



Invasive Plant Surveys: CSRD Lands
2017 INVENTORY SUMMARY



Blueweed: A Provincially Listed Noxious Weed and CSISS Priority Species for Eradication

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BACKGROUND

In April of 2013 the Columbia Shuswap Invasive Species Society (CSISS) was formed to address invasive species issues within the boundaries of the Columbia Shuswap Regional District. As per the terms of its five year funding agreement with the CSRD, the CSISS has undertaken many non-regulatory duties and responsibilities previously assigned to the CSRD Noxious Weed Inspector.

One of these responsibilities includes surveying CSRD lands for noxious weeds and invasive species for the purpose of making control recommendations. Preliminary inventories of CSRD landfills, transfer stations, fire halls and parks have been underway since early 2014. The purpose of this report is to provide the CSRD with information regarding the extent of noxious weeds on their properties and a priority list of sites and species for treatment. All data collected as part of these surveys were entered into the provincial Invasive Alien Plant Program (IAPP) database. A subset of these surveys will occur on a yearly basis in order to update the CSRD on treatment priorities for invasive plants within its jurisdiction. In the case of CSRD properties with no high priority plants that are in good maintenance, it is recommended that they are re-surveyed every 3-5 years for invasive plants.

CSRD OWNED LAND AND PROPERTIES

As part of the Society's important partnership with the CSRD, CSISS staff continue to complete invasive plant inventories on CSRD Properties. In addition to the inventories, CSISS staff administered and monitored the landfill and transfer station invasive plant treatment, completed mechanical removal of priority invasive plants, released biological control agents to treat a purple loosestrife site and completed landowner outreach, inclusive of landowner visits, mailing outreach letters and responding to weed complaints (Figure 1).



Figure 1: Landowner visits for knotweed (left). Purple loosestrife, target invasive plant for biological treatment (center). Mechanical treatment of blueweed at Salmon Arm Landfill (right).

CSRD LANDFILLS AND TRANSFER STATIONS

In 2017, CSISS coordinated invasive plant treatment work at CSRD landfills and transfer stations, which included overseeing and monitoring a professional herbicide applicator contractor. In total, 6 sites and 290 m² were treated over three passes from May to September 2017. Herbicide monitoring at each of the 6 sites was completed 2 weeks after treatment, all sites passed inspection. CSISS staff conducted mechanical treatment at four CSRD landfills and transfer stations with a total of 50 m² of invasive plant material removed (Table 1 and Figure 1).

The priority sites for 2017 treatment include:

- All high priority plants for eradication and annual control (based on CSISS Operational Plan Priority List)
- All landfill and transfer stations, with first priorities being sites with high priority plants
- As per direction by CSISS staff when new priority occurrences are found

***Red Bolded Invasive Plants: Priority Species for Eradication/Annual Control (CSISS Priority Ranking List, Appendix B)**

Table 1: Chemical and mechanical treatments completed on CSRD Landfills and Transfer Stations in 2017

Site ID	Site Name	Species Treated	Treatment Method	Area Treated (m ²)	Re-Survey and Re-Treat 2018
250602	Golden Landfill	Blueweed	Chemical	1	Yes
250657	Salmon Arm Landfill	Blueweed	Chemical	267	Yes
317732	Revelstoke Landfill (non-scale side)	Bohemian Knotweed	Chemical	8	Yes
301462	Malakwa Transfer Station	Bohemian Knotweed	Chemical	11	Yes
301522	Revelstoke Landfill (scale side)	Bohemian Knotweed	Chemical	2	Yes
301457	Sicamous Landfill	Himalayan Blackberry	Chemical	1	Yes
301522	Revelstoke Landfill (scale side)	Policeman's helmet	Mechanical	30	Yes
301522	Revelstoke Landfill (scale side)	Greater Celandine	Mechanical	1	Yes
301462	Malakwa Transfer Station	Field Scabious	Mechanical	10	Yes
301448	Glenemma Transfer Station	Rush Skeleton Weed	Mechanical	5	Yes

301453	Skimikin Transfer Station	Scotch Thistle	Mechanical	5	Yes
301449	Falkland Transfer Station	Policeman's Helmet	Mechanical	1	Yes
301457	Sicamous Landfill	Policeman's Helmet	Mechanical	5	Yes
Total				347	

