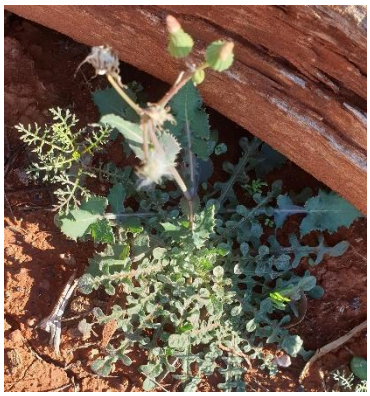
Weed survey of disturbance areas at the Higginsville Minesite and surrounding areas

For Karora Resources June 2021



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1. Background

Jenny Borger Botanical Consulting (JBBC) was engaged by Karora Resources (Karora) to undertake a weed survey of disturbance footprints including the haul road from the mining centre to Baloo, Eundynie, Two Boys and Aquarius mining areas within the Higginsville mining area and Spargos, located north of Widgiemooltha, west of the Coolgardie – Esperance Highway.

The surveys were undertaken from the 4th to the 6th June 2021 by two botanists, Jenny Borger and Catherine Krens. Three reconnaissance vegetation and flora surveys were undertaken at Eundynie, South Mousehollow and Poseidon in the Higginsville area from the 7th to the 9th June and opportunistic finds of weeds were also recorded in these areas.

Karora provided maps and shapefiles of the survey areas.

2. Results

2.1 Summary

Nineteen introduced species were recorded, including three species which are declared pests in Western Australia (Table 1).

Table 1: Introduced species recorded and locations

Scientific Name	Common Name	Location	Comment
Agave americana	Century Plant	Spargos	Mature plants and young plants
Asparagus asparagoides	Bridal Creeper	Spargos	WONS[1]; 1 plant; declared pest in WA
Bryophyllum delagoense	Mother of Millions	Spargos	Potentially serious weed
Carrichtera annua	Wards weed	Haul Road, Eundynie, Aquarius, Two Boys and Aquarius Mining Centres; Poseidon North	Small plants, some recently germinated
Centaurea melitensis	Maltese cockspur	Haul Road; Eundynie, Two Boys Mining Centres	Vegetative; basal rosette only
Cleretum papulosum subsp. papulosum	Type of iceplant	Common in Eundynie Mining Centre; present at Two Boys MC and Spargos	Common in hollows in topsoil stockpiles at Eundynie MC
Dittrichia graveolens	Stinkwort	Two Boys	One patch
Erodium aureum	Storksbill	Eundynie and Two Boys MC; Poseidon North, Spargos and South Mousehollow vegetation survey areas	Common in disturbance areas at Spargos
Erodium cicutarium	Common Storksbill	Poseidon North	1 location
Hypochaeris glabra	Smooth cat's ear	Haul Road; Two Boys MC	

Scientific Name	Common Name	Location	Comment
Lysimachia arvensis	Pimpernel	Eundynie MC; Spargos	Common in hollows in topsoil stockpiles at Eundynie MC
Medicago polymorpha	Burr Medic	Poseidon North	Isolated occurrences
Opuntia dejecta (tentative ID)	Cactus	Spargos	WONS[1]; 1 plant; declared pest in WA; present with O. stricta
Opuntia stricta	Prickly Pear	Spargos	WONS[1]; 1 plant; declared pest in WA
Oxalis pes-caprae	Soursob	Poseidon North	Isolated occurrence
Raphanus raphanistrum	Radish	Haul Road; Eundynie MC	Mostly vegetative
Salvia verbenaca	Wild Sage	Haul Road; Eundynie MC; Two Boys MC	Mostly vegetative; few starting to flower
Solanum nigrum	Deadly nightshade	Haul Road; Eundynie MC; Spargos	Flowering; immature fruit
Sonchus oleraceus	Common Sowthistle	Haul Road; Eundynie, Two Boys MC; South Mousehollow and Poseidon vegetation survey areas	Many plants in flower; common along pipeline adjacent to Haul Road

1 – Weed of national significance

2.2 Individual site results

Haul Road

The haul road extends from the Higginsville mining centre to Baloo. Weeds were very common in the northern section, south of the waste rock dump and tailings storage facility to 5 ways, with many occurring along the pipeline and area to the east adjacent to the TSF. Isolated occurrences were recorded after 5 ways. The most common weeds were *Salvia verbenaca, Sonchus oleraceus, Carrichtera annua* and *Centaurea melitensis*.

