Campbell Tract 2018 Non-native Plant Survey

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Introduction

The 730-acre Campbell Tract in Anchorage, Alaska (**Figure 1**) is managed by the Bureau of Land Management (BLM). With over 12 miles of trails and an outdoor education center, the Campbell Creek Science Center, the Tract provides year-round outdoor recreation and education opportunities for its 337,469 annual visitors. Bureau of Land Management Anchorage Field Offices (AFO), warehouse, communication sites, and an active airstrip and heliport are also located within the Tract. The lands that constitute Campbell Tract today have been part of the public domain since before World War II. During World War II the area was used for military purposes and included the establishment of the 5,000 foot gravel runway and associated taxiways (Guyer 2000). Even though Campbell Tract is one of Anchorage's largest open spaces, the land has been in a multi-purpose use for nearly a century.

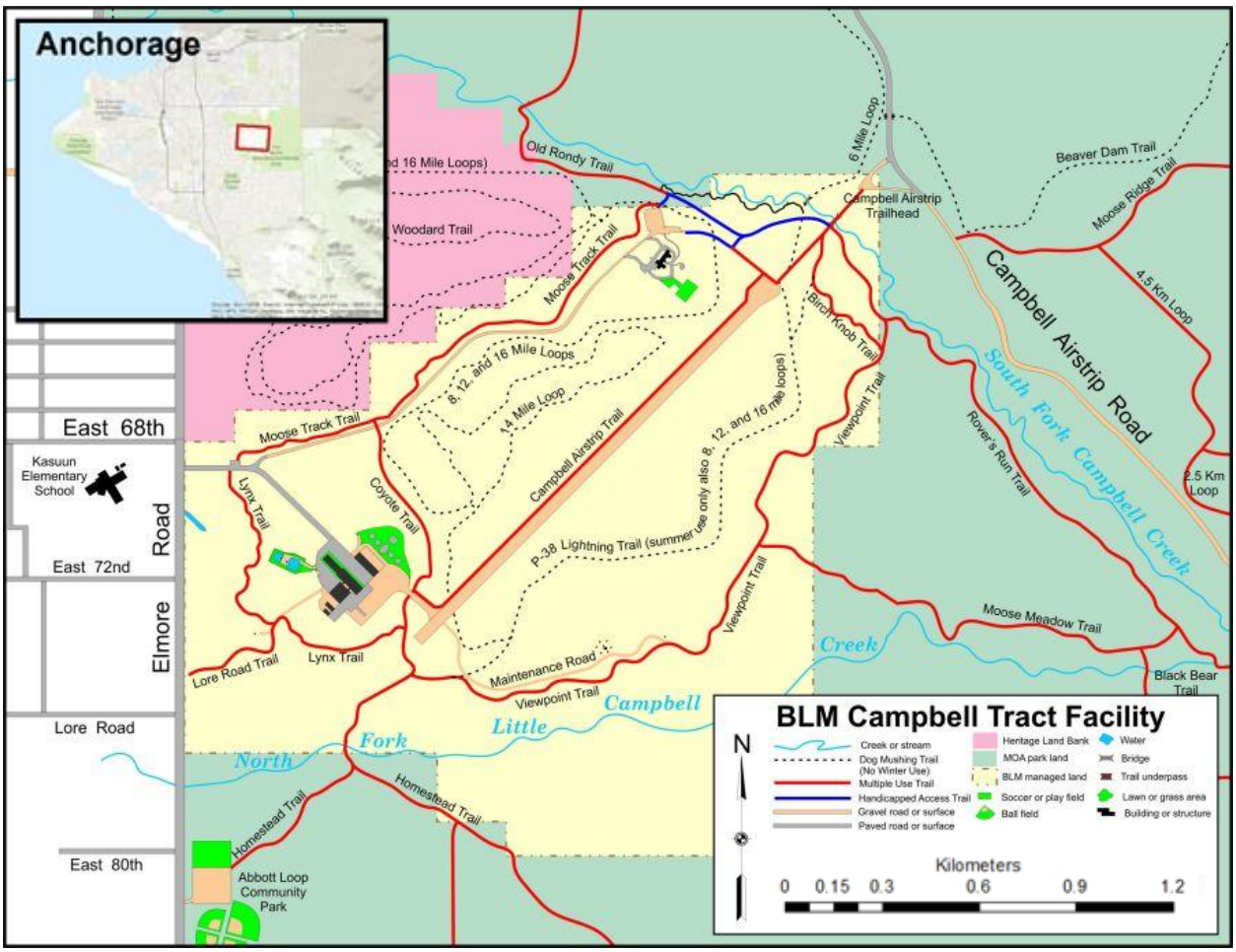

Figure 1. Location map of BLM Campbell Tract Facility, Anchorage, Alaska.

The Tract harbors a wide variety of boreal forest plants and wildlife in relatively unaltered communities, yet, due to the surrounding urban development the Tract is highly susceptible to invasion by non-native plant propagules. The number of non-native plant taxa documented in Alaska (ca. 350) was estimated to be 14% of the state's total flora, with new invasive species recorded every year (Carlson et al. 2008). Alaska has a lower percentage relative to most other states: 18% of California's flora (Hickman 1993), approximately 20% of Oregon's flora (Kaye

pers. comm.), and 49% of Hawaii's flora (Randall and Hoshovsky 2000) are non-native. However, over the last ten years there has been a marked acceleration in the rate of introduction of non-native plants to Alaska, presumably driven by increases in the movement of goods and people (Carlson and Shephard 2007). Most of these species follow the disturbances along the southcentral Alaska urban/rural rail belt corridor which includes the Anchorage, region. Propagules are likely introduced to Campbell Tract in contaminated materials imported for construction and maintenance projects, on the boots and bike and car tires of BLM staff and recreational trail users, and from nearby infestations that are spreading along the broader network of city trails and stream corridors. The effects of these species to native ecosystems is being documented in southcentral Alaska. For example, the widely planted *Prunus padus* has replaced much of the native shrub and tree riparian vegetation along Anchorage's creeks (Cortés-Burns and Flagstad 2009, Roon 2011), has spread to spread along the Chena River in Fairbanks and has caused fatal poisoning of moose calves in Anchorage (Woodford et al. 2011). Yet another example of a non-native species that has been documented affecting Alaska's ecosystems is *Melilotus albus*; this legume outcompetes native species along Alaska's glacial river bars (Spellman and Wurtz 2010) and impacts native plant-pollinator networks (Spellman et al. 2015). Nonetheless the overall number, distribution and impacts of invasive weeds in Alaska are still minor; land managers in this state have a unique opportunity to be proactive in managing invasive plants and reducing current and future negative impacts. Although landscaping at the Science Center is comprised of primarily native species, nearby access roads and the airstrip margin appear to have been regraded and reseeded with topsoil or seed mixes contaminated with non-native plant propagules. The Anchorage area has the greatest concentration of human altered landscapes in the state and the proximity of local park lands, such as Campbell Tract, make them vulnerable to infestation (Cortes-Burns and Flagstad 2013).

The BLM is committed to minimizing the introduction, establishment and dispersal of invasive[1] plant species to the Tract to conserve the natural ecology of the area. The first step in invasive plant management is to inventory the targeted area for non-native[2] plants, or weeds[3] so that species and infestations can be prioritized for control work. To meet these objectives, the Alaska Natural Heritage Program (AKNHP) entered into an agreement with the BLM in 2006 to survey the Tract for non-native plants, record their locations and recommend areas for control (Carlson et al. 2006); long-term monitoring transects set up in conjunction with the initial survey were revisited in 2008 (Cortés-Burns 2009), and 2009 (Flagstad 2010). All non-native data for these surveys were uploaded to the Alaska Exotic Plants Information Clearinghouse (AKEPIC) data portal. AKNPH repeated two more surveys in 2010 and 2011 with associated data uploaded into AKEPIC. Additionally, BLM data from Campbell Tract since 2011 are available in AKEPIC (AKEPIC 2017). Following implementation of the *Non-native Plant Management Plan for Campbell Tract* (Cortés-Burns and Flagstad 2013).

In 2018, Botanists from the Alaska Center for Conservation Science (ACCS; formerly known as AKNHP) revisited areas during the summer of 2018 that were previously infested and/or susceptible to new invasion by non-native plant species in Campbell Tract. The routine

[1] Invasive plants are non-native plants that produce viable offspring in large numbers and have the potential to establish and spread in natural areas.

[2] Non-native plants are plants whose presence in a given area is due to accidental or intentional introduction by humans.

[3] A weed is a plant, native or not, whose presence is undesirable to people in a particular time or place. In this work, given the potential negative impacts of non-native plants on ecosystem integrity and function, we also refer to non-native plants as weeds.

maintenance activities associated with Campbell Tract facilities and trails, such as construction of new facilities and the gear and equipment used by BLM staff, at these locations makes them susceptible to weed introductions. Furthermore, the connectivity of these locations to the rest of Campbell Tract makes them potential source locations for the further dispersal of non-native plant species. Results from the 2018 survey are summarized in this report.

The BLM has used herbicide treatments to control non-native species in Campbell Tract since 2016. Several spot treatments for *Vicia cracca* and *Melilotus albus* have been implemented from 2016 to 2018. A boom spray was used in 2016 to control the large *Melilotus albus* infestation at the airstrip, with two more treatments applied during the summer of 2018. Additionally, one spot treatment was for *Phalaris arundinacea* was performed in 2018. These three species were listed as high priorities for management in the *Non-native Plant Management Plan for Campbell Tract* (Cortés-Burns and Flagstad 2013). Manual treatments have also been used for controlling non-natives in Campbell Tract.

Methods

We concentrated our survey of Campbell Tract by revisiting areas identified as highly susceptible to invasion by new non-native plant species (Cortés-Burns and Flagstad 2013). These areas included:

- Areas of recent construction/trail work
- Trailheads (Smokejumper and Campbell Airstrip) plus 500 meters down all departing trails
- Grounds surrounding the Science Center and administrative buildings
- Airstrip and helipads
- Riparian corridors
- Materials Storage Area

A walking survey was proposed for 2018 non-native survey, as opposed to the transect method used in 2008 and 2009 Campbell Tract Surveys (Cortés-Burns 2009, Flagstad 2010). A walking survey provides a more comprehensive analysis of the all non-native species present throughout Campbell Tract, and decreases the chance of missing high priority species that may have been introduced to new areas.

Survey work was carried out between June and September 2018 by walking targeted areas and ocular estimating infestation occurrence. Unknown species encountered were collected and identified in the lab.

At Campbell Tract, we specifically surveyed the following areas (**Figure 2**):

- BLM Road
- BLM Anchorage Field Office
- Campbell Creek Science Center (CCSC) Road
- Open grassy area on the east side of CCSC Road
- Campbell Creek Science Center and Parking Lot
- Campbell Airstrip
- Campbell Airstrip Trailhead Parking Lot
- Smoke Jumper Trailhead and parking lot
- Birch Knob Trail

- CCSC Spur
- Coyote Trail
- Homecoming Trail
- Lynx Trail
- Moose Track Trail
- Old Rondy Trail
- P-38 Lightning Trail
- Rovers Run Trail
- Salmon Run Trail
- Viewpoint Trail
- Helipad Area
- Materials Storage Area
- South Fork Campbell Creek

An exhaustive species inventory of non-native plants with associated data were recorded while surveying areas mentioned above. For roads, parking lots, trailheads, and around buildings we surveyed a minimum 5 m from the edge of the pavement. A brief non-native plant survey was completed while walking through the native plants gardens surrounding the Science Center. Maintained lawn areas were surveyed a minimum of 5 m from forest edge into the lawn area. For trails we surveyed up to 5 m on both sides of the trail. A minimum of 500 m was surveyed from major trailheads down each departing trail, based on prior known infestations remaining near trailheads. For larger sites, such as the airstrip, the entire area was surveyed.

Survey sites were broken into polygons to calculate infestation areas and for identifying which sites were revisits from previous surveys (**Figure *2***, **Figure *3***). The centroid of each polygon was used to map the location of each site (See Appendix A for site data). Survey sites were named with the prefix BLM_CT_2018_ plus 'CCR' for surveys along Campbell Creek or 'CT' for all other areas of Campbell Tract. These survey sites were numbered in sequential order (e.g., BLM, CT_2018_ct023, BLM_CT_2018_ct024). Sites were categorized as 'revisits' in AKEPIC if the centroids of our polygons were less than 50 meters from a previous AKEPIC occurrence. Original site codes corresponding to these previous occurrences were recorded in AKEPIC along with our site codes from 2018.

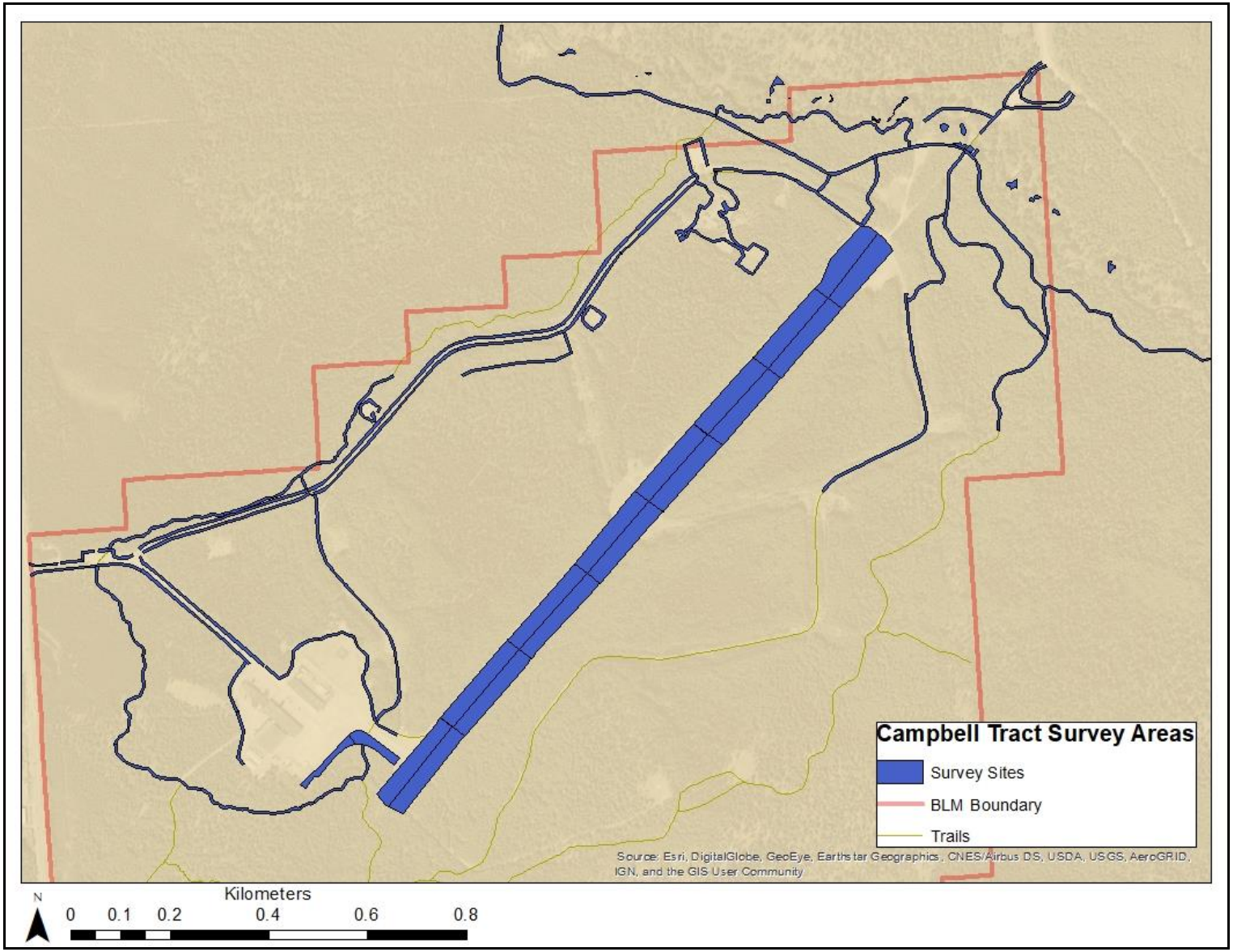

Figure 2. Survey sites of Campbell Tract by ACCS biologists.