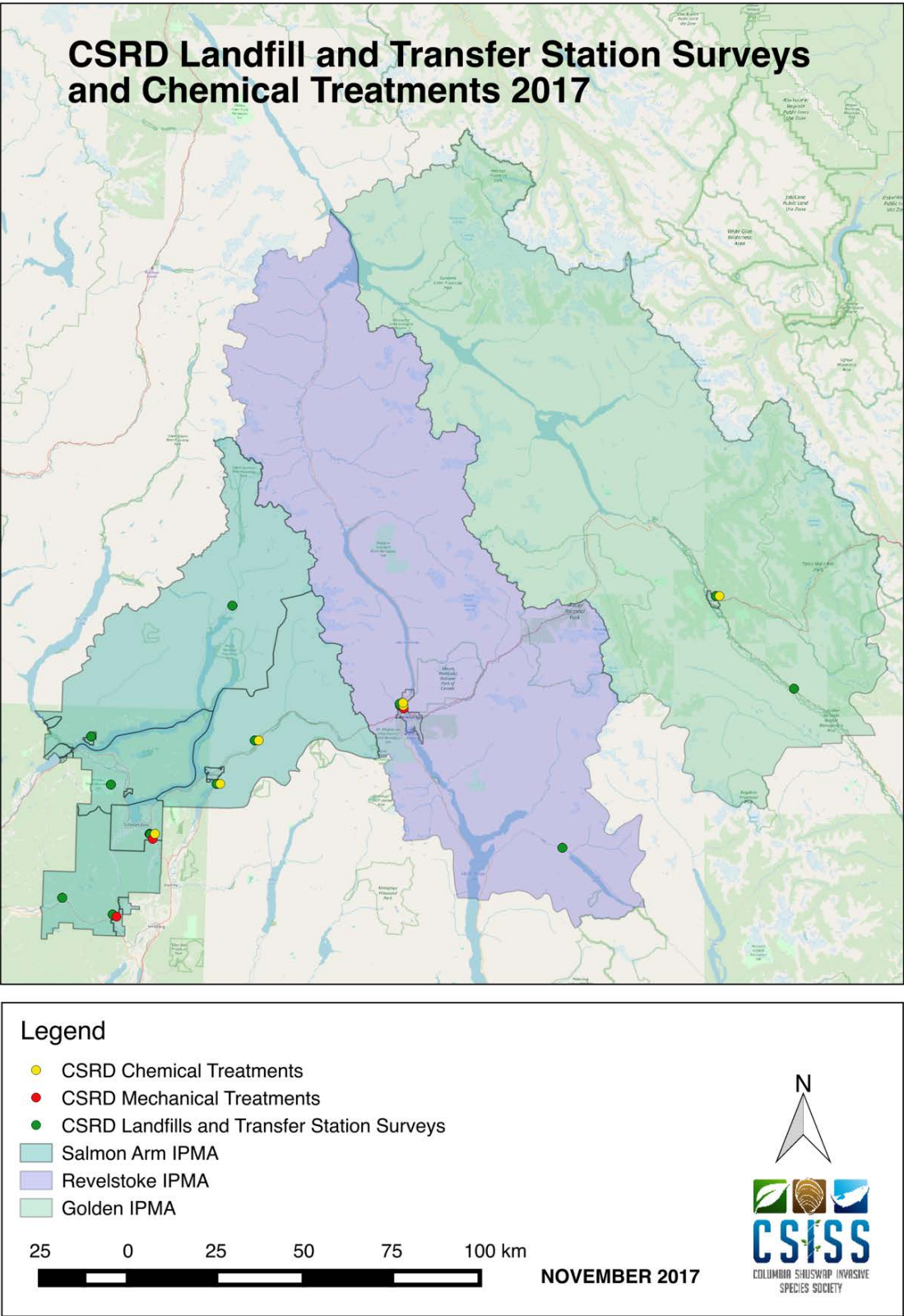


Figure 1: Invasive plant surveys, chemical treatments and mechanical treatments completed at CSRD landfills and transfer stations in 2017

CSRD INVENTORIES, OUTREACH, AND MECHANICAL/ BIOLOGICAL TREATMENT

In 2017, CSISS staff inventoried 31 CSRD properties, and completed 254 invasive plant records (Figure 2). CSRD Fire halls and Parks are being surveyed every 3 years, unless priority species are found. Where high priority species were found on CSRD properties, CSISS staff surveyed and alerted the required personnel/ contractor to treat the infested sites. CSISS staff completed mechanical treatment at 5 CSRD Parks treating a total of 20 m² (Table 2).

The priority sites for 2017 treatment include:

- All high priority plants for eradication and annual control (based on CSISS Operational Plan Priority List)
- All Parks, with first priorities being sites with high priority plants
- As per direction by CSISS staff when new priority occurrences are found

***Red Bolded Invasive Plants: Priority Species for Eradication/Annual Control (CSISS Priority Ranking List, Appendix B)**

Table 2: Mechanical treatments completed on CSRD Parks in 2017

Site ID	Site Name	Species Treated	Treatment Method	Area Treated (m ²)	Re-Survey and Re-Treat 2018
301523	Harbour Road Boat Launch	Blueweed	Mechanical	1	Yes
304196	Canterbury Road Community Park	Blueweed	Mechanical	8	Yes
306500	St. Ives Community Park	English Ivy	Mechanical	5	Yes
322623	Robson Creek Community Park	Himalayan Blackberry	Mechanical	5	Yes
236217	Gardom Lake Community Park	Yellow Flag Iris	Mechanical	1	Yes
301521	Milfoil Yard	Bohemian Knotweed	No Weed Found- No Treatment	0	Yes
Total				20	

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

In 2017, the CSISS responded to 67 invasive species reports and noxious weed complaints and 99 invasive species requests for information. Depending on the nature and priority of the report, it was confirmed by a site visit

and/or responded to with landowner extension, an outreach letter, or by enacting the provincial Early Detection Rapid Response (EDRR) protocol.

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

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

PREVENTION

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

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

PRIORITY SITES FOR TREATMENT

CSRD landfills and transfer stations should be prioritized for annual treatment. Treatment efforts should target all noxious weeds and priority invasive plants within landfill and transfer station boundaries. Special care should be devoted to CSRD facilities containing compost as seeds and fragments of invasive plants can be transported by wind or machinery into any exposed medium. Prioritizing these areas will minimize the spread of invasive plants across the region.

PRIORITY SPECIES

Priority invasive species should be addressed with an understanding of the larger context of the landscape which they occupy. When infestations extend into neighbouring jurisdictions, treatment should be carried out in coordination with other land management agencies.

All priority invasive species within CSRD Landfills, Transfer Stations and Parks were treated in 2017 (Table 1 and Table 2). Complete lists of priority invasive species are found in Appendix B. Species priority is determined by the 2013 CSISS Operational Plan and subsequent updated priority ranking. Annual updates to the priority lists are planned for March 2018.

INTEGRATED PEST MANAGEMENT

An integrated pest management approach is recommended when planning the treatment of any invasive species. All potential treatment options should be considered and chosen based on the characteristics of the site, extent of infestation and species in question. Treatment options and examples include:

- 1) Cultural control: Tilling, grazing, planting native species
- 2) Bio-control: Utilizing host-specific predators and pathogens
- 3) Mechanical control: Mowing, Manual removal

- 4) Herbicide treatment: All herbicide must be applied by certified applicators.

CSISS staff are available to provide site-specific recommendations for treatment on CSRD lands.

OVERALL ASSESSMENT

As a whole, CSRD parks and properties are well cared for, mowed and maintained to an excellent standard. The CSRD should continue to invest in the maintenance of parks and public spaces and schedule mowing activities prior to seed set (mid July) in order to prevent the spread of invasives. In 2017, CSISS completed mechanical treatment on priority invasive plants within CSRD Parks and recommends continued mechanical treatment in 2018. CSRD Landfills and Transfer Stations are maintained to a high standard and the CSRD should continue to invest in the chemical and mechanical treatment of priority species within the confines of their properties. In order to prevent the spread of invasives, CSISS recommends continuing the chemical and mechanical treatment in 2018. In addition to field work, CSISS staff are available for plant identification, as well as to provide best management practice resources and training for CSRD staff.

