant best practices for roadside workers, and
- Identification tools for priority roadside invasive plants within the CKIPC region.

This workshop was very successful and encouraged collaborative approaches to roadside vegetation and invasive plant management. CKIPC looks forward to working with the Creston Valley Beef Growers Association, Emcon, YRB and MOTI in 2012 to further develop appropriate and effective invasive plant management along MOTI ROW's.

Creston Valley Quad Squad

Held on September 7, 2011 and attended by 18 active members of the Creston Valley Quad Squad, this two-hour workshop included a PowerPoint presentation and a discussion period. Workshop topics included invasive plant identification and management techniques and reporting protocols. In addition, high priority species and EDRR species, within the Creston area, were identified and discussed. This workshop was well attended and received; this group is now on the alert for new and spreading invasive species throughout the Creston and surrounding area.

Aquatic Invasive Species Workshop

Funded by the Columbia Basin Trust, this workshop was a key deliverable of the "Protecting Waterways from Alien Invasion" project. The goals of this project were to:

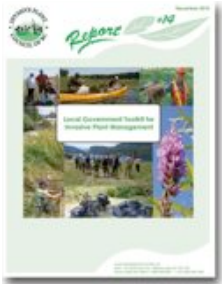
1. Protect our aquatic and riparian ecosystems from non-native invasive species.
2. Raise awareness about aquatic invaders and their impacts in the Central Kootenay.
3. Prevent further introduction and spread of aquatic invaders.
4. Detect new invaders early.

Held on September 16, 2011, at the Mir Centre for Peace in Castlegar, the workshop was a resounding success. CKIPC was fortunate to have several engaging and knowledgeable speakers including Dr. Matthias Herborg, Aquatic Invasive Species Coordinator for the Ministry of Environment and Dr. Brian Heise, Associate Professor of Natural Resources, at Thompson Rivers University. Workshop topics ranged from invasive fish species identification to boat cleaning techniques. The workshop brought together 45 government and non-government agencies, biologists, and interested citizens who had the opportunity to learn about the latest aquatic invasive issues.

Dr. Brian Heise describing invasive fish species at the Aquatic Invasive Species Workshop, September 16th, 2011

Municipal Council Meeting Presentations

CKIPC developed a 10-minute presentation on *Local Government Invasive Plant Management,* which was presented to the Village of Fruitvale and the City of Rossland. This presentation highlighted invasive species of concern within specific municipalities and their impacts on infrastructure and communities in general. Each of the Council members and the Mayor received a Local Government Invasive Plant Management package. In addition, each municipality received an IPCBC, *Report No 14: Local Government Toolkit for Invasive Plant Management*.



These presentations were very well received and resulted in further collaboration with these communities. The City of Rossland requested that the municipal workers participate in a 1-hour workshop and the Village of Fruitvale added an invasive plant profile to each of their Newsletters from May until October of 2011.

Presentations have been scheduled for Spring 2012 with the Village of Salmo and the City of Trail and discussions are occurring in the RDCK.

Municipal Worker Workshop

As a result of the presentation to the City of Rossland Council and Mayor, CKIPC was requested to develop and deliver a Municipal Contractor workshop. This workshop was held on August 17 and was attended by 18 city staff and contractors. This workshop highlighted:

- Priority species of concern within City limits,
- Identification techniques and resources, and
- Management techniques and concerns.

This workshop received good evaluations and the City and staff were pleased with the results. CKIPC will continue to collaborate with the City of Rossland on invasive plant management through provision of CKIPC brochures and resources.

Landowner Visits

The CKIPC continued to deliver the education component for the RDKB, through landowner visits, provision of resources and assistance with management plans and techniques of invasive plant species on private lands. Due to limited funds, only a few landowner visits were conducted outside of RDKB.

Provincial and Regional Collaboration

CKIPC contractors (Crystal Klym and Jennifer Vogel) and Directors represented the committee on a broader level to ensure that current information and resources are made available to CKIPC members, land managers and others, and that regional issues are brought forward to the regional, provincial, and international level. This level of collaboration is also important to improve efficiencies in the design and delivery of regional programs, projects and materials as well as to foster cross-border collaboration and cooperation. CKIPC participated in a number of committees, meetings and workshops including:

- IPCBC Technical & Operational Support Committee
- Weed Coordinator Working Group
- Invasive Alien Plant Program Version 2 Advisory Committee
- Cross-border initiatives (i.e., 100th Meridian Initiative, Headwaters EWM Taskforce)

CKIPC regularly communities with neighbouring regional committees (East Kootenay Invasive Plant Council, Boundary Weed Management Committee) and states (Idaho, Washington, Montana) as well as the IPCBC and Inter-Ministry Invasive Species Working Group.

Aquatics Working Group

In 2010 the importance of addressing aquatic invasive species was identified as CKIPC partners and members recognized the increasing threat to local lakes, rivers and wetlands. In response to this concern, CKIPC launched the Aquatics Working Group in spring of 2011 with thanks to Sheila Street of FortisBC Inc. who took on the role of Chair. With initial funding from FortisBC Inc. and the Columbia Basin Trust, the group's first task was to prioritize the aquatic invasive species that threaten the Central Kootenay region, and determine best practices required to prevent their introduction and spread.