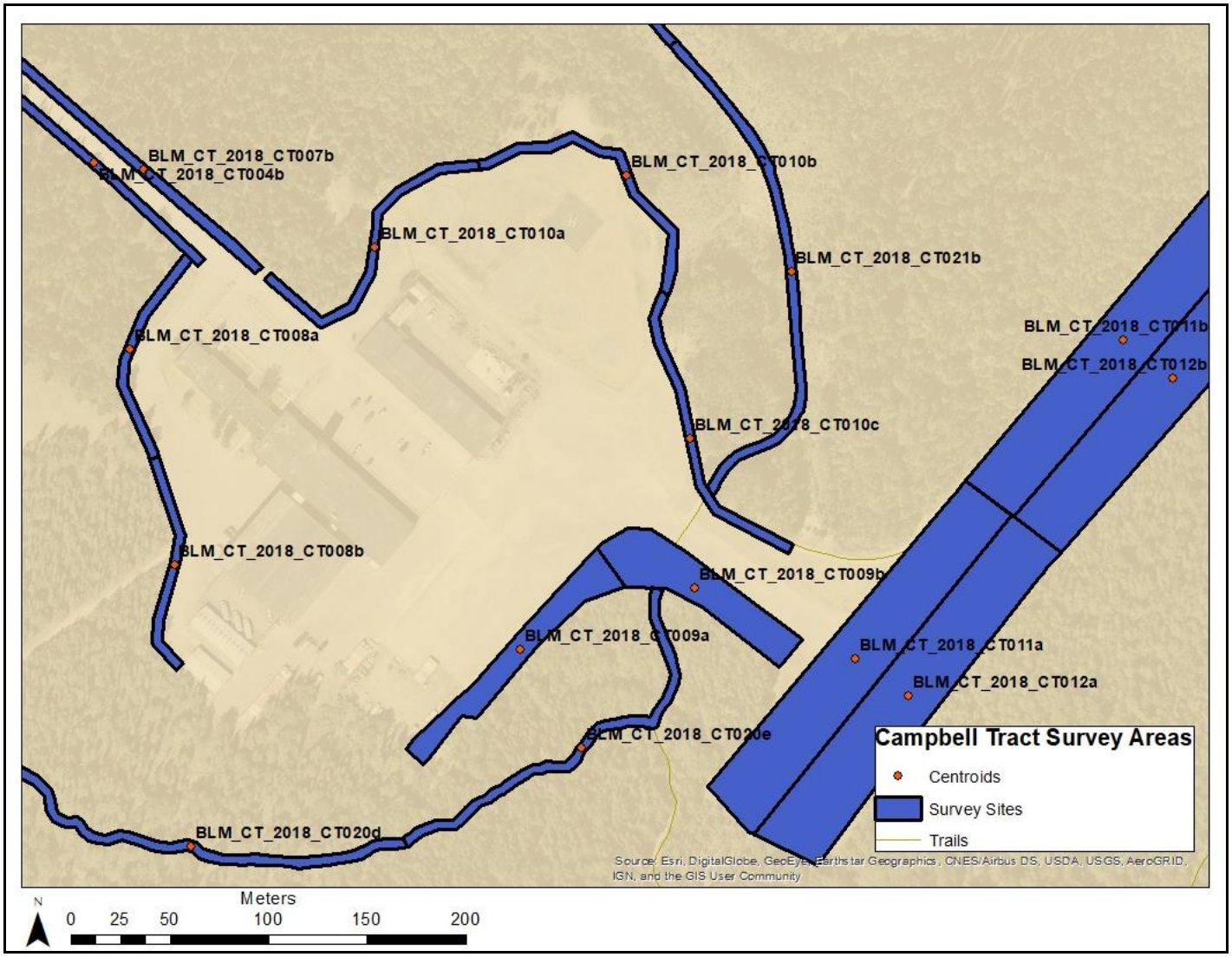

Figure 3. Close-up of survey areas at Campbell Tract. Centroids of sites labeled with site names.

For our survey, occurrences of the same non-native species found >50 meter from a previous infestation within the same site were considered a different infestation. For each non-native infestation, GPS coordinates, infestation area, percent cover, and stem number were recorded and uploaded to the Alaska Exotic Plant Information Clearinghouse (AKEPIC) data portal.

The following categorization of invasiveness in **Table *1*** is used to discuss non-native species found in Campbell Tract. Species that ranked 60 or greater are considered high priority species. Although *Hordeum jubatum* (foxtail barley; 63) has a relatively high invasiveness rank, its nativity status is uncertain and will therefore not be considered a high priority species.

Table 1. Invasiveness categories based on AKEPIC Invasiveness Rank (Cortés-Burns and Flagstad 2013). Species that ranked 60 or greater in orange are considered 'high priority species'.

Category	AKEPIC Invasiveness Rank
Extremely invasive	≥80
Highly invasive	70-79
Moderately invasive	60-69
Modestly invasive	50-59
Weakly or very weakly invasive	<50
Unranked	NR[1]

[1] 'NR' indicates that the species has not yet been ranked and does not imply low invasiveness.

Results

Twenty-seven non-natives were documented in Campbell Tract during the 2018 survey (**Table *2***). *Taraxacum officinale*, *Trifolium repens*, and *Plantago major* had the highest frequency of occurrences, making up 53% of all non-native occurrences found in Campbell Tract in 2018, and were the only three species to occur in over 50% of all sites (**Table *2***). See Appendix B for all non-native species occurrences and associated data. A new non-native plant species to Campbell Tract, *Sorbaria sorbifolia*, was found at four site locations summarized in Appendix B. *Sorbaria sorbifolia* can easily be confused with native *Sorbus* species and therefore may have been overlooked in the past. However, infestations were low in cover and size with young individuals and might be young recruits.

Furthermore, roadsides showed the greatest richness of non-native species with sites having up to of 13 non-native species per site. In contrast, sites found along Campbell Creek only had 1—4 non-native species per site (**Figure *4***).

Table 2. Non-native plants species from 2018 Campbell Tract Survey. Light yellow shaded areas are high priority species.

Scientific Name	Common Name	Invasiveness Rank	Percentage of Sites Infested	*Frequency of Occurrences	**Total Infested Area (m^2)
Alopecurus pratensis	meadow foxtail	52	2%	0.4%	500.0
Cerastium glomeratum	sticky chickweed	36	6%	1.4%	96.0
Chenopodium album ssp. *album*	lambsquarters	37	8%	1.8%	139.0
Crepis tectorum	narrowleaf hawksbeard	56	31%	6.9%	12,257.1
Elymus repens	quackgrass	59	4%	0.8%	16.0
Hordeum jubatum	foxtail barley	63	1%	0.2%	97.0
Lamium album	white deadnettle	40	2%	0.4%	180.0
Leucathemum vulgare	oxeye daisy	61	1%	0.2%	1.0
Linaria vulgaris	butter and eggs	69	8%	1.8%	749.3
Lolium perenne	perennial ryegrass	52	1%	0.2%	20.0
Matricaria discoidea	pineappleweed	32	18%	4.3%	4,711.2
Melilotus albus	white sweetclover	81	17%	3.7%	46,420.2
Phleum pratense	timothy grass	54	6%	1.2%	8.5
Plantago major	common plantain	44	81%	18.1%	23,206.2
Poa annua	annual bluegrass	46	25%	5.5%	6,087.0
Poa pratensis (ssp. irrigata and ssp. pratensis)	spreading bluegrass or Kentucky bluegrass	52	10%	2.2%	1,898.0
Polygonum aviculare	prostrate knotweed	45	7%	1.8%	659.1
Prunus padus	european bird cherry	74	5%	1.0%	37.2
Rumex acetosella	common sheep sorrel	51	2%	0.4%	6.5

Scientific Name	Common Name	Invasiveness Rank	Percentage of Sites Infested	*Frequency of Occurrences	**Total Infested Area (m^2)
Rumex longifolius	dooryard dock	48	1%	0.8%	0.1
Sorbaria sorbifolia	false spirea	NR	4%	0.2%	1.25
Stellaria media	common chickweed	42	6%	1.2%	671.0
Taraxacum officinale	common dandelion	58	87%	19.3%	33,423.5
Trifolium hybridum	alsike clover	57	27%	6.1%	9,679.7
Trifolium repens	white clover	59	69%	15.7%	27,333.0
Tripleurospermum inodorum	scentless false mayweed	48	6%	1.2%	2,159.5
Vicia cracca ssp. *cracca*	bird vetch	73	13%	3.1%	349.6

*Frequency observed of non-native plant species in Campbell Tract. Occurrence defined as a single infestation within a site. Infestations >50 m from eachother winthin the same site were considered separate occurrences. A single infestation that spanned multiple sites was considered as multiple occurrences (one for each site).

**Sum of infestation area of all individual occurrences for a single species (Appendix B).

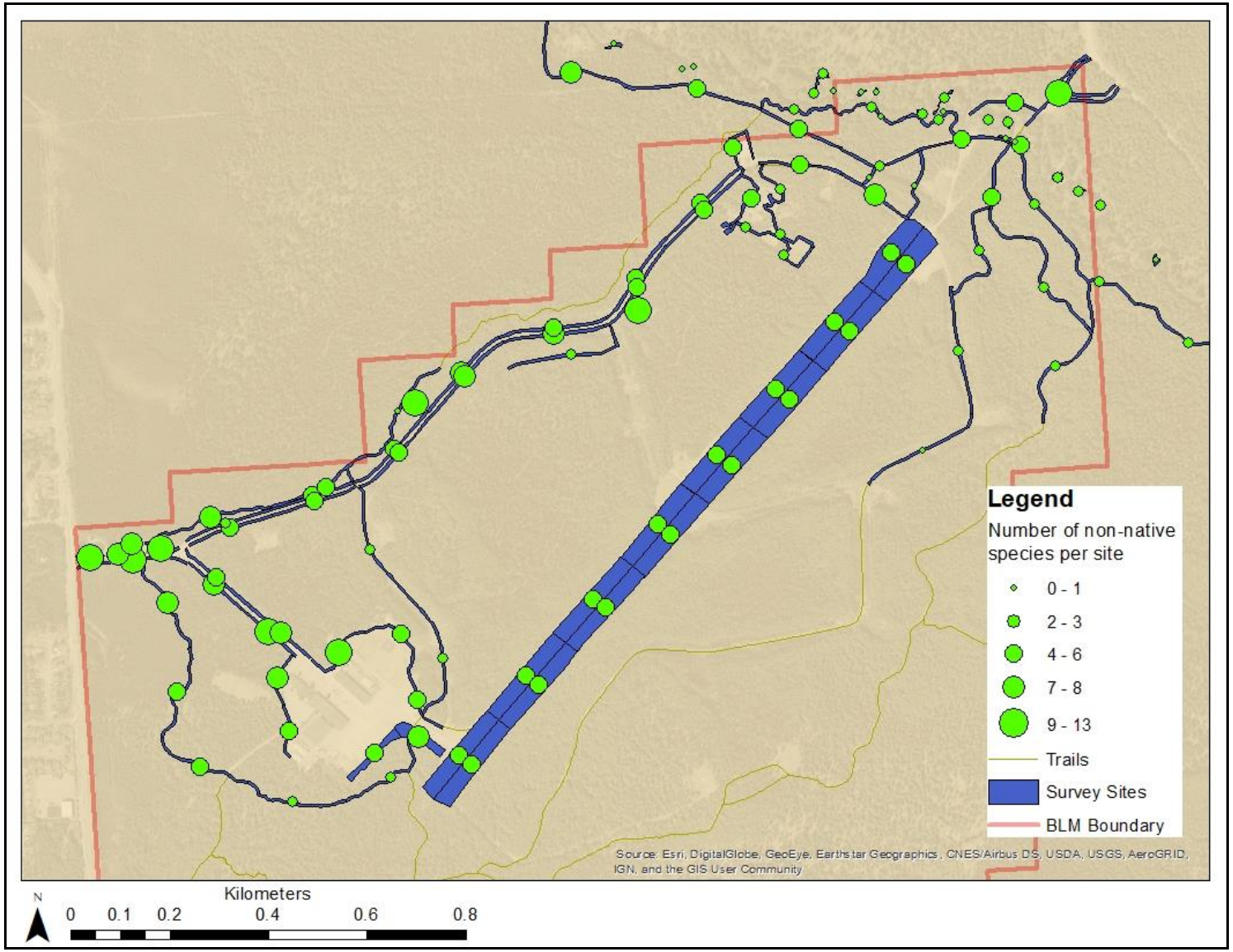

Figure 4. Richness of non-native species across survey sites.

High priority species infestations

Five high priority species were found at Campbell Tract in 2018; *Melilotus albus* (white sweet clover; 81), *Prunus padus* (European bird cherry; 74), *Vicia cracca* ssp. *cracca* (bird vetch; 73), *Leucanthemum vulgare* (oxeye daisy; 61), and *Linaria vulgaris* (butter and eggs; 69) (**Figure *5***). While these non-native species have the highest invasiveness ranks, they each contributed < 4% of all non-native occurrences found in Campbell Tract (**Table *2***). No species observed in 2018 are 'A-listed' species by Municipality of Anchorage (Klein et al. 2012). Four out of the five high priority species are 'B-listed' by the Municipality of Anchorage.