Baloo Mining Centre

No weeds were recorded in this area.

Eundynie Mining Centre and South Mousehollow vegetation survey area

Weeds were very common on the topsoil stockpiles and edges with most occurrences in the depressions in water gaining areas. Occurrences also occurred south of the Mousehollow Pit, with weeds also present within the South Mousehollow (SMH) vegetation survey area south of the Eundynie Mining Centre (EMC) within the drainage line. Weeds may be spreading into this area from the EMC.

	
Southern edge of the northern topsoil stockpile. Weeds were present between the TS and the Hidden Secret WRD.	Weeds were common at the base of the topsoil piles and occurred with native species – mainly Maireana, Dodonaea and Malva spp.
	
Erodium seedlings were present within recently disturbed areas at Spargos.	Patches of weeds were present within Salmon gum woodland in highly disturbed areas at the northern end of the SMH survey area

3. Control

Species	Image	Description and control
Agave americana Century Plant Spargos – northern area in Spargoville site 		Rhizatomous, perennial, tree-like monocot to 6 m high; leaves are fleshy and spine tipped. The massive flower structures can reach 8 m in height. It has a life span of 10 – 30 years. This species reproduces by seed and vegetatively by suckers which allow it to spread laterally forming dense colonies. Young plants produced off suckers can be spread in runoff. Numerous small plants were present in the area indicating the plants are spreading. Control: Dig out and/ or hand remove small infestations – all year round. Herbicide treatment is most effective in summer. Stem inject into base of leaves with 1 part Tordon/ 5 parts diesel. Plants should be killed before flowers appear. Follow up treatments may be required.
Asparagus asparagoides Bridal Creeper Spargos – northern area in Spargoville site		Rhizatomous and tuberous perennial herb and climber. Primarily reproduces by seed, occasionally by rhizome/ tubers. Bridal creeper is usually dormant from October to February. One plant was recorded which was a fairly recent germination (either from seed or tuber). It is possible that further germinations could occur. Control: Best results are achieved when flowering (July – August). 1. Spray with 0.2 g Metsulfuron methyl + Pulse in 15 L water <u>or</u> 2. Glyphosate 360g/L - 1:2 parts with water. Apply directly to plant using a sponge glove. While this is very selective method it is very slow to apply and is very slow to act in the plant. Retreatment will be necessary.

Bryophyllum delagoense Mother of Millions Spargos – northern area 		Erect, smooth, succulent perennial herb, with pink to grey stems. Flowers yellow-red. *Bryophyllum delagoense* reproduces by seed and by tiny plantlets that are produced at the ends of the fleshy leaves. Dislodged leaves and broken leaf parts can also take root. Control: *B. delagoense* is susceptible to a variety of herbicides. The best time for treatment is before it sets seed but can be treated at any time of year. The species was present in one area with about 30 plants. Small infestations can be removed by hand; but all plant material should be either burnt or bagged and disposed of safely. Fluroxypyr, picloram + triclopyr and 2, 4-D are registered for use on Mother-of-Millions in WA.
Carrichtera annua Wards weed Several areas		Erect annual herb to 0.4 m high; flowers September to November Manually remove isolated plants. Prevent seed set. Spray small infested areas with 10 g/ha Eclipse® plus 500mL/ha of Brodal® plus 1% spray oil in winter each year. Most of the Brassicaceae weeds have dormant seeds that continue to germinate throughout the season and for several years. They often mature and set seed very quickly. Manual removal is effective but must be done at least every 8-10 weeks. Once pods are formed, seed will often mature even if the plant has been uprooted. Soil disturbance often leads to a flush of seedlings.