CSRD LANDFILLS, TRANSFER STATIONS, AND YARDS

CSISS recommends re-surveying CSRD Landfills, Transfer Stations and yards every year due to high traffic and disposal of yard waste. Additionally, CSISS is available to provide CSRD staff Best Management Practices training and resources required for identification and management of priority invasive plants.

****Red Bolded Invasive Plants: Priority Species for Eradication/Annual Control (CSISS Priority Ranking List, Appendix B)**

IAPP Site ID	Landfills and Transfer Stations	Survey Date	Surveyors	Noxious Weeds	Invasive Species Present
304207	Seymour Arm TS	July 18, 2017	L. Gaster	Yes	Bull thistle, Chicory, Curled dock, Eyebright, Meadow buttercup, Meadow knapweed, Orange hawkweed, Oxeye daisy, St. John's wort, Yellow hawkweed species.
301452	Scotch Creek TS	July 19, 2017	L. Gaster	Yes	Chicory, Diffuse knapweed, Hoary alyssum, Mullein, Perennial sow thistle, Spotted knapweed, Sulphur cinquefoil, Western goat's beard, White cockle
301453	Skimikin TS	August 9, 2017	L. Gaster	Yes	Bladder campion, Bull thistle, Chicory, Common tansy, Hoary alyssum, Mullein, Oxeye daisy, Scotch thistle , Spotted knapweed, Sulphur cinquefoil, Western goat's beard, White cockle
301448	Glenemma TS	August 9, 2017	L. Gaster	Yes	Chicory, Dalmation toadflax, Diffuse knapweed, Hoary alyssum, Mullein, Oxeye daisy, Rush skeletonweed , Spotted knapweed, Sulphur cinquefoil, Western goat's beard

301449	Falkland TS		L. Gaster	Yes	Bull thistle, Burdock, Hoary alyssum, Hound's tongue, Mullein, Oxeye daisy, Policeman's helmet , Spotted knapweed, Western goat's beard
301530	Trout Lake TS	July 18, 2017	R. Hooper	Yes	Common tansy, Eyebright, Orange hawkweed, Spotted knapweed, St. john's wort, Yellow hawkweed species
301467	Parson TS	August 16, 2017	L. Gaster	Yes	Bladder campion, Burdock, Mullein, Oxeye daisy, Spotted knapweed, Western goat's beard, wormwood
301462	Malakwa TS	July 11, 2017	L. Gaster	Yes	Bohemian knotweed , Bull thistle, Burdock, Chicory, Common Tansy, Field scabious , Flat peavine, Hoary alyssum, Mullein, St. John's wort, White cockle, Yellow hawkweed species
301457	Sicamous Landfill	July 11, 2017	L. Gaster	Yes	Bull thistle, Burdock, Chicory, Common tansy, Curled dock, Field bindweed, Himalayan blackberry , Hoary alyssum, Mullein, Nightshade, Oxeye daisy, Policeman's helmet , Spotted knapweed, Western goat's beard, Yellow hawkweed species
250657	Salmon Arm Landfill	July 13, 2017	L. Gaster	Yes	Blueweed , Burdock, Chicory, Common tansy, Curled dock, Field bindweed, Hoary alyssum, Mullein, Oxeye daisy, Perennial sow thistle, Spotted knapweed, St. John's wort, Sulphur cinquefoil, Western goat's beard, white cockle
250602	Golden Landfill	August 17, 2017	L. Gaster	Yes	Blueweed , Bull thistle, Burdock, Canada thistle, Chicory, Dalmatian toadflax, Field bindweed, Hound's tongue, Mullein, Oxeye daisy, Perennial sow thistle, Spotted knapweed, Western goat's beard, Wormwood
301522	Revelstoke Landfill (scale side)	June 28, 2017	R. Hooper	Yes	Bladder campion, Bohemian knotweed , Bull thistle, Burdock, Canada thistle, Common tansy, Flat peavine, Greater celandine , Hoary alyssum, Lady's thumb, Mullein, Orange hawkweed, Oxeye daisy, Policeman's helmet , Shepherd's purse,

					Sowthistle species, Spotted knapweed, Yellow hawkweed species
317732	Revelstoke Landfill (not scale side)	July 11, 2017	L. Gaster	Yes	Bohemian knotweed
301521	Milfoil Yard	July 13, 2017	L. Gaster	Yes	Bull thistle, Canada, thistle, Common tansy, Hoary alyssum, Mullein, Orange hawkweed, Oxeye daisy, St. John's wort, Sulphur cinquefoil,

CSRD FIREHALLS

CSISS recommends re-surveying CSRD Firehalls every 3 years due to high quality of maintenance and mowing, unless high priority species are present in which case annual survey and treatment is recommended. Additionally, CSISS is available to provide CSRD maintenance staff Best Management Practices training and resources required for identification and management of priority invasive plants.

