

Rare and Invasive Plant Survey

Port Lions Airport Improvements

August 16, 2018

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Introduction

The Alaska Department of Transportation and Public Facilities, (DOT&PF) Southcoast Region, is evaluating improvements at the Port Lions Airport. This work requires evaluation under the National Environmental Policy Act (NEPA) and must adhere to Executive Order (EO) 13112 to prevent the control and spread of invasive species. DOT&PF contracted HDR Alaska, Inc. (HDR), to identify rare and invasive plants within the study area in order to support project planning and permitting (Figures 1 and 2).

Methods

On July 19 through 24, 2018, HDR completed a field survey to identify and map the presence of rare and invasive plants within a 330-acre study area surrounding the Port Lions Airport. A pedestrian survey was conducted along all representative habitats and disturbed areas within the study area, including the runway, access roads, material site, and trails. All plant locations were recorded using an iPad with Bluetooth-linked sub-meter accuracy global positioning system (GPS). If a population was limited to a circular area with a radius less than 3 feet, a GPS point was collected. If the population extended beyond a 3-foot radius circle, the boundary of the population was walked, and points along the polygon boundary were collected.

Rare Plants

HDR surveyed the study area for 16 rare plant species (Table 1). In order to determine which species to survey, HDR contacted the Alaska Center for Conservation Science (ACCS) to obtain a list of rare plants that have potential suitable habitat within the study area. All plants identified by ACCS as having potential suitable habitat in the study area were surveyed. No threatened or endangered plant species are within the study area or would be expected to occur within the study area.

Rare plant surveys were concentrated on potential habitats, such as coastal herbaceous meadows, wetlands, and open gravelly riparian areas. Rare plant surveys were also conducted during the wetland delineation and invasive plant surveys. The survey was conducted during late July to optimize the search during the best point in the phenology of all plants on the list. Late-flowering species such as fourpart dwarf gentian (*Gentianella propinqua* ssp. *Aleutica*) may not have fully emerged (e.g., the only gentian observed was autumn dwarf gentian [*Gentianella amarella*]).

Table 1. List of Rare Plant Species Included in Survey

Common Name	Scientific Name	State Rank	Global Rank	Federal Listings
Alaska moonwort	<i>Botrychium alaskense</i>	S3	G4	
Rattlesnake fern	<i>Botrychium virginianum</i>	S3	G5	
Lapland sedge	<i>Carex lapponica</i>	S3S4	G4G5Q	
Sessileleaf scurvygrass	<i>Cochlearia sessilifolia</i>	S2Q	G1G2Q	USFS, BLM Watch
Quill spikerush	<i>Eleocharis nitida</i>	S1S2	G3G4	

Table 1. List of Rare Plant Species Included in Survey

Common Name	Scientific Name	State Rank	Global Rank	Federal Listings
Thinleaf cottonsedge	<i>Eriophorum viridicarinatum</i>	S2S3	G5	
Aleutian fourpart dwarf gentian	<i>Gentianella propinqua</i> ssp. <i>aleutica</i>	S3	G5T2T4	
American silvertop	<i>Glehnia littoralis</i> ssp. <i>leiocarpa</i>	S2S3	G5T5	
Western quillwort	<i>Isoetes occidentalis</i>	S3S4	G4G5	
Jointleaf rush	<i>Juncus articulatus</i>	S1S2	G5	
Tall blue lettuce	<i>Lactuca biennis</i>	S2S3	G5	
Toothed surfgrass	<i>Phyllospadix serrulatus</i>	S3	G4	
Fowler's knotweed	<i>Polygonum fowleri</i> ssp. <i>fowleri</i>	S3S4	G5TNR	
Alaska mistmaiden	<i>Romanzoffia unalaschcensis</i>	S3S4	G3	USFS
Circumpolar starwort	<i>Stellaria ruscifolia</i> ssp. <i>aleutica</i>	S2S3	G4T3	
Horned pondweed	<i>Zannichellia palustris</i> ssp. <i>palustris</i>	S3S4	G5	

#Q = Taxon is questionable.

State Rank

S1 = Critically imperiled within the state; at very high risk of extirpation because of very few occurrences, declining populations, or extremely limited range and/or habitat.

S2 = Imperiled within the state; at high risk of extirpation because of few occurrences, declining populations, limited range, and/or habitat.