Centaurea melitensis Maltese cockspur Haul Road; Eundynie, Two Boys Mining Centres		Erect annual or biennial herb, 0.2 – 1 m high. Flowering recorded September to March. Reproduces by seed, with seed falling close to plant; can be spread over short distances by wind and water. Removal methods such as hand-pulling should reduce and possibly eliminate the infestation. Make sure to remove as much of the taproot as possible. The best time to pull plants is before they have produced viable seed, so before they flower. Bag and dispose carefully of the pulled plants as the flowerheads can be self-fertilizing and can produce viable seed. Glyphosate, Spot Treatment 1% to 2% v/v solution before flowering – March to July/ August.
Cleretum papulosum subsp. papulosum Type of iceplant		Prostrate annual succulent herb to 0.1 m high x 0.2 m wide. Flowers August to September. Some grazing was noted on plants (goats?). Slender Iceplant control (*Mesembryanthemum nodiflorum*) – a related succulent herb: Triasulfuron (e.g. Logran®) at 40 g/ha plus 1% oil applied in winter provides reasonably selective control in many bushland situations.

Dittrichia graveolens Stinkwort Two Boys Mining Centre		Erect, bushy, viscid, aromatic annual herb to 0.1 – 0.5 (1) m high. Flowers yellow – white, January to November. Hand remove isolated plants before flowering. Slash close to ground otherwise plants can resprout. Any treatment should be applied twice, early and then late summer. Apply glyphosate at 1% when plants are small, or up to flowering. Plants present in Two Boys were already in seed.
Erodium aureum Storksbill 		Spreading short-lived perennial herb to 0.2 m high. Plants were in flower in June; June – October A wide range of herbicides can be used. Glyphosate should work. Follow up with Tordon or a 2,4-D based product if necessary.

Erodium cicutarium Common Storksbill		Decumbent (spreading horizontally) or erect annual or biennial herb to 0.2 m high. Flowers pink – white May to October. A wide range of herbicides can be used. Glyphosate should work. Follow up with Tordon or a 2,4-D based product if necessary.
Hypochaeris glabra Smooth cat's ear		Rosetted annual or perennial, herb, 0.08-0.5 m high, leaves smooth, flower heads up to 1.5 cm across. Fl. yellow, Jan to Dec (mainly in Spring). Hand remove small infestations and/or isolated plants, ensuring the taproot is removed. Alternatively wipe rosettes with glyphosate at 30%. Dicamba (broad leaf selective) can be mixed with Glyphosate for increased impact

Lysimachia arvensis Pimpernel		Hairless, weak stemmed low growing herb; flowers mostly blue. Germinates in autumn and spring, flowers in spring. This species reproduces by seed. Glyphosate should work
Medicago polymorpha Burr Medic		Prostrate or ascending annual, herb, 0.04-0.2 m high, to 0.5 m wide. Fl. yellow, Jan to Feb or May or Jul to Nov. Relatively tolerant to glyphosate, grazing and mowing. Hand pull isolated plants in winter before flowering. Lontrel® at 10 ml/10 L + wetting agent provides effective control in early winter. Otherwise metsulfuron methyl 0.1 g/10 L + wetting agent or 1 g/10 L of Logran® applied in early winter provides reasonably selective control.

Opuntia dejecta (tentative ID)		Perennial succulent shrub Physical removal appears to be one of the most effective control methods, but the spines make manual removal of these species difficult. Care must also be taken to remove and properly dispose of, usually by burning, all vegetative and fruit material. The root system must also be dug out to prevent regrowth. Monosodium methylarsonate, picloram + triclopyr and triclopyr are registered for use on Opuntia spp. in WA. Opuntia sp. can be painted (or sprayed) with a ratio of 60:1 Biosafe to Grazon.
Opuntia stricta Prickly Pear Young plants were present in pushed up piles of timber 		Succulent small shrub/ tree. Reproduces asexually from stem fragments, flowers or immature fruits. *Seedbank persistence.* 10 to 20 years. *Fire response.* May not be killed in fire, may result in vigorous regrowth following fire. Physical removal appears to be one of the most effective control methods for Prickly Pears, but the spines make manual removal of these species difficult. Care must also be taken to remove and properly dispose of, usually by burning, all vegetative and fruit material. The root system must also be dug out to prevent regrowth. Monosodium methylarsonate, picloram + triclopyr and triclopyr are registered for use on Opuntia spp. in WA. Prickly Pear can be painted (or sprayed) with a ratio of 60:1 Biosafe to Grazon.