The Working Group held its first meeting in April 2011 where priority species of concern were identified (Appendix 4) and key activities, such as hosting the workshop and developing boat launch signs, were outlined. Many of the priority species identified by the group are not yet found in the Central Kootenay so prevention and early detection is critical. Currently, the group includes representatives from RDKB, Environment Canada, Selkirk College, CKIPC, Okanagan Basin Water Board, BC Hydro, Celgar, Okanagan Nation Alliance, Silverwing Ecological Consulting, Creston Valley Wildlife Management Area, Slocan Lake Stewardship Society, East Kootenay Invasive Plant Council, Ministry of Environment, Hatfield Consultants, FortisBC Inc., FLNRO, and IPCBC. The working group is currently drafting a work plan for 2012 and CKIPC is seeking funds to implement key priorities.

Compliance and Enforcement

CKIPC does not deliver a compliance and enforcement program. Invasive plant complaints have been received via the CKIPC "hotline", and the Program Manager and/or Program Assistant provided whatever assistance and resources were available to mitigate the caller's concerns. Some complaints resulted in a landowner visit. CKIPC partners were notified of any inquiries/complaints associated with their lands, as appropriate.

Research

CKIPC did not conduct any research activities in 2011.

Financial Statement[7]

Table 5: Invasive Plant Program Total Revenue Summary by Funding Agency Report for 2011

Source of Revenue	Amount ($)
Ministry of Forests, Lands and Natural Resource Operations	$35,000.00
Regional District of the Kootenay Boundary	$3,900.00
AGM Revenue	$895.00
Community Legacy Program	$10,000.00
Teck Metals Ltd.	$4,500.00
Ministry of Transportation and Infrastructure	$15,500.00
Training/Workshop Revenue	$340.00
Regional District of the Central Kootenay	$5,580.00
Columbia Power Corporation/Waneta Expansion Ltd. Partnership	$10,000.00
BC Hydro	$19,000.00
Fish and Wildlife Compensation Program	$11,860.00
Invasive Plant Council of BC	$7,202.55
Columbia Basin Trust	$20,100.00
SFI Implementation Committee (WCSIC)	$1,000.00
FortisBC Inc.	$11,500.00
FortisBC Energy	$15,000.00
Total Misc Revenue	$1,357.44
Total	**$172,734.99**

Table 6: CKIPC Invasive Plant Program Total Expenditure Summary by Activity Report for 2011

Activity	Expenditures* ($)
On-the-Ground Treatments including Inventory[8]	$61,936.34
Administration[9] and Coordination[10]	$32,343.80
Education and Awareness	$19,364.12
Compliance and Enforcement	$0.00
Research	$0.00
Travel Expenses	$12,900.72
Materials, supplies, printing, photo-copying, misc	$6,008.13
Consultant Services for Special Projects	$15,939.50
HST Expense	$3,366.85
Total	**$151,859.46**

[7] See income statement and balance sheet for detailed financial information.
[8] Includes work planning, reporting and data management associated with on-the-ground operations.
[9] Includes overall program administration and associated costs (i.e., insurance, postage, rent, software, etc).
[10] Includes overall program management and coordination as well as CKIPC hotline and email inquiries, fund development, Board of Directors coordination, and other core committee activities.

Proposed Program for 2012

The following section proposes key programs and activities to be undertaken by CKIPC, pending funding and available resources. Recommendations are provided under each of CKIPC's four program areas including: 1) education and awareness, 2) coordination, 3) on-the-ground treatment, and 4) inventory. For the purposes of this report, inventory will be included with on-the-ground treatment.

Education and Awareness

2012 is shaping up to be an exciting year for CKIPC's education and awareness program as the committee was fortunate to receive funding from the Columbia Basin Trust to continue delivering education programs throughout the Central/West Kootenay region. In 2012, CKIPC's school-based programs will be incorporating web-based learning tools (i.e., iPAD) with on-the-ground field skills, such as invasive species prevention, identification and management. CKIPC is collaborating with the JL Crowe Secondary School's Outdoor Education program to develop and deliver a three-day invasive species workshop using this approach. JL Crowe has also committed to piloting the "Adopt a Site" program where the school commits to managing a high priority invasive plant site for 2-3 years. In addition, CKIPC is working with Nakusp Elementary and Secondary School, the Arrow Lakes Environmental Stewardship Society and the Village of Nakusp, to hold a Spring Broom Bash community pulling event in June.