S3 = Rare within the state; at moderate risk of extirpation because of restricted range, narrow habitat specificity, recent population decline, small population sizes, and moderate number of occurrences.

S4 = Apparently secure but uncommon within the state; may be a long-term conservation concern.

Global Rank

G1 = Critically imperiled; at very high risk of extinction because of extreme rarity, very steep declines, or other factors.

G2 = Imperiled; at high risk of extinction because of very restricted range, few occurrences, small populations, steep declines, or other factors.

G3 = Vulnerable; at moderate risk of extinction because of restricted range, relatively few occurrences, small populations, recent and widespread declines, or other factors.

G4 = Apparently secure but uncommon; some cause for long-term concern because of declines or other factors.

G5 = Secure; common, widespread, and abundant.

T# = Indicates the global rank of a subspecies or variety and is appended to the end of a rank for the species.

NR = Global rank not yet assessed.

Note: USFS = U.S. Forest Service; BLM = U.S. Bureau of Land Management

Invasive Species

Thirty-seven invasive species were surveyed for within the study area (Table 2). This includes all invasive species on the Alaska Department of Natural Resources' (ADNR's) Prohibited and Noxious Weed and Invasives Species of Interest lists. Orange hawkweed (*Hieracium aurantiacum*), a prohibited and restricted noxious weed, as well as oxeye daisy (*Leucanthemum vulgare*) and common tansy (*Tanacetum vulgare*), invasive species of interest, were previously documented in the Port Lions area. The invasive species survey included all disturbed, and directly adjacent, areas within the study area as well as other areas covered during the rare plant and wetland surveys.

Table 2. List of Invasive Species Included in Survey

ADNR Prohibited and Restricted Noxious Weeds	
Common Name	Scientific Name
Leafy spurge	<i>Euphorbia esula</i>
Purple loosestrife	<i>Lythrum salicaria</i>
Orange hawkweed	<i>Hieracium aurantiacum</i>
Canada thistle	<i>Cirsium arvense</i>
Perennial sowthistle	<i>Sonchus arvensis</i>
Whitetops and its varieties	<i>Cardaria draba, C. pubescens, Lepidium latifolium</i>
Russian knapweed	<i>Acroptilon repens</i>
Quackgrass	<i>Elymus repens</i>
Field bindweed	<i>Convolvulus arvensis</i>
Hempnettle	<i>Galeopsis tetrahit</i>
Galinsoga	<i>Galinsoga parviflora</i>
Austrian fieldcress	<i>Rorippa austriaca</i>
Horsenettle	<i>Solanum carolinense</i>
Blue-flowering lettuce	<i>Lactuca tatarica, Lactuca pulchella</i>
Other Invasive Species of Interest to be Identified	
Common Name	Scientific Name
Japanese knotweed	<i>Polygonum cuspidatum, P. bohemicum</i>
Spotted knapweed	<i>Centaurea stoebe, C. maculosa</i>
Reed canarygrass	<i>Phalaris arundinacea</i>
Ornamental jewelweed	<i>Impatiens glandulifera</i>
White sweetclover	<i>Melilotus alba</i>
Meadow hawkweed	<i>Hieracium caespitosum</i>
Cheatgrass	<i>Bromus tectorum</i>
Siberian pea shrub	<i>Caragana arborescens</i>
European bird cherry	<i>Prunus padus</i>
Bird vetch	<i>Vicia cracca</i>
Garlic mustard	<i>Alliaria petiolata</i>
Common toadflax	<i>Linaria vulgaris</i>
Scotchbroom	<i>Cytisus scoparius</i>
Rampion bellflower	<i>Campanula rapunculoides</i>
Foxtail barley	<i>Hordeum jubatum</i>
Tansy ragwort	<i>Senecio jacobaea</i>
Bull thistle	<i>Cirsium vulgare</i>
Oxeye daisy	<i>Leucanthemum vulgare</i>
Common tansy	<i>Tanacetum vulgare</i>
Narrowleaf hawksbeard	<i>Crepis tectorum</i>
Splitlip hempnettle	<i>Galeopsis bifida</i>
Western salsify	<i>Tragopogon dubius</i>
Hairy catsear	<i>Hypochaeris radicata</i>

Survey Results

Rare Plants

No rare plants were observed during the survey. Some of the plants surveyed for do not have appropriate habitat within the study area (e.g., alpine areas and habitats below the high tide line). Representative transects were conducted on the extensive, steep, south-facing herbaceous meadows in the center of the study area, as well as meadows in the western portion and the coastal strand. When similar species were encountered (such as Sitka mistmaiden (*Romanzoffia sitchensis*; similar to Alaska mistmaiden) and northern green rush (*Juncus alpinoarticulatus*; similar to jointleaf rush), the specimens were collected and examined closely to determine that they were not target species.