****Red Bolded Invasive Plants: Priority Species for Eradication/Annual Control (CSISS Priority Ranking List, Appendix B)**

IAPP Site ID	Firehalls	Most recent survey date	Noxious Weeds	Invasive Species Present	Comments	Next Scheduled Survey
322634	Ranchero/Deep Creek Volunteer Fire Department	2017	Yes	Bull thistle, Chicory, Common tansy, Hoary alyssum, Mullein, Oxeye daisy, Spotted knapweed, Sulphur cinquefoil, Western goat's beard	Well maintained, invasives around perimeter	2020
301454	Silver Creek Volunteer Fire Department	2016	Yes	Bull thistle, Canada thistle, Chicory, Common tansy, Hoary Alyssum, Mullein, Nightshade, Oxeye daisy, Spotted knapweed, Sulphur cinquefoil, Western goat's beard, White cockle	Well maintained property. Invasives located along perimeter and behind building/ shipping container.	2019
301529	Shuswap Volunteer Fire Department	2016	Yes	Burdock Spp, Chicory, Orange Hawkweed	Well maintained and mowed, weeds along perimeter	2019
301478	White Lake Volunteer Fire Department	2016	Yes	Chicory, Hawkweed Spp, Hoary Alyssum, Mullein, Nightshade, Oxeye Daisy, Queen Anne's Lace, Spotted Knapweed, St. John's Wort, Sulphur Cinquefoil, Western Goat's Beard, Yellow Toadflax	Large amounts of invasive species around perimeter.	2019
301524	Eagle Bay Volunteer Fire Department	2014	Yes	Burdock	Well maintained, Burdock along path by entrance	2018
317954	Tappen/Sunnybrae Volunteer Fire	2016	Yes	Bladder Champion, Burdock Spp, Canada Thistle, Chicory,	There is a dumping pile	2019

	Department			Nightshade, Oxeye Daisy, Queen Anne's Lace, Sulphur Cinquefoil, Western Goat's Beard	behind the building. Many invasives are growing around the pile. Advised to not dump.	
322626	Swansea Point Volunteer Fire Department	2017	Yes	Chicory, Hoary alyssum, Mullein, Orange hawkweed, Oxeye daisy, Spotted knapweed	Well maintained	2020
301464	Malakwa Volunteer Fire Department	2014	Yes	Spotted knapweed, mouse-ear hawkweed, flat pea-vine, Saint John's Wort, yellow hawkweed spp, oxeye daisy	Feasible to hand-pull most invasives in gravel behind & around garage	2018
306497	Celista Volunteer Fire Department	2016	Yes	Burdock Spp, Canada Thistle, Chicory, Common Tansy, Mullein, Oxeye Daisy, Perennial Sow Thistle, White Cockle	Property well maintained. Invasives located along perimeter and in adjacent lots	2019
317760	Nicholson Volunteer Fire Department	2016	Yes	Bull Thistle, Burdock Spp, Canada Thistle, Meadow Buttercup, Mullein, Oxeye Daisy, Western Goat's Beard	Well maintained	2019
301451	Falkland Volunteer Fire Department	2016	Yes	Canada thistle, Chicory, Hoary Alyssum, Mullein, Orange hawkweed, Perennial sow thistle, Scentless chamomile, Spotted knapweed, Western goat's beard, White cockle	Well maintained & mowed but invasives around perimeter	2019
306504	Anglemont Volunteer Fire Department	2015	No	Hoary Alyssum, Bull Thistle, Chicory	Property well maintained	2018
306528	Scotch Creek/Lee Creek Volunteer Fire Department	2015	No	Chicory, Hoary Alyssum	Property well maintained	2018

CSRD Parks

CSISS recommends re-surveying CSRD parks every 3 years due to high quality of maintenance and mowing, unless high priority species are present in which case annual survey and treatment is recommended. Additionally, CSISS is available to provide CSRD maintenance staff Best Management Practices training and resources required for identification and management of priority invasive plants.

****Red Bolded Invasive Plants: Priority Species for Eradication/Annual Control (CSISS Priority Ranking List, Appendix B)**

Electoral Area A: Golden IPMA						
IAPP Site ID	Parks Name	Most recent survey date	Noxious Weeds	Invasive Species Present	Comments	Next Scheduled Survey

301446	Tom Kelley Memorial Park	2017	Yes	Bull Thistle, Burdock Spp, Canada Thistle, Meadow Buttercup, Oxeye Daisy	Well Maintained. Mowed park, invasives found on perimeter.	2020
301447	Cedar Lake Recreation Site	2016	Yes	Bull Thistle, Canada Thistle, Oxeye daisy, Perennial Sow Thistle	Well maintained. Invasives found in sun lit areas around beach and parking lots.	2019
317756	Kicking Horse Mountain Resort Park	2016	Yes	Bladder Campion, Bull Thistle, Canada Thistle, Mullein, Oxeye Daisy	Well maintained, frequently mowed. Invasives found around perimeter.	2019
301447	Moonraker Trailhead	2016	Yes	Bull Thistle, Canada Thistle, Oxeye Daisy, Perennial Sow Thistle	Invasives located throughout gravel parking lot.	2019
301469	Parson Recreation Park	2016	Yes	Bladder Campion, Burdock Spp, Canada Thistle, Meadow Buttercup, Mullein, Oxeye Daisy, Western Goat's Beard, Wormwood, Yellow Toadflax	A majority of park is mowed. A large un-mowed field of Canada Thistle can be found in the back corner. Recommend mowing or biocontrol for management.	2019
317758	Golden Golf Course	2016	Yes	Bladder Campion, Bull Thistle, Burdock Spp, Canada Thistle, Common Periwinkle, Common Tansy, Mullein, Oxeye Daisy, Spotted Knapweed, Western Goat's Beard, Yellow Toadflax	Golf course greens are immaculate. Parking lots and roadsides are un-mowed and contain invasives.	2019

Electoral Area B: Revelstoke IPMA						
IAPP Site ID	Parks Name	Most recent survey date	Noxious Weeds	Invasive Species Present	Comments	Next Scheduled Survey
n/a	Birchcliffe Park	2014	No	None Found	No Invasives Found	2018