In addition to delivering the abovementioned program, CKIPC proposes the following activities to further enhance education and awareness in the region:

- ☐ Collaborate with the Royal BC Museum and Touchstones Nelson on the delivery of the *Aliens Among Us* exhibition.
- ☐ Creating and expanding on outreach materials including invasive plant profiles and weed alerts.
- ☐ Upgrading the CKIPC website that includes social media components (i.e., blog).
- ☐ Coordinating the invasive plant highway sign program with support from MOTI, Atco Wood Products, and other partners and contractors.
- ☐ Working with the RDCK to develop and deliver a workshop geared towards landfill technicians and other key staff.
- ☐ Developing (as required) and distributing invasive plant identification, prevention, and management resources and brochures to the general public, private landowners, and land managers. This includes stocking or re-stocking visitor info centers, offices, libraries, and other key venues as guided by the Board of Directors and partners.
- ☐ Conducting landowner visits, as required and/or requested (pending funding).
- ☐ Developing and mailing out knotweed information packages to target landowners.
- ☐ Coordinating an Annual General Meeting and Speaker Series (April 2012), and Annual Field Tour (June 2012).
- ☐ Updating the CKIPC terrestrial information booth and hosting it, along with the aquatic information booth, at key events around the region (i.e., Hills Garlic Festival and the West Kootenay Fly Fishing Symposium).
- ☐ Providing Municipal Council presentations within the RDKB and RDCK.

- ☐ Raising awareness and delivering "Grow Me Instead" and training for growers, retailers, gardening enthusiasts, and others involved in the horticulture and aquarium industry. This includes delivering a workshop through Selkirk College's Continuing Education Program.
- ☐ Presenting at the BC Teacher's Federation regional "Global to Global" conference.

Coordination

CKIPC anticipates that 2012 will see increased coordination and partnership delivery of on-the-ground programs, and improved collaboration between land managers in the delivery of regional invasive plant management programs. CKIPC will also focus on evaluating and enhancing existing programs, supporting the newly formed Aquatics Advisory Committee, and diversifying funding and Board development opportunities.

CKIPC proposes the following activities to further enhance coordination in the region:

- ☐ Promoting provincial programs and resources. Pending funding, this would also include the regional coordination and delivery of any future Take Action crews.
- ☐ Hosting the Pend D'Orielle land manager and partner meeting in February and development of associated *Invasive Plant Management Area (IPMA) Operational Plan* for the Lower Arrow/Pend D'Orielle Valley.
- ☐ Creating operational plans for other IPMAs around the region.
- ☐ Collaborating with the Creston Valley Beef Growers Association to deliver a coordinated invasive plant program from Yahk to Creston through to Salmo.
- ☐ Providing support to land managers, supporters, and partners as required.
- ☐ Coordinating the Aquatic Working Group and securing funds to deliver on work plan priorities including the development of a 5-year Aquatic Invasive Species Strategy for the West and Central Kootenay region.
- ☐ Securing funds to provide Board development opportunities and delivery priority programs.
- ☐ Developing CKIPC Board policies and updating the Central Kootenay Strategic Management Plan.
- ☐ Developing invasive plant stewardship plans for partners, as requested.

On-the-Ground Treatment & Inventory

Delivering a coordinated invasive plant management program including inventory and management of priority species, and areas as identified in the 2012 work plan for all areas within the CKIPC region including Creston. This includes the regional coordination of invasive plant programs for the following organizations: FortisBC Energy, FortisBC Inc., BC Hydro, MOTI, FLNRO, and RDKB (Areas A and B). Additional partnerships may be fostered in 2012.

CKIPC proposes the following activities to further enhance coordination in the region:

- ☐ Monitoring treatment trials on invasive knotweed and coltsfoot within the CKIPC region, and re-treating as required.
- ☐ Collaborating with MOTI roadside maintenance contractors, including Emcon and YRB.
- ☐ Collecting, shipping, monitoring and releasing biological control agents as directed by FLNRO.

- ☐ Inventorying partner lands, monitoring historical treatments, and recommending future management options.
- ☐ Mechanically controlling priority species and sites.
- ☐ Coordinating chemical control activities and completing efficacy monitoring.

Opportunities and Challenges

2011 saw challenges in obtaining the necessary approval to conduct mechanical control on aquatic and riparian invaders such as yellow flag iris. Also, there was very limited funding for private land activities (i.e., landowner visits) outside of Regional District of Kootenay Boundary Area A.

Generous funding and support from a broad range of agencies in 2011 allowed CKIPC to continue offering and enhancing outreach and education programs as well as delivering on-the-ground invasive plant management programs. Expanding on lessons learned from 2010, CKIPC was able to improve its approach to on-the-ground management and expand its inventory and mechanical control programs. Work conducted under 2011 programs will enable CKIPC to develop a comprehensive regional work plan in the winter of 2012, which will ensure timely and efficient delivery of programs in the spring and summer of 2012. Increased funder support and expansion of regional programs enabled CKIPC to support a project-based Program Assistant contract opportunity.

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Appendix 1: Snapshot of Aquatic Species Booth

Appendix 2: Snapshot of Boat Launch Sign

Appendix 3: DRAFT Priority Terrestrial/Riparian Species (2012)

CATEGORY 1: EARLY DETECTION & RAPID RESPONSE (EDRR)

New species not present in BC or in the Central Kootenay area but likely to establish if introduced. Early detection and rapid response is the main management focus.