Oxalis pes-caprae Soursob Poseidon North *Image: FloraBase*		Bulbaceous and rhizatomous perennial herb. Flowers yellow, June to October Spot spray metsulfuron methyl 0.2 g/15 L + Pulse®, or 1% glyphosate. Apply at bulb exhaustion, generally just on flowering. Exercise care if manually removing as physical removal can result in spread of bulbils.
Raphanus raphanistrum Wild radish *Image: FloraBase*		Erect annual herb, 0.15 – 1 m tall; flowers yellow-white/ pink, April to May, July to November Hand pull isolated plants Spot spray 1% glyphosate before flowering.

Salvia verbenaca Wild Sage		Aromatic erect, greyish green perennial herb; 0.1 – 1 m tall; flowers blue-pink-purple, April or July to October (most were pre-flowering in June) Spray small areas until just wet and a 1-2 metre buffer strip (where possible, avoiding native plants) with a mixture of 1 litre of Tordon® 75-D in 100 litres of water.
Solanum nigrum Black berry nightshade, deadly nightshade Image: FloraBase		Erect perennial herb or short-lived shrub to 1 m high; flowers white January to December; fruit a black berry Prevent seed set for several years. Hand weed small infestations. 1 L/ha Starane® or 20 mL in 10 L water, applied when the weed is actively growing in summer, will provide reasonably selective control. 1 L/ha 2,4-D amine(500g/L) or 20 mL in 10 L water is also used for the control of young plants in early summer and at these rates causes little damage to most established native species.

Sonchus oleraceus Common Sowthistle		Erect annual or short lived perennial herb up to 1.5 m high, with milky sap; flowers yellow – recorded all year round, dependent on rainfall. Most plants were still rosettes; however, some were in flower and going to seed. Remove small and/or isolated populations manually prior to seed set. This species was quite common, particularly along the pipeline and surrounding area. Slashing is often ineffective as flowers continue to be produced. Spot spray Lontrel® 10 ml/10 L + wetting agent preferably at the rosette stage – autumn, winter.

Some weed descriptions (e.g., flowering times) and control recommendations are not specifically for the Goldfields region, so these may vary slightly from the above information. A weed control specialist with experience in the region may offer different control methods which are more suitable, or have been found to be more effective, than those described above.

References

Department of Primary Industries and Regional Development Western Australia (Agriculture and Food) – Declared Plants; Western Australian Organism List – Website – Searched June 2021 – agric.wa.gov.au/pests-weeds-diseases/weeds/declared plants

Department of Primary Industries and Regional Development Western Australia (Agriculture and Food) – Bridal Creeper Control – agric.wa.gov.au/herbicides/bridal creeper control

Herbiguide – accessed June 2021; www.herbiguide.com.au/Desciptions

Western Australian Herbarium (1998-) FloraBase. Accessed June 2021: florabase.dpaw.wa.gov.au/browse