Invasive Species

Two of the invasive species surveyed for were documented within the study area: orange hawkweed and oxeye daisy. Orange hawkweed was observed at 104 locations (Attachment A; Figure 3) and oxeye daisy was observed at 97 locations (Attachment B; Figure 3) within the study area. At orange hawkweed infestations, the number of flowering stems and percent cover were recorded. At oxeye daisy infestations, the number of flowering stems, number of sprouts (i.e., seedlings or rosettes), and percent cover were recorded. Photographs of some of the infestations are included in Attachment C.

No other invasive species surveyed for were observed within the study area. Other non-native plants not on either of ADNR’s lists were observed within the study area (Table 3). These plants were limited to the disturbed areas adjacent to the runway, except for common dandelion (*Taraxacum officinale*), which was found in herbaceous meadows away from the runway. Alsike clover (*Trifolium hybridum*) infestations were extensive throughout the disturbed areas.

Table 3. Other Non-native Species Identified During the Field Survey

Common Name	Scientific Name
Creeping bentgrass	<i>Agrostis stolonifera</i>
Common mouse-ear chickweed	<i>Cerastium fontanum</i>
Disc mayweed	<i>Matricaria discoidea</i>
Common plantain	<i>Plantago major</i>
Annual bluegrass	<i>Poa annua</i>
Canada bluegrass	<i>Poa compressa</i>
Tall buttercup	<i>Ranunculus acris</i>
Common sheep sorrel	<i>Rumex acetosella</i>
Curly dock	<i>Rumex crispus</i>
Old-man-in-the-Spring	<i>Senecio vulgaris</i>
Red sandspurry	<i>Spergularia rubra</i>
Common dandelion	<i>Taraxacum officinale</i> ssp. <i>officinale</i>
Alsike clover	<i>Trifolium hybridum</i>
Neckweed	<i>Veronica peregrina</i>

Figures

Figure 1: Vicinity Map

Figure 2: Survey Study Area

Figure 3: Sheets 1-4



- Study Area
- City
- Existing Roads

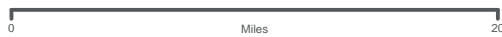


Figure 1: Vicinity Map
 Port Lions Airport Improvements
 Invasive Species Survey

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Invasive Species Infestations - 2018

- Orange Hawkweed
- Oxeye Daisy
- Study Area
- Mapbook Sheets

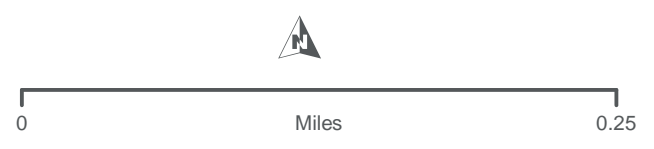


Figure 2: Survey Study Area
 Port Lions Airport Improvements
 Invasive Species Survey

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Invasive Species Infestations - 2018

- Orange Hawkweed
- Oxeye Daisy
- Study Area



Figure 3: Sheet 1 of 4
 Port Lions Airport Improvements
 Invasive Species Survey

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Invasive Species Infestations - 2018

-
 Orange Hawkweed
 Oxeye Daisy
 Study Area



Figure 3: Sheet 2 of 4
 Port Lions Airport Improvements
 Invasive Species Survey

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Invasive Species Infestations - 2018

