
FOX CREEK TO NAMAJO JUNCTION EXPANSION PIPELINE PROJECT 2016 WHITE AREA PRE-CONSTRUCTION WEED SURVEY REPORT

Submitted to:



Pembina Pipeline
Calgary Alberta

Submitted by:



AAR Environmental Services
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1 INTRODUCTION

Pembina Pipeline Corporation (Pembina) is proposing to construct the Fox Creek to Namao Junction Expansion Pipeline Project (Project) to connect existing and future supplies of hydrocarbon liquids from its facility in the Fox Creek area to existing processing facilities located north of Edmonton, Alberta. The Project consists of two, approximately 268 km pipelines that will be constructed concurrently and installed in the same trench. The proposed pipeline route traverses both Crown and private lands in both the White and Green Areas of the province, and extends east from Pembina's existing Fox Creek Pump Station (Legal Subdivision (LSD) 08-36-062-20 W5M) to Pembina's existing Namao Junction (LSD 04-35-054-24 W4M). The proposed pipelines are Nominal Pipe Size (NPS) 16 inches (206.4 mm outside diameter (O.D.)) and NPS 24 inches (609.6 mm O.D.) and have been designed to transport High Vapour Pressure (HVP) hydrocarbon liquids: a mix of C2+, C3+ and C5+. The construction right-of-way (RoW) will consist of a permanent RoW width of 35 m with an additional 10 m wide temporary workspace (TWS) for pipeline construction. Given its total length and the pipeline diameter, the Project is a Class I pipeline according to the 2,690 pipeline index threshold.

Approximately 162 km of the proposed route lies in the White Area, with the remaining approximately 106 km located in the Green Area. A Conservation and Reclamation (C&R) report was submitted on September 2, 2014 (the Boreal Group Inc. (Boreal) 2014a) to the Alberta Energy Regulator (AER) for *Environmental Protection and Enhancement Act* (EPEA) Approval for the portion of the Project within the White Area of the province. Pipeline Agreement (PLA) applications with supporting Environmental Field Reports (EFRs) have been completed for the Crown portion of the Project including Crown lands in both the Green and White Areas.

Vegetation surveys were conducted along the proposed Project route in 2014 in support of the Project's regulatory applications (Boreal 2014b,c). A pre-construction weed survey was conducted along accessible portions of the Project route in the White Area in 2015 to determine the presence, abundance and distribution of weed species along the route, the results of which have been reported previously (Boreal 2015b). Pre-construction weed surveys were conducted along the remaining portions of the Project route in the White Area prior to construction in the summer and fall of 2016. This report provides the results of these remaining 2016 weed surveys.

2 METHODS

A desktop review of existing information sources including data from 2014 and 2015 vegetation and weeds field surveys was completed for the White Area portion of the Project. The following background information regarding vegetation resources along the Project has previously been provided (Boreal 2014a,b, Boreal 2015a,b) and will not be reprised in this report:

- incidental non-native and invasive ("weed") species observations and their respective abundances recorded during the 2014 and 2015 vegetation and weeds surveys (Appendix B, Table B-2 of Boreal 2014b, Appendix A, Table A-3 of Boreal 2015b);
- a Weed Management Plan, which includes mitigation measures intended to minimize the spread of weeds during construction (Section 15.3 of the Environmental Protection Plan (EPP) (Boreal 2015a); and
- a list of weed species of concern within the Counties crossed by the proposed route (Table 2-1 of Boreal 2015b).



2.1 Nomenclature

Nomenclature throughout this report follows the Alberta Weed Control Regulation, where applicable (i.e., for weed species listed under the Regulation), and the ACIMS vascular plants element list (ACIMS 2015a) otherwise (i.e., for non-listed, non-native species). Where Regulation nomenclature differs from ACIMS', the ACIMS name is provided in brackets following the first mention of the species' name in text.

2.2 Site Selection

All quarter sections where weed surveys were not completed in 2015 and where land access permissions were in place were subject to survey in 2016.

2.3 Survey Area

The 2016 weed survey for the Project encompassed approximately 65.6 km (40.5 %) of the total proposed White Area portion of the Project route.

2.4 Data Collection

Incidental non-native and invasive species observations and their respective abundances were recorded during the 2014 vegetation surveys (Appendix B, Table B-2 of Boreal 2014b). However, due to the colonizing and often aggressive nature of weed species, as well as land management practices employed by individual landowners, weed presence and abundance can change rapidly over time. A pre-construction weed survey was therefore conducted to provide more complete characterization of baseline weed conditions along the route in the season prior to construction; weeds were a primary, rather than an incidental, focus of the 2016 surveys. The 2016 pre-construction weed survey results supplant the weed results from the 2014 vegetation survey.

The 2016 pre-construction weed survey included all quarter sections where land access permissions were in place, but which had not been previously surveyed during 2015 weed surveys, in addition to several quarter sections where appreciable route realignments had occurred since 2015 weed surveys. For each unit of land ownership or management surveyed (e.g., by quarter section or differing land use, whichever was smaller), all weed species observed were recorded; a distribution code from 1-13 was assigned following the distribution guide described by Adams et al. (2009) (Appendix A, Table A-1); and a density code from 1-4 was assigned following the BC Invasive Alien Plant Program (IAPP) form (BC Ministry of Forests, Lands and Natural Resource Operations (MFLNRO) (date unknown) (Appendix A, Table A-2). Determination of species as native or non-native followed the ACIMS complete element list (ACIMS 2015a). Additional spatial information useful in further targeting weed locations within the land management unit being surveyed (e.g., patch size and coordinates) was also collected. Weed species were identified using regionally-appropriate reference materials (e.g., Dickinson and Royer 1999, Moss 1983, Whitson 2012).

2.5 Clubroot

Clubroot prevention measures were implemented during the weed survey before entering into or moving between lands under annual crop production: footwear and small equipment (e.g., trowels) were thoroughly cleaned of soil and debris and sanitized using a bleach solution between fields to prevent the spread of soil-borne crop diseases such as clubroot, as well as weeds.



3 RESULTS

Weed survey for the White Area portion of the Project occurred from July 22-28, August 2-10, August 12-13, August 22-25, August 30, September 13-17, September 25, and October 13, 2016.

3.1 Non-native and Invasive Species

One plant species designated under the *Weed Control Act* as a Prohibited Noxious weed was observed during the White Area pre-construction weed survey:

- orange hawkweed (*Hieracium aurantiacum*).

Orange hawkweed was observed at moderate abundance in NE 21-056-01 W5M. Under the Alberta *Weed Control Act*, plant species designated as Prohibited Noxious weeds must be destroyed by the owner or occupant of those lands on which the species are present.