NOT KNOWN IN CENTRAL KOOTENAY - REPORT ALL SIGHTINGS

Invasive Plant Category	Legislation			Locations of Concern (outside Central Kootenay)
	WCA[11]	FRPA[12]	CCA[13]	
Black henbane (*Hyoscyamus niger*)				On Idaho and Boundary Weed Management Committee (BWMC) list.
Black Knapweed (*Centaurea nigra*)		√		Ferry, Stevens, Pend Oreille Counties in Washington State.
Buffalobur (*Solanum rostratum*)				On Idaho list.
Common bugloss (*Anchusa officinalis*)		√		Rock Creek, Kelowna, south Okanagan, and Keremeos. Ferry and Pend Oreille Counties in Washington State.
Common crupina (*Crupina vulgaris*)	P			On Idaho & BWMC list.
Common reed (*Phragmites australis* subsp. *australis*)	P		√	Vernon, Osoyoos and Coastal BC.
Cypress spurge (*Euphorbia cyparissias*)				On BWMC list.
Dyer's woad (*Isatis tinctoria*)				On Idaho list.
Garlic mustard (*Alliaria petiolata*)	P			Coastal BC.
Gorse (*Ulex europaeus*)	P	√	√	Southern Vancouver Island, Gulf and Queen Charlotte Islands. West coast Washington State.
Longspine sandbur (*Cenchrus longispinus*)				South Okanagan and one site in Boundary.
Marsh plume thistle (*Cirsium palustre*)		√		Cariboo, Robson valley between McBride and Prince George.
Meadow clary (*Salvia pratensis*)				On EKIPC list.
Nodding thistle (*Carduus nutans*)		√		Boundary, Similkameen, and Okanagan. Idaho State. Okanogan, Spokane, Pend Oreille Counties in Washington State.
Perennial pepperweed (*Lepidium latifolium*)		√		Vancouver, Walachin, Cranbrook, and Windermere. Ferry, Stevens, Pend Oreille Counties in Washington State. Boundary County, Idaho.
Puncturevine (Tribulus terrestris)		√		South Okanagan (Oliver to Osooyos Lk), Boundary. Okanagan County, Washington State. Idaho State. Protect entry into Pend D'Oreille.
Russian knapweed (*Acroptilon repens)*		√		Thompson, Okanagan and Kootenay. Okanogan, Ferry, Stevens, Pend Oreille Counties in Washington State. Idaho State.

[11] *Weed Control Act*; P=Provincial Noxious; R=Regional Noxious for Central Kootenay

[12] *Forest and Range Practices Act*

[13] *Community Charter Act*

Squarrose knapweed (*Centaurea virgata var. squarrosa*)				EDRR in Idaho.
Syrian Beancaper (*Zygophyllum fabago*)				EDRR in Idaho.
Velvetleaf (*Abutilon theophrasti*)	P			On BWMC list.
Wild Four O'Clock (*Myrabilis nyctaginea*)				On BWMC list. Class A in Washington State.
Yellow starthistle (*Centaurea solstitialis*)	P	√	√	Stevens County, Washington State. Protect entry into Pend D'Oreille and Creston area.

CATEGORY 2: ERADICATION OR ANNUAL CONTROL

New species to the CKIPC area with limited distribution and low density on infested sites. Species invading susceptible habitats, sensitive areas, or sites containing red- or blue-listed species. New infestations of established species in the area beyond the original population.

ERADICATION OR ANNUAL CONTROL IS THE MAIN MANAGEMENT FOCUS.

CHECK IAPP FOR KNOWN SITES AND REPORT NEW LOCATIONS.

Invasive Plant Category	Legislation			Known Infestation in the Central Kootenay
	WCA	FRPA	CCA	
Blueweed (*Echium vulgare*)	R	√		Creston area, Yahk, Powder Creek, Salmo, Kaslo (Woodbury), Whatshan (1 plant) and Nakusp. Relatively abundant in Creston so containment is main focus there. Report sightings outside these areas.
Coltsfoot (*Tussilago farfara*)				Known in the Kaslo, Retallack, Meadow Creek areas.
Field bindweed (*Convolvulus arvensis*)				Known in gardens in Nelson and perhaps other parts of CKIPC area. No records in IAPP.
Giant hogweed (*Heracleum mantegazzianum*)	P			Limited distribution in Kaslo and Hills on private land.
Greater celandine (*Chelidonium majus*)				One one site at Little Slocan Lake Forestry Recreation Site.
Hoary cress (*Cardaria draba*)		√		Known in Columbia Gardens, Trail, Fruitvale, Rossland and Pend D'Oreille areas. Report sightings outside these areas.
Himalayan blackberry (*Rubus discolor*)			√	Known in small patches through CKIPC region. More inventory required.
Japanese butterbur (*Petasites japonicus*)				Known in Rossland, Kaslo and Slocan. Species not in IAPP.
Knotweed (Japanese, Giant and Bohemian) (*Polygonum* spp.)	P	√		Found throughout the Central Kootenay. Introduced as a garden ornamental and spread by dumping. Report isolated and remote sites. Eradication goal outside private land.
Leafy spurge (*Euphorbia esula*)	P	√	√	Known in Creston (on private land) and in Kitchener (on highway).
Mouse-ear hawkweed (*Hieracium pilosella*)		√	√	Known in Kokanee Creek Park and previously in Champion Lakes Provincial Park (eradicated in 2008? - TBC). Report all sightings.
Russian olive (*Elaeagnus angustifolia)*				Limited distribution in Nelson on private land. No sites in IAPP. More inventory required.