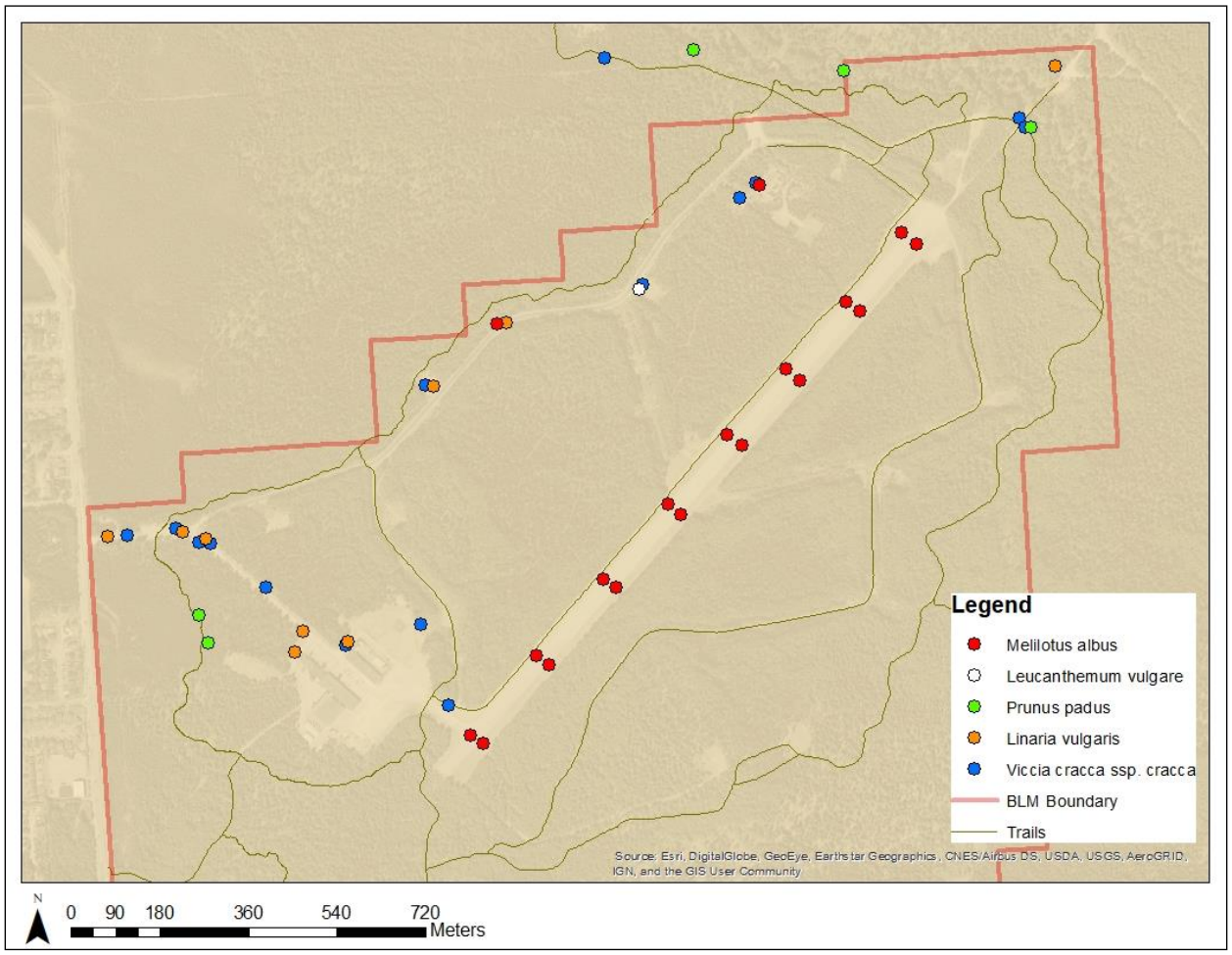

Figure 5. High priority non-native species found in Campbell Tract in 2018.

The main *Melilotus albus* infestation was found along the airstrip (**Figure *5***). All 16 surveyed sites along the airstrip were infested, with infested area ranging from 1300 m^2 with 3% cover to 6000 m^2 with 15% cover (Appendix B). Two other infestations were found on the CCSC road and around the Campbell Creek Science Center (**Figure 6**), with infested areas of 20 m^2 with 1% cover and 0.2 m^2 with 40% cover, respectively. *Melilotus albus* had the greatest total infestation area for all

Figure 6. *Melilotus albus* behind CCSC building.

Figure 7. *Prunus padus* along Campbell Creek.

Figure 8. *Vicia cracca ssp. cracca* behind CCSC building.

occurrences throughout Campbell Tract (this not taking into account stem count or percent cover, as these measurements were recorded as a range of values) (**Table *2***).

Two infestations of *Prunus padus* were found along the Lynx Trail (**Figure *5***). One infestation consisted of several large flowering trees with an infestation size of 35 m^2 and 15% cover, while the other infestation comprised of 1-6 saplings with an infestation size of 1 m^2. There were three additional occurrences of non-flowering saplings found along South Fork Campbell Creek all with infestation sizes of <1 m^2 (**Figure 7**).

Fifteen occurrences of *Vicia cracca* spp. *cracca* were observed (**Table *2***, **Figure *5***, **Figure 8**). Four occurrences had an infestation area of $\leq$ 1 m^2, found along Campbell Creek, BLM Road, material storage area and around the helipad area. Six occurrences with an infestation area between 2 m^2 and 9 m^2, were found along the BLM Road, Smokejumper Trailhead and parking lot, helipad area, Campbell Creek Science Center, and Old Rondy Trail. The last five occurrences were found along Campbell Creek (18 m^2, 10% cover), BLM Road (75 m^2, 4% cover), area surrounding helipad (160 m^2, 4% cover), around Campbell Creek Science Center (17 m2, 20% cover), and in the open grassy area on east side of CCSC Road (50 m^2, 5% cover).

There were nine occurrences of *Linaria vulgaris* along the roadsides, BLM Anchorage Field Office and parking lot, and material storage area (**Figure *5***). Five occurrences had an infestation size of $\leq$ 2 m^2, while the occurrences with larger infestation areas were found at the Campbell airstrip parking lot (30 m^2, 3% cover), along the BLM Road (65 m^2, 3% cover), at the material storage area (150 m^2, 1% cover) and area surrounding the helipad (500 m^2, 2% cover).

One occurrence of *Leucanthemum vulgare* was found in the open grassy area on the east side of CCSC Road with an infestation size of 1 m^2 (**Figure *5***).

Moderate priority species infestations

Other species found in 2018 that were listed as moderate priority targets by Cortés-Burns and Flagstad (2013) included *Crepis tectorum* (narrowleaf hawksbeard; 56), *Alopecurus pratensis* (meadow foxtail; 52), *Rumex acetosella* (common sheep sorrel; 51), *Rumex longifolius* (dooryard dock; 48), *Tripleurospermum inodorum* (scentless false mayweed; 48), and *Lamium album* (white deadnettle, 40) (**Table *2***, **Figure *9***).

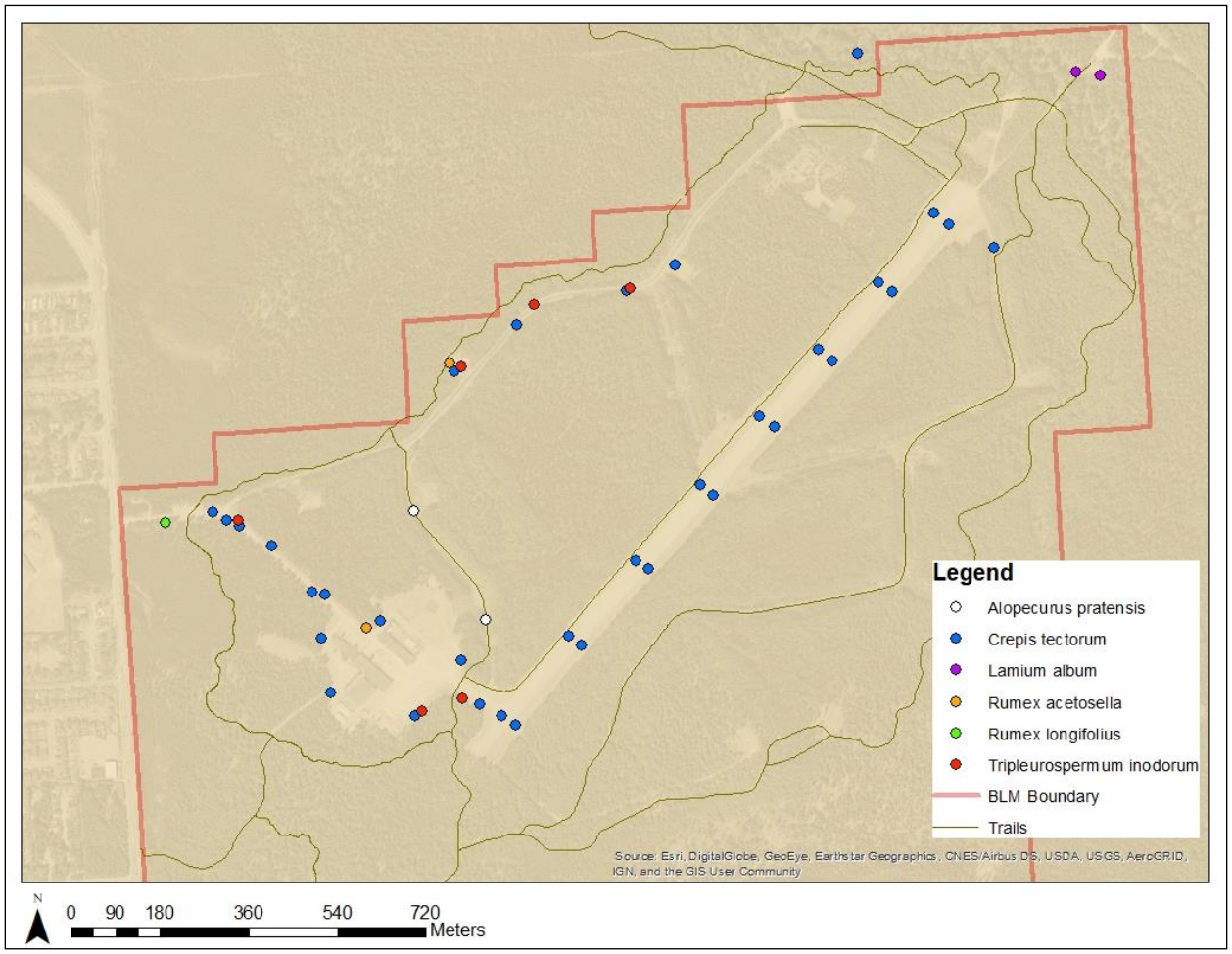

Figure 9. Moderate priority non-native species found in Campbell Tract in 2018.

Thirty-four occurrences of *Crepis tectorum* were observed in Campbell Tract, mostly in open gravelly areas such as roadsides and the airstrip. Two occurrences of *Rumex acetosella* were observed with one occurrence at the material storage site and one near the parking lot of the BLM Anchorage Field Office. Only one occurrence of *Rumex longifolius* was found along the BLM Road. Two infestations of *Lamium album* were found between the Campbell Airstrip Trailhead and bridge. Six occurrences *Tripleurospermum inodorum* were documented around the BLM Anchorage Field Office, material storage area, and along roadsides. Two occurrences of *Alopecurus pratensis* were observed along on the Coyote Trail.

Discussion

Fifty-seven non-native species have been found in Campbell Tract from 2003—2018 (Appendix C) and approximately 136 non-native species are known to occur in the Anchorage area (AKEPIC 2017). However, only twenty-seven non-natives were documented in Campbell Tract during the 2018 survey (**Table *2***).

Taraxacum officinale, *Trifolium repens*, and *Plantago major* occurrences were the most common non-native species throughout Campbell Tract, but are only considered weakly to modestly invasive (**Table *1***, **Table *2***). Fewer occurrences of moderate to highly invasive non-native species in Campbell Tract is likely due to these species being targeted for eradication in past years. *M. albus*, and *V. cracca* have been treated since 2016 herbicide treatments began, and *Leucanthemum vulgare* has been spot treated (A. Segal - pers. comm.). *Linaria vulgaris* and *Prunus padus* were also listed as high priorities for management (Cortés-Burns and Flagstad 2013), but have not been treated in recent years.

Sites with a lower richness of non-native species (**Figure *4***) were mostly comprised of weakly to modestly invasive species (Appendix B, **Table *2***). This pattern of non-native richness is due to a variety of factors including proximity to other non-native populations and level of disturbance. Highly invasive non-natives were not growing nearby these low richness areas and the area surveyed did not have substantial fill soil or disturbance that could be a source for additional non-native species.

High priority species infestations

Melilotus albus was first spotted in Campbell Tract in 2003 has been found to be widespread in Campbell Tract since the 2006 survey, with its distribution being reduced to the north and west sides of Campbell Tract in 2010 (AKEPIC 2017, Carlson et al. 2006). As this species was only found along the airstrip and in two additional locations in 2018, it appears that its distribution has decreased since previous survey. An integrated approach to eradication was proposed in the *Non-native Plant Management Plan for Campbell Tract* (Cortés-Burns and Flagstad 2013) involving manual removal and herbicide treatments. This species has received herbicide treatments since 2016, however it still had the largest total infested area in Campbell Tract in 2018 indicating that once established it is quick to spread and difficult to remove. This species is known to produce up to 350,000 seeds/plant with seeds remaining viable in the soil for up to 81 years (Klemow and Raynal 1981, Rutledge and McLendon 1996, Royer and Dickinson 1999). Summer 2018 observations found the main *M. albus* infestation along the airstrip were sprayed with herbicides twice during our survey by a BLM contractor. Given that the seeds of *M. albus* can remain viable in the soil for many years, eradication is unlikely (Cortés-Burns and Flagstad 2013). Therefore, continuous efforts are necessary to control this species.

Prunus padus was first recorded and removed on the South Fork Campbell Creek in 2006, and was not observed again until 2010 with several infestations found along Campbell Creek (Carlson et al. 2006, Roon 2010). In 2011, several occurrences of *P. padus* were still observed along Campbell Creek with one additional occurrence found along the Lynx Trail (AKEPIC 2017). As stated in the *Non-native Plant Management Plan for Campbell Tract* (Cortés-Burns and Flagstad 2013), targeting fruiting trees is a top priority for controlling this species, as well as removal of smaller plants before they reach maturity. As an infestation of *Prunus padus* had reached full maturity (both fruits and flowers observed) before being detected, suggests that annual monitoring is necessary to find this species in its earlier stages.

High priority species were mostly found in open, high traffic areas (**Figure *5***). One exception to this pattern was *Prunus padus* which was found on trails and along Campbell Creek. *Prunus padus* produces fruits that are eaten by birds, which likely increase its ability to spread into less trafficked areas making it difficult to find. Additionally, *P. padus* was observed to be established in mostly shaded undisturbed areas.

Vicia cracca spp. *cracca* and *Linaria vulgaris* have been found scattered along the roadsides and open disturbed areas (mostly found around the helipad, around buildings, and materials storage area) from 2003 to the present (AKEPIC 2017, Appendix B). As this species was only found in a few isolated infestations in 2018, it may be a candidate for local eradication. *Linaria vulgaris*, however, can spread vegetatively and by seed and therefore may be very resource-intensive to control (Cortés-Burns and Flagstad 2013).

Leucanthemum vulgare has been documented in Campbell Tract since 2003, but has been found only in a few isolated infestations (AKEPIC 2017). Only one occurrence of this species was recorded in 2018 (Appendix B). This species is also a candidate for local eradication given that only one small infestation was found.

All five high priority non-native species found in Campbell Tract are widely distributed across Alaska and particularly abundant in Southcentral Alaska (AKEPIC 2017). Therefore, controlling outlying infestations is necessary for limiting new introductions into Campbell Tract.

Other extremely to highly invasive non-native species previously recorded in Campbell Tract include: *Phalaris arundinacea*, *Melilotus officinalis*, *Prunus virginiana*, *Hieracium aurantiacum*, *Cirsium arvense*, *Hordeum jubatum*, *Bromus inermis* ssp. *inermis* (although these all have an invasiveness rank of >60, only *Hieracium aurantiacum* and *Cirsium arvense* were considered to be high priorities for control in the 2013 Management Plan) (Appendix A). Of these species, only *Hordeum jubatum* was observed in disturbed trailhead areas this year, however it's not considered a target species for management.

Phalaris arundinacea was not detected during our 2018 survey but an unconfirmed observation near the BLM Helipad moose exclosure and near the entrance sign at Elmore Road by an invasive species contract staff was reported and subsequently treated with glyphosate herbicide. Known infestations occur across the street of the Elmore Road entrance, therefore monitoring for this species should specifically focus on this area and other areas close to known populations.

The firebreak area was not surveyed in 2018 as it was not listed as an area concern when developing our project methodology. *Hieracium aurantiacum* had been observed in this area in previous years. However, ACCS scientists were near the firebreak exclosure for Assessment, Inventory and Monitoring (AIM) surveys and did not record presence of *Hieracium aurantiacum*.