Appendix 1: GPS locations of weeds

Scientific Name	Zone	Easting	Northing	No.	Site
Agave americana var. americana	51J	354238	6543450	10	Spargos
Agave americana var. americana	51J	354337	6543561	5	Spargos
Asparagus asparagoides	51J	354227	6543424	1	Spargos
Bryophyllum delagoense	51J	354046	6543694	30	Spargos
Carrichtera annua	51J	379310	6487312	5	Aquarius
Carrichtera annua	51J	379727	6485896	10	Aquarius
Carrichtera annua	51J	388117	6482918	5	Eundynie mine area
Carrichtera annua	51J	388121	6482897	5	Eundynie mine area
Carrichtera annua	51J	388064	6482877	15	Eundynie mine area
Carrichtera annua	51J	388037	6482886	3	Eundynie mine area
Carrichtera annua	51J	387998	6482912	30	Eundynie mine area
Carrichtera annua	51J	387988	6482892	20	Eundynie mine area
Carrichtera annua	51J	387915	6482932	10	Eundynie mine area
Carrichtera annua	51J	387911	6482923	5	Eundynie mine area
Carrichtera annua	51J	387829	6482884	5	Eundynie mine area
Carrichtera annua	51J	387790	6482885	20	Eundynie mine area
Carrichtera annua	51J	387767	6482872	15	Eundynie mine area
Carrichtera annua	51J	387751	6482873	50	Eundynie mine area
Carrichtera annua	51J	387748	6482857	100	Eundynie mine area
Carrichtera annua	51J	387760	6482841	500	Eundynie mine area
Carrichtera annua	51J	387534	6483672	15	Eundynie mine area
Carrichtera annua	51J	387511	6483678	200	Eundynie mine area
Carrichtera annua	51J	387486	6483689	50	Eundynie mine area
Carrichtera annua	51J	387460	6483693	100	Eundynie mine area
Carrichtera annua	51J	387422	6483697	200	Eundynie mine area
Carrichtera annua	51J	387391	6483699	100	Eundynie mine area
Carrichtera annua	51J	387401	6483727	100	Eundynie mine area
Carrichtera annua	51J	387408	6483750	50	Eundynie mine area
Carrichtera annua	51J	387421	6483772	100	Eundynie mine area
Carrichtera annua	51J	387428	6483802	15	Eundynie mine area
Carrichtera annua	51J	388108	6482869	20	Eundynie mine area
Carrichtera annua	51J	387818	6482906	20	Eundynie mine area
Carrichtera annua	51J	387800	6482901	20	Eundynie mine area
Carrichtera annua	51J	387782	6482917		Eundynie mine area
Carrichtera annua	51J	387761	6482933	200	Eundynie mine area
Carrichtera annua	51J	387729	6482933	300	Eundynie mine area
Carrichtera annua	51J	387713	6482950	200	Eundynie mine area
Carrichtera annua	51J	387536	6483662	10	Eundynie mine area
Carrichtera annua	51J	387509	6483666	100	Eundynie mine area
Carrichtera annua	51J	387488	6483668	30	Eundynie mine area
Carrichtera annua	51J	387432	6483679	60	Eundynie mine area
Carrichtera annua	51J	387393	6483689	50	Eundynie mine area

Carrichtera annua	51J	387375	6483687	40	Eundynie mine area
Carrichtera annua	51J	387406	6483713	20	Eundynie mine area
Carrichtera annua	51J	387422	6483740	100	Eundynie mine area
Carrichtera annua	51J	387447	6483774	20	Eundynie mine area
Carrichtera annua	51J	380338	6487280	10	haul road
Carrichtera annua	51J	380270	6487244	200	haul road
Carrichtera annua	51J	380253	6487204	20	haul road
Carrichtera annua	51J	380249	6487184	10	haul road
Carrichtera annua	51J	380155	6487147	10	haul road
Carrichtera annua	51J	380792	6485636	30	haul road
Carrichtera annua	51J	379998	3486092	20	haul road
Carrichtera annua	51J	380112	6487692	20	haul road
Carrichtera annua	51J	380117	6487159	111	haul road
Carrichtera annua	51J	380165	6487173	50	haul road
Carrichtera annua	51J	380158	6487216	10	haul road
Carrichtera annua	51J	379988	6486015	5	haul road
Carrichtera annua	51J	380203	6487163	10	haul road
Carrichtera annua	51J	379073	6489224	5	Poseidon North
Carrichtera annua	51J	379174	6489474	5	Poseidon North
Carrichtera annua	51J	354048	6543982	2	Spargos
Carrichtera annua	51J	354245	6543416	1	Spargos
Carrichtera annua	51J	354222	6543415	40	Spargos
Carrichtera annua	51J	354022	6542943	10	Spargos
Carrichtera annua	51J	354313	6543537	5	Spargos
Carrichtera annua	51J	379340	6487409	50	Two Boys
Carrichtera annua	51J	379305	6487401	5	Two Boys
Carrichtera annua	51J	379312	6487385	5	Two Boys
Carrichtera annua	51J	379283	6487422	10	Two Boys
Carrichtera annua	51J	379120	6487333	1	Two Boys
Carrichtera annua	51J	379056	6487524	5	Two Boys
Carrichtera annua	51J	379030	6487572	100	Two Boys
Centaurea melitensis	51J	387511	6483678	5	Eundynie mine area
Centaurea melitensis	51J	380171	6487188	1	haul road
Centaurea melitensis	51J	381534	6485532	5	haul road
Centaurea melitensis	51J	380112	6487692	20	haul road
Centaurea melitensis	51J	380073	6487505	30	haul road
Centaurea melitensis	51J	380160	6487184	2	haul road
Centaurea melitensis	51J	380158	6487216	20	haul road
Centaurea melitensis	51J	380049	6486758	30	haul road
Centaurea melitensis	51J	380937	6485604	20	haul road
Centaurea melitensis	51J	379073	6489224	10	Poseidon North
Centaurea melitensis	51J	378976	6489374	20	Poseidon North
Centaurea melitensis	51J	380259	6490071	10	Poseidon North
Centaurea melitensis	51J	388456	6482528	300	South Mousehollow