Salt Cedar (*Tamarix aphylla*)			√	Recorded sites in Nelson, Trail and Montrose. Likely on on private land throughout Central Kootenay. Inventory required.
Scotch thistle (*Onopordum acanthium*)		√		Isolated sites on private land including Thrums (eradicated), Harrop and Rossland Report in Slocan Valley requires confirmation. Previously found at two locations in the Pend d'Oreille (mid-1990's) but successfully was handpulled. Report all sightings.
Sea buckthorn (*Hippophae rhamnoides*)				Known in Creston. Species not in IAPP.
Tansy ragwort (*Senecio jacobeae*)	P	√	√	One isolated plant found on private land south of Kaslo. Handpulled in 2010, monitor. Report all sites.
Teasel (Fuller's) (*Dipsacus fullonum*)		√		Isolated patches in in Rossland, Paterson, Trail, Pend D'Oreille, Creston, and Wynndel.
Yellow Bedstraw (*Galium verum*)				Known only at Kokanee Creek Provincial Park (TA). Samples to be collected. Species not in IAPP.
Yellow Flag Iris (*Iris pseudacorus*)	P	√	√	Found in throughout region in garden ponds. Known in the Creston Valley Wildlife Management Area, Kootenay Lake, Kootenay Canal, Arrow Lake, Erie Lake, Meldeanna Pond, Nancy Greene Lake, Salmo River? and Pend D'Oreille. Report sites outside these areas.

CATEGORY 3: CONTAINMENT

Established infestations along transportation corridors and areas of concentrated activities such as trails, campgrounds, parking lots, garbage dumps, maintenance yards, and gravel pits. These species are well established in some parts of the Central Kootenay but not present throughout most of the region.

CONTROL AND CONTAINMENT ARE THE MAIN MANAGEMENT FOCUS.

REPORT SIGHTINGS IN AREAS OUTSIDE KNOWN DISTRIBUTION.

Invasive Plant Category	Legislation			Known Infestation in the Central Kootenay
	WCA	FRPA	CCA	
Baby's breath (*Gypsophila paniculata*)		√	√	Found in the Castlegar (Robson) area, Edgewood, Nakusp and Creston. Report sightings outside these locations.
Bristly locust (*Robinia hispida*)				Found in the Trail/Fruitvale areas, Thrums and Kokanee Creek Park. Many sites not in IAPP since inventory was done before species was in IAPP. Report sites outside these areas.
Common tansy (*Tanacetum vulgare*)	R	√		Found throughout the Central Kootenay. Range is expanding along roadsides and through riparian areas. Map region to determine containment lines. Report remote or isolated sites.
Field scabious (*Knautia arvensis*)	R	√		Known only in Salmo, with isolated patches near Ymir (Porcupine Road), Meadows and Pend D'Oreille. Report sightings outside these areas.
Hairy cat's ear (*Hypochaeris radicata*)				Known from Thrums to Nelson, north shore of Kootenay Lake, and Fauquier. Only one site in IAPP. Further information required.
Hoary alyssum (*Berteroa incana*)	R	√		Found throughout the Central Kootenay. Main infestation is the Pend d'Oreille/Columbia Gardens/Fruitvale area with increasing populations in the Castlegar/Robson to Deer Park areas. Sporadic to Nelson and Balfour, increasing in Harrop/Procter. Report sightings north of Slocan, east of Creston, and isolated/remote areas.
Meadow/brown knapweed (*Centaurea pratensis*)		√		Found throughout the Fauquier/Octopus Creek, East Arrow, Nakusp to Fauquier areas. One patch in Incommappleux. Report sightings outside this area.