Moderate priority species infestations

Crepis tectorum has been widespread throughout Campbell Tract since 2006 (AKEPIC 2017, Carlson et al. 2006). During the 2018 survey this species was still found to be very abundant in open gravel areas, however it appears to be relatively absent from trails in comparison to previous years (**Figure *9***).

Rumex acetosella and *Rumex longifolius* are not common in Campbell Tract and have only been found in a few open disturbed locations (AKEPIC 2017). In 2018 these species were found along the BLM road and material storage area, and therefore do not appear to be spreading to new areas.

Only one infestation of *Lamium album* had been previously recorded in Campbell Tract, (located at the intersection between the BLM and CCSC road in 2010 and 2011; AKEPIC 2017). While two new infestations were found in 2018 between the Campbell Airstrip Trailhead and bridge (**Figure *9***), this species was not found elsewhere on Campbell Tract.

Tripleurospermum inodorum, was found in the same general areas as in previous years: around the BLM building, and material storage area (**Figure *9***, AKEPIC 2017), which suggests that this species has not spread to new areas.

Alopecurus pratensis was only found in 2006 on the east side of BLM Anchorage Field Office (Carlson et al. 2006). During the 2018 survey, two infestations were observed to be spread along the Coyote Trail, but the percent cover and stem counts were relatively low (Appendix B). As this species has only been found in isolated infestations, it does not appear to be of concern of quickly spreading to new areas.

Conclusions

The greatest concerns for control within Campbell Tract are *Melilotus albus* and *Prunus padus*. The large infestation of *Melilotus albus* on the airstrip has been treated, but regular monitoring is recommended. Continued control efforts are necessary given a small infestation was found along the CCSC Road. The mature infestation of *Prunus padus* on the Lynx trail is of concern given that it was not detected in previous years and has several fruiting trees, indicating annual to biannual surveys for this species is needed for Early Detection and Rapid Response. This area, as well as the three infestations along Campbell Creek, warrant attention to reduce the spread of this species.

Leucanthemum vulgare, *Vicia cracca* spp. *cracca* and *Linaria vulgaris* are high priority species and were found in relatively small, isolated infestations. Control of these species is encouraged to reduce their spread and minimize impact to the surrounding natural habitat. For lower priority species, continued monitoring is recommended.

Gravel imported for trail maintenance initially appeared to be weed free but monitoring of these trail improvement areas is recommended for the summer of 2019. The greatest contributor to the introduction of non-natives in Campbell Tract is most likely from contaminated materials being brought in for large scale construction or maintenance projects (Cortés-Burns and Flagstad 2013, Flagstad 2010).

AKEPIC database is valuable tool outside the BLM for data collection and monitoring non-native species. This database provides other land resource managers a reference for understanding non-natives in the Southcentral Alaska area. The results of this survey will be uploaded to AKEPIC and future uploading of data on non-native plant presence or absence should be encouraged from plant surveys conducted in Campbell Tract. Resources, such as the *Non-native Plant Management Plan for Campbell Tract* Anchorage, Alaska, are available to BLM managers to follow Best Management Practices to reduce the import of and eradication of non-native plant species.

Summary

Campbell Tract's proximity to the surrounding urban area of Anchorage and high visitor count to trailheads makes it susceptible to invasion of non-native plant species. Non-natives species seem to prefer naturally open and disturbed areas. Any new construction projects should be managed such that all gravel materials come from a weed free source. Finally, we recommend continuing to follow the objectives of the *Non-native Plant Management Plan for Campbell Tract* (Cortés-Burns

and Flagstad 2013), specifically continuing to monitor those areas that are particularly susceptible to invasion by new non-native species and continuing an early detection and rapid response efforts throughout Campbell Tract.

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Appendix A. Survey sites from 2018 Campbell Tract Survey

Site Code	*Original Site Code	Area surveyed (m^2)	Latitude	Longitude	Location Notes
BLM_CT_2018_CCR002	CAMCK SF 124	300	61.16722847	-149.7824253	South Fork Campbell Creek
BLM_CT_2018_CCR003	BLM_CT_2011_CAMCRK_SF_18	5	61.16669463	-149.7799155	South Fork of Campbell Creek: 30 feet from bank edge
BLM_CT_2018_CCR004	BLM_CT_2011_CAMCRK_SF_18	60	61.16673382	-149.7794702	South Fork Campbell Creek: on gravel bar
BLM_CT_2018_CCR005		75	61.16609679	-149.7750086	South Fork Campbell creek: east of Salmon Run Trail stairway
BLM_CT_2018_CCR006	BLM_CT_2011_CAMCRK_SF_19	300	61.16646003	-149.7746021	South Fork Campbell Creek: on sand/gravel bar on 90 degree turn of creek.
BLM_CT_2018_CCR007	CESANC2012-1	5	61.16612498	-149.7742293	South Fork Campbell Creek
BLM_CT_2018_CCR008	CESANC2012-1	60	61.16606328	-149.7732218	South Fork Campbell Creek
BLM_CT_2018_CCR009		40	61.16605931	-149.7726285	South Fork Campbell Creek
BLM_CT_2018_CCR010		5	61.16561894	-149.7725049	South Fork Campbell Creek
BLM_CT_2018_CCR011	CESANC2012-1	75	61.16561192	-149.7709485	South Fork Campbell Creek: on established dirt trail west of viewing platform off of Salmon Run Trail
BLM_CT_2018_CCR012	CAMCK SF135	100	61.16587595	-149.7700829	South Fork of Campbell Creek: on gravel bed
BLM_CT_2018_CCR013	BLM_CT_2008_T09_A	20	61.16561387	-149.7701688	South Fork Campbell Creek: down side trail of Salmon Run trail to flood plain
BLM_CT_2018_CCR014	BLM_CT_2011_CAMCRK_SF_07	200	61.16541852	-149.7684596	South Fork Campbell Creek: open area off of Salmon Run trail by creek, just east of Dog Team Bridge
BLM_CT_2018_CCR015a	BLM_CT_2011_CAMCRK_SF_07	200	61.16536298	-149.7677436	South Fork Campbell Creek: just west of second bridge to Campbell airstrip trailhead
BLM_CT_2018_CCR015b	BLM_CT_2011_VIEWPT_11	200	61.16506404	-149.7678747	South Fork Campbell Creek: just west of second bridge to Campbell airstrip trailhead
BLM_CT_2018_CCR016	BLM_CT_2006_MLC047	120	61.16499307	-149.767528	South Fork Campbell Creek: east of second bridge to airstrip
BLM_CT_2018_CCR017	BLM_CT_2010_VIEWPT_01	90	61.16492199	-149.7673334	South Fork Campbell Creek: east of revegetation fence, small disturbed area
BLM_CT_2018_CCR018	BLM_CT_2011_CAMCRK_SF_17	200	61.1643027	-149.7660025	South Fork Campbell Creek: open area near bank off of main trail
BLM_CT_2018_CCR019	BLM_CT_2011_CAMCRK_SF_17	75	61.1640243	-149.7652268	South Fork Campbell Creek: from game trail to Campbell Creek

Site Code	*Original Site Code	Area surveyed (m^2)	Latitude	Longitude	Location Notes
BLM_CT_2018_CCR020		60	61.1637552	-149.7644399	South Fork Campbell Creek: on gravel/sand bar
BLM_CT_2018_CCR021		120	61.16269227	-149.7625069	South Fork Campbell Creek: north of rivers run trail on gravel bar
BLM_CT_2018_CT001	BLM_CT_2006_MLC001.5	295	61.15853219	-149.8034312	BLM Rd: corner of Elmore and BLM Rd to utility access road
BLM_CT_2018_CT002	BLM_CT_2006_MLC001.6	235	61.15855693	-149.8023623	BLM Rd: from Smokejumper trailhead parking lot, west to utility access road
BLM_CT_2018_CT003	BLM_CT_2006_MLC004.4	1135	61.15844445	-149.8018284	BLM Rd: south side from Elmore to BLM gate
BLM_CT_2018_CT004a	BLM_CT_2010_UNNAMD_04	875	61.15789579	-149.7988028	BLM Rd: south side between the gate and BLM parking lot
BLM_CT_2018_CT004b		875	61.15699145	-149.7968693	BLM Rd: south side between the gate and BLM parking lot
BLM_CT_2018_CT005	BLM_CT_2009_T01_SA	185	61.15872213	-149.8018149	Smokejumper Trailhead and parking lot: west end
BLM_CT_2018_CT006	BLM_CT_2010_RS_ELM_01	395	61.15860951	-149.8007222	Smokejumper Trailhead and parking lot: east side of parking lot to Science Center Dr.
BLM_CT_2018_CT007a	BLM_CT_2006_MLC004.5	978	61.15801811	-149.7986963	BLM Rd: from Science Center Dr. east to Coyote Trail Spur
BLM_CT_2018_CT007b	BLM_CT_2010_ADMIN_RD_03	978	61.15694715	-149.7964079	BLM Rd: from Science Center Dr, east to Coyote Trail Spur
BLM_CT_2018_CT008a	BLM_CT_2006_MLC006.2	675	61.15613838	-149.7966441	BLM Anchorage Field Office: Behind warehouse on the south side
BLM_CT_2018_CT008b	BLM_CT_2006_MLC007.3	675	61.1551541	-149.7963515	BLM Anchorage Field Office: Behind warehouse on the south side
BLM_CT_2018_CT009a	BLM_CT_2006_MLC009	2650	61.15467459	-149.793143	BLM Anchorage Field Office: east side of building to airstrip on south side of taxiway
BLM_CT_2018_CT009b	BLM_CT_2010_COYOTE_03	2145	61.15490264	-149.7914559	BLM Anchorage Field Office: east side of BLM building to airstrip on south side of taxiway
BLM_CT_2018_CT010a	BLM_CT_2010_COYOTE_01	930	61.15653103	-149.7942699	Helipad Area: from airstrip on north side of taxidrive to BLM parking lot
BLM_CT_2018_CT010b		930	61.15678096	-149.7918502	Helipad Area: from airstrip on north side of taxidrive to BLM parking lot
BLM_CT_2018_CT010c	BLM_CT_2006_MLC012.2	930	61.15557794	-149.7914163	Helipad Area: from airstrip on north side of taxidrive to BLM parking lot

Site Code	*Original Site Code	Area surveyed (m^2)	Latitude	Longitude	Location Notes
BLM_CT_2018_CT011a	BLM_CT_2006_MLC025	6500	61.15453723	-149.7899792	Airstrip: west side
BLM_CT_2018_CT011b	BLM_CT_2006_MLC030	6500	61.15589597	-149.7872678	Airstrip: west side
BLM_CT_2018_CT011c	BLM_CT_2010_AIRSTP_03	6500	61.15719634	-149.7845526	Airstrip: west side
BLM_CT_2018_CT011d		6500	61.15848565	-149.7819425	Airstrip: west side
BLM_CT_2018_CT011e	BLM_CT_2006_MLC038	6500	61.15967076	-149.7795314	Airstrip: west side
BLM_CT_2018_CT011f	BLM_CT_2010_AIRSTP_05	6500	61.16080362	-149.7771567	Airstrip: west side
BLM_CT_2018_CT011g	BLM_CT_2006_MLC035	6500	61.16194947	-149.774743	Airstrip: west side
BLM_CT_2018_CT011h	BLM_CT_2006_MLC037	6500	61.16313875	-149.7724716	Airstrip: west side
BLM_CT_2018_CT012a	BLM_CT_2010_P38TR_15	6500	61.15435565	-149.7895094	Airstrip: east side
BLM_CT_2018_CT012b	BLM_CT_2006_MLC030	6500	61.15571159	-149.7868178	Airstrip: east side
BLM_CT_2018_CT012c	BLM_CT_2006_MLC033	6500	61.15703275	-149.784085	Airstrip: east side
BLM_CT_2018_CT012d		6500	61.15828619	-149.7814648	Airstrip: east side
BLM_CT_2018_CT012e		6500	61.15946286	-149.7790103	Airstrip: east side
BLM_CT_2018_CT012f		6500	61.16058553	-149.7766518	Airstrip: east side
BLM_CT_2018_CT012g	BLM_CT_2006_MLC035	6500	61.16176257	-149.7742117	Airstrip: east side
BLM_CT_2018_CT012h	BLM_CT_2006_MLC036.2	6500	61.16291198	-149.771916	Airstrip: east side
BLM_CT_2018_CT013	BLM_CT_2006_UNNAMD_05	725	61.16095089	-149.7907841	Material storage area
BLM_CT_2018_CT014	BLM_CT_2010_DISTRB_03	2285	61.16583334	-149.765768	Campbell Airstrip Trailhead and parking lot
BLM_CT_2018_CT015	BLM_CT_2011_UNNAMD_07	825	61.16569706	-149.7674162	Campbell Airstrip Trailhead and parking lot: to bridge and 150 m down right side trail
BLM_CT_2018_CT016a	BLM_CT_2006_MLC047.3	1530	61.16400862	-149.7685258	Birch Knob Trail: west of bridge going southwest
BLM_CT_2018_CT016b		1530	61.16233439	-149.7667881	Birch Knob Trail: west of bridge going southwest
BLM_CT_2018_CT016c	BLM_CT_2006_MLC094.5	1530	61.16089515	-149.7665547	Viewpoint Trail
BLM_CT_2018_CT017a	BLM_CT_2006_MLC093	1025	61.16384071	-149.7669195	Rovers Run Trail
BLM_CT_2018_CT017b		1025	61.16235843	-149.7646851	Rovers Run Trail
BLM_CT_2018_CT017c		1025	61.161159	-149.761482	Rovers Run Trail
BLM_CT_2018_CT018a	BLM_CT_2010_P38TR_13	840	61.16482569	-149.7756841	Old Rondy Trail: from Moose Track Trail to bridge
BLM_CT_2018_CT018b	BLM_CT_2010_P38TR_11	840	61.16418891	-149.7729463	Old Rondy Trail: from Moose Track Trail to bridge
BLM_CT_2018_CT019a	BLM_CT_2006_MLC051.1	785	61.16522501	-149.7782026	Campbell Creek Science Center: parking lot
BLM_CT_2018_CT019b	BLM_CT_2006_MLC054.2	785	61.16427153	-149.7776066	Campbell Creek Science Center