Electoral Area C: Sunnybrae, Tappen, White Lake, Blind Bay, Sorrento, Eagle Bay and Notch Hill						
IAPP Site ID	Parks Name	Most recent survey date	Noxious Weeds	Invasive Species Present	Comments	Next Scheduled Survey
317986	Mt Tuam Community Bike Park	2016	Yes	Common tansy	Well maintained. Park is mostly forested.	2019
301527	Blind Bay Beach Pebble	2016	Yes	Spotted knapweed, bull thistle, Oxeye daisy, Canada thistle, Burdock species, Mullein, Chicory	Most invasive species are found around the outhouse and the perimeters of the beach.	2019
301525	Blind Bay Beach Sandy	2017	Yes	Nightshade, Bull Thistle, Oxeye daisy, Burdock species, Mullein, Orange hawkweed, Hawkweed species, Perennial sow thistle, Western goat's beard, Yellow toadflax	Well maintained, invasive species along perimeter of upper parking lot. Some invasive species growing on beach around trees.	2020
317988	Reedman Road Community Park	2016	No	Bladder camion, Hoary Alyssum, Chicory	Well Maintained	2019
317987	Cedar Heights Community Park	2016	Yes	Bull Thistle, Chicory, Common Tansy, hawkweed Spp, Hoary Alyssum, Mullein, Oxeye Daisy, Spotted Knapweed, Sulphur Cinquefoil	Well maintained park. Mowed frequently.	2019
322623	Robinson Creek Community Park	2017	Yes	Bull thistle, Diffuse knapweed, Himalayan blackberry , Oxeye daisy, Queen Anne's lace	Well maintained park.	2018
322661	Mt Baldy Trail	2017	Yes	Burdock, Chicory, Hoary alyssum, Oxeye daisy, Spotted knapweed, Sulphur cinquefoil, Westerngoat's beard, Yellow hawkweed species	Well maintained park. Invasives near trailhead	2020
317971	Shannon Beach Community Park	2016	Yes	Common Tansy, Hawkweed Spp, Orange Hawkweed, Oxeye Daisy, St. John's Wort	Well maintained	2019
322669	Gail Road Community Park	2017	Yes	Bull thistle, Burdock, Chicory, Common tansy, Creeping buttercup, Orange hawkweed, Oxeye daisy, St. John's wort, Sulphur cinquefoil	Well maintained	2020
317972	Rocky Martinson Community Park	2016	No	Chicory, Meadow Buttercup	Well maintained	2019
322705	Notch Hill Community Park	2017	Yes	Chicory, Hoary alyssum, Oxeye daisy, Spotted knapweed, Sulphur cinquefoil, Yellow hawkweed species	Well maintained	2020

317983	Rocky Point Road Community Park	2017	No	Yellow Archangel , Chicory, Yellow hawkweed species	Well maintained. Archangel is spreading into Park from private property. (CSISS spoke with private land owner)	2018
317984	MacArthur Heights Trailhead	2016	Yes	Bull Thistle, Hawkweed Spp, Mullein, Spotted Knapweed, Sulphur Cinquefoil, Western Goat's Beard	Well maintained	2019
317955	Sunnybrae Community Park	2016	Yes	Bull Thistle, Chicory, Common Tansy, Hoary Alyssum, Mullein, Nightshade, Oxeye Daisy, Spotted Knapweed, Sulphur Cinquefoil	Invasive plants found on perimeter in unmowed areas. Majority of park is mowed.	2019
322622	Reinecker Creek Trail	2017	Yes	Bull thistle, Chicory, Mullein, Oxeye daisy, Sulphur cinquefoil, Western goat's beard	Well maintained	2020
301523	Harbour Road Boat Launch	2017	Yes	Blueweed , Field Bindweed, Oxeye daisy, Nightshade, Night-flowering catchfly, White Cockle, Burdock species, Orange Hawkweed, Yellow toadflax, Hound's tongue	Mechanical Treatment 2017	2018
322662	Ferro Road Lake Access	2017	Yes	Bull thistle, Canada thistle, Chicory, Oxeye daisy, St. John's wort, Yellow hawkweed species	Well maintained	2020
316820	Gillespie Road Community Park	2016	Yes	Mullein, Orange Hawkweed, Oxeye daisy, Sulphur Cinquefoil, Yellow Toadflax	Well maintained	2019
n/a	Robertson Road Community Park	2017		NWF		2020
317991	Sorrento Blind Bay Park	2016	Yes	Chicory, Hawkweed Spp, Orange Hawkweed, Oxeye Daisy	Well maintained	2019
316823	Caen Road Community Park	2016	Yes	Burdock Spp, Canada Thistle, Common Tansy, Hoary Alyssum, Mullein, Oxeye Daisy, Spotted Knapweed, Sulphur Cinquefoil, Yellow Toadflax	Well maintained park. Mowed frequently.	2019
301531	Markwart Road Boat Launch	2016	Yes	Nightshade, Oxeye daisy, Canada thistle, Curled dock, Common tansy, Hoary Alyssum, Burdock species, Yellow toadflax, Western goat's beard, Tall buttercup, Chicory, Hawkweed species, Sulphur cinquefoil	Well maintained, but invasive species along perimeter of upper parking lot.	2019
301527	Balmoral	2016	Yes	Nightshade, Oxeye daisy, St.	Sloped area around	2019

	Trailhead			John's Wort, Spotted knapweed, Mullein, Western Goat's beard, Bull thistle, Orange hawkweed, Yellow toadflax	parking lot has invasive plants growing. Invasive plants decrease as you go up trailhead.	
301532	John Evdokimoff Community Bike Park	2016	Yes	St. John's wort, Hoary alyssum, Sulphur cinquefoil, Chicory, Western goat's beard, Queen Anne's lace, Mullein, Oxeye daisy, Yellow toadflax	Many invasives growing along hillside and un-mowed areas	2019
316825	White Lake Community Park	2016	Yes	Nightshade, Common tansy, St. John's Wort, Chicory, Spotted knapweed, Canada thistle, Oxeye daisy, Mullein, Sulphur cinquefoil	Well kept, invasive species are growing along perimeter. Nightshade is growing heavily along stream with bridge that leads to White Lake.	2019
316826	Hugh Road Community Park	2016	Yes	Oxeye daisy, Sulphur cinquefoil, Western goat's beard, Mullein, Canada thistle, Bull thistle, Hoary alyssum, Chicory	Invasive plants along trail to beach. Large patch of Sulphur cinquefoil	2019
317964	Wild Rose Bay Community Park	2016	No	Bull Thistle, Chicory, Hawkweed Spp, Oxeye Daisy	Well maintained	2019
317970	Whitehead Road Community Park	2016	Yes	Bull Thistle, Burdock Spp, Mullein, Oxeye Daisy	Well maintained park and boat launch.	2019