Plumeless thistle (*Carduus acanthoides*)	R	√		Known in the Pend D'Oreille, Columbia Gardens Trail, Paterson and Fort Shepherd areas. Two sites in Castlegar. Found in Creston in the mid-1990's and was treated. Report sites outside these areas.
Policeman's helmet/ Himalayan balsam (*Impatiens glandulifera*)			√	Particularly abundant in southern portion of the Central Kootenay region. Introduced as a garden ornamental and found in gardens through region. Report remote sites or sites on waterways.
Purple Loosestrife (*Lythrum salicaria*)	P	√	√	Currently found from the 6-mile area of the north shore of Nelson along Kootenay Lake and River to the Kootenay Canal area near Shoreacres. Isolated patches in Fauquier, Trail, Meldeanna pond, Wyndel, Ainsworth and Balfour. A few plants were found at the oxbow near Selkirk College in the 1990's. Report isolated and remote sites.
Queen Anne's Lace (*Daucus carota*)				Relatively abundant from Nakusp to Fauquier and Whatshan. Also found in southern portion of region up to Meadow Creek, Nakusp, and Slocan Valley. Most sites not in IAPP because this species was not listed prior to inventories.
Rush skeletonweed (*Chondrilla juncea*)	P	√	√	Contain to Crescent Valley, Krestova, Passmore, Slocan Park, Glade, Shoreacres and Pass Creek. Two small sites near Creston (Sirdar railway siding and Erickson). One extremely small site (1 plant) was discovered in Harrop at the start of the Lasca Creek road. Report all sites outside these areas.
Scentless chamomile (*Matricaria maritime*)	P	√	√	Relatively abundant in Edgewood and Burton. Small patches found in Nancy Greene Summit, Nelson (Giveout Creek, Smallwood, Sproule Creek), Harrop, Fruitvale, Salmo, Creston and Yahk. Report sites outside these areas.
Scotch broom (*Cytisus scoparius*)		√	√	Abundant in Nelson and the north and east shores of Kootenay Lake. Contain to this region. Isolated patches throughout CKIPC region. Report remote or isolated sites.
Siberian Elm (*Ulmus pumila*)				May be widely distributed throughout the region but there is no data in IAPP. Inventory required.
CATEGORY 4: BIOCONTROL OR HIGH PRIORITY SITES Established low to high density infestations that are widely distributed throughout the Central Kootenay area and/or have biocontrol options. **BIOCONTROL OR CONTROL AT HIGH PRIORITY SITES ARE THE PRIMARY MANAGEMENT FOCUS.**				
Invasive Plant Category	**Legislation**			**Known Infestation in the Central Kootenay**
	WCA	**FRPA**	**CCA**	
Black locust (*Robinia pseudoacacia*)				Found throughout southern portion of CKIPC region (Pend D'Oreille, Trail, Fruitvale, Waneta, Castlegar, Nelson, and Kaslo. More inventory required. Report north of Slocan.
Bull thistle (*Cirsium vulgare*)		√	√	Found throughout the Central Kootenay.
Burdock (*Arctium minus*)		√		Found sporadically throughout the Central Kootenay.
Canada thistle (*Cirsium arvense*)	P	√	√	Found throughout the Central Kootenay. Particularly abundant at the north end of Kootenay Lake.
Common toadflax (*Linaria vulgaris*)	P	√	√	Found scattered throughout the Central Kootenay.
Dalmatian toadflax (*Linaria dalmatica*)	P	√	√	Found in relatively small patches throughout the CKIPC area. Biocontrol appears to have been effective in reducing the once abundant populations of this species.

Diffuse knapweed (*Centaurea diffusa*)	P	√		Limited infestations at west end of the Pend d'Oreille valley, Beaver Creek Park, and at Columbia Gardens. (Not to be confused with the white flowered spotted knapweed that is often seen in Castlegar and Salmo/Fruitvale). Data in IAPP mostly is spotted knapweed. Report sites outside these areas.
Hound's tongue (*Cynoglossum officinale*)	P	√	√	Found primarily in the Pend D'Oreille and Creston areas, with smaller populations appearing in Blewett, Harrop, Fruitvale, Castlegar, South Slocan and New Denver. Biocontrol option available. Report large infestations outside these areas.
Orange hawkweed (*Hieracium aurantiacum*)	R	√		Found throughout the Central Kootenay in relatively low abundance, although dense patches in Nelson, north shore of Kootenay Lake, Kaslo and north. Report isolated or remote sites.
Spotted knapweed (*Centaurea biebersteinii*)	P	√	√	Found throughout the Central Kootenay area except in only small patches in East Arrow Park, Incomappleux Valley, and high elevations. Biocontrol options available.
St. John's Wort (*Hypericum perforatum*)		√	√	Throughout the Central Kootenay. Particularly abundant in the Pend D'Oreille. Biocontrol has been used since 1950's.
Sulphur cinquefoil (*Potentilla recta*)		√		Found throughout the Central Kootenay, with greater abundance in drier areas, particularly in the Pend D'Oreille valley and Robson to Deer Park.
Wormwood (Absinth) (*Artemesia absinthium*)				Found in isolated patches throughout the southern part of the CKIPC region to Kaslo.
Yellow hawkweeds (*Hieracium* spp.)		√	√	Found throughout the Central Kootenay. Difficult to identify to species. Biocontrol options being developed.