- Orange Hawkweed
- Oxeye Daisy
- Study Area



Figure 3: Sheet 3 of 4
 Port Lions Airport Improvements
 Invasive Species Survey

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Attachment A

Orange Hawkweed Infestations



<i>Site Name</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Type (Point/Polygon)</i>	<i>Acres</i>	<i>Square Feet</i>	<i>Percent Cover</i>	<i>Number of Flowering Stems</i>	<i>Comments</i>
OH1	57.885238	-152.847452	Point	0.000648	28	25	8	
OH2	57.883956	-152.854054	Point	0.000648	28	2	5	
OH3	57.883792	-152.854243	Point	0.000648	28	<1	2	
OH4	57.883776	-152.854039	Point	0.000648	28	<1	1	
OH5	57.883677	-152.854332	Polygon	0.036149	1,575	<1	350	5 groupings
OH6	57.883612	-152.854658	Point	0.000648	28	22	25	
OH7	57.883534	-152.854487	Polygon	0.006929	302	<1	52	
OH8	57.883722	-152.854677	Polygon	0.043397	1,890	1	107	9 groupings
OH9	57.883812	-152.854625	Polygon	0.003702	161	1	30	3 groupings
OH10	57.883616	-152.854899	Point	0.000648	28	20	8	
OH11	57.883852	-152.854864	Point	0.000648	28	15	32	3 groupings
OH12	57.884111	-152.855778	Point	0.000648	28	<1	1	
OH13	57.883538	-152.853982	Polygon	0.014755	643	5	238	4 groupings
OH14	57.883607	-152.853864	Polygon	0.009926	432	3	137	7 groupings
OH15	57.883883	-152.853683	Point	0.000648	28	<1	1	
OH16	57.883775	-152.853801	Polygon	0.000632	28	<1	19	
OH17	57.883391	-152.853323	Point	0.000648	28	30	26	
OH18	57.883411	-152.853212	Polygon	0.005546	242	5	86	
OH19	57.883445	-152.85305	Point	0.000648	28	3	7	1 group
OH20	57.883444	-152.85291	Polygon	0.0042	183	15	47	
OH21	57.883459	-152.85262	Polygon	0.007732	337	3	98	
OH22	57.883651	-152.850998	Polygon	0.47065	20,502	55	~280,000	Large infestation. 55% on entire slope. 1 square meter - 75%, 200 culms
OH23	57.88275	-152.853152	Polygon	0.043709	1,904	70	~33,000	Large infestation, 95% on both ends
OH24	57.884137	-152.849237	Point	0.000648	28	75	1,000	
OH25	57.884235	-152.848656	Point	0.000648	28	5	25	

<i>Site Name</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Type (Point/Polygon)</i>	<i>Acres</i>	<i>Square Feet</i>	<i>Percent Cover</i>	<i>Number of Flowering Stems</i>	<i>Comments</i>
OH26	57.88439	-152.848183	Polygon	0.000648	28	<1	6	
OH27	57.883879	-152.851078	Polygon	0.14332	6,243	1	220	Main concentration between windsock and parking lot. Majority is leaf cover without culms. Two primary clumps surrounding windsock and at edge of parking lot. 18 groupings
OH28	57.883911	-152.851415	Polygon	0.011242	490	90	900	Major infestation, adjacent to OH27
OH29	57.883878	-152.851814	Polygon	0.01771	771	50	465	
OH30	57.883984	-152.852043	Polygon	0.000767	33	5	57	One major clump with a few scattered throughout.
OH31	57.884084	-152.852016	Point	0.000648	28	<1	3	
OH32	57.884277	-152.851315	Point	0.000648	28	<1	1	
OH33	57.884435	-152.849213	Polygon	0.002675	117	35	82	
OH34	57.884267	-152.853187	Point	0.000648	28	<1	1	
OH35	57.882403	-152.85379	Polygon	0.034064	1,484	10	194	9 groupings
OH36	57.882578	-152.854488	Polygon	0.08183	3,565	1	4,300	One long primary clump along roadside (95% cover). 10 scattered clumps on hillside.
OH37	57.883174	-152.854347	Point	0.000648	28	<1	2	
OH38	57.883326	-152.85393	Point	0.000648	28	<1	2	
OH39	57.883359	-152.853721	Point	0.000648	28	<1	2	
OH40	57.883313	-152.854201	Point	0.000648	28	<1	2	
OH41	57.883388	-152.854445	Polygon	0.006979	304	<1	5	3 groupings
OH42	57.883194	-152.854494	Point	0.000648	28	1	10	
OH43	57.883102	-152.854642	Point	0.000648	28	<1	1	
OH44	57.882931	-152.854989	Polygon	0.032058	1,396	3	342	Along road and continues up driveway ~40 feet.
OH45	57.882802	-152.855097	Point	0.000648	28	<1	1	