Site Code	*Original Site Code	Area surveyed (m^2)	Latitude	Longitude	Location Notes
BLM_CT_2018_CT019c	BLM_CT_2006_MLC057.1	785	61.16375179	-149.7779062	Campbell Creek Science Center
BLM_CT_2018_CT019d		785	61.16322095	-149.7765152	Campbell Creek Science Center
BLM_CT_2018_CT019e		785	61.163597	-149.7765888	Campbell Creek Science Center
BLM_CT_2018_CT019f	BLM_CT_2006_MLC054	785	61.16441316	-149.7765038	Campbell Creek Science Center
BLM_CT_2018_CT020a		1300	61.15762523	-149.8006191	Lynx trail
BLM_CT_2018_CT020b		1300	61.15600168	-149.8004529	Lynx trail
BLM_CT_2018_CT020c		1300	61.15462307	-149.7997895	Lynx trail
BLM_CT_2018_CT020d	BLM_CT_2006_MLC091.1	1300	61.15388268	-149.7963633	Lynx trail
BLM_CT_2018_CT020e		1300	61.15421237	-149.7926241	Lynx trail
BLM_CT_2018_CT021a	BLM_CT_2006_MLC071	1345	61.1583442	-149.7928318	Coyote Trail: from runway to Science Ctr Rd.
BLM_CT_2018_CT021b	BLM_CT_2011_COYOTE_07	1345	61.15630198	-149.7903567	Coyote Trail: from runway to Science Ctr Rd.
BLM_CT_2018_CT022a		1050	61.15899939	-149.7982333	CCSC Rd- west side of road from BLM Rd. to Coyote Trail
BLM_CT_2018_CT022b	BLM_CT_2006_MLC067	1050	61.15939706	-149.7948945	CCSC Rd- west side of road from BLM Rd. to Coyote Trail
BLM_CT_2018_CT023a		1065	61.15890494	-149.7980738	CCSC Rd: east side of road, just past gate to trail that leads to weather station
BLM_CT_2018_CT023b	BLM_CT_2010_CCSCRD_02	1065	61.15929175	-149.7948279	CCSC Rd: east side of road, just past gate to trail that leads to weather station
BLM_CT_2018_CT024	BLM_CT_2010_DISTRB_04	750	61.16237133	-149.7821472	Open grassy area on east side of CCSC Road
BLM_CT_2018_CT025a		1425	61.16676655	-149.7841134	Old Rondy Trail: from Salmon Run, going west
BLM_CT_2018_CT025b		1425	61.1663336	-149.7793889	Old Rondy Trail: from Salmon Run, going west
BLM_CT_2018_CT026a		880	61.16546521	-149.7756542	Old Rondy Trail: from intersection at the CCSC parking lot
BLM_CT_2018_CT026b	BLM_CT_2010_OLDRONDY_05	880	61.1647032	-149.7726989	Old Rondy Trail
BLM_CT_2018_CT026c	BLM_CT_2011_OLDRONDY_06	927	61.16510597	-149.7695083	Old Rondy Trail: east end
BLM_CT_2018_CT027a		1052	61.16014658	-149.7917029	CCSC Rd: north west side
BLM_CT_2018_CT027b		1052	61.16145013	-149.7889723	CCSC Rd: north west side
BLM_CT_2018_CT027c		1052	61.16215483	-149.7853644	CCSC Rd: north west side
BLM_CT_2018_CT027d	BLM_CT_2010_MOOSETRK_06	1052	61.16296165	-149.7821789	CCSC Rd: north west side
BLM_CT_2018_CT027e		1052	61.16424369	-149.779521	CCSC Rd: north west side
BLM_CT_2018_CT028a		1035	61.16007641	-149.7915392	CCSC Rd: south east side

Site Code	*Original Site Code	Area surveyed (m^2)	Latitude	Longitude	Location Notes
BLM_CT_2018_CT028b		1035	61.16138661	-149.7888324	CCSC Rd: south east side
BLM_CT_2018_CT028c		1035	61.16204505	-149.7853984	CCSC Rd: south east side
BLM_CT_2018_CT028d	BLM_CT_2010_DISTRB_04	1035	61.16279433	-149.7821331	CCSC Rd: south east side
BLM_CT_2018_CT028e		1035	61.16411948	-149.7794361	CCSC Rd: south east side
BLM_CT_2018_CT029	BLM_CT_2006_MLC114	1352	61.16165341	-149.7847986	Homecoming Trail
BLM_CT_2018_CT030a		1275	61.15911276	-149.7987901	Moose Track Trail
BLM_CT_2018_CT030b	BLM_CT_2006_MLC067	1275	61.15954069	-149.7943654	Moose Track Trail
BLM_CT_2018_CT030c		1275	61.16082749	-149.7914646	Moose Track Trail
BLM_CT_2018_CT031a	BLM_CT_2006_MLC112	1305	61.16306469	-149.7691508	P-38 Lightning trail
BLM_CT_2018_CT031b		1323	61.16127248	-149.7701443	P-38 Lightning trail
BLM_CT_2018_CT031c	BLM_CT_2010_P38TR_07	1323	61.15952522	-149.7717719	P-38 Lightning trail
BLM_CT_2018_CT032		798	61.16431479	-149.7714195	Connecting trail from Old Rondy to CCSC Spur
BLM_CT_2018_CT033	BLM_CT_2010_P38TR_12	223	61.16452344	-149.7730878	Connecting trail from Old Rondy to CCSC Spur
BLM_CT_2018_CT034a	BLM_CT_2011_CAMCRK_SF_01	900	61.16583264	-149.7757814	Salmon Run Trail
BLM_CT_2018_CT034b		900	61.16579651	-149.7728313	Salmon Run Trail
BLM_CT_2018_CT034c	BLM_CT_2006_T09_A	900	61.16548396	-149.7703613	Salmon Run Trail

*Original site code from previous non-native occurrences recorded in APEPIC for sites that were considered revisits

Appendix B. All non-native plant species occurrences from 2018 Campbell Tract Survey

Scientific	Common Name	Site Code	Infested Area (m^2)	Percent Cover	Stem Count	Latitude	Longitude
Alopecurus pratensis L.	meadow foxtail	BLM_CT_2018_CT021a	250.0	5	51-150	61.1583442	-149.7928318
Alopecurus pratensis L.	meadow foxtail	BLM_CT_2018_CT021b	250.0	5	51-150	61.15630198	-149.7903567
Cerastium glomeratum Thuill.	sticky chickweed	BLM_CT_2018_CCR006	15.0	1	26-50	61.16647984	-149.7747088
Cerastium glomeratum Thuill.	sticky chickweed	BLM_CT_2018_CCR012	5.0	2	1-5	61.1656303	-149.7705298
Cerastium glomeratum Thuill.	sticky chickweed	BLM_CT_2018_CCR020	2.0	5	1-5	61.16384218	-149.7646041
Cerastium glomeratum Thuill.	sticky chickweed	BLM_CT_2018_CT010b	9.0	10	6-25	61.15652538	-149.7916725
Cerastium glomeratum Thuill.	sticky chickweed	BLM_CT_2018_CT013	25.0	3	51-150	61.16098087	-149.7912517
Cerastium glomeratum Thuill.	sticky chickweed	BLM_CT_2018_CT014	30.0	4	151-500	61.16564945	-149.7661931
Cerastium glomeratum Thuill.	sticky chickweed	BLM_CT_2018_CT018b	10.0	2	6-25	61.164194	-149.772999
Chenopodium album L.	lambsquarters	BLM_CT_2018_CT001	15.0	0.1	6-25	61.15855986	-149.8031445
Chenopodium album L.	lambsquarters	BLM_CT_2018_CT003	4.0	25	500+	61.15843764	-149.8015904
Chenopodium album L.	lambsquarters	BLM_CT_2018_CT004a	2.0	10	26-50	61.15830064	-149.7997533
Chenopodium album L.	lambsquarters	BLM_CT_2018_CT005	35.0	8	151-500	61.15858055	-149.8019144
Chenopodium album L.	lambsquarters	BLM_CT_2018_CT006	10.0	1	6-25	61.15856158	-149.8006873
Chenopodium album L.	lambsquarters	BLM_CT_2018_CT007a	1.0	5	500+	61.15850191	-149.7997234
Chenopodium album L.	lambsquarters	BLM_CT_2018_CT010a	2.0	5	51-150	61.15673625	-149.7942213
Chenopodium album L.	lambsquarters	BLM_CT_2018_CT014	60.0	5	151-500	61.16568329	-149.7661037
Chenopodium album L.	lambsquarters	BLM_CT_2018_CT020a	10.0	10	26-50	61.157625	-149.800619
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CCR005	0.1	20	1-5	61.16612643	-149.7749355
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT003	1.0	1	1-5	61.15855904	-149.8004294
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT003	4.0	1	6-25	61.15838554	-149.7999156
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT004a	263.0	1	6-25	61.15827518	-149.7994503
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT004b	263.0	1	6-25	61.156991	-149.796869
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT007a	100.0	0.5	6-25	61.15787338	-149.7982765
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT007b	100.0	0.5	6-25	61.15694715	-149.7964079
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT008a	405.0	0.25	51-150	61.15613838	-149.796644
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT008b	405.0	0.25	51-150	61.155159	-149.796419
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT009a	1500.0	10	150-500	61.15467459	-149.793143
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT009b	800.0	10	150-500	61.15476675	-149.79081
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT010a	500.0	0.5	51-150	61.15638872	-149.7943489
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT010c	200.0	0.5	26-50	61.15557794	-149.7914163
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT011a	400.0	3	51-150	61.154537	-149.789979

Scientific	Common Name	Site Code	Infested Area (m^2)	Percent Cover	Stem Count	Latitude	Longitude
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT011b	400.0	3	51-150	61.155896	-149.787268
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT011c	400.0	3	51-150	61.157196	-149.784553
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT011d	400.0	3	51-150	61.158486	-149.781943
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT011e	400.0	3	51-150	61.159671	-149.779531
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT011f	400.0	3	51-150	61.160804	-149.777157
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT011g	400.0	3	51-150	61.161949	-149.774743
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT011h	400.0	3	51-150	61.163139	-149.772472
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT012a	400.0	3	51-150	61.154356	-149.789509
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT012b	800.0	3	51-150	61.155712	-149.786818
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT012c	800.0	3	51-150	61.157033	-149.784085
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT012d	800.0	3	51-150	61.158286	-149.781465
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT012e	400.0	3	51-150	61.159463	-149.77901
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT012f	400.0	3	51-150	61.160586	-149.776652
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT012g	400.0	3	51-150	61.161763	-149.774212
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT012h	400.0	3	51-150	61.162912	-149.771916
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT013	45.0	5	51-150	61.16083285	-149.7909679
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT024	50.0	5	26-50	61.162505	-149.782366
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT028b	10.0	3	6-25	61.161604	-149.788505
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT028c	10.0	3	6-25	61.162125	-149.784204
Crepis tectorum L.	narrowleaf hawksbeard	BLM_CT_2018_CT031b	1.0	10	6-25	61.16245919	-149.7702713
Elymus repens (L.) Gould	quackgrass	BLM_CT_2018_CT002	2.0	10	6-25	61.15855239	-149.8021825
Elymus repens (L.) Gould	quackgrass	BLM_CT_2018_CT003	0.5	100	51-150	61.15841604	-149.7999945
Elymus repens (L.) Gould	quackgrass	BLM_CT_2018_CT004b	7.5	10	6-25	61.156991	-149.796869
Elymus repens (L.) Gould	quackgrass	BLM_CT_2018_CT031b	6.0	20	26-50	61.16245919	-149.7702713
Hordeum jubatum L.	foxtail barley	BLM_CT_2018_CT005	97.0	15	6-25	61.15866596	-149.8019743
Lamium album L.	white deadnettle	BLM_CT_2018_CT014	30.0	30	500+	61.165444	-149.7658406
Lamium album L.	white deadnettle	BLM_CT_2018_CT015	150.0	4	151-500	61.16553081	-149.7667506
Leucothemum vulgare Lam.	oxeye daisy	BLM_CT_2018_CT024	1.0	25	1-6	61.162505	-149.782366
Linaria vulgaris P. Mill.	butter and eggs	BLM_CT_2018_CT001	1.0	3	26-50	61.15855611	-149.8032143
Linaria vulgaris P. Mill.	butter and eggs	BLM_CT_2018_CT003	65.0	3	51-150	61.15854192	-149.8003357
Linaria vulgaris P. Mill.	butter and eggs	BLM_CT_2018_CT004b	0.2	20	6-25	61.15660143	-149.7960405
Linaria vulgaris P. Mill.	butter and eggs	BLM_CT_2018_CT007a	0.1	25	1-5	61.15838523	-149.7994756
Linaria vulgaris P. Mill.	butter and eggs	BLM_CT_2018_CT008a	2.0	14	51-150	61.15623808	-149.7964227

Scientific	Common Name	Site Code	Infested Area (m^2)	Percent Cover	Stem Count	Latitude	Longitude
Linaria vulgaris P. Mill.	butter and eggs	BLM_CT_2018_CT010a	500.0	2	151-500	61.15633817	-149.7944029
Linaria vulgaris P. Mill.	butter and eggs	BLM_CT_2018_CT013	150.0	1	26-50	61.16090026	-149.7906725
Linaria vulgaris P. Mill.	butter and eggs	BLM_CT_2018_CT014	30.0	3	26-50	61.16597706	-149.7662558
Linaria vulgaris P. Mill.	butter and eggs	BLM_CT_2018_CT028b	1.0	2	6-25	61.161954	-149.7876
Lolium perenne L.	perennial ryegrass	BLM_CT_2018_CT024	20.0	5	26-50	61.162505	-149.782366
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT001	35.0	0	500+	61.15851518	-149.8035177
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT002	100.0	25	151-500	61.15852459	-149.8028053
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT003	9.0	10	151-500	61.15843789	-149.8013337
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT003	15.0	2	51-150	61.15838314	-149.7998556
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT003	5.0	5	51-150	61.15840441	-149.8033573
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT004a	0.2	10	26-50	61.15830224	-149.7996313
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT004b	2.0	3	26-50	61.15650397	-149.7958813
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT005	70.0	40	500+	61.15865038	-149.8018624
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT006	70.0	5	500+	61.15863926	-149.8007567
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT007b	300.0	0.05	6-25	61.15646816	-149.7954207
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT009a	1500.0	8	500+	61.154675	-149.793143
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT009b	200.0	1	26-50	61.154903	-149.791456
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT010a	300.0	4	500+	61.15666796	-149.7940737
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT010c	100.0	1	151-500	61.15557794	-149.7914163
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT014	400.0	15	500+	61.16580802	-149.7658184
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT015	400.0	9	500+	61.16542108	-149.7665326
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT018a	150.0	2	51-150	61.164826	-149.775684
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT018b	150.0	2	51-150	61.164189	-149.772946
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT022a	450.0	2	26-50	61.15899939	-149.7982333
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT022b	450.0	2	26-50	61.15939706	-149.7948945
Matricaria discoidea DC.	pineappleweed	BLM_CT_2018_CT030a	5.0	10	6-25	61.158956	-149.799615
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT011a	1300.0	9	151-500	61.154537	-149.789979
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT011b	1300.0	9	151-500	61.155896	-149.787268
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT011c	1300.0	9	151-500	61.157196	-149.784553
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT011d	1300.0	9	151-500	61.158486	-149.781943
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT011e	1300.0	9	151-500	61.159671	-149.779531
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT011f	1300.0	9	151-500	61.160804	-149.777157
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT011g	1300.0	9	151-500	61.161949	-149.774743