Electoral Area D: Falkland, Deep Creek, Ranchero, Salmon Valley, Silver Creek, and Gardom Lake						
IAPP Site ID	Parks Name	Most recent survey date	Noxious Weeds	Invasive Species Present	Comments	Next Scheduled Survey
322635	Musgrave Road Lake Access	2017	yes	Bull thistle, Canada thistle, Chicory, Hoary alyssum, Nightshade, Oxeye daisy, Spotted knapweed, Sulphur cinquefoil, Wormwood	well maintained. Invasive plants found on perimeter near parking lot.	2020
317956	Bolean Creek Community Park	2016	yes	Burdock Spp, Canada Thistle, Common Tansy, Diffuse Knapweed, Hoary Alyssum, Oxeye Daisy, Scentless Chamomile, Spotted Knapweed, Western Goat's Beard	Well maintained. Invasive plants found on perimeter near parking lot.	2019
316579	Joyce Lake Campground	2016	yes	Burdock, Hoary Alyssum, Spotted knapweed	well maintained campground.	2019
301455	Silver Creek Community Park	2016	yes	Bull thistle, Canada thistle, Chicory, Common tansy, Hoary alyssum, Mullein,	well maintained	2019

				Spotted knapweed, Sulphur cinquefoil, Western goat's beard, White cockle, Wormwood		
317730	Gannor Road Community Park	2016	yes	Spotted knapweed, Mullein, St. John's Wort, Sulphur cinquefoil, Oxeye daisy, Western goat's beard, Chicory, Orange hawkweed, Common Tansy	Open area, not yet developed. Invasive species in open lot. Would recommend cleaning equipment before and after if site developed.	2019

Electoral Area E: Swansea Point, Malakwa, area surrounding Sicamous

IAPP Site ID	Parks Name	Most recent survey date	Noxious Weeds	Invasive Species Present	Comments	Next Scheduled Survey
317936	Yard Creek Campground	2016	Yes	Hawkweed Spp, Meadow Buttercup, Orange Hawkweed	Well Maintained Campground and picnic area.	2019
317934	Swanson Road	2016	No	Hawkweed Spp, Western Goat's Beard	Well maintained. Gravel area is free of invasives.	2019
304196	Canterbury Road Lake Access	2017	Yes	Blueweed , Bull Thistle, Burdock Spp, Chicory, Common Periwinkle, Common Tansy, Mullein, Oxeye Daisy	Re-survey and Re-treat 2018	2018
317932	Westminster Road Lake Access	2016	Yes	Burdock Spp, Chicory, Common Tansy, Mullein, Orange Hawkweed	Well maintained. Sandy/ Treed areas are mainly free of invasives.	2019
3179333	Cambridge Road Lake Access	2016	Yes	Burdock Spp, Hoary Alyssum, Mullein, Oxeye Daisy, Spotted Knapweed, White Cockle	Well maintained.	2019
317931	Windsor Road Boat Launch	2016	Yes	Bull Thistle, Chicory, Common Tansy, Hoary Alyssum, Nightshade, Oxeye Daisy	Well maintained boat launch and park.	2019
317930	Oxford Road Lake Access	2016	Yes	Bull Thistle, Burdock, Chicory, Common Tansy, Creeping Buttercup, Hoary Alyssum, Oxeye Daisy, Spotted Knapweed, St. John's Wort, Yellow Toadflax	Well maintained. Sandy areas free of invasives.	2019
317929	Eton Road Lake Access	2016	Yes	Hawkweed Spp, Orange Hawkweed	Well maintained. Recently mowed.	2019
322630	North Fork Wild	2017	Yes	Oxeye daisy, yellow hawkweed species	well maintained, mainly forested park	2020
301459	Sicamous Creek Trails	2014	No	Spotted knapweed, hoary alyssum, oxeye daisy, yellow hawkweed spo.	Could be a good candidate for a community weed pull	2018
317936	Mara Heights Park	2016	No	Hawkweed Spp, Meadow Buttercup, Orange Hawkweed	Well Maintained Campground and picnic area.	2019

Electoral Area F: North Shuswap						
IAPP Site ID	Parks Name	Most recent survey date	Noxious Weeds	Invasive Species Present	Comments	Next Scheduled Survey
306505	Lakeview Park	2015	No	Chicory, Spotted Knapweed, Mullein	Park well-maintained, Larinus biocontrol on Knapweed	2018
306503	Airstrip Park	2015	No	Chicory	Forest park area, no priority invasives found. Abandoned kiosk and BBQ found. At new trailhead to Evelyn Falls.	2018
306500	St. Ives Community Park	2017	Yes	Chicory, Common Tansy, English Ivy , Mullein, Oxeye Daisy, White Cockle	Well-maintained and mowed	2018
306506	Welch Road Lake Access	2015	No	St. John's Wort, Chicory	Forested trail with few weeds	2018
306513	Farrell's Field Community Park / Ice Rink	2015	Yes	Burdock, Chicory	Park well-maintained, except around outhouse	2018
306498	Bristow Road Lake Access	2015	No	Chicory	Property well maintained	2018
306531	Martinovsky Road Lake Access	2017	Yes	Burdock, Chicory, Hoary alyssum, Mullein, Oxeye daisy, Spotted knapweed, Western goat's beard	well maintained	2020
306507	Ross Creek Park	2015	No	Chicory	Park well-maintained	2018
306512	Magna Bay Wharf Road Boat Launch	2015	No	Chicory	Boat launch park well-maintained	2018
306524	Rose Clifford Park	2016	Yes	Chicory, Hoary Alyssum, Mullein, Spotted Knapweed	Well-maintained, Few invasives around perimeter.	2019
306525	Scotch Creek Wharf Road Park	2015	No	Chicory	Well-maintained	2018
322655	Scotch Creek Hlina Trail	2017	Yes	Chicory, Creeping buttercup, Oxeye daisy, Sulphur cinquefoil, Western goat's beard, Yellow hawkweed species		2020
304209	Beswick Road Community Park	2015	Yes	Hawkweed spp, Oxeye Daisy, Sulphur Cinquefoil	Well-maintained, high use area	2018
304208	Don Fink Community Park	2015	No	Hawkweed spp., Oxeye Daisy, St. John's Wort	Park well maintained	2018
306529	Cornwall Road Lake Access	2016	Yes	Bull Thistle, Chicory, Common Tansy, Mullein, Oxeye Daisy, White Cockle	Well-maintained park.	2019