<i>Site Name</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Type (Point/Polygon)</i>	<i>Acres</i>	<i>Square Feet</i>	<i>Percent Cover</i>	<i>Number of Flowering Stems</i>	<i>Comments</i>
OH46	57.88258	-152.855335	Point	0.000648	28	<1	6	
OH47	57.8818	-152.856283	Polygon	0.004318	188	5	40	
OH48	57.881728	-152.856385	Point	0.000648	28	<1	1	
OH49	57.881638	-152.856603	Polygon	0.003273	143	<1	20	
OH50	57.881253	-152.858064	Point	0.000648	28	<1	3	
OH51	57.88077	-152.860276	Point	0.000648	28	<1	2	
OH52	57.880949	-152.859462	Point	0.000648	28	<1	2	
OH53	57.881341	-152.857386	Point	0.000648	28	<1	4	
OH54	57.881496	-152.856796	Point	0.000648	28	<1	7	
OH55	57.881571	-152.85656	Point	0.000648	28	<1	7	
OH56	57.881637	-152.856411	Point	0.000648	28	<1	7	
OH57	57.881694	-152.856302	Point	0.000648	28	<1	1	
OH58	57.881917	-152.855951	Polygon	0.002079	91	10	63	
OH59	57.882676	-152.855105	Point	0.000648	28	<1	11	
OH60	57.882747	-152.854943	Polygon	0.017236	751	20	850	L shaped along road
OH61	57.882692	-152.854704	Point	0.000648	28	25	20	
OH62	57.882473	-152.854552	Polygon	0.024799	1,080	20	2,250	4 groupings
OH63	57.88199	-152.854663	Polygon	0.054197	2,361	30	2,270	Side slope
OH64	57.88537	-152.840576	Polygon	0.003215	140	40	642	
OH65	57.886135	-152.839513	Point	0.000648	28	15	65	
OH66	57.888711	-152.834857	Polygon	0.002665	116	<1	51	
OH67	57.889063	-152.834906	Polygon	0.001229	54	<1	20	
OH68	57.890336	-152.833231	Point	0.000648	28	5	6	On trail
OH69	57.884573	-152.853847	Point	0.000648	28	<1	2	
OH70	57.884709	-152.853719	Point	0.000648	28	1	5	
OH71	57.884852	-152.853563	Point	0.000648	28	<1	1	
OH72	57.884945	-152.853592	Point	0.000648	28	<1	3	
OH73	57.885283	-152.853093	Point	0.000648	28	<1	1	



<i>Site Name</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Type (Point/Polygon)</i>	<i>Acres</i>	<i>Square Feet</i>	<i>Percent Cover</i>	<i>Number of Flowering Stems</i>	<i>Comments</i>
OH74	57.885339	-152.852861	Point	0.000648	28	<1	1	
OH75	57.885422	-152.852258	Point	0.000648	28	<1	1	
OH76	57.885486	-152.851968	Polygon	0.000801	35	<1	57	
OH77	57.885571	-152.851782	Point	0.000648	28	5	15	
OH78	57.886222	-152.851678	Polygon	0.001805	79	20	137	Surrounded by upland
OH79	57.886297	-152.851668	Point	0.000648	28	<1	0	No culms, 1 rosette. Surrounded by upland, disturbed.
OH80	57.885697	-152.851674	Point	0.000648	28	<1	1	
OH81	57.88564	-152.851905	Polygon	0.01068	465	<1	77	8 groupings
OH82	57.885633	-152.852056	Point	0.000648	28	<1	3	
OH83	57.885662	-152.852108	Point	0.000648	28	<1	3	
OH84	57.885594	-152.852135	Point	0.000648	28	<1	2	
OH85	57.885592	-152.852056	Point	0.000648	28	<1	1	
OH86	57.88579	-152.853416	Point	0.000648	28	1	11	1 group
OH87	57.886287	-152.853099	Point	0.000648	28	<1	3	On top of outcropping
OH88	57.885511	-152.853339	Point	0.000648	28	<1	4	
OH89	57.885616	-152.853494	Point	0.000648	28	<1	16	
OH90	57.885988	-152.853666	Point	0.000648	28	5	5	
Oh91	57.88604	-152.853505	Point	0.000648	28	8	11	
OH92	57.886139	-152.853792	Point	0.000648	28	1	8	
Oh93	57.88726	-152.854329	Point	0.000648	28	1	16	
OH94	57.887515	-152.854279	Point	0.000648	28	2	27	
OH95	57.887615	-152.854231	Point	0.000648	28	<1	3	
OH96	57.888331	-152.853938	Polygon	0.003054	133	20	179	
OH97	57.886715	-152.854441	Point	0.000648	28	<1	1	
OH98	57.884647	-152.853762	Point	0.000648	28	<1	2	
OH99	57.884566	-152.853837	Point	0.000648	28	<1	3	
OH100	57.886531	-152.852599	Polygon	0.003485	152	1	12	