Scientific	Common Name	Site Code	Infested Area (m^2)	Percent Cover	Stem Count	Latitude	Longitude
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT011h	1300.0	9	151-500	61.163139	-149.772472
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT012a	6000.0	15	500+	61.154356	-149.789509
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT012b	6000.0	15	500+	61.155712	-149.786818
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT012c	6000.0	15	500+	61.157033	-149.784085
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT012d	6000.0	15	500+	61.158286	-149.781465
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT012e	3000.0	15	500+	61.159463	-149.77901
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT012f	3000.0	15	500+	61.160586	-149.776652
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT012g	3000.0	15	500+	61.161763	-149.774212
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT012h	3000.0	15	500+	61.162912	-149.771916
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT019b	0.2	40	1-5	61.16417	-149.777703
Melilotus albus Medik.	white sweetclover	BLM_CT_2018_CT027b	20.0	1	1-5	61.161954	-149.78779
Phleum pratense L.	timothy grass	BLM_CT_2018_CT003	0.5	8	1-5	61.16670103	-149.7799307
Phleum pratense L.	timothy grass	BLM_CT_2018_CT020a	1.0	8	1-5	61.157493	-149.800537
Phleum pratense L.	timothy grass	BLM_CT_2018_CT020d	1.0	8	1-5	61.154147	-149.7976
Phleum pratense L.	timothy grass	BLM_CT_2018_CT025a	4.0	8	6-25	61.166916	-149.784122
Phleum pratense L.	timothy grass	BLM_CT_2018_CT029	1.0	10	1-5	61.161551	-149.786861
Phleum pratense L.	timothy grass	BLM_CT_2018_CT030a	1.0	8	1-5	61.158956	-149.799615
Plantago major L.	common plantain	BLM_CT_2018_CCR008	17.0	6	51-150	61.16603835	-149.7733724
Plantago major L.	common plantain	BLM_CT_2018_CCR011	10.0	10	26-50	61.16565067	-149.7710645
Plantago major L.	common plantain	BLM_CT_2018_CCR013	1.0	5	1-5	61.16559722	-149.7701417
Plantago major L.	common plantain	BLM_CT_2018_CCR014	25.0	1	1-5	61.16541233	-149.768612
Plantago major L.	common plantain	BLM_CT_2018_CCR018	200.0	8	500+	61.16435699	-149.7658296
Plantago major L.	common plantain	BLM_CT_2018_CCR019	8.0	1	6-25	61.16409547	-149.7651847
Plantago major L.	common plantain	BLM_CT_2018_CCR020	50.0	5	151-500	61.1637175	-149.7645014
Plantago major L.	common plantain	BLM_CT_2018_CT001	17.2	5	51-150	61.15851938	-149.8037111
Plantago major L.	common plantain	BLM_CT_2018_CT002	50.0	10	51-150	61.15854284	-149.8024792
Plantago major L.	common plantain	BLM_CT_2018_CT003	30.0	2	6-25	61.15844222	-149.800489
Plantago major L.	common plantain	BLM_CT_2018_CT003	6.0	15	51-150	61.15843185	-149.8000462
Plantago major L.	common plantain	BLM_CT_2018_CT004a	6.0	5	26-50	61.15837545	-149.7993982
Plantago major L.	common plantain	BLM_CT_2018_CT004b	35.0	2	26-50	61.15655871	-149.7960053
Plantago major L.	common plantain	BLM_CT_2018_CT004b	42.0	2	51-150	61.15661891	-149.7961068
Plantago major L.	common plantain	BLM_CT_2018_CT005	42.0	2	26-50	61.15866596	-149.8019743
Plantago major L.	common plantain	BLM_CT_2018_CT006	60.0	1	51-150	61.15860483	-149.800806

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Plantago major L.	common plantain	BLM_CT_2018_CT007a	60.0	1	6-25	61.15788475	-149.7984305
Plantago major L.	common plantain	BLM_CT_2018_CT007b	150.0	2	26-50	61.15653342	-149.7954299
Plantago major L.	common plantain	BLM_CT_2018_CT008a	300.0	1	51-150	61.15613838	-149.796644
Plantago major L.	common plantain	BLM_CT_2018_CT008b	300.0	1	51-150	61.155154	-149.796351
Plantago major L.	common plantain	BLM_CT_2018_CT009a	250.0	5	151-500	61.154675	-149.793143
Plantago major L.	common plantain	BLM_CT_2018_CT009b	250.0	5	151-500	61.154903	-149.791456
Plantago major L.	common plantain	BLM_CT_2018_CT010a	200.0	2	51-150	61.15636101	-149.7944508
Plantago major L.	common plantain	BLM_CT_2018_CT010b	200.0	2	51-150	61.15678096	-149.7918502
Plantago major L.	common plantain	BLM_CT_2018_CT010c	200.0	2	51-150	61.15557794	-149.7914163
Plantago major L.	common plantain	BLM_CT_2018_CT011a	400.0	2	51-150	61.154537	-149.789979
Plantago major L.	common plantain	BLM_CT_2018_CT011b	400.0	2	51-150	61.155896	-149.787268
Plantago major L.	common plantain	BLM_CT_2018_CT011c	400.0	2	51-150	61.157196	-149.784553
Plantago major L.	common plantain	BLM_CT_2018_CT011d	400.0	2	51-150	61.158486	-149.781943
Plantago major L.	common plantain	BLM_CT_2018_CT011e	400.0	2	51-150	61.159671	-149.779531
Plantago major L.	common plantain	BLM_CT_2018_CT011f	400.0	2	51-150	61.160804	-149.777157
Plantago major L.	common plantain	BLM_CT_2018_CT011g	400.0	2	51-150	61.161949	-149.774743
Plantago major L.	common plantain	BLM_CT_2018_CT011h	400.0	2	51-150	61.163139	-149.772472
Plantago major L.	common plantain	BLM_CT_2018_CT012a	400.0	3	51-150	61.154356	-149.789509
Plantago major L.	common plantain	BLM_CT_2018_CT012b	800.0	3	51-150	61.155712	-149.786818
Plantago major L.	common plantain	BLM_CT_2018_CT012c	800.0	3	51-150	61.157033	-149.784085
Plantago major L.	common plantain	BLM_CT_2018_CT012d	800.0	3	51-150	61.158286	-149.781465
Plantago major L.	common plantain	BLM_CT_2018_CT012e	400.0	3	51-150	61.159463	-149.77901
Plantago major L.	common plantain	BLM_CT_2018_CT012f	400.0	3	51-150	61.160586	-149.776652
Plantago major L.	common plantain	BLM_CT_2018_CT012g	400.0	3	51-150	61.161763	-149.774212
Plantago major L.	common plantain	BLM_CT_2018_CT012h	400.0	3	51-150	61.162912	-149.771916
Plantago major L.	common plantain	BLM_CT_2018_CT013	450.0	0.5	6-25	61.16088999	-149.790995
Plantago major L.	common plantain	BLM_CT_2018_CT014	450.0	10	500+	61.16559936	-149.7664836
Plantago major L.	common plantain	BLM_CT_2018_CT015	200.0	2	500+	61.16539847	-149.7665882
Plantago major L.	common plantain	BLM_CT_2018_CT016a	360.0	5	51-150	61.164009	-149.768526
Plantago major L.	common plantain	BLM_CT_2018_CT016b	360.0	5	51-150	61.162334	-149.766788
Plantago major L.	common plantain	BLM_CT_2018_CT016c	360.0	5	51-150	61.16016498	-149.7672212
Plantago major L.	common plantain	BLM_CT_2018_CT017a	200.0	5	151-500	61.16368726	-149.7665951
Plantago major L.	common plantain	BLM_CT_2018_CT017b	200.0	5	151-500	61.16235843	-149.7646851

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Plantago major L.	common plantain	BLM_CT_2018_CT017c	200.0	5	151-500	61.161159	-149.761482
Plantago major L.	common plantain	BLM_CT_2018_CT018a	170.0	2	26-50	61.164826	-149.775684
Plantago major L.	common plantain	BLM_CT_2018_CT018b	170.0	2	26-50	61.164189	-149.772946
Plantago major L.	common plantain	BLM_CT_2018_CT019a	300.0	5	26-150	61.16522501	-149.7782026
Plantago major L.	common plantain	BLM_CT_2018_CT019b	300.0	5	26-150	61.16427153	-149.7776066
Plantago major L.	common plantain	BLM_CT_2018_CT019c	300.0	5	26-150	61.16375179	-149.7779062
Plantago major L.	common plantain	BLM_CT_2018_CT019d	300.0	5	26-150	61.16322095	-149.7765152
Plantago major L.	common plantain	BLM_CT_2018_CT019e	300.0	5	26-150	61.163597	-149.7765888
Plantago major L.	common plantain	BLM_CT_2018_CT019f	300.0	5	26-150	61.16441316	-149.7765038
Plantago major L.	common plantain	BLM_CT_2018_CT020a	260.0	1	6-25	61.157619	-149.800689
Plantago major L.	common plantain	BLM_CT_2018_CT020b	260.0	1	6-25	61.156002	-149.800453
Plantago major L.	common plantain	BLM_CT_2018_CT020c	260.0	1	6-25	61.154623	-149.79979
Plantago major L.	common plantain	BLM_CT_2018_CT020d	260.0	1	6-25	61.153883	-149.796363
Plantago major L.	common plantain	BLM_CT_2018_CT020e	260.0	1	6-25	61.154212	-149.792624
Plantago major L.	common plantain	BLM_CT_2018_CT022a	450.0	2	26-50	61.15899939	-149.7982333
Plantago major L.	common plantain	BLM_CT_2018_CT022b	450.0	3	26-50	61.15939706	-149.7948945
Plantago major L.	common plantain	BLM_CT_2018_CT023a	450.0	2	26-50	61.15890494	-149.7980738
Plantago major L.	common plantain	BLM_CT_2018_CT023b	450.0	2	26-50	61.15929175	-149.7948279
Plantago major L.	common plantain	BLM_CT_2018_CT024	500.0	2	51-150	61.162505	-149.782366
Plantago major L.	common plantain	BLM_CT_2018_CT025a	285.0	3	51-150	61.166767	-149.784113
Plantago major L.	common plantain	BLM_CT_2018_CT025b	285.0	3	51-150	61.166334	-149.779389
Plantago major L.	common plantain	BLM_CT_2018_CT026a	175.0	2	6-25	61.165465	-149.775654
Plantago major L.	common plantain	BLM_CT_2018_CT026b	175.0	2	6-25	61.164703	-149.772699
Plantago major L.	common plantain	BLM_CT_2018_CT026c	185.0	2	26-50	61.165106	-149.769508
Plantago major L.	common plantain	BLM_CT_2018_CT027a	250.0	1	26-50	61.16014658	-149.7917029
Plantago major L.	common plantain	BLM_CT_2018_CT027b	250.0	1	26-50	61.16145013	-149.7889723
Plantago major L.	common plantain	BLM_CT_2018_CT027c	250.0	1	26-50	61.16216086	-149.785329
Plantago major L.	common plantain	BLM_CT_2018_CT027d	250.0	1	26-50	61.16296165	-149.7821789
Plantago major L.	common plantain	BLM_CT_2018_CT027e	250.0	1	26-50	61.16424369	-149.779521
Plantago major L.	common plantain	BLM_CT_2018_CT028a	250.0	1	26-50	61.16007641	-149.7915392
Plantago major L.	common plantain	BLM_CT_2018_CT028b	250.0	1	26-50	61.16138661	-149.7888324
Plantago major L.	common plantain	BLM_CT_2018_CT028c	250.0	1	26-50	61.16204505	-149.7853984
Plantago major L.	common plantain	BLM_CT_2018_CT028d	250.0	1	26-50	61.16279433	-149.7821331

Scientific	Common Name	Site Code	Infested Area (m^2)	Percent Cover	Stem Count	Latitude	Longitude
Plantago major L.	common plantain	BLM_CT_2018_CT028e	250.0	1	26-50	61.16411948	-149.7794361
Plantago major L.	common plantain	BLM_CT_2018_CT030a	255.0	2	51-150	61.159113	-149.79879
Plantago major L.	common plantain	BLM_CT_2018_CT030b	132.0	2	51-150	61.159541	-149.794365
Plantago major L.	common plantain	BLM_CT_2018_CT033	45.0	2	6-25	61.164523	-149.773088
Plantago major L.	common plantain	BLM_CT_2018_CT034a	180.0	2	50-150	61.165833	-149.775781
Plantago major L.	common plantain	BLM_CT_2018_CT034b	180.0	2	50-150	61.165797	-149.772831
Plantago major L.	common plantain	BLM_CT_2018_CT034c	180.0	2	50-150	61.165484	-149.770361
Poa annua L.	annual bluegrass	BLM_CT_2018_CT001	100.0	75	500+	61.15856307	-149.8034429
Poa annua L.	annual bluegrass	BLM_CT_2018_CT002	100.0	15	26-50	61.1585528	-149.8023851
Poa annua L.	annual bluegrass	BLM_CT_2018_CT004a	200.0	15	151-500	61.15840121	-149.7998251
Poa annua L.	annual bluegrass	BLM_CT_2018_CT004b	200.0	15	151-500	61.15652544	-149.7958819
Poa annua L.	annual bluegrass	BLM_CT_2018_CT005	20.0	10	26-50	61.15871164	-149.8018575
Poa annua L.	annual bluegrass	BLM_CT_2018_CT006	20.0	10	26-50	61.158591	-149.800493
Poa annua L.	annual bluegrass	BLM_CT_2018_CT008a	675.0	30	150-500	61.15613838	-149.796644
Poa annua L.	annual bluegrass	BLM_CT_2018_CT008b	675.0	30	150-500	61.155154	-149.796351
Poa annua L.	annual bluegrass	BLM_CT_2018_CT009a	250.0	3	51-150	61.154675	-149.793143
Poa annua L.	annual bluegrass	BLM_CT_2018_CT009b	250.0	3	51-150	61.154903	-149.791456
Poa annua L.	annual bluegrass	BLM_CT_2018_CT018a	150.0	2	51-150	61.164826	-149.775684
Poa annua L.	annual bluegrass	BLM_CT_2018_CT018b	150.0	2	51-150	61.164189	-149.772946
Poa annua L.	annual bluegrass	BLM_CT_2018_CT020c	10.0	8	26-50	61.15650005	-149.79964
Poa annua L.	annual bluegrass	BLM_CT_2018_CT025a	200.0	2	51-150	61.166916	-149.784122
Poa annua L.	annual bluegrass	BLM_CT_2018_CT025b	200.0	3	51-150	61.166334	-149.779389
Poa annua L.	annual bluegrass	BLM_CT_2018_CT027a	250.0	2	50-150	61.16014658	-149.7917029
Poa annua L.	annual bluegrass	BLM_CT_2018_CT027b	250.0	2	50-150	61.16145013	-149.7889723
Poa annua L.	annual bluegrass	BLM_CT_2018_CT027c	250.0	2	50-150	61.16216086	-149.785329
Poa annua L.	annual bluegrass	BLM_CT_2018_CT027d	250.0	2	50-150	61.16296165	-149.7821789
Poa annua L.	annual bluegrass	BLM_CT_2018_CT027e	250.0	2	50-150	61.16424369	-149.779521
Poa annua L.	annual bluegrass	BLM_CT_2018_CT028a	250.0	2	50-150	61.16007641	-149.7915392
Poa annua L.	annual bluegrass	BLM_CT_2018_CT028b	250.0	2	50-150	61.16138661	-149.7888324
Poa annua L.	annual bluegrass	BLM_CT_2018_CT028c	250.0	2	50-150	61.16204505	-149.7853984
Poa annua L.	annual bluegrass	BLM_CT_2018_CT028d	250.0	2	50-150	61.16279433	-149.7821331
Poa annua L.	annual bluegrass	BLM_CT_2018_CT028e	250.0	2	50-150	61.16411948	-149.7794361
Poa annua L.	annual bluegrass	BLM_CT_2018_CT030a	255.0	3	51-150	61.159113	-149.79879