Appendix 4: Priority Aquatic Species

CATEGORY 1: EARLY DETECTION & RAPID RESPONSE New species not present in BC or in the Central Kootenay area but likely to establish if introduced. Early detection and rapid response is the main management focus. **NOT KNOWN IN CENTRAL KOOTENAY - REPORT ALL SIGHTINGS**		
Aquatic Invasive Species	**Target Species**	**Presence in adjacent states/regions**
Brazilian elodea (*Egeria densa*)	**X**	Present in Idaho
Common/ European frogbit *(Hydrocharis morsus-ranae)*		Not present in Idaho
Curly leaf pondweed (*Potamogeton crispus*)		Present in northern Idaho
Fanwort (*Cabomba caroliniana*)		Not present in Idaho
Feathered mosquito fern (*Azolla pinnata*)		Not present in Idaho
Flowering rush (*Butomus umbellatus)*		Present in northern Idaho
Giant salvinia (*Salvinia molesta*)		Not present in Idaho
Hydrilla (*Hydrilla verticillata*)	**X**	Present in Idaho
New Zealand mudsnail (*Potamopyrgus antipodarum*)	**X**	Present in Spokane and Vancouver Island
Parrotfeather milfoil (*Myriophyllum aquaticum)*	**X**	Present in Idaho and the south coast of BC
Quagga mussel (*Dreissena rostriformis bugensis*)	**X**	High alert for western North America
Variable-leaf milfoil (*Myriophyllum heterophyllum)*		Not present in Idaho
Water chestnut (*Trapa natans*)		Not present in Idaho
Yellow floating heart (*Nymphoides peltata*)		Present in Idaho
Zebra mussel (*Dreissena polymorpha*)	**X**	High alert for western North America

CATEGORY 2: ERADICATION OR ANNUAL CONTROL New species to the CKIPC area with limited distribution and low density on infested sites. Species invading susceptible habitats, sensitive areas, or sites containing red- or blue-listed species. New infestations of established species in the area beyond the original population. **ERADICATION OR ANNUAL CONTROL IS THE MAIN MANAGEMENT FOCUS – CHECK IAPP FOR KNOWN SITES AND REPORT NEW LOCATIONS**		
Aquatic Invasive Species Category	**Target Species**	**Known Infestation in the Central Kootenay**
Giant hogweed (*Heracleum mantegazzianum*)	**X**	Known in Hills and Meadow Creek Spawning Channel
Knotweed (Japanese, giant and bohemian) (*Polygonum* spp.)	**X**	Found throughout the Central Kootenay. Being introduced as a garden ornamental. Report isolated and remote sites.

Salt Cedar (*Tamarix aphylla*)		Known sites on private land throughout Central Kootenay. Inventory required.
Yellow flag-Iris (*Iris psedacorus*)	**X**	Found in the Creston Valley Wildlife Management Area, Kootenay Lake, Erie Lake, Meldeanna Pond, Nancy Greene Lake and other remote areas. Report sites outside these areas.
CATEGORY 3: CONTAINMENT Established infestations in waterways. These species are well established in some parts of the Central Kootenay but not present throughout most of the region. **CONTROL AND CONTAINMENT ARE THE MAIN MANAGEMENT FOCUS – REPORT SIGHTINGS IN AREAS OUTSIDE KNOWN DISTRIBUTION – PREVENT SPREAD OUTSIDE THESE LOCATIONS**		
Aquatic Invasive Species Category	**Target Species**	**Known Infestation in the Central Kootenay**
Didymo (*Didymosphenia geminate*)	**X**	Columbia River, Kootenay River [?], Salmo River, Trout Lake, Lardeau River, Wilson Crk, [Other?]
Eurasian water-milfoil (*Myriophyllum spicatum*)	**X**	Almost eradicated in Champion Lakes. Reports in Kootenai River from Bonner's Ferry to Porthill in Idaho. Confirmed in Kootenay River and Kootenay Lake.
Policeman's helmet/ Himalayan balsam (*Impatiens glandulifera*)		Known in the southern portion of the Central Kootenay region. Introduced as a garden ornamental. Report isolated and remote sites.
Purple Loosestrife (*Lythrum salicaria*)	**X**	Currently found from the 6-mile area of the north shore of Nelson along Kootenay Lake and River to the Kootenay Canal area near Shoreacres. One patch in Fauquier. A few plants were found at the oxbow near Selkirk College ten years ago. Report isolated and remote sites.
Exotic/Introduced fish species including Smallmouth Bass, Largemouth Bass, Perch, Pumpkinseed, Northern Pike, Tench, Yellow Perch, Walleye, Carp	**X**	[DETAILS]

Appendix 5: Example Articles

2 www.trailtimes.ca Wednesday, June 8, 2011 Trail Daily Times

LOCAL

WEATHER

Showers Thundershowers
Low: 8°C • High: 15°C
POP: 100% • Wind: S 5 km/h

THURSDAY
Isolated Showers • Low: 8°C • High: 22°C
POP: 30% • Wind: SW 5 km/h

FRIDAY
Cloudy w/Showers • Low: 13°C • High: 18°C
POP: 60% • Wind: SE 5 km/h

Work experience students get down and dirty

BY TESSA CLAYTON
Times Staff

J.L. Crowe Secondary work experience students were out and about on Tuesday, doing their part for a Communities Pulling Together initiative.