Centaurea melitensis	51J	379286	6487410	50	Two Boys
Centaurea melitensis	51J	379070	6487510	30	Two Boys
Centaurea melitensis	51J	379452	6487264	20	Two Boys
Cleretum papulosum subsp. papulosum	51J	388113	6482923	5	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	387792	6482827	1	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	387511	6483678	5	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	387422	6483697	5	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	387401	6483727	5	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	388108	6482869	1	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	387826	6482906	5	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	387800	6482901	2	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	387782	6482917	10	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	387729	6482933	10	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	387676	6482951	1	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	387488	6483668	5	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	387375	6483687	10	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	387406	6483713	20	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	387458	6483804	1	Eundynie mine area
Cleretum papulosum subsp. papulosum	51J	354087	6543298	1	Spargos
Cleretum papulosum subsp. papulosum	51J	354245	6543416	8	Spargos
Cleretum papulosum subsp. papulosum	51J	379120	6487333	20	Two Boys
Dittrichia graveolens	51J	379349	6487291	10	Two Boys
Erodium aureum	51J	388064	6482877	1	Eundynie mine area
Erodium aureum	51J	387767	6482872	3	Eundynie mine area
Erodium aureum	51J	387748	6482857	5	Eundynie mine area
Erodium aureum	51J	387511	6483678	15	Eundynie mine area
Erodium aureum	51J	387486	6483689	20	Eundynie mine area
Erodium aureum	51J	387460	6483693	20	Eundynie mine area
Erodium aureum	51J	387422	6483697	50	Eundynie mine area
Erodium aureum	51J	387391	6483699	50	Eundynie mine area
Erodium aureum	51J	387401	6483727	30	Eundynie mine area
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Erodium aureum	51J	387509	6483666	10	Eundynie mine area
Erodium aureum	51J	387488	6483668	10	Eundynie mine area
Erodium aureum	51J	387432	6483679	20	Eundynie mine area
Erodium aureum	51J	387375	6483687	20	Eundynie mine area