Scientific	Common Name	Site Code	Infested Area (m^2)	Percent Cover	Stem Count	Latitude	Longitude
Poa annua L.	annual bluegrass	BLM_CT_2018_CT030b	132.0	3	51-150	61.159541	-149.794365
Poa pratensis L. ssp. *irrigata* (Lindm.) H. Lindb. or *Poa pratensis* L. ssp. *pratensis*	spreading bluegrass or Kentucky bluegrass	BLM_CT_2018_CT005	20.0	5	1-5	61.15866716	-149.8017629
Poa pratensis L. ssp. *irrigata* (Lindm.) H. Lindb. or *Poa pratensis* L. ssp. *pratensis*	spreading bluegrass or Kentucky bluegrass	BLM_CT_2018_CT006	80.0	1	26-50	61.15870836	-149.8013095
Poa pratensis L. ssp. *irrigata* (Lindm.) H. Lindb. or *Poa pratensis* L. ssp. *pratensis*	spreading bluegrass or Kentucky bluegrass	BLM_CT_2018_CT018b	16.0	35	51-150	61.164189	-149.77295
Poa pratensis L. ssp. *irrigata* (Lindm.) H. Lindb. or *Poa pratensis* L. ssp. *pratensis*	spreading bluegrass or Kentucky bluegrass	BLM_CT_2018_CT021a	250.0	5	51-150	61.1583442	-149.7928318
Poa pratensis L. ssp. *irrigata* (Lindm.) H. Lindb. or *Poa pratensis* L. ssp. *pratensis*	spreading bluegrass or Kentucky bluegrass	BLM_CT_2018_CT021b	250.0	5	51-150	61.15630198	-149.7903567
Poa pratensis L. ssp. *irrigata* (Lindm.) H. Lindb. or *Poa pratensis* L. ssp. *pratensis*	spreading bluegrass or Kentucky bluegrass	BLM_CT_2018_CT024	10.0	2	1-5	61.162505	-149.782366
Poa pratensis L. ssp. *irrigata* (Lindm.) H. Lindb. or *Poa pratensis* L. ssp. *pratensis*	spreading bluegrass or Kentucky bluegrass	BLM_CT_2018_CT026a	175.0	10	51-150	61.165438	-149.775536
Poa pratensis L. ssp. *irrigata* (Lindm.) H. Lindb. or *Poa pratensis* L. ssp. *pratensis*	spreading bluegrass or Kentucky bluegrass	BLM_CT_2018_CT030a	255.0	1	51-150	61.159113	-149.79879
Poa pratensis L. ssp. *irrigata* (Lindm.) H. Lindb. or *Poa pratensis* L. ssp. *pratensis*	spreading bluegrass or Kentucky bluegrass	BLM_CT_2018_CT030b	132.0	1	51-150	61.159541	-149.794365
Poa pratensis L. ssp. *irrigata* (Lindm.) H. Lindb. or *Poa pratensis* L. ssp. *pratensis*	spreading bluegrass or Kentucky bluegrass	BLM_CT_2018_CT031b	355.0	3	26-50	61.16097895	-149.7699781
Poa pratensis L. ssp. *irrigata* (Lindm.) H. Lindb. or *Poa pratensis* L. ssp. *pratensis*	spreading bluegrass or Kentucky bluegrass	BLM_CT_2018_CT031c	355.0	3	26-50	61.16097895	-149.7699781

Scientific	Common Name	Site Code	Infested Area (m^2)	Percent Cover	Stem Count	Latitude	Longitude
Polygonum aviculare L.	prostrate knotweed	BLM_CT_2018_CT001	0.1	50	1-5	61.15855491	-149.8030157
Polygonum aviculare L.	prostrate knotweed	BLM_CT_2018_CT003	4.0	1	26-50	61.15842662	-149.8035225
Polygonum aviculare L.	prostrate knotweed	BLM_CT_2018_CT003	2.0	20	151-500	61.15846615	-149.8014525
Polygonum aviculare L.	prostrate knotweed	BLM_CT_2018_CT005	48.0	27	500+	61.15866716	-149.8017629
Polygonum aviculare L.	prostrate knotweed	BLM_CT_2018_CT006	125.0	10	500+	61.15872346	-149.8012113
Polygonum aviculare L.	prostrate knotweed	BLM_CT_2018_CT014	45.0	15	26-50	61.16568329	-149.7661037
Polygonum aviculare L.	prostrate knotweed	BLM_CT_2018_CT015	400.0	8	500+	61.16537456	-149.7669103
Polygonum aviculare L.	prostrate knotweed	BLM_CT_2018_CT020a	10.0	10	26-50	61.157625	-149.800619
Polygonum aviculare L.	prostrate knotweed	BLM_CT_2018_CT026c	25.0	5	26-50	61.164383	-149.771336
Prunus padus L.	European bird cherry	BLM_CT_2018_CCR003	0.5	30	1-5	61.16670075	-149.7798991
Prunus padus L.	European bird cherry	BLM_CT_2018_CCR007	0.5	25	1-5	61.16613393	-149.7742467
Prunus padus L.	European bird cherry	BLM_CT_2018_CCR017	0.2	10	1-5	61.16485593	-149.7674054
Prunus padus L.	European bird cherry	BLM_CT_2018_CT020b	35.0	15	6-25	61.15700848	-149.7999325
Prunus padus L.	European bird cherry	BLM_CT_2018_CT020c	1.0	75	1-5	61.15650005	-149.79964
Rumex acetosella L.	common sheep sorrel	BLM_CT_2018_CT010a	6.0	10	6-25	61.15628833	-149.7949167
Rumex acetosella L.	common sheep sorrel	BLM_CT_2018_CT013	0.5	15	6-25	61.160989	-149.791117
Rumex longifolius DC.	dooryard dock	BLM_CT_2018_CT003	0.1	100	1-5	61.15842599	-149.8022501
Sorbaria sorbifolia (L.) A. Braun	false spirea	BLM_CT_2018_CT005	0.5	60	1-5	61.158709	-149.801706
Sorbaria sorbifolia (L.) A. Braun	false spirea	BLM_CT_2018_CT016a	0.3	25	1-5	61.16212517	-149.7664344
Sorbaria sorbifolia (L.) A. Braun	false spirea	BLM_CT_2018_CT019a	0.3	25	1-5	61.165225	-149.778203
Sorbaria sorbifolia (L.) A. Braun	false spirea	BLM_CT_2018_CT025a	0.25	25	1-5	61.16659993	-149.7828051
Stellaria media (L.) Vill.	common chickweed	BLM_CT_2018_CT014	300.0	5	500+	61.16569444	-149.7656209
Stellaria media (L.) Vill.	common chickweed	BLM_CT_2018_CT015	150.0	4	500+	61.16540045	-149.7667414
Stellaria media (L.) Vill.	common chickweed	BLM_CT_2018_CT017a	10.0	25	500+	61.16401865	-149.7670865
Stellaria media (L.) Vill.	common chickweed	BLM_CT_2018_CT019a	1.0	8	151-500	61.16502277	-149.7780844
Stellaria media (L.) Vill.	common chickweed	BLM_CT_2018_CT020a	10.0	5	26-50	61.157625	-149.800619
Stellaria media (L.) Vill.	common chickweed	BLM_CT_2018_CT022b	200.0	3	26-50	61.15939706	-149.7948945
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR002	45.0	2	6-25	61.16720652	-149.7825645
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR004	60.0	2	6-25	61.16673251	-149.7795088
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR005	2.0	3	1-5	61.16606746	-149.775084
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR006	75.0	12	151-500	61.16638074	-149.774761
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR009	2.0	3	1-5	61.16602586	-149.7725933
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR010	2.0	15	51-150	61.1657153	-149.7725019

Scientific	Common Name	Site Code	Infested Area (m^2)	Percent Cover	Stem Count	Latitude	Longitude
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR011	10.0	5	6-25	61.16562762	-149.7709502
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR012	25.0	0.5	1-5	61.1658583	-149.7700793
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR014	40.0	2	26-50	61.16537663	-149.7683586
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR015a	12.0	10	151-500	61.16538526	-149.767789
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR015b	200.0	40	500+	61.16510975	-149.7676622
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR016	40.0	20	151-500	61.16497121	-149.7674263
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR017	60.0	20	500+	61.16498138	-149.7672939
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR018	200.0	8	500+	61.16438692	-149.7656863
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR019	10.0	1	26-50	61.16408919	-149.7653031
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR020	60.0	0.5	151-500	61.16378321	-149.7646917
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CCR021	10.0	0.5	1-5	61.16263032	-149.7625965
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT001	177.0	5	151-500	61.1584882	-149.8032405
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT002	225.0	30	151-500	61.15870341	-149.8018929
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT003	1500.0	35	500+	61.15845002	-149.8001498
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT004a	875.0	20	151-500	61.157896	-149.798803
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT004b	875.0	20	151-500	61.156991	-149.796869
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT005	97.0	15	51-150	61.15872278	-149.8019265
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT006	250.0	27	500+	61.15865468	-149.8012556
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT007b	978.0	10	151-500	61.1565196	-149.7955641
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT007b	978.0	10	151-500	61.156947	-149.796408
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT008a	676.0	1	51-150	61.15613838	-149.796644
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT008b	676.0	1	51-150	61.155154	-149.796351
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT009a	250.0	18	151-500	61.15449943	-149.7933944
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT009b	250.0	18	151-500	61.154903	-149.791456
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT010a	800.0	3	51-150	61.15635649	-149.7944346
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT010b	800.0	3	51-150	61.15678096	-149.7918502
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT010c	800.0	3	51-150	61.15557794	-149.7914163
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT011a	600.0	5	51-150	61.154537	-149.789979
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT011b	600.0	5	51-150	61.155896	-149.787268
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT011c	600.0	5	51-150	61.157196	-149.784553
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT011d	600.0	5	51-150	61.158486	-149.781943
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT011e	600.0	5	51-150	61.159671	-149.779531
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT011f	600.0	5	51-150	61.160804	-149.777157

Scientific	Common Name	Site Code	Infested Area (m^2)	Percent Cover	Stem Count	Latitude	Longitude
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT011g	600.0	5	51-150	61.161949	-149.774743
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT011h	600.0	5	51-150	61.163139	-149.772472
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT012a	600.0	5	51-150	61.154356	-149.789509
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT012b	1100.0	5	151-500	61.155712	-149.786818
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT012c	1100.0	5	151-500	61.157033	-149.784085
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT012d	1100.0	5	151-500	61.158286	-149.781465
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT012e	600.0	5	51-150	61.159463	-149.77901
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT012f	600.0	5	51-150	61.160586	-149.776652
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT012g	600.0	5	51-150	61.161763	-149.774212
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT012h	600.0	5	51-150	61.162912	-149.771916
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT013	750.0	8	500+	61.16092485	-149.7905433
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT014	700.0	10	500+	61.16551276	-149.7659993
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT015	400.0	2	500+	61.16547122	-149.7665734
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT016a	360.0	1	26-50	61.164009	-149.768526
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT016b	360.0	1	26-50	61.162334	-149.766788
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT016c	360.0	1	26-50	61.1602715	-149.7671411
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT017b	0.5	20	51-150	61.16231861	-149.7640432
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT017c	200.0	1	151-500	61.161791	-149.76326
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT018a	170.0	2	26-50	61.164826	-149.775684
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT018b	170.0	2	26-50	61.164189	-149.772946
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT019a	30.0	5	151-501	61.16522501	-149.7782026
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT019b	30.0	5	26-150	61.16427153	-149.7776066
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT019c	30.0	5	26-150	61.16375179	-149.7779062
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT019d	30.0	5	26-150	61.16322095	-149.7765152
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT019e	30.0	5	26-150	61.163597	-149.7765888
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT019f	30.0	5	26-150	61.16441316	-149.7765038
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT020a	260.0	1	6-25	61.157619	-149.800689
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT020b	260.0	1	6-25	61.156002	-149.800453
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT020c	260.0	1	6-25	61.154623	-149.79979
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT020d	260.0	1	6-25	61.153883	-149.796363
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT020e	260.0	1	6-25	61.154212	-149.792624
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT022a	450.0	3	26-50	61.15899939	-149.7982333
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT022b	450.0	3	26-50	61.15939706	-149.7948945

Scientific	Common Name	Site Code	Infested Area (m^2)	Percent Cover	Stem Count	Latitude	Longitude
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT023a	450.0	2	26-50	61.15890494	-149.7980738
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT023b	450.0	2	26-50	61.15929175	-149.7948279
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT024	500.0	2	51-150	61.162505	-149.782366
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT025a	285.0	3	51-150	61.166767	-149.784113
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT025b	285.0	3	51-150	61.166334	-149.779389
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT026a	175.0	2	6-25	61.165465	-149.775654
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT026b	175.0	2	6-25	61.164703	-149.772699
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT026c	185.0	2	26-50	61.165106	-149.769508
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT027a	250.0	2	26-50	61.16014658	-149.7917029
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT027b	250.0	2	26-50	61.16145013	-149.7889723
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT027c	250.0	2	26-50	61.16216086	-149.785329
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT027d	250.0	2	26-50	61.16296165	-149.7821789
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT027e	250.0	2	26-50	61.16424369	-149.779521
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT028a	250.0	2	26-50	61.16007641	-149.7915392
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT028b	250.0	2	26-50	61.16138661	-149.7888324
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT028c	250.0	2	26-50	61.16204505	-149.7853984
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT028d	250.0	2	26-50	61.16279433	-149.7821331
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT028e	250.0	2	26-50	61.16411948	-149.7794361
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT030a	255.0	1	51-150	61.159113	-149.79879
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT030b	132.0	1	51-150	61.159541	-149.794365
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT031a	20.0	8	26-50	61.162362	-149.770141
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT034b	0.5	10	1-5	61.16571631	-149.7726121
Taraxacum officinale F.H. Wigg.	common dandelion	BLM_CT_2018_CT034c	0.5	10	1-5	61.165227	-149.76964
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CCR017	0.2	7	6-25	61.16498138	-149.7672939
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT001	50.0	35	151-500	61.1586728	-149.8008207
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT002	100.0	10	51-150	61.15857054	-149.8024127
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT003	900.0	10	51-150	61.15842123	-149.7999373
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT004a	875.0	10	151-500	61.157896	-149.798803
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT004b	875.0	10	151-500	61.156991	-149.796869
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT006	10.0	1	6-25	61.15856928	-149.8007745
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT007b	978.0	8	151-500	61.15658057	-149.7957461
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT007b	978.0	8	151-500	61.156947	-149.796408
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT008a	540.0	2	51-150	61.15613838	-149.796644

Scientific	Common Name	Site Code	Infested Area (m^2)	Percent Cover	Stem Count	Latitude	Longitude
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT008b	540.0	2	51-150	61.155154	-149.796351
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT010a	16.0	9	51-150	61.15600589	-149.7949109
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT013	0.5	5	1-5	61.16080159	-149.7906398
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT014	2.0	10	6-25	61.16575928	-149.7659898
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT016a	70.0	1	151-500	61.16455715	-149.768543
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT019b	60.0	10	6-25	61.16406999	-149.7782725
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT023a	450.0	1	26-50	61.15890494	-149.7980738
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT023b	450.0	1	26-50	61.15929175	-149.7948279
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT024	100.0	3	26-50	61.162505	-149.782366
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT026c	185.0	0.5	6-25	61.165106	-149.769508
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT027a	250.0	1	6-25	61.16014658	-149.7917029
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT027b	250.0	1	6-25	61.16145013	-149.7889723
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT027c	250.0	1	6-25	61.16216086	-149.785329
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT027d	250.0	1	6-25	61.16296165	-149.7821789
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT027e	250.0	1	6-25	61.16424369	-149.779521
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT028a	250.0	1	6-25	61.16007641	-149.7915392
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT028b	250.0	1	6-25	61.16138661	-149.7888324
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT028c	250.0	1	6-25	61.16204505	-149.7853984
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT028d	250.0	1	6-25	61.16279433	-149.7821331
Trifolium hybridum L.	alsike clover	BLM_CT_2018_CT028e	250.0	1	6-25	61.16411948	-149.7794361
Trifolium repens L.	white clover	BLM_CT_2018_CT001	50.0	15	151-500	61.1585198	-149.8033724
Trifolium repens L.	white clover	BLM_CT_2018_CT002	100.0	5	151-500	61.15853294	-149.8026101
Trifolium repens L.	white clover	BLM_CT_2018_CT003	1500.0	10	500+	61.15834369	-149.7997768
Trifolium repens L.	white clover	BLM_CT_2018_CT004a	875.0	25	151-500	61.157896	-149.798803
Trifolium repens L.	white clover	BLM_CT_2018_CT004b	875.0	25	151-500	61.156991	-149.796869
Trifolium repens L.	white clover	BLM_CT_2018_CT006	2.0	5	6-25	61.15857538	-149.8001176
Trifolium repens L.	white clover	BLM_CT_2018_CT007b	978.0	18	151-500	61.15655998	-149.7956142
Trifolium repens L.	white clover	BLM_CT_2018_CT007b	978.0	18	151-500	61.156947	-149.796408
Trifolium repens L.	white clover	BLM_CT_2018_CT008a	676.0	5	51-150	61.15613838	-149.796644
Trifolium repens L.	white clover	BLM_CT_2018_CT008b	676.0	5	51-150	61.155154	-149.796351
Trifolium repens L.	white clover	BLM_CT_2018_CT009b	200.0	10	151-500	61.15467078	-149.7909006
Trifolium repens L.	white clover	BLM_CT_2018_CT009b	200.0	10	151-500	61.154903	-149.791456
Trifolium repens L.	white clover	BLM_CT_2018_CT010a	600.0	2	51-150	61.15645829	-149.7941406