APPENDIX A: NOXIOUS WEEDS IN THE CSRD

Note: The Noxious Weed Act is under review for revision by the Province of BC. There is a new proposed prohibited species list found here: [B.C. Proposed Prohibited Noxious Weeds](#)

PROVINCIALY DESIGNATED NOXIOUS WEEDS

Annual Sow-thistle (*Sonchus oleraceus*)
Bohemian Knotweed (*Fallopia x bohemica*)
Bur Chervil (*Anthriscus caucalis*)
Canada Thistle (*Cirsium arvense*)
Common Reed (*Phragmites australis* subsp. *australis*)
Crupina (*Crupina vulgaris*)
Dalmatian Toadflax (*Linaria dalmatica*)
Dense-flowered Cordgrass (*Spartina densiflora*)
Diffuse Knapweed (*Centaurea diffusa*)
Dodder (*Cuscuta* spp.)
English Cordgrass (*Spartina anglica*)
Flowering Rush (*Butomus umbellatus*)
Garlic Mustard (*Alliaria petiolata*)
Giant Hogweed (*Heracleum mantegazzianum*)
Giant Knotweed (*Fallopia sachalinensis*)
Giant Mannagrass / Reed Sweetgrass (*Glyceria maxima*)
Gorse (*Ulex europaeus*)
Himalayan Knotweed (*Polygonum polystachyum*)
Hound's-tongue (*Cynoglossum officinale*)
Japanese Knotweed (*Fallopia japonica*)
Jointed Goatgrass (*Aegilops cylindrica*)
Leafy Spurge (*Euphorbia esula*)
Milk Thistle (*Silybum marianum*)
North Africa Grass (*Ventenata dubia*)

Perennial Sowthistle (*Sonchus arvensis*)
Purple Loosestrife (*Lythrum salicaria*)
Purple Nutsedge (*Cyperus rotundus*)
Rush Skeletonweed (*Chondrilla juncea*)
Saltmeadow Cordgrass (*Spartina patens*)
Scentless Chamomile (*Matricaria maritima*)
Smooth Cordgrass (*Spartina alterniflora*)
Spotted Knapweed (*Centaurea maculosa*)
Tansy Ragwort (*Senecio jacobaea*)
Velvetleaf (*Abutilon theophrasti*)
Wild Oats (*Avena fatua*)
Yellow Flag Iris (*Iris pseudacorus*)
Yellow Nutsedge (*Cyperus esculentus*)
Yellow Starthistle (*Centaurea solstitialis*)
Yellow Toadflax (*Linaria vulgaris*)

REGIONALLY DESIGNATED NOXIOUS WEEDS

Blueweed (*Echium vulgare*)
Burdock (*Arctium* spp.)
Common Tansy (*Tanacetum vulgare*)
Hoary Cress (*Cardaria* spp.)
Meadow Knapweed (*Centaurea pratensis*)
Orange Hawkweed (*Hieracium aurantiacum*)
Sulphur Cinquefoil (*Potentilla recta*)

APPENDIX B: PRIORITY INVASIVE PLANTS IN THE CSRD

As taken from 2013 CSISS Operational Plan, updated in 2017

TABLE 3: DEFINITION OF PRIORITY RANKING CATEGORIES FOR INVASIVE PLANT SPECIES

Priority Ranking	Description
Provincial EDRR Regional EDRR (Prevention) (1)	<p>These invasive plant species are proposed BC Prohibited Noxious Weeds and candidates for the BC Early Detection Rapid Response Program. CSISS reports occurrences to FLNRO; FLNRO will initiate treatment. For a list of current species, see: BC Government Noxious Weeds</p> <p>These species are not currently known in this IPMA but are known to occur in the Columbia-Shuswap region. The goal for these species is immediate eradication if they are detected. EDRR reporting and action protocols for these species are outlined in Section 3.4. These sites are extremely high priority for treatment and eradication is the management objective.</p>
ERADICATION OR ANNUAL CONTROL (2)	<p>These species are known in the IPMA but with very limited distribution. Some of these species may have been present for a relatively long period so monitoring for spread is the management objective. Other species are relatively new to the IPMA so eradication is the objective.</p>
CONTAINMENT (3)	<p>These species are abundant (with no expectation of eradication) in certain portions of the IPMA but have not yet infested all potential habitats. Management efforts are delineated by containment lines which may be based on geographic (i.e. a specific region) or jurisdictional boundaries (e.g. private gardens only). Some of these species have biocontrol (BC) agents available which may be useful within the containment line. Containment is the management objective.</p>
ESTABLISHED (BIOCONTROL OR SITE-SPECIFIC APPROACH) (4)	<p>These are widespread species that are beyond landscape-level control and/or have relatively low impact. Land managers may choose to treat these species at high priority sites (e.g. wildlife habitat, corridors of spread, adjacent to agricultural land, restoration goals, etc.) based on specific land management objectives. Some of these species have biological control agents available.</p>
INSUFFICIENT INFORMATION (5)	<p>There is insufficient information for these species on their distribution, impacts, potential for spread and/or feasibility of control. In some cases, species have also been classified in one of the other categories because enough is known about their distribution. They also appear in this category because further information is still required.</p>