This is the third year the program has been working with organizations like the Central Kootenay Invasive Plant Committee and Land Conservancy of B.C.

"It's an education thing — the more kids we get out, the more understanding there is about the conservancy of the area," said Norman Marchi, work experience coordinator at J.L. Crowe.

"The first year it was more of a picking up garbage thing, last year it was more of a maintenance thing and it's looking pretty good now," said Marchi.

He added that kids in the program have made bird boxes and bee nests, and that another trip they'll be going on will involve them working with a biologist to do creek surveys in the area.

These trips not only benefit the student and release them from the

Aaron McLean, a grade 11 work experience student at J.L. Crowe, hands off some of the Japanese knotweed he was cutting down to Jared Maida, a Fish and Wildlife summer student. The students were taking part in a "Communities Pulling Together" initiative, which was taking aim at removing the invasive and extremely hardy weed from an area by the Old Trail Bridge.

"It helps us reach our goal of managing priority species because for us, we're a small organization, we always need bodies," said Jennifer Vogel, program coordinator with the Central Kootenay Invasive Plant Committee.

"And it's also great to give back to the community and groups have a really good time."

On that particular day the students were out chopping down the invasive Japanese knotweed by the Old Trail Bridge.

The plant is rather hardy — in order to completely kill it herbicides must be used in the roots.

that the knotweed invaded.

"This area, the Columbia River, leads to Fort Shepard which is our biggest concern and we want to stop it from going into the United States," Vogel said.

The students enjoy the day trips as well, as it means they get to

unity to get out of class and do something good for our community," said Aaron McLean, one of the students on site.

He added that they learn a lot of things they might not otherwise hear about — like the bee population, which he found out about on the ride down to the

Whoa... don't move a mussel!

CKIPC
Submitted

Imagine your boat so covered in mussels that you must scrape it off every time you want to use it. Imagine native species like trout disappearing from your favourite lake. Imagine intake pipes so clogged that water no longer flows to your house. These issues are real in many parts of North America already. The culprit? Invasive mussels.

Zebra and quagga mussels are invasive aquatics species that form large colonies that can literally smother out native aquatic species of plants and other aquatic organisms.

Because they are efficient filter feeders, zebra and quagga mussels can change ecosystems and food sources critical to native species like salmon and trout. They can also grow on native mussels and other bivalves, preventing them from opening and feeding.

These mussels cause major economic problems. They rapidly colonize hard surfaces like boats, engines, and docks and are very challenging to clean off.

The colonies can form dense mats in pipes that clog water-intake systems at power plants, dams, public water supplies and other infrastructure. They cost hundreds of millions of dollars

Invasive zebra mussels colonizing boat engine, top photo, clogging pipe, photo above.. B. Krynock photos

a year in damages and control where they have invaded.

Because zebra and quagga mussels are native to Eurasia, they don't have predators to control them in Canada. They entered the Great Lakes in the mid-1980s in ship ballast water and have spread to more than 20 U.S. states as well as Ontario and Quebec. Like other water-based invasive species, they spread by attaching themselves to boats and equipment.

The mussels are easily transported because they can live out of water for many days.

Luckily zebra and quagga mussels are not known in B.C. but they could arrive any day.

Idaho and Washington (along with other U.S. States) have regular inspection stations to check boats for standing water and for signs of zebra and quagga mussels. To date, zebra and quagga mussels have have been found on over 20 boats entering Washington and some boats heading for B.C.

To prevent the introduction of zebra and quagga mussels to B.C., the Central Kootenay Invasive Plant Committee (CKIPC) urges all boaters to clean, drain and dry their boats and equipment on dry land before and after entering any water bodies.

These invasive mussels can generally be identified because they cling to hard surfaces whereas native mussels tend to live in sediment.

Please report any suspected sightings to the Central Kootenay Invasive Plant Committee at 250-352-1160 or coordinator@kootenayweeds.com.

Prevention and early detection are critical for control of these invasive species. Don't move a mussel!

Thursday, July 28, 2011 West Kootenay Advertiser

Appendix 6: Interpretive Signs (BC Parks)

PROTECT OUR PARK
from harmful invasive plants

Kokanee Creek Provincial Park contains one of the *only* known infestations of **mouse-ear hawkweed** in BC. This highly invasive plant spreads rapidly, choking out native plants, which impacts the wildlife that rely on them.

Invasive hawkweed takes over important native habitat.

PLEASE HELP

Prevent the spread of

MOUSE-EAR HAWKWEED:

- Stay on trails
- Remove seeds or plant parts from equipment, clothing, tents, bicycles, shoes and pets BEFORE leaving the area
- Dispose of seeds in a plastic bag in a garbage can (*not on the ground*)

DID YOU KNOW?

Himalayan blackberry is an invasive plant.

Please help reduce its spread. Dispose of berries and seeds you don't eat into a plastic bag for the garbage. Please do not spit them out in your campsite!

CKIPC
www.kootenayweeds.com
250-352-1160

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100 Years 2018
BCParks