<i>Site Name</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Type (Point/Polygon)</i>	<i>Acres</i>	<i>Square Feet</i>	<i>Percent Cover</i>	<i>Number of Flowering Stems</i>	<i>Comments</i>
OH101	57.886519	-152.852838	Point	0.000648	28	8	6	
OH102	57.886334	-152.846825	Point	0.000648	28	5	0	No culms, only leaves
OH103	57.886868	-152.84656	Polygon	0.002149	94	1	39	
OH104	57.889154	-152.841677	Polygon	0.000986	43	5	83	Flowers have been bitten off by wildlife



Attachment B

Oxeye Daisy Infestations



Site Name	Latitude	Longitude	Type (Point/Polygon)	Acres	Square Feet	Percent Cover	Number of Flowering Stems	Number of Sprouts	Comments
OD1	57.885436	-152.840974	Point	0.000648	28	<1	3	0	
OD2	57.885509	-152.840971	Polygon	0.003599	157	1	40	97	
OD3	57.885679	-152.84103	Polygon	0.00411	179	25	75	1,300	
OD4	57.885767	-152.841128	Polygon	0.023526	1,025	2	325	2,810	410 sprouts on the 10' wide graded edge. 2,400 sprouts in vegetation outside of graded edge.
OD5	57.885762	-152.841424	Polygon	0.017119	746	5	220	610	180 sprouts on graded edge (triangular area starting at 30"wide). 430 sprouts in outside vegetation.
OD6	57.885726	-152.84176	Polygon	0.014118	615	15	750	1,140	300 sprouts on graded edge. 840 sprouts in outside vegetation.
OD7	57.885702	-152.842019	Polygon	0.005335	232	5	200	85	40 sprouts on graded edge. 45 in outside vegetation.
OD8	57.885704	-152.842181	Point	0.000648	28	<1	1	3	
OD9	57.88565	-152.842452	Point	0.000648	28	<1	2	0	
OD10	57.885608	-152.842989	Polygon	0.002836	124	2	33	5	
OD11	57.8855	-152.844101	Point	0.000648	28	<1	1	2	
OD12	57.885425	-152.844855	Polygon	0.001704	74	5	31	235	Sprouts on graded edge
OD13	57.885417	-152.845143	Polygon	0.000881	38	2	6	80	
OD14	57.885366	-152.845476	Polygon	0.009114	397	<1	61	80	Sprouts on graded edge
OD15	57.885334	-152.845795	Polygon	0.000623	27	<1	10	5	
OD16	57.885328	-152.845939	Point	0.000648	28	<1	2	0	
OD17	57.88524	-152.846579	Point	0.000648	28	<1	0	2	
OD18	57.885141	-152.84763	Point	0.000648	28	<1	2	5	
OD19	57.885108	-152.847831	Point	0.000648	28	<1	1	5	
OD20	57.885082	-152.847968	Point	0.000648	28	<1	1	0	
OD21	57.885071	-152.848056	Polygon	0.000903	39	<1	3	25	
OD22	57.885061	-152.848316	Polygon	0.000263	11	<1	11	5	
OD23	57.884962	-152.849091	Polygon	0.001272	55	5	30	20	
OD24	57.884976	-152.849234	Polygon	0.000755	33	2	30	22	
OD25	57.884678	-152.852043	Point	0.000648	28	<1	3	2	
OD26	57.88465	-152.852192	Point	0.000648	28	<1	1	0	