The following nine Noxious weed species were observed during the survey:

- Canada thistle (creeping thistle) (*Cirsium arvense*);
- common tansy (*Tanacetum vulgare*);
- oxeye daisy (*Leucanthemum vulgare*);
- perennial sow thistle (*Sonchus arvensis*);
- scentless chamomile (*Tripleurospermum inodorum*);
- tall buttercup (*Ranunculus acris*);
- white cockle (*Silene latifolia* ssp. *alba*); and
- yellow toadflax (common toadflax) (*Linaria vulgaris*).

Under the Alberta *Weed Control Act*, plant species designated as Noxious weeds must be controlled by the owner or occupant of those lands on which the species are present.

Numerous non-native plant species that are not designated under the *Weed Control Act* were also observed during the weed survey. Weed observations made during the 2016 weed surveys of the pipeline RoW and temporary workspace are provided in Table A-3 (Appendix A), arranged by legal location and land use, from east to west. Weed observations made during 2016 weed surveys of vehicle access are provided in Table A-4 (Appendix A).



4 DISCUSSION AND RECOMMENDATIONS

4.1 Weed Surveys

Weeds surveys have been conducted on the majority of lands traversed by the Project in the White Area (approximately 94.1 km (58.1 %) in 2015 and approximately 65.6 km (40.5 %) in 2016). Weeds are typically abundant in lands under agricultural use (*i.e.*, the majority of White Area lands crossed by the Project), and different land management practices affect weed presence, abundance and distribution. Consequently, it is likely that additional weed infestations exist along unsurveyed portions of the route (*i.e.*, 1.8% of the Project route where no land access permission was granted). Given the abundance and distribution of weeds observed within surveyed areas, it is anticipated that mitigation measures outlined within the Weed Management Plan of the Project EPP will be sufficient to address weeds of concern that may be present within unsurveyed portions of the route.

4.2 Mitigation

The 2016 weed survey results are provided in Table A-3 (Appendix A). Conscientious application of weed control measures denoted in the Weed Management Plan of the Project EPP (Section 15.3 of Boreal 2015a) are expected to minimize the spread of weeds during Project construction. These measures remain applicable and valid to the site conditions observed during field studies along the proposed route in 2016 and, therefore, were determined not to require revision.

Mitigation measures in the Project EPP are expected to allow Pembina's Environmental Inspector (EI) to effectively address any additional weeds of concern discovered prior to or during construction.

4.3 Reclamation and Monitoring

Clean-up and reclamation measures are provided the Project EPP (Section 12 of Boreal 2015a). Pembina will conduct a Post Construction Reclamation Assessment (PCRA) to determine the effectiveness of mitigation measures on weeds, among other items, in the White Area, as directed under EPEA and the *Conservation and Reclamation Regulation*. The PCRA will be based on the *Reclamation Assessment Criteria for Pipelines: 2001 Draft* (Government of Alberta 2001), or the most recent reclamation criteria available at the time of reclamation.



5 REFERENCES

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- Dickinson, France and Royer, Richard. 1999. Weeds of Canada and the Northern United States: A Guide for Identification. The University of Alberta Press. Edmonton, Alberta. 433 pp.
- Government of Alberta. 2001. Reclamation Assessment Criteria for Pipelines: 2001 Draft. 102 pp. Available: <http://environment.gov.ab.ca/info/library/6883.pdf>. Accessed: September 2015.
- Moss, E.H. 1983. Flora of Alberta. Second Edition. Revised by J.G. Packer. University of Toronto Press. Toronto, Ontario. 687 pp.
- Whitson, Tom D. (ed.) 2012. Weeds of the West. 11th ed. The Western Society of Weed Science. Las Cruces, New Mexico. 628 pp.



Appendix A

Weeds

**Table A-1: Weed Distribution Codes**

Class	Description of abundance in polygon	Distribution
0	None	
1	Rare	
2	A few sporadically occurring individual plants	
3	A single patch	
4	A single patch plus a few sporadically occurring plants	
5	Several sporadically occurring plants	
6	A single patch plus several sporadically occurring plants	
7	A few patches	
8	A few patches plus several sporadically occurring plants	
9	Several well spaces patches	
10	Continuous uniform occurrences of well spaces plants	
11	Continuous occurrence of plants with a few gaps in the distribution	
12	Continuous dense occurrence of plants	
13	Continuous occurrence of plants with a distinct linear edge in the polygon	

Source: Adams et al. 2009



Table A-2: Weed Density Codes

Density Code	Definition
1	< 1 plant/m ²
2	2-5 plants/m ²
3	6-10 plants/m ²
4	> 10 plants/m ²

Source: BC MFLNRO *date unknown*

**Table A-3: 2016 Weed Survey Results of Proposed Pipeline Right-of-way and Temporary Workspace Locations**

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
Lac Ste. Anne County							
NW 18-058-09 W5M	road	ditch	smooth brome	not listed	13	2	--
			timothy	not listed	13	2	
	tame grass	pasture	tall buttercup	Noxious	2	1	--
			common dandelion	not listed	12	3	
NE 18-058-09 W5M	tame grass	hay	tall buttercup	Noxious	2	1	--
			common dandelion	not listed	12	3	
			night-flowering catchfly	not listed	3	2	
	tame grass	pasture	Canada thistle	Noxious	9	3	Patches of Canada thistle were observed both on and off the Project RoW. A large patch of Canada thistle was observed at 11U 609845 E, 5986808 N.
			perennial sow thistle	Noxious	6	2	
			tall buttercup	Noxious	6	2	
			annual hawk's-beard	not listed	2	1	
			common chickweed	not listed	2	1	
			common dandelion	not listed	10	1	
			common plantain	not listed	2	1	
			flixweed	not listed	2	1	
			hemp-nettle	not listed	2	1	
			night-flowering catchfly	not listed	2	1	
			prostrate knotweed	not listed	2	1	
			Russian pigweed	not listed	6	2	
			stinkweed	not listed	1	1	
			wild buckwheat	not listed	1	1	
NW 17-058-09 W5M	treed	native	Canada thistle	Noxious	2	1	--
			hemp-nettle	not listed	7	2	
NW 34-057-09 W5M	annual crop	field line	Canada thistle	Noxious	2	1	A patch of Canada thistle was also observed on the existing RoW, off of the proposed Project RoW.
			white cockle	Noxious	2	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			prickly annual sow-thistle	not listed	2	1	
			red clover	not listed	5	2	
			shepherd's-purse	not listed	2	1	
			smooth brome	not listed	13	2	
			stinkweed	not listed	2	1	
			timothy	not listed	2	2	

Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	annual crop	cultivation	tufted vetch	not listed	2	1	--
			wild buckwheat	not listed	2	1	
			wild oat	not listed	2	1	
			Canada thistle	Noxious	5	1	
			annual hawk's-beard	not listed	2	1	
			black medick	not listed	2	1	
			cleavers	not listed	2	1	
			clover species	not listed	2	1	
			common plantain	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			prickly annual sow-thistle	not listed	5	1	
			volunteer soybeans	not listed	2	1	
			volunteer canola	not listed	2	1	
			wild buckwheat	not listed	2	1	
	annual crop	field line	Canada thistle	Noxious	2	1	--
			alfalfa	not listed	2	1	
			alsike clover	not listed	5	1	
			common dandelion	not listed	5	2	
			night-flowering catchfly	not listed	2	1	
			smooth brome	not listed	13	2	
SW 34-057-09 W5M	annual crop	field line	timothy	not listed	5	2	--
			Canada thistle	Noxious	7	2	
			tall buttercup	Noxious	2	1	
			alfalfa	not listed	2	1	
			alsike clover	not listed	5	1	
			common dandelion	not listed	5	2	
			hemp-nettle	not listed	2	1	
			night-flowering catchfly	not listed	2	1	
			red clover	not listed	2	1	
			white sweet-clover	not listed	5	2	
			wild oat	not listed	13	3	
			yellow sweet-clover	not listed	10	2	
	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			annual hawk's-beard	not listed	2	1	
			cleavers	not listed	12	3	
			clover species	not listed	2	1	
			common chickweed	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			common dandelion	not listed	5	1	
			common plantain	not listed	2	1	
			volunteer barley	not listed	2	1	
			hemp-nettle	not listed	2	1	
			orchard grass	not listed	13	2	
			prickly annual sow-thistle	not listed	12	3	
			wild buckwheat	not listed	10	1	
			wild oat	not listed	2	1	
	treed	pasture	Canada thistle	Noxious	11	2	Oxeye daisy plants were observed along the western fenceline both on and off the Project RoW.
			oxeye daisy	Noxious	2	1	
			perennial sow thistle	Noxious	11	2	
			black medick	not listed	2	1	
			common dandelion	not listed	5	1	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	2	1	
			stinkweed	not listed	2	1	
			tufted vetch	not listed	11	2	
			white sweet-clover	not listed	4	2	
			wild oat	not listed	2	1	
			yellow sweet-clover	not listed	4	2	
	tame forage	hay	oxeye daisy	Noxious	2	1	Oxeye daisy plants were observed along the western fenceline both on and off the Project RoW.
			common dandelion	not listed	5	1	
			common plantain	not listed	2	1	
SE 34-057-09 W5M	tame forage	hay	common dandelion	not listed	5	1	--
			common plantain	not listed	2	1	
			wild buckwheat	not listed	2	1	
	road	ditch	tall buttercup	Noxious	1	1	An additional small patch of tall buttercup was observed off of the Project RoW to the east.
			alfalfa	not listed	2	1	
			alsike clover	not listed	9	3	
			common dandelion	not listed	5	2	
			orchard grass	not listed	10	2	
			red clover	not listed	2	1	
			smooth brome	not listed	13	2	
			timothy	not listed	13	2	
			yellow sweet-clover	not listed	4	2	
NE 27-057-09 W5M	road	ditch	Canada thistle	Noxious	5	1	--



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Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			alsike clover	not listed	9	2	
			common dandelion	not listed	5	1	
			orchard grass	not listed	5	1	
			red clover	not listed	2	1	
			smooth brome	not listed	13	2	
			timothy	not listed	10	2	
	tame forage	hay	common dandelion	not listed	10	1	--
	tame grass	pasture	Canada thistle	Noxious	4	2	Canada thistle and tall buttercup were observed to be more abundant near the west fenceline.
			tall buttercup	Noxious	6	2	
			common dandelion	not listed	10	2	
	tame forage	hay	Canada thistle	Noxious	4	2	A patch of Canada thistle was observed at the southeast fenceline, both on and off the Project RoW.
			common dandelion	not listed	10	1	
	road	ditch	Canada thistle	Noxious	8	3	A large patch of Canada thistle was observed along Range Road 92, both on and off the Project RoW. Two tall buttercup plants were also observed on the Project RoW.
			tall buttercup	Noxious	1	1	
			alfalfa	not listed	2	1	
			alsike clover	not listed	7	2	
			common dandelion	not listed	5	1	
			hemp-nettle	not listed	2	1	
			orchard grass	not listed	5	2	
			prostrate knotweed	not listed	2	1	
			red clover	not listed	3	2	
			smooth brome	not listed	10	2	
			timothy	not listed	13	2	
			yellow sweet-clover	not listed	2	1	
NW 26-057-09 W5M	road	ditch	Canada thistle	Noxious	4	2	A large patch of Canada thistle was observed off the Project RoW on the existing RoW.
			orchard grass	not listed	10	2	
			smooth brome	not listed	13	2	
			timothy	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	6	2	A patch of perennial sow thistle was observed on the Project RoW along the south fenceline.
			perennial sow thistle	Noxious	3	2	
			tall buttercup	Noxious	4	1	
			annual hawk's-beard	not listed	2	1	
			common dandelion	not listed	5	1	



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2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			common plantain	not listed	2	1	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			night-flowering catchfly	not listed	1	1	
			prickly annual sow-thistle	not listed	2	1	
			shepherd's-purse	not listed	2	1	
			smooth brome	not listed	12	3	
			stinkweed	not listed	2	1	
			sweet-clover species	not listed	2	1	
			timothy	not listed	5	1	
			volunteer canola	not listed	2	1	
	tame grass	pasture	Canada thistle	Noxious	8	2	Canada thistle was observed mainly along a series of recreational vehicle trails.
			perennial sow thistle	Noxious	2	1	
			tall buttercup	Noxious	10	2	
			annual hawk's-beard	not listed	2	1	
			bluebur	not listed	2	1	
			common dandelion	not listed	10	2	
			common plantain	not listed	2	1	
			flixweed	not listed	2	1	
			hemp-nettle	not listed	2	1	
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			shepherd's-purse	not listed	2	1	
			stinkweed	not listed	5	1	
			wild buckwheat	not listed	2	1	
			yellow sweet-clover	not listed	2	1	
SW 26-057-09 W5M	annual crop	field line	Canada thistle	Noxious	5	1	--
			tall buttercup	Noxious	2	1	
			alfalfa	not listed	2	1	
			alsike clover	not listed	4	2	
			common dandelion	not listed	13	2	
			smooth brome	not listed	13	2	
	annual crop	cultivation	Canada thistle	Noxious	6	2	--
			cleavers	not listed	10	2	
			clover species	not listed	5	1	
			common dandelion	not listed	5	1	
			volunteer barley	not listed	2	1	



Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	treed	native	hemp-nettle	not listed	5	1	A large patch of Canada thistle was observed along the watercourse both on and off Project RoW.
			prickly annual sow-thistle	not listed	2	1	
			wild buckwheat	not listed	2	1	
			Canada thistle	Noxious	6	3	
			tall buttercup	Noxious	2	1	
			alfalfa	not listed	2	1	
			alsike clover	not listed	2	1	
			common dandelion	not listed	5	1	
			prickly annual sow-thistle	not listed	2	1	
			smooth brome	not listed	8	2	
			tufted vetch	not listed	2	1	
			volunteer canola	not listed	1	1	
			white sweet-clover	not listed	2	1	
			yellow sweet-clover	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	4	2	Canada thistle plants were mainly observed along crop margins.
			alfalfa	not listed	4	2	
			cleavers	not listed	5	1	
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	2	1	
			prickly annual sow-thistle	not listed	5	1	
			stinkweed	not listed	1	1	
			volunteer canola	not listed	1	1	
			wild buckwheat	not listed	2	1	
SE 26-057-09 W5M	road	ditch	Canada thistle	Noxious	2	1	--
			alfalfa	not listed	9	2	
			alsike clover	not listed	11	3	
			common dandelion	not listed	8	2	
			hemp-nettle	not listed	2	1	
			night-flowering catchfly	not listed	2	1	
			orchard grass	not listed	4	2	
			red clover	not listed	2	1	
			smooth brome	not listed	6	2	
			timothy	not listed	6	2	
	annual crop	cultivation	Canada thistle	Noxious	5	2	Canada thistle plants were mainly observed along crop margins.
			annual hawk's-beard	not listed	5	1	
			annual sow-thistle	not listed	2	1	
			cleavers	not listed	11	3	



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Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			common dandelion	not listed	5	2	
			corn spurry	not listed	2	1	
			hemp-nettle	not listed	5	2	
			lady's-thumb	not listed	8	2	
			lamb's-quarters	not listed	8	3	
			prickly annual sow-thistle	not listed	2	1	
			stinkweed	not listed	6	2	
			volunteer canola	not listed	11	4	
			volunteer wheat	not listed	11	4	
			wild buckwheat	not listed	11	3	
	treed	native	Canada thistle	Noxious	5	2	--
			alfalfa	not listed	4	1	
			alsike clover	not listed	4	2	
			common dandelion	not listed	5	2	
			hemp-nettle	not listed	2	1	
			orchard grass	not listed	4	2	
			smooth brome	not listed	6	2	
			timothy	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			alsike clover	not listed	2	1	
			cleavers	not listed	4	2	
			common chickweed	not listed	5	1	
			common dandelion	not listed	2	2	
			corn spurry	not listed	5	2	
			hemp-nettle	not listed	2	1	
			lady's-thumb	not listed	5	2	
			lamb's-quarters	not listed	6	2	
			night-flowering catchfly	not listed	1	1	
			prickly annual sow-thistle	not listed	2	1	
			stinkweed	not listed	4	1	
			volunteer canola	not listed	10	2	
			volunteer wheat	not listed	10	3	
			wild buckwheat	not listed	8	2	
	tame grass	hay	common dandelion	not listed	5	2	--
			wild oat	not listed	2	1	
	tame grass	field line	Canada thistle	Noxious	2	1	--
			hemp-nettle	not listed	4	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
SW 25-057-09 W5M	annual crop	field line	Canada thistle	Noxious	4	2	A patch of perennial sow thistle plants were observed south of the Project RoW.
			alfalfa	not listed	5	2	
			hemp-nettle	not listed	3	2	
			lamb's-quarters	not listed	2	1	
			smooth brome	not listed	13	2	
			tufted vetch	not listed	2	1	
			wild buckwheat	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			perennial sow thistle	Noxious	3	2	
			tall buttercup	Noxious	2	1	
			alfalfa	not listed	2	1	
			annual hawk's-beard	not listed	1	1	
			cleavers	not listed	5	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	4	2	
			lady's-thumb	not listed	4	2	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	2	1	
			prickly annual sow-thistle	not listed	8	2	
			stinkweed	not listed	2	1	
			sweet-clover species	not listed	2	1	
			volunteer canola	not listed	6	2	
			wild buckwheat	not listed	5	1	
			wild oat	not listed	2	1	
	road	ditch	Canada thistle	Noxious	2	1	--
			perennial sow thistle	Noxious	3	2	
			tall buttercup	Noxious	2	1	
			alfalfa	not listed	5	1	
			alsike clover	not listed	2	1	
			cleavers	not listed	2	1	
			common dandelion	not listed	10	2	
			night-flowering catchfly	not listed	2	1	
			prickly annual sow-thistle	not listed	4	2	
			red clover	not listed	1	1	
			smooth brome	not listed	13	2	
			timothy	not listed	5	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
SW 24-057-09 W5M			volunteer canola	not listed	2	1	
			wild buckwheat	not listed	2	1	
			wild oat	not listed	5	1	
			yellow sweet-clover	not listed	13	2	
	road	ditch	Canada thistle	Noxious	2	1	--
			alfalfa	not listed	5	1	
			alsike clover	not listed	2	1	
			common dandelion	not listed	5	1	
			hemp-nettle	not listed	5	1	
			orchard grass	not listed	5	2	
			smooth brome	not listed	13	2	
			timothy	not listed	10	2	
	annual crop	cultivation	Canada thistle	Noxious	3	2	A patch of Canada thistle was observed at the northwest crop edge both on and off the Project RoW.
			alfalfa	not listed	2	1	
			alsike clover	not listed	2	1	
			annual hawk's-beard	not listed	3	1	
			common chickweed	not listed	2	1	
			common dandelion	not listed	5	1	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	2	1	
			night-flowering catchfly	not listed	7	2	
			prickly annual sow-thistle	not listed	2	1	
			shepherd's-purse	not listed	2	1	
			stinkweed	not listed	2	1	
			volunteer wheat	not listed	7	2	
			wild buckwheat	not listed	10	2	
			wild oat	not listed	5	1	
	shelterbelt	field line	alfalfa	not listed	2	1	--
			ball mustard	not listed	2	1	
			common dandelion	not listed	5	1	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			smooth brome	not listed	13	2	
			volunteer canola	not listed	2	1	
			wild oat	not listed	2	1	
NE 13-057-09 W5M	annual crop	field line	Canada thistle	Noxious	5	2	--

Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	annual crop	cultivation	alfalfa	not listed	7	2	--
			common dandelion	not listed	2	1	
			smooth brome	not listed	11	3	
			Canada thistle	Noxious	2	1	
			alsike clover	not listed	5	1	
			annual hawk's-beard	not listed	4	2	
			cleavers	not listed	5	2	
			common dandelion	not listed	2	1	
			dog mustard	not listed	2	1	
			hemp-nettle	not listed	5	2	
			lamb's-quarters	not listed	5	2	
			prickly annual sow-thistle	not listed	5	2	
			shepherd's-purse	not listed	2	1	
			volunteer canola	not listed	5	1	
			white sweet-clover	not listed	1	1	
			wild buckwheat	not listed	10	2	
	shelterbelt	field line	alfalfa	not listed	5	1	--
			alsike clover	not listed	2	1	
			common dandelion	not listed	5	2	
			timothy	not listed	2	1	
	road	ditch	alfalfa	not listed	2	2	--
			alsike clover	not listed	10	2	
			smooth brome	not listed	5	2	
			timothy	not listed	2	1	
			white sweet-clover	not listed	1	1	
			yellow sweet-clover	not listed	2	1	
NW 18-057-08 W5M	road	ditch	smooth brome	not listed	11	3	A couple of Canada thistle plants were observed along the roadside, off of the Project RoW.
			timothy	not listed	2	1	
			white sweet-clover	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			cleavers	not listed	6	2	
			common chickweed	not listed	2	1	
			flixweed	not listed	1	1	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	4	1	
			night-flowering catchfly	not listed	1	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	treed	native	shepherd's-purse	not listed	2	1	--
			stinkweed	not listed	4	1	
			wild buckwheat	not listed	6	2	
			Canada thistle	Noxious	8	2	
			tall buttercup	Noxious	2	1	
			alfalfa	not listed	3	1	
			alsike clover	not listed	2	1	
			common dandelion	not listed	4	2	
			smooth brome	not listed	7	2	
			timothy	not listed	2	1	
			tufted vetch	not listed	2	1	
			white sweet-clover	not listed	1	1	
			yellow sweet-clover	not listed	1	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			annual hawk's-beard	not listed	2	1	
			hemp-nettle	not listed	1	1	
			prickly annual sow-thistle	not listed	4	2	
			wild buckwheat	not listed	1	1	
	treed	native	Canada thistle	Noxious	4	2	--
			tall buttercup	Noxious	3	2	
			alsike clover	not listed	4	2	
			cleavers	not listed	2	1	
			common dandelion	not listed	2	2	
			hemp-nettle	not listed	2	1	
			prickly annual sow-thistle	not listed	2	1	
			smooth brome	not listed	2	2	
			timothy	not listed	3	2	
			white clover	not listed	2	1	
SW 18-057-08 W5M	annual crop	cultivation	Canada thistle	Noxious	3	2	Patches of Canada thistle were observed at crop edges both on and off Project RoW.
			alsike clover	not listed	2	1	
			annual hawk's-beard	not listed	2	1	
			prickly annual sow-thistle	not listed	8	2	
			volunteer canola	not listed	1	1	
			wild oat	not listed	1	1	
			Canada thistle	Noxious	4	2	A weedy patch approximately 15 m wide was observed traversing the Project RoW,
			alfalfa	not listed	1	1	
			alsike clover	not listed	11	3	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			annual hawk's-beard	not listed	6	3	associated with an ephemeral draw.
			cleavers	not listed	3	2	
			common dandelion	not listed	10	2	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	4	1	
			lamb's-quarters	not listed	2	1	
			night-flowering catchfly	not listed	2	1	
			prickly annual sow-thistle	not listed	5	2	
			red clover	not listed	3	1	
			timothy	not listed	2	1	
			wild buckwheat	not listed	4	1	
			wild oat	not listed	7	2	
			yellow sweet-clover	not listed	2	1	
	annual crop	field line	Canada thistle	Noxious	1	1	--
			alfalfa	not listed	2	1	
			annual hawk's-beard	not listed	2	1	
			cicer milk vetch	not listed	1	1	
			common dandelion	not listed	2	1	
			smooth brome	not listed	7	2	
			timothy	not listed	2	2	
SE 18-057-08 W5M	tame grass	pasture	Canada thistle	Noxious	2	1	--
			tall buttercup	Noxious	1	1	
			common dandelion	not listed	10	3	
	treed	pasture	hemp-nettle	not listed	4	2	--
			Canada thistle	Noxious	4	2	
			tall buttercup	Noxious	1	1	
			common dandelion	not listed	5	2	
			lamb's-quarters	not listed	1	1	
	tame forage	hay	common dandelion	not listed	5	1	An existing RoW seeded with agronomic species parallels the treed portion of the Project RoW to the south for approximately 525 m. Canada thistle plants were mainly observed along the west fenceline on the Project RoW.
			Canada thistle	Noxious	3	2	
			hemp-nettle	not listed	10	2	
			lamb's-quarters	not listed	1	1	
			common dandelion	not listed	5	1	A 50 m x 110 m weedy area was observed within a wetland to the north of Township Road 572. Can
			Canada thistle	Noxious	3	2	
			hemp-nettle	not listed	10	2	
			lamb's-quarters	not listed	1	1	

Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
NW 08-057-08 W5M	road	ditch	stinkweed	not listed	2	1	--
			sweet-clover species	not listed	2	1	
			wild buckwheat	not listed	2	1	
			alfalfa	not listed	2	1	
			alsike clover	not listed	5	1	
			common dandelion	not listed	5	2	
			red clover	not listed	5	1	
			smooth brome	not listed	11	3	
			tufted vetch	not listed	7	2	
			yellow sweet-clover	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			cleavers	not listed	5	1	
			clover species	not listed	2	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	1	1	
			dog mustard	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	1	1	
			prickly annual sow-thistle	not listed	2	1	
			shepherd's-purse	not listed	2	1	
			stinkweed	not listed	1	1	
			sweet-clover species	not listed	2	1	
			wild buckwheat	not listed	1	1	
	shelterbelt	cultivation	Canada thistle	Noxious	3	2	--
			alfalfa	not listed	2	1	
			alsike clover	not listed	2	1	
			common dandelion	not listed	5	2	
			smooth brome	not listed	10	3	
SW 08-057-08 W5M	shelterbelt	field line	Canada thistle	Noxious	8	3	--
			alfalfa	not listed	10	2	
			alsike clover	not listed	2	1	
			cleavers	not listed	5	2	
			common dandelion	not listed	5	2	
			hemp-nettle	not listed	5	1	
			lamb's-quarters	not listed	2	1	
			prickly annual sow-thistle	not listed	2	1	
			smooth brome	not listed	5	2	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	annual crop	cultivation	stinkweed	not listed	2	1	--
			wild buckwheat	not listed	5	1	
			wild oat	not listed	2	1	
			common dandelion	not listed	2	1	
			low cudweed	not listed	2	1	
			night-flowering catchfly	not listed	2	1	
SE 08-057-08 W5M	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			perennial sow thistle	Noxious	2	1	
			alfalfa	not listed	2	1	
			alsike clover	not listed	2	1	
			annual hawk's-beard	not listed	2	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	2	1	
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	3	2	
			low cudweed	not listed	8	2	
			night-flowering catchfly	not listed	2	1	
			prickly annual sow-thistle	not listed	4	2	
			stinkweed	not listed	2	1	
			sweet-clover species	not listed	2	1	
			volunteer wheat	not listed	2	1	
			wild buckwheat	not listed	2	1	
	road	ditch	Canada thistle	Noxious	2	1	--
			perennial sow thistle	Noxious	13	2	
			tall buttercup	Noxious	2	1	
			alfalfa	not listed	2	1	
			alsike clover	not listed	2	1	
			common dandelion	not listed	5	2	
			common plantain	not listed	2	1	
NW 02-057-08 W5M	road	ditch	smooth brome	not listed	13	2	--
			timothy	not listed	2	1	
	road	ditch	yellow sweet-clover	not listed	6	2	--
			hemp-nettle	not listed	2	1	
			smooth brome	not listed	13	3	
	shelterbelt	field line	hemp-nettle	not listed	2	1	--
	tame forage	hay	Canada thistle	Noxious	2	1	--