Scientific	Common Name	Site Code	Infested Area (m^2)	Percent Cover	Stem Count	Latitude	Longitude
Trifolium repens L.	white clover	BLM_CT_2018_CT010b	600.0	2	51-150	61.15678096	-149.7918502
Trifolium repens L.	white clover	BLM_CT_2018_CT010c	600.0	2	51-150	61.15557794	-149.7914163
Trifolium repens L.	white clover	BLM_CT_2018_CT011a	400.0	2	51-150	61.154537	-149.789979
Trifolium repens L.	white clover	BLM_CT_2018_CT011b	400.0	2	51-150	61.155896	-149.787268
Trifolium repens L.	white clover	BLM_CT_2018_CT011c	400.0	2	51-150	61.157196	-149.784553
Trifolium repens L.	white clover	BLM_CT_2018_CT011d	400.0	2	51-150	61.158486	-149.781943
Trifolium repens L.	white clover	BLM_CT_2018_CT011e	400.0	2	51-150	61.159671	-149.779531
Trifolium repens L.	white clover	BLM_CT_2018_CT011f	400.0	2	51-150	61.160804	-149.777157
Trifolium repens L.	white clover	BLM_CT_2018_CT011g	400.0	2	51-150	61.161949	-149.774743
Trifolium repens L.	white clover	BLM_CT_2018_CT011h	400.0	2	51-150	61.163139	-149.772472
Trifolium repens L.	white clover	BLM_CT_2018_CT012a	400.0	2	51-150	61.154356	-149.789509
Trifolium repens L.	white clover	BLM_CT_2018_CT012b	800.0	2	51-150	61.155712	-149.786818
Trifolium repens L.	white clover	BLM_CT_2018_CT012c	800.0	2	51-150	61.157033	-149.784085
Trifolium repens L.	white clover	BLM_CT_2018_CT012d	800.0	2	51-150	61.158286	-149.781465
Trifolium repens L.	white clover	BLM_CT_2018_CT012e	400.0	2	51-150	61.159463	-149.77901
Trifolium repens L.	white clover	BLM_CT_2018_CT012f	400.0	2	51-150	61.160586	-149.776652
Trifolium repens L.	white clover	BLM_CT_2018_CT012g	400.0	2	51-150	61.161763	-149.774212
Trifolium repens L.	white clover	BLM_CT_2018_CT012h	400.0	2	51-150	61.162912	-149.771916
Trifolium repens L.	white clover	BLM_CT_2018_CT013	600.0	1	151-500	61.16070953	-149.7908876
Trifolium repens L.	white clover	BLM_CT_2018_CT014	500.0	8	500+	61.16588221	-149.7662291
Trifolium repens L.	white clover	BLM_CT_2018_CT016a	70.0	2	151-500	61.1645185	-149.7682129
Trifolium repens L.	white clover	BLM_CT_2018_CT016b	1.0	10	6-25	61.16220502	-149.7665518
Trifolium repens L.	white clover	BLM_CT_2018_CT016c	200.0	4	151-500	61.16094609	-149.7658538
Trifolium repens L.	white clover	BLM_CT_2018_CT017b	0.5	5	6-25	61.16198082	-149.7636449
Trifolium repens L.	white clover	BLM_CT_2018_CT017c	200.0	2	151-500	61.16172136	-149.7625733
Trifolium repens L.	white clover	BLM_CT_2018_CT018a	170.0	2	26-50	61.164826	-149.775684
Trifolium repens L.	white clover	BLM_CT_2018_CT018b	170.0	2	26-50	61.164189	-149.772946
Trifolium repens L.	white clover	BLM_CT_2018_CT019a	300.0	5	151-500	61.16522501	-149.7782026
Trifolium repens L.	white clover	BLM_CT_2018_CT019b	300.0	5	26-150	61.16427153	-149.7776066
Trifolium repens L.	white clover	BLM_CT_2018_CT019c	300.0	5	26-150	61.16375179	-149.7779062
Trifolium repens L.	white clover	BLM_CT_2018_CT019d	300.0	5	26-150	61.16322095	-149.7765152
Trifolium repens L.	white clover	BLM_CT_2018_CT019e	300.0	5	26-150	61.163597	-149.7765888
Trifolium repens L.	white clover	BLM_CT_2018_CT019f	300.0	5	26-150	61.16441316	-149.7765038

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Trifolium repens L.	white clover	BLM_CT_2018_CT020a	200.0	1	6-25	61.15762523	-149.8006191
Trifolium repens L.	white clover	BLM_CT_2018_CT020b	200.0	1	6-25	61.15600168	-149.8004529
Trifolium repens L.	white clover	BLM_CT_2018_CT020c	200.0	1	6-25	61.15462307	-149.7997895
Trifolium repens L.	white clover	BLM_CT_2018_CT021a	500.0	2	51-150	61.1583442	-149.7928318
Trifolium repens L.	white clover	BLM_CT_2018_CT021b	500.0	2	51-150	61.15630198	-149.7903567
Trifolium repens L.	white clover	BLM_CT_2018_CT022b	450.0	5	51-150	61.15939706	-149.7948945
Trifolium repens L.	white clover	BLM_CT_2018_CT023a	450.0	3	51-150	61.15890494	-149.7980738
Trifolium repens L.	white clover	BLM_CT_2018_CT023b	450.0	3	51-150	61.15929175	-149.7948279
Trifolium repens L.	white clover	BLM_CT_2018_CT024	200.0	3	26-50	61.162505	-149.782366
Trifolium repens L.	white clover	BLM_CT_2018_CT025a	285.0	1	26-50	61.166767	-149.784113
Trifolium repens L.	white clover	BLM_CT_2018_CT025b	285.0	1	26-50	61.166334	-149.779389
Trifolium repens L.	white clover	BLM_CT_2018_CT026a	20.0	8	26-50	61.165774	-149.776804
Trifolium repens L.	white clover	BLM_CT_2018_CT026c	185.0	2	26-50	61.165106	-149.769508
Trifolium repens L.	white clover	BLM_CT_2018_CT027a	250.0	3	50-150	61.16014658	-149.7917029
Trifolium repens L.	white clover	BLM_CT_2018_CT027b	250.0	3	50-150	61.16145013	-149.7889723
Trifolium repens L.	white clover	BLM_CT_2018_CT027c	250.0	3	50-150	61.16216086	-149.785329
Trifolium repens L.	white clover	BLM_CT_2018_CT027d	250.0	3	50-150	61.16296165	-149.7821789
Trifolium repens L.	white clover	BLM_CT_2018_CT027e	250.0	3	50-150	61.16424369	-149.779521
Trifolium repens L.	white clover	BLM_CT_2018_CT028a	250.0	3	50-150	61.16007641	-149.7915392
Trifolium repens L.	white clover	BLM_CT_2018_CT028b	250.0	3	50-150	61.16138661	-149.7888324
Trifolium repens L.	white clover	BLM_CT_2018_CT028c	250.0	3	50-150	61.16204505	-149.7853984
Trifolium repens L.	white clover	BLM_CT_2018_CT028d	250.0	3	50-150	61.16279433	-149.7821331
Trifolium repens L.	white clover	BLM_CT_2018_CT028e	250.0	3	50-150	61.16411948	-149.7794361
Trifolium repens L.	white clover	BLM_CT_2018_CT029	1.0	10	1-5	61.161653	-149.784799
Trifolium repens L.	white clover	BLM_CT_2018_CT030a	255.0	4	151-500	61.159113	-149.79879
Trifolium repens L.	white clover	BLM_CT_2018_CT030b	132.0	4	151-500	61.159541	-149.794365
Trifolium repens L.	white clover	BLM_CT_2018_CT030b	1.0	10	1-6	61.16009013	-149.7928471
Trifolium repens L.	white clover	BLM_CT_2018_CT031a	132.0	3	150-500	61.16292371	-149.7689877
Trifolium repens L.	white clover	BLM_CT_2018_CT032	160.0	2	26-50	61.164315	-149.77142
Trifolium repens L.	white clover	BLM_CT_2018_CT034a	5.0	5	6-25	61.165828	-149.775323
Trifolium repens L.	white clover	BLM_CT_2018_CT034b	0.5	5	1-5	61.16571631	-149.7726121
Tripleurospermum inodorum (L.) Sch. Bip.	scentless false mayweed	BLM_CT_2018_CT007b	40.0	5	26-50	61.15838523	-149.7994756

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Tripleurospermum inodorum (L.) Sch. Bip.	scentless false mayweed	BLM_CT_2018_CT009a	1500.0	2	51-150	61.15467459	-149.793143
Tripleurospermum inodorum (L.) Sch. Bip.	scentless false mayweed	BLM_CT_2018_CT009b	500.0	1	26-50	61.15490264	-149.7914559
Tripleurospermum inodorum (L.) Sch. Bip.	scentless false mayweed	BLM_CT_2018_CT013	17.5	7	51-150	61.16080871	-149.7909049
Tripleurospermum inodorum (L.) Sch. Bip.	scentless false mayweed	BLM_CT_2018_CT027b	2.0	10	6-25	61.161954	-149.78779
Tripleurospermum inodorum (L.) Sch. Bip.	scentless false mayweed	BLM_CT_2018_CT028c	100.0	5	51-150	61.162125	-149.784204
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CCR015a	18.0	10	151-500	61.1650797	-149.7677184
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CCR017	0.5	10	6-25	61.16490173	-149.7674083
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CT002	6.0	1	6-25	61.15854222	-149.8024355
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CT003	2.0	3	26-50	61.15834166	-149.7997838
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CT006	4.0	2	26-50	61.15861578	-149.8005909
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CT007a	0.1	25	1-5	61.15835536	-149.7993954
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CT007b	75.0	4	26-50	61.15744478	-149.7973257
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CT010a	2.0	9	26-50	61.1563186	-149.794383
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CT010b	160.0	4	151-500	61.15658936	-149.7915654
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CT010c	1.0	10	6-25	61.15509175	-149.7907242
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CT013	1.0	5	6-25	61.16092227	-149.7908378
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CT019b	17.0	20	151-500	61.16421817	-149.7778618
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CT019b	9.0	20	151-500	61.16394962	-149.7784947
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CT024	50.0	5	26-50	61.162505	-149.782366
Vicia cracca L. ssp. *cracca*	bird vetch	BLM_CT_2018_CT025a	4.0	10	6-25	61.166646	-149.78327

Appendix C. All non-native species found in Campbell Tract from 2003 to present (AKEPIC 2017, ACCS 2018 Survey)

Scientific Name	Common Name	Invasiveness Rank[1]	Found in 2018
Phalaris arundinacea	reed canarygrass	83	
Melilotus albus	white sweetclover	81	X
Hieracium aurantiacum	orange hawkweed	79	
Cirsium arvense	Canada thistle	76	
Prunus padus	European bird cherry	74	X
Prunus virginiana	chokecherry	74	
Vicia cracca	bird vetch	73	X
Linaria vulgaris	butter and eggs	69	X
Melilotus officinalis	yellow sweetclover	69	
Hordeum jubatum	foxtail barley	63	X
Bromus inermis ssp. *inermis*	smooth brome	62	
Leucanthemum vulgare	oxeye daisy	61	X
Elymus repens	quackgrass	59	X
Sorbus aucuparia	European mountain ash	59	
Trifolium repens	white clover	59	X
Taraxacum officinale	common dandelion	58	X
Trifolium hybridum	alsike clover	57	X
Lupinus polyphyllus	bigleaf lupine	55	
Crepis tectorum	narrowleaf hawksbeard	54	X
Phleum pratense	timothy	54	X
Elymus sibiricus	Siberian wildrye	53	
Trifolium pratense	red clover	53	
Alopecurus pratensis	meadow foxtail	52	X
Lolium perenne ssp. *perenne*	perennial ryegrass	52	X
Poa pratensis (ssp. *irrigata* and ssp. *pratensis*)	spreading bluegrass or Kentucky bluegrass	52	X
Leontodon autumnalis	fall dandelion	51	
Rumex acetosella	common sheep sorrel	51	X
Brassica rapa	field mustard	50	
Fallopia convolvulus	black bindweed	50	
Rumex crispus	curly dock	48	
Rumex longifolius	dooryard dock	48	X
Tripleurospermum idorum	scentless false mayweed	48	X
Persicaria lapathifolia	curlytop ktweed	47	
Persicaria maculosa	spotted ladysthumb	47	
Centaurea montana	perennial cornflower	46	
Poa annua	annual bluegrass	46	X
Polygonum aviculare	prostrate ktweed	45	X
Hypochaeris radicata	hairy cat's ear	44	
Plantago major	common plantain	44	X
Silene dioica	Clairville red catchfly	42	
Stellaria media	common chickweed	42	X
Descurainia sophia	flixweed	41	

Scientific Name	Common Name	Invasiveness Rank[1]	Found in 2018
Lolium perenne ssp. *multiflorum*	annual ryegrass	41	
Senecio sylvaticus	woodland ragwort	41	
Capsella bursa-pastoris	shepherd's purse	40	
Galeopsis tetrahit	hempnettle	40	
Lamium album	white deadnettle	40	X
Chepodium album	lambsquarters	37	X
Cerastium fontanum ssp. *vulgare*	Common mouse-ear chickweed	36	
Cerastium glomeratum	sticky chickweed	36	X
Saponaria officinalis	bouncingbet	34	
Matricaria discoidea	pineappleweed	32	X
Spergula arvensis	corn spurry	32	
Lepidium densiflorum	common pepperweed	25	
Erucastrum gallicum	common dogmustard	NR	
Silene armeria	sweet William	NR	
Sorbaria sorbifolia	false spirea	NR	X

[1]Invasiveness ranks are taken from Carlson et al. 2008 and Flagstad et al. 2017; 'NR' indicates that the species has not yet been ranked and does not imply low invasiveness

Appendix D. AKEPIC Data Entry Sheets

Media file on USB Storage Device. Long term storage held at ACCS office available upon request or viewed on AKEPIC data portal.

Appendix E. GIS shapefiles of CT Survey

Media file on USB Storage Device. Long term storage held at ACCS office available upon request.