<i>Site Name</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Type (Point/Polygon)</i>	<i>Acres</i>	<i>Square Feet</i>	<i>Percent Cover</i>	<i>Number of Flowering Stems</i>	<i>Number of Sprouts</i>	<i>Comments</i>
OD27	57.884631	-152.852485	Point	0.000648	28	<1	2	0	
OD28	57.884553	-152.853262	Polygon	0.011511	501	2	126	15	
OD29	57.883961	-152.853909	Point	0.000648	28	<1	3	5	
OD30	57.883776	-152.854039	Point	0.000648	28	<1	0	1	
OD31	57.883618	-152.853848	Point	0.000648	28	<1	2	0	
OD32	57.88392	-152.853697	Polygon	0.001688	74	1	3	12	
OD33	57.883868	-152.853751	Polygon	0.01668	727	<1	176	775	
OD34	57.883703	-152.853764	Polygon	0.018663	813	8	1,040	2,040	
OD35	57.883568	-152.853747	Point	0.000648	28	20	20	55	
OD36	57.883385	-152.853462	Polygon	0.002097	91	15	150	260	
OD37	57.883391	-152.853349	Point	0.000648	28	1	9	0	
OD38	57.882787	-152.85302	Point	0.000648	28	5	20	0	In middle of OH infestation
OD39	57.882785	-152.853039	Point	0.000648	28	2	15	0	In middle of OH infestation
OD40	57.883979	-152.852038	Polygon	0.001675	73	5	45	80	
OD41	57.884305	-152.851011	Polygon	0.001907	83	15	30	25	
OD42	57.884366	-152.850552	Polygon	0.000951	41	15	40	40	
OD43	57.884352	-152.8506	Point	0.000648	28	1	2	5	
OD44	57.884384	-152.85034	Polygon	0.000624	27	2	9	1	
OD45	57.884407	-152.850179	Polygon	0.001567	68	20	85	50	
OD46	57.884433	-152.849879	Polygon	0.010346	451	20	185	85	
OD47	57.884467	-152.849603	Polygon	0.007436	324	10	275	54	
OD48	57.884496	-152.849313	Polygon	0.018877	822	8	220	305	
OD49	57.884528	-152.848922	Polygon	0.017999	784	35	360	270	
OD50	57.884576	-152.848553	Polygon	0.00959	418	80	185	90	
OD51	57.88461	-152.848305	Polygon	0.000716	31	8	17	16	
OD52	57.884635	-152.84793	Polygon	0.018306	797	10	420	720	
OD53	57.884674	-152.84764	Point	0.000648	28	10	26	35	
OD54	57.884727	-152.847177	Polygon	0.027994	1,219	5	410	800	



<i>Site Name</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Type (Point/Polygon)</i>	<i>Acres</i>	<i>Square Feet</i>	<i>Percent Cover</i>	<i>Number of Flowering Stems</i>	<i>Number of Sprouts</i>	<i>Comments</i>
OD55	57.884794	-152.846443	Polygon	0.019865	865	10	180	1,030	
OD56	57.884839	-152.845968	Polygon	0.00696	303	7	83	150	
OD57	57.884924	-152.845302	Point	0.000648	28	<1	1	0	
OD58	57.884935	-152.845028	Polygon	0.011643	507	3	110	315	
OD59	57.885172	-152.842841	Polygon	0.000698	30	1	11	65	
OD60	57.885257	-152.842045	Polygon	0.001263	55	<1	8	5	
OD61	57.885275	-152.841881	Point	0.000648	28	<1	4	10	
OD62	57.885306	-152.841667	Polygon	0.002158	94	<1	14	160	
OD63	57.88532	-152.841508	Polygon	0.001708	74	<1	2	15	
OD64	57.885323	-152.841336	Point	0.000648	28	<1	0	5	
OD65	57.88536	-152.84093	Polygon	0.002317	101	1	9	125	
OD66	57.885386	-152.840767	Point	0.000648	28	<1	6	0	
OD67	57.885408	-152.840969	Point	0.000648	28	<1	4	0	
OD68	57.885375	-152.841987	Polygon	0.009743	424	1	230	110	
OD69	57.885407	-152.842127	Point	0.000648	28	<1	1	0	
OD70	57.885469	-152.842035	Point	0.000648	28	<1	2	1	
OD71	57.885594	-152.842093	Polygon	0.014659	639	<1	85	21	
OD72	57.881827	-152.856258	Point	0.000648	28	<1	5	0	
OD73	57.88112	-152.858748	Point	0.000648	28	<1	1	1	
OD74	57.881362	-152.857253	Point	0.000648	28	1	14	0	
OD75	57.881389	-152.857189	Point	0.000648	28	<1	5	0	
OD76	57.882429	-152.854451	Polygon	0.001272	55	<1	13	0	
OD77	57.885082	-152.841253	Polygon	0.000121	5	<1	3	0	
OD78	57.885335	-152.840694	Point	0.000648	28	<1	1	2	
OD79	57.885375	-152.840593	Polygon	0.000818	36	2	23	10	Overlaps with OH poly
OD80	57.889217	-152.832292	Polygon	0.001277	56	<1	22	107	North side of road
OD81	57.889245	-152.832292	Point	0.000648	28	<1	2	0	
OD82	57.889763	-152.831392	Point	0.000648	28	<1	1	0	