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
NE 01-057-08 W5M			oxeye daisy	Noxious	11	2	
			tall buttercup	Noxious	7	2	
			white cockle	Noxious	2	1	
			common dandelion	not listed	10	2	
			night-flowering catchfly	not listed	5	2	
	tame forage	field line	common dandelion	not listed	5	2	--
	tame grass	pasture	oxeye daisy	Noxious	2	1	--
			common dandelion	not listed	10	2	
	tame forage	hay	oxeye daisy	Noxious	5	2	--
			common dandelion	not listed	10	2	
			wild buckwheat	not listed	2	1	
NW 06-057-07 W5M	tame grass	pasture	Canada thistle	Noxious	5	2	A tall buttercup plant was observed at the east fenceline on the Project RoW.
			oxeye daisy	Noxious	4	2	
			tall buttercup	Noxious	1	1	
			common dandelion	not listed	10	2	
	road	ditch	Canada thistle	Noxious	5	2	--
			oxeye daisy	Noxious	4	2	
			perennial sow thistle	Noxious	3	3	
			common dandelion	not listed	2	1	
			flixweed	not listed	1	1	
			red clover	not listed	2	1	
			smooth brome	not listed	13	2	
			timothy	not listed	10	2	
			tufted vetch	not listed	4	2	
			Canada thistle	Noxious	4	2	
			perennial sow thistle	Noxious	3	2	
			alfalfa	not listed	2	1	
			alsike clover	not listed	2	1	
			common dandelion	not listed	2	1	
			smooth brome	not listed	11	2	
			timothy	not listed	2	1	
			tufted vetch	not listed	2	1	
			yellow sweet-clover	not listed	2	1	
	tame grass	hay	Canada thistle	Noxious	5	1	--
			common dandelion	not listed	10	2	
			prickly annual sow-thistle	not listed	2	1	
			tufted vetch	not listed	5	2	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	tame grass	pasture	yellow sweet-clover	not listed	2	1	A patch of tall buttercup plants were observed off the Project RoW, along the east fenceline. Oxeye daisy plants were observed at the east fenceline both on and off the Project RoW.
			Canada thistle	Noxious	6	2	
			oxeye daisy	Noxious	2	1	
			annual hawk's-beard	not listed	2	1	
			black medick	not listed	2	1	
			common dandelion	not listed	10	2	
			common plantain	not listed	2	1	
			volunteer barley	not listed	2	1	
			lady's-thumb	not listed	4	1	
			lamb's-quarters	not listed	6	2	
			prostrate knotweed	not listed	4	2	
			red-root pigweed	not listed	6	1	
			shepherd's-purse	not listed	4	2	
			stinkweed	not listed	4	2	
			wild buckwheat	not listed	2	1	
			wild oat	not listed	1	1	
	tame grass	field line	Canada thistle	Noxious	4	2	--
			oxeye daisy	Noxious	2	1	
			common dandelion	not listed	5	2	
	tame grass	pasture	Canada thistle	Noxious	5	1	--
			common dandelion	not listed	10	2	
			prickly annual sow-thistle	not listed	2	1	
			tufted vetch	not listed	5	2	
			yellow sweet-clover	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	Canada thistle plants were observed at the west edge of the crop, both on and off the Project RoW.
			alfalfa	not listed	2	1	
			annual hawk's-beard	not listed	2	1	
			cleavers	not listed	4	2	
			common dandelion	not listed	2	1	
			flixweed	not listed	2	1	
			hemp-nettle	not listed	5	1	
			night-flowering catchfly	not listed	10	1	
			smooth brome	not listed	2	1	
			stinkweed	not listed	5	1	
			timothy	not listed	2	1	
			wild buckwheat	not listed	5	1	
			clover species	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
NE 06-057-07 W5M	annual crop	field line	lady's-thumb	not listed	2	1	--
			hemp-nettle	not listed	5	2	
			smooth brome	not listed	13	2	
			stinkweed	not listed	2	1	
			wild buckwheat	not listed	5	2	
	annual crop	cultivation	Canada thistle	Noxious	3	3	A dense patch of Canada thistle was observed at the east fenceline both on and off the Project RoW.
			clover species	not listed	2	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
			volunteer barley	not listed	2	1	
			hemp-nettle	not listed	2	1	
			lady's-thumb	not listed	5	1	
			night-flowering catchfly	not listed	5	1	
			sweet-clover species	not listed	2	1	
			volunteer canola	not listed	4	1	
			wild buckwheat	not listed	10	2	
	shrubland	pasture	Canada thistle	Noxious	8	2	A patch of perennial sow thistle was observed at the south edge of the Project RoW along the eastern bank of the watercourse.
			common tansy	Noxious	3	2	
			perennial sow thistle	Noxious	4	2	
			tall buttercup	Noxious	6	2	
			cicer milk vetch	not listed	3	2	
			common dandelion	not listed	6	2	
			tufted vetch	not listed	2	1	
	treed	pasture	Canada thistle	Noxious	4	2	Oxeye daisy plants were observed along the southern fenceline both on and off the Project RoW.
			oxeye daisy	Noxious	4	2	
			tall buttercup	Noxious	10	2	
			common dandelion	not listed	10	2	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	2	1	
	treed	field line	oxeye daisy	Noxious	5	1	--
			tall buttercup	Noxious	13	2	
			common dandelion	not listed	10	2	
			common plantain	not listed	2	1	
SE 06-057-07 W5M	tame forage	hay	Canada thistle	Noxious	5	1	Canada thistle plants were also observed within a wetland off the Project RoW to the southwest. Oxeye daisy
			oxeye daisy	Noxious	10	1	
			common dandelion	not listed	10	2	
			volunteer oat	not listed	1	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	road	ditch	wild buckwheat	not listed	2	1	plants were observed at higher densities at field edges both on and off the Project RoW.
			oxeye daisy	Noxious	1	1	A few Canada thistle plants were observed along the roadside off of the Project RoW.
			alfalfa	not listed	5	1	
			alsike clover	not listed	2	1	
			common dandelion	not listed	4	2	
			smooth brome	not listed	13	2	
			timothy	not listed	5	2	
SE 05-057-07 W5M	treed	native	oxeye daisy	Noxious	3	2	Patches of oxeye daisy were observed at the west fenceline in a clearing both on and off the Project RoW.
			tall buttercup	Noxious	2	1	
			common dandelion	not listed	5	1	
			hemp-nettle	not listed	2	1	
			red clover	not listed	2	1	
			smooth brome	not listed	4	2	
			timothy	not listed	2	1	
	tame forage	hay	oxeye daisy	Noxious	10	2	--
			tall buttercup	Noxious	2	1	
			common dandelion	not listed	10	2	
			wild buckwheat	not listed	2	1	
	shelterbelt	hay	Canada thistle	Noxious	2	1	--
			hemp-nettle	not listed	5	2	
			tufted vetch	not listed	2	1	
	treed	native	Canada thistle	Noxious	1	1	--
			oxeye daisy	Noxious	3	2	
			tall buttercup	Noxious	3	2	
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	4	2	
	tame forage	hay	oxeye daisy	Noxious	8	2	A couple of Canada thistle plants were observed off of the Project RoW to the west, along the fenceline.
			common dandelion	not listed	10	2	
			wild buckwheat	not listed	2	1	
	tame grass	pasture	oxeye daisy	Noxious	6	2	--
			common dandelion	not listed	12	2	
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	3	2	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	road	ditch	stinkweed	not listed	2	1	--
			alfalfa	not listed	2	1	
			common dandelion	not listed	5	1	
			red clover	not listed	2	1	
			smooth brome	not listed	13	2	
			yellow sweet-clover	not listed	5	2	
SW 04-057-07 W5M	road	ditch	alfalfa	not listed	2	1	--
			barnyard grass	not listed	2	1	
			smooth brome	not listed	13	2	
			yellow sweet-clover	not listed	13	3	
	tame grass	pasture	oxeye daisy	Noxious	4	2	--
			tall buttercup	Noxious	2	1	
			common dandelion	not listed	12	3	
			hemp-nettle	not listed	2	1	
			night-flowering catchfly	not listed	2	1	
			wild buckwheat	not listed	2	1	
	shrubland	pasture	Canada thistle	Noxious	2	1	--
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	5	1	
			stinkweed	not listed	2	1	
	tame grass	pasture	oxeye daisy	Noxious	4	2	--
			perennial sow thistle	Noxious	3	2	
			tall buttercup	Noxious	2	1	
			common dandelion	not listed	12	3	
			hemp-nettle	not listed	2	1	
			night-flowering catchfly	not listed	2	1	
			wild buckwheat	not listed	2	1	
	shrubland	pasture	Canada thistle	Noxious	2	1	--
			perennial sow thistle	Noxious	2	1	
			tall buttercup	Noxious	2	1	
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	5	1	
			stinkweed	not listed	2	1	
	tame grass	pasture	bull thistle	not listed	1	1	--
			common dandelion	not listed	10	1	
	shrubland	pasture	hemp-nettle	not listed	2	1	--
	shrubland	transmission line RoW	oxeye daisy	Noxious	2	1	--