PRIORITY INVASIVE PLANT SPECIES IN THE COLUMBIA SHUSWAP BY IPMA

Species	Bio-control?	Relevant legislation ¹	Salmon Arm IPMA	Revelstoke IPMA	Golden IPMA
Annual sow thistle (SONC OLE)			4	4	4
Baby's breath (GYPS PAN)		CCA, FRPA	1	1	2
Bachelor's button (CENT CYA)			5	5	5
Bighead knapweed (CENT MAC)			2	1	2
Bittersweet nightshade / Nightshade (SOLA SPP)			4	5	5
Black knapweed (CENT NIG)		FRPA	2	2	1
Black locust (ROBI PSE)			5	5	5
Bluweed (ECHI VUL)		WCA, FRPA	2	2	2
Brown Knapweed (CENT JAC)			5	5	5
Buffalobur (SOLA ROS)			1	1	1
Bull thistle (CIRS VUL)	Y	CCA, FRPA	4	4	4
Bur chervil (ANTH CAU)			1	1	1
Burdock (ARCT SPP)		WCA, FRPA	4	4	4
Canada thistle (CIRS ARV)	Y	WCA, CCA, FRPA	4	4	4
Caraway (CARU CAR)			1	1	2
Chicory (CICH INT)			4	4	4
Colt's Foot (TUS FAR) (Tussilago spp.)			1	1	1
Common bugloss (ANCH OFF)		FRPA	1	1	1
Common comfrey (SYMP OFF)			4	4	4
Common tansy (TANA VUL)		WCA, FRPA	3	3	2
Contain to gardens: - Butterfly bush (BUDD DAV) - English Ivy (HEDE HEL) - Goutweed (AEGO POD) - Japanese butterbur - Russian olive (ELAE ANG) - Common Periwinkle			3	3	3

(VINC MIN) - Salt cedar/ Tamarisk (TAMA RAM) - Siberian elm (ULMU PUM)					
Creeping buttercup (RANU REP)			5	5	5
Curled dock (RUME CRI)			4	4	4
Cypress spurge (EUPH CYP)			2	1	2
Dalmatian toadflax (LINA DAL)	Y	WCA, CCA, FRPA	4	4	4
Dame's rocket (HESP MAT)			5	5	5
Diffuse knapweed (CENT DIFF)	Y	WCA, CCA, FRPA	4	4	2
Eyebright (EUPH NEM)			5	5	5
Field bindweed (CONV ARV)			5	5	5
Field scabious (KNAU ARV)		FRPA	2	1	1
Flat Peavine (LATH SYL) (<i>Lathyrus sylvestris</i>)			5	5	5
Flowering rush (BUTO UMB)			1	1	1
Fragrant water lily (NYMP ODO)			2	1	1
Garlic mustard (ALLI PET)			5	5	5
Giant hogweed (HERA MAN)			2	1	1
Gorse (ULEX EUR)			1	1	1
Greater celandine (CHEL MAJ)			5	5	5
Greater knapweed (CENT SCA)			1	1	1
Green foxtail / green bristlegrass (SETA VIR)			5	5	5
Hairy cat's ear (HYPO RAD)			5	5	5
Hawkweed spp. (HIER SPP) (see yellow hawkweeds)			4	4	4
Himalayan blackberry (RUBU ARM)		CCA	2	5	5
Hoary alyssum (BERT INC)		FRPA	4	2	2

Hoary cress (CARD DRA)		WCA, FRPA	1	1	2
Hound's tongue (CYNO OFF)	Y	WCA, CCA, FRPA	4	4	4
Knapweed species (CENT SPP)	Y/ limited		4	4	2
Knotweeds (FALL SPP)		WCA, CCA, FRPA	2	2	2
Lady's thumb (POLY PER)			5	5	5
Leafy spurge (EUPH ESU)	Y	WCA, CCA, FRPA	2	2	1
Longspine sandbur (CENC LON)			1	1	1
Marsh plume thistle (CIRS PALU)		FRPA	2	2	1
Meadow goat's beard (TRAG PRA) (<i>Tragopogon pratensis</i>)			4	4	1
Meadow knapweed (CENT DEB)		WCA, FRPA	2	2	1
Night-flowering catchfly (SILE NOC)			5	5	5
Nodding thistle (CARD NUT)			1	1	1
Orange hawkweed (HIER AUR)		WCA, FRPA	4	4	5
Oxeye daisy (LEUC VUL)		FRPA	4	4	4
Perennial sow thistle (SONC ARV)		WCA	4	4	4
Plumeless thistle (CARD ACA)			1	1	1
Poison hemlock (CONI MAC)			4	5	5
Policeman's helmet / Himalayan Balsam/Orchid (IMPA GLA)		CCA	2	2	2
Puncturevine (TRIB TER)		FRPA	1	1	1
Purple loosestrife (LYNT SAL)	Y	WCA, CCA, FRPA	2	2	1
Queen anne's lace / wild carrot (DAUC CAR)			4	5	5
Rush skeletonweed (CHON JUN)	Y	WCA, CCA, FRPA	2	1	1
Russian knapweed (ACRO REP)		FRPA	5	1	1
Scentless chamomile (MATR PER)	Y	WCA, CCA, FRPA	5	5	2

Scotch broom (CYTI SCO)		CCA, FRPA	2	1	1
Scotch thistle (ONOP ACA)		FRPA	2	1	1
Short-fringed knapweed (CENT NIR)			2	2	2
Sow thistle spp (SONC SPP)			4	4	4
Spotted knapweed (CENT BIE)	Y	WCA, CCA, FRPA	4	4	2
St. John's wort (HYPE PER)	Y	CCA, FRPA	4	4	5
Sulphur cinquefoil (POTE REC)		WCA, FRPA	4	4	5
Tall Buttercup/ Meadow Buttercup (RANU ACR)			5	5	5
Tansy Ragwort			1	1	1
Teasel (DIPS FUL)		FRPA	2	1	1
Western Goat's Beard (TRAG DUB) (<i>Tragapogon dubius</i>)			4	4	4
Wild chervil (ANTH SYL)			2	2	1
Wild Four O'Clock (MIRA NYC)			1	1	1
Wood sage (SALV NEM)			1	1	1
Wormwood (ARTE ABS) (Absinth)			4	4	5
Yellow flag-iris (IRI PSE)		WCA, CCA, FRPA	3	2	1
Yellow hawkweeds (HIER SPP) (including: king devil, meadow, polar, queen devil, spotted, tall, whiplash, yellow devil)		FRPA (meadow)	4	4	4
Lamium/Yellow archangel (LAMI GAL)			2	2	2
Yellow (common) toadflax (LINA VUL)		WCA, CCA, FRPA	4	4	4