<i>Site Name</i>	<i>Latitude</i>	<i>Longitude</i>	<i>Type (Point/Polygon)</i>	<i>Acres</i>	<i>Square Feet</i>	<i>Percent Cover</i>	<i>Number of Flowering Stems</i>	<i>Number of Sprouts</i>	<i>Comments</i>
OD83	57.888881	-152.834867	Point	0.000648	28	<1	4	15	
OD84	57.885152	-152.853102	Polygon	0.009755	425	<1	40	5	
OD85	57.885196	-152.853185	Point	0.000648	28	<1	1	0	
OD86	57.885252	-152.853105	Polygon	0.001523	66	10	51	0	
OD87	57.88534	-152.853005	Point	0.000648	28	2	33	0	
OD88	57.885384	-152.853054	Point	0.000648	28	<1	11	0	
OD89	57.885337	-152.852863	Point	0.000648	28	<1	6	0	
OD90	57.88563	-152.852003	Point	0.000648	28	<1	1	0	
OD91	57.885668	-152.852092	Polygon	0.000507	22	2	15	40	
OD92	57.885585	-152.852129	Point	0.000648	28	<1	0	2	
OD93	57.885642	-152.853237	Point	0.000648	28	1	14	1	
OD94	57.885469	-152.853246	Polygon	0.001164	51	5	62	125	
OD95	57.885607	-152.853498	Point	0.000648	28	<1	4	1	
OD96	57.885328	-152.853316	Point	0.000648	28	<1	1	0	
OD97	57.886667	-152.853271	Point	0.000648	28	<1	4	2	



Attachment C

Photographs
July 19-24, 2018



Site OH05. Orange hawkweed. Photograph taken July 21, 2018.



Site OH13. Orange hawkweed grouping. Photograph taken July 21, 2018.



Site OH27. Orange hawkweed. Photograph taken July 21, 2018.



Site OH44. Orange hawkweed along and within ATV trail. Photograph taken July 21, 2018.



Site OH62. Orange hawkweed along beach access road. Photograph taken July 21, 2018.



Site OH64. Orange hawkweed. Photograph taken July 21, 2018.



Site OH66. Orange hawkweed. Photograph taken July 21, 2018.



Site OH96. Orange hawkweed. Photograph taken July 21, 2018.



Site OH103. Orange hawkweed. Photograph taken July 22, 2018.



Site OH103. Orange hawkweed. Photograph taken July 22, 2018.



Site OH104. Orange hawkweed. Photograph taken July 23, 2018.



Site OD04. Oxeye daisy sprouts along the graded edge of the runway. Photograph taken July 20, 2018.



Site OD04. Oxeye daisy infestation along the graded edge of runway. Photograph taken July 20, 2018.



Site OD04. Oxeye daisy mixed with adjacent vegetation. Photograph taken July 20, 2018.



Site OD05. Oxeye daisy infestation along runway. Photograph taken July 20, 2018.



Site OD06. Oxeye daisy infestation. Photograph taken July 20, 2018.



Site OD07. Oxeye daisy. Photograph taken July 20, 2018.



Site OD10. Oxeye daisy. Photograph taken July 20, 2018.



Site OD14. Oxeye daisy. Photograph taken July 20, 2018.



Site OD28. Oxeye daisy. Photograph taken July 20, 2018.



Site OD36. Oxeye daisy infestation at Port Lions sign. Photograph taken July 20, 2018.



Site OD41. Oxeye daisy. Photograph taken July 21, 2018.



Site OD42. Oxeye daisy. Photograph taken July 21, 2018.



Site OD47. Oxeye daisy. Photograph taken July 21, 2018.



Site OD55. Oxeye daisy mixed with alders. Photograph taken July 21, 2018.



Site OD65. Oxeye daisy. Photograph taken July 21, 2018.