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			perennial sow thistle	Noxious	4	2	
			tall buttercup	Noxious	1	1	
			common dandelion	not listed	10	1	
			yellow sweet-clover	not listed	5	2	
NW 33-056-07 W5M	tame grass	pasture	Canada thistle	Noxious	6	2	--
			tall buttercup	Noxious	1	1	
			lamb's-quarters	not listed	2	1	
			prickly annual sow-thistle	not listed	4	2	
			stinkweed	not listed	3	2	
			tufted vetch	not listed	2	1	
			yellow sweet-clover	not listed	2	1	
NE 33-056-07 W5M	shrubland	disturbed	Canada thistle	Noxious	8	2	A large patch of Canada thistle was observed at the south edge of the RoW, both on and off the Project RoW.
			clover species	not listed	2	1	
			common dandelion	not listed	5	1	
			hemp-nettle	not listed	11	3	
			prickly annual sow-thistle	not listed	4	1	
			smooth brome	not listed	10	2	
			stinkweed	not listed	2	1	
			tufted vetch	not listed	2	1	
	treed	native	Canada thistle	Noxious	4	2	--
			tall buttercup	Noxious	2	1	
			hemp-nettle	not listed	6	2	
			wild buckwheat	not listed	2	1	
	annual crop	cultivation	volunteer barley	not listed	2	1	--
			hemp-nettle	not listed	2	1	
			smooth brome	not listed	2	1	
			wild buckwheat	not listed	10	2	
			tufted vetch	not listed	2	1	
	shrubland	native	Canada thistle	Noxious	8	2	Canada thistle and perennial sow thistle were observed in more abundance on the east side of watercourse, both on and off Project RoW.
			perennial sow thistle	Noxious	4	2	
			alsike clover	not listed	2	1	
			common dandelion	not listed	5	1	
			prickly annual sow-thistle	not listed	2	1	
			red clover	not listed	2	1	
			smooth brome	not listed	10	2	
			wild buckwheat	not listed	4	2	
	annual crop	cultivation	Canada thistle	Noxious	9	3	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			barnyard grass	not listed	2	1	Dense patches of Canada thistle were observed throughout the cultivation, both on and off the Project RoW.
			common plantain	not listed	2	1	
			hemp-nettle	not listed	5	1	
			smooth brome	not listed	4	2	
			wild buckwheat	not listed	2	1	
	road	ditch	clover species	not listed	2	1	--
			common dandelion	not listed	2	1	
			common plantain	not listed	1	1	
			red clover	not listed	2	1	
			smooth brome	not listed	13	2	
			timothy	not listed	5	2	
			wild buckwheat	not listed	1	1	
			yellow sweet-clover	not listed	2	1	
SE 34-056-07 W5M	annual crop	field line	Canada thistle	Noxious	2	1	--
			cleavers	not listed	3	2	
			hemp-nettle	not listed	3	3	
			lamb's-quarters	not listed	2	1	
			prickly annual sow-thistle	not listed	2	1	
			smooth brome	not listed	13	3	
			volunteer wheat	not listed	2	1	
			wild buckwheat	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			barnyard grass	not listed	10	1	
			cleavers	not listed	10	2	
			common chickweed	not listed	2	1	
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	10	2	
			prickly annual sow-thistle	not listed	2	1	
			stinkweed	not listed	2	1	
			volunteer soybeans	not listed	2	1	
			volunteer wheat	not listed	2	1	
			wild buckwheat	not listed	10	1	
	shrubland	native	Canada thistle	Noxious	2	1	--
			perennial sow thistle	Noxious	3	2	
			tall buttercup	Noxious	2	1	
			alsike clover	not listed	2	1	
			annual hawk's-beard	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			cleavers	not listed	2	1	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	3	2	
			red clover	not listed	2	1	
			smooth brome	not listed	5	2	
			stinkweed	not listed	2	1	
	annual crop	cultivation	perennial sow thistle	Noxious	3	1	--
			barnyard grass	not listed	5	1	
			cleavers	not listed	5	1	
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	5	1	
			low cudweed	not listed	3	1	
			volunteer wheat	not listed	2	1	
			wild buckwheat	not listed	2	1	
NE 27-056-07 W5M	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			barnyard grass	not listed	5	1	
			cleavers	not listed	5	2	
			clover species	not listed	2	1	
			common chickweed	not listed	2	1	
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	5	2	
			low cudweed	not listed	7	2	
			stinkweed	not listed	2	1	
			volunteer wheat	not listed	2	1	
			wild buckwheat	not listed	5	1	
	treed	native	Canada thistle	Noxious	7	2	Patches of Canada thistle were observed at both the forest and watercourse edge, on and off the Project RoW. A patch of perennial sow thistle was observed at the watercourse edge, both on and off the Project RoW.
			perennial sow thistle	Noxious	3	2	