Erodium aureum	51J	387422	6483740	50	Eundynie mine area
Erodium aureum	51J	387447	6483774	20	Eundynie mine area
Erodium aureum	51J	379174	6489474	2	Poseidon North
Erodium aureum	51J	388892	6482029	5	South Mousehollow
Erodium aureum	51J	354069	6543186	100	Spargos
Erodium aureum	51J	354173	6543390	40	Spargos
Erodium aureum	51J	354043	6543210	100	Spargos
Erodium aureum	51J	354103	6543280	200	Spargos
Erodium aureum	51J	354087	6543298	100	Spargos
Erodium aureum	51J	354093	6543333	50	Spargos
Erodium aureum	51J	354103	6543340	100	Spargos
Erodium aureum	51J	354107	6543354	20	Spargos
Erodium aureum	51J	354128	6543412	25	Spargos
Erodium aureum	51J	354141	6543330	20	Spargos
Erodium aureum	51J	354269	6543410	30	Spargos
Erodium aureum	51J	354282	6543338	5	Spargos
Erodium aureum	51J	354284	6543319	5	Spargos
Erodium aureum	51J	354272	6543298	5	Spargos
Erodium aureum	51J	354247	6543297	20	Spargos
Erodium aureum	51J	354232	6543314	50	Spargos
Erodium aureum	51J	354235	6543333	50	Spargos
Erodium aureum	51J	354048	6543982	2	Spargos
Erodium aureum	51J	354087	6542983	10	Spargos
Erodium aureum	51J	354085	6542524	10	Spargos
Erodium aureum	51J	354588	6543312	5	Spargos
Erodium aureum	51J	354572	6543313	25	Spargos
Erodium aureum	51J	354482	6542675	20	Spargos
Erodium aureum	51J	354245	6543416	5	Spargos
Erodium aureum	51J	354222	6543415	20	Spargos
Erodium aureum	51J	354220	6543399	200	Spargos
Erodium aureum	51J	354200	6543366	100	Spargos
Erodium aureum	51J	354191	6543331	200	Spargos
Erodium aureum	51J	354210	6543311	50	Spargos
Erodium aureum	51J	354090	6543139	50	Spargos
Erodium aureum	51J	354053	6543040	10	Spargos
Erodium aureum	51J	354037	6543049	5	Spargos
Erodium aureum	51J	354022	6542943	10	Spargos
Erodium aureum	51J	354158	6542673	400	Spargos
Erodium aureum	51J	354107	6542522	20	Spargos
Erodium aureum	51J	354489	6542516	10	Spargos
Erodium aureum	51J	379073	6487493	1	Two Boys
Erodium cicutarium	51J	379073	6489224	10	Poseidon North
Hypochaeris glabra	51J	379997	6486122	10	haul road
Hypochaeris glabra	51J	380000	6486185	15	haul road

Hypochaeris glabra	51J	380017	6486460	7	haul road
Hypochaeris glabra	51J	379240	6487393	5	Two Boys
Hypochaeris glabra	51J	379237	6487265	10	Two Boys
Hypochaeris glabra	51J	379120	6487333	3	Two Boys
Lysimachia arvensis	51J	388113	6482923	10	Eundynie mine area
Lysimachia arvensis	51J	387751	6482873	5	Eundynie mine area
Lysimachia arvensis	51J	387534	6483672	15	Eundynie mine area
Lysimachia arvensis	51J	387511	6483678	10	Eundynie mine area
Lysimachia arvensis	51J	387422	6483697	20	Eundynie mine area
Lysimachia arvensis	51J	387391	6483699	20	Eundynie mine area
Lysimachia arvensis	51J	387401	6483727	15	Eundynie mine area
Lysimachia arvensis	51J	387408	6483750	20	Eundynie mine area
Lysimachia arvensis	51J	387421	6483772	15	Eundynie mine area
Lysimachia arvensis	51J	387826	6482906	10	Eundynie mine area
Lysimachia arvensis	51J	387536	6483662	20	Eundynie mine area
Lysimachia arvensis	51J	387509	6483666	20	Eundynie mine area
Lysimachia arvensis	51J	387432	6483679	10	Eundynie mine area
Lysimachia arvensis	51J	387422	6483740	20	Eundynie mine area
Lysimachia arvensis	51J	387458	6483804	1	Eundynie mine area
Lysimachia arvensis	51J	354069	6543186	1	Spargos
Lysimachia arvensis	51J	354087	6543298	1	Spargos
Lysimachia arvensis	51J	354141	6543330	5	Spargos
Lysimachia arvensis	51J	354245	6543416	5	Spargos
Lysimachia arvensis	51J	354222	6543415	20	Spargos
Lysimachia arvensis	51J	354191	6543331	10	Spargos
Lysimachia arvensis	51J	354022	6542943	50	Spargos
Medicago polymorpha	51J	378909	6489238	1	Poseidon North
Medicago polymorpha	51J	378976	6489374	5	Poseidon North
Opuntia dejecta	51J	354222	6543415	1	Spargos
Opuntia stricta	51J	354238	6543450	10	Spargos
Opuntia stricta	51J	354247	6543408	3	Spargos
Opuntia stricta	51J	354223	6543421	2	Spargos
Opuntia stricta	51J	354222	6543415	20	Spargos
Oxalis pes-caprae	51J	380034	6490383	2	Poseidon North
Raphanus raphanistrum	51J	379501	6485881	40	Aquarius
Raphanus raphanistrum	51J	387534	6483672	5	Eundynie mine area
Raphanus raphanistrum	51J	380171	6487188	1	haul road
Raphanus raphanistrum	51J	379997	6486122	20	haul road
Raphanus raphanistrum	51J	379067	6487555	200	haul road
Raphanus raphanistrum	51J	380160	6487184	2	haul road
Salvia verbenaca	51J	387536	6483662	5	Eundynie mine area
Salvia verbenaca	51J	380154	6487084	100	haul road
Salvia verbenaca	51J	380199	6487333	10	haul road
Salvia verbenaca	51J	380253	6487204	100	haul road

Salvia verbenaca	51J	380249	6487184	200	haul road
Salvia verbenaca	51J	380235	6487162	300	haul road
Salvia verbenaca	51J	380203	6487163	150	haul road
Salvia verbenaca	51J	380126	6487158	500	haul road
Salvia verbenaca	51J	380165	6487173	50	haul road
Salvia verbenaca	51J	380158	6487216	50	haul road
Salvia verbenaca	51J	379240	6487393	5	Two Boys
Solanum nigrum	51J	387761	6482933	3	Eundynie mine area
Solanum nigrum	51J	387432	6483679	1	Eundynie mine area
Solanum nigrum	51J	381534	6485532	10	haul road
Solanum nigrum	51J	380028	6486547	1	haul road
Solanum nigrum	51J	380033	6486596	5	haul road
Solanum nigrum	51J	354087	6543298	5	Spargos
Sonchus oleraceus	51J	387536	6483662	30	Eundynie mine area
Sonchus oleraceus	51J	380002	6486079	20	haul road
Sonchus oleraceus	51J	379996	6486081	45	haul road
Sonchus oleraceus	51J	380014	6486262	20	haul road
Sonchus oleraceus	51J	380024	6486394	15	haul road
Sonchus oleraceus	51J	380026	6486418	50	haul road
Sonchus oleraceus	51J	380029	6486479	45	haul road
Sonchus oleraceus	51J	380036	6486542	45	haul road
Sonchus oleraceus	51J	380038	6486577	2	haul road
Sonchus oleraceus	51J	380044	6486654	15	haul road
Sonchus oleraceus	51J	380050	6486701	5	haul road
Sonchus oleraceus	51J	380233	6487332	50	haul road
Sonchus oleraceus	51J	380338	6487280	100	haul road
Sonchus oleraceus	51J	379067	6487555	20	haul road
Sonchus oleraceus	51J	380160	6487184	2	haul road
Sonchus oleraceus	51J	380084	6487104	1	haul road
Sonchus oleraceus	51J	380082	6487047	5	haul road
Sonchus oleraceus	51J	380075	6486987	70	haul road
Sonchus oleraceus	51J	380049	6486758	10	haul road
Sonchus oleraceus	51J	379994	6486051	5	haul road
Sonchus oleraceus	51J	380188	6487320	100	haul road
Sonchus oleraceus	51J	379087	6490381	10	Poseidon North
Sonchus oleraceus	51J	388456	6482528	10	South Mousehollow
Sonchus oleraceus	51J	379070	6487510	50	Two Boys
Sonchus oleraceus	51J	379053	6487589	2	Two Boys
Sonchus oleraceus	51J	379349	6487291	10	Two Boys
Sonchus oleraceus	51J	379452	6487264	10	Two Boys