			common dandelion	not listed	2	1	
			prickly annual sow-thistle	not listed	3	2	
			smooth brome	not listed	7	2	
			white sweet-clover	not listed	3	2	
			hemp-nettle	not listed	2	1	
			smooth brome	not listed	10	2	
	tame grass	hay	Canada thistle	Noxious	2	1	A patch of Canada thistle was observed off of the Project RoW.
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
SE 27-056-07 W5M	tame forage	hay	stinkweed	not listed	2	1	
			tufted vetch	not listed	2	1	
			wild buckwheat	not listed	2	1	
			common dandelion	not listed	5	1	
SW 26-056-07 W5M	tame forage	hay	Canada thistle	Noxious	4	2	--
			perennial sow thistle	Noxious	1	1	
			common dandelion	not listed	5	1	
	annual crop	cultivation	Canada thistle	Noxious	8	2	--
			clover species	not listed	5	1	
			common dandelion	not listed	10	1	
			hemp-nettle	not listed	5	1	
			lamb's-quarters	not listed	2	1	
			wild buckwheat	not listed	2	1	
			wild oat	not listed	2	1	
	tame grass	hay	Canada thistle	Noxious	6	2	Patches of Canada thistle were observed mainly within an ephemeral draw, both on and off Project RoW.
			tall buttercup	Noxious	4	2	
			common dandelion	not listed	10	1	
			wild buckwheat	not listed	2	1	
	annual crop	cultivation	alfalfa	not listed	5	1	--
			alsike clover	not listed	5	1	
			common dandelion	not listed	2	1	
			lady's-thumb	not listed	2	1	
			smooth brome	not listed	13	3	
			stinkweed	not listed	5	1	
			timothy	not listed	5	2	
			wild buckwheat	not listed	10	1	
SE 26-056-07 W5M	tame grass	hay	common dandelion	not listed	10	2	Patches of Canada thistle were observed off of the Project RoW on the existing RoW.
	annual crop	cultivation	tall buttercup	Noxious	5	2	Several tall buttercup plants were observed within a wetland both on and off the Project RoW.
			alfalfa	not listed	5	2	
			clover species	not listed	5	1	
			common dandelion	not listed	5	2	
			corn spurry	not listed	5	1	
			hemp-nettle	not listed	5	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			smooth brome	not listed	2	1	
			stinkweed	not listed	10	1	
			timothy	not listed	2	1	
			wild buckwheat	not listed	10	2	
	tame grass	pasture	Canada thistle	Noxious	4	2	--
			tall buttercup	Noxious	6	2	
			common dandelion	not listed	5	2	
NE 23-056-07 W5M	tame grass	pasture	Canada thistle	Noxious	3	2	A patch of Canada thistle was observed at the north fenceline, both on and off the Project RoW. A couple of tall buttercup plants were observed off the Project RoW along the north fenceline.
			common plantain	not listed	2	1	
			low cudweed	not listed	2	1	
			stinkweed	not listed	2	1	
	tame grass	hay	Canada thistle	Noxious	2	1	A patch of oxeye daisy was observed at the southeast fenceline, both on and off of the Project RoW.
			tall buttercup	Noxious	3	2	
			common dandelion	not listed	5	2	
			night-flowering catchfly	not listed	2	1	
	tame grass	pasture	Canada thistle	Noxious	8	2	--
			tall buttercup	Noxious	6	2	
			common dandelion	not listed	10	2	
			lamb's-quarters	not listed	2	1	
	tame grass	hay	Canada thistle	Noxious	2	1	--
			tall buttercup	Noxious	2	1	
			common dandelion	not listed	5	2	
	road	ditch	alfalfa	not listed	2	1	--
			smooth brome	not listed	13	3	
			timothy	not listed	10	2	
			yellow sweet-clover	not listed	2	1	
NW 19-056-06 W5M	road	ditch	Canada thistle	Noxious	4	2	--
			alsike clover	not listed	5	2	
			common dandelion	not listed	5	1	
			pineappleweed	not listed	2	1	
			prostrate knotweed	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	tame forage	hay	smooth brome	not listed	5	2	Tall buttercup plants were observed in a wetland both on and off the Project RoW. Distribution and densities were higher off RoW. Canada thistle distributions were concentrated along watercourses and east fenceline.
			timothy	not listed	4	1	
			yellow sweet-clover	not listed	1	1	
			Canada thistle	Noxious	7	2	
			tall buttercup	Noxious	4	2	
			annual hawk's-beard	not listed	2	1	
			cicer milk vetch	not listed	8	2	
			common dandelion	not listed	11	2	
			hemp-nettle	not listed	5	2	
NE 19-056-06 W5M	shrubland	pasture	Canada thistle	Noxious	11	2	--
			common dandelion	not listed	5	1	
			hemp-nettle	not listed	4	2	
			smooth brome	not listed	5	2	
	tame grass	pasture	Canada thistle	Noxious	9	2	Canada thistle was observed at high density along the existing RoW paralleling the Project RoW in addition to large patches found at 11U 639945 E, 5969346 N and 11U 639463 E, 5969351 N.
			tall buttercup	Noxious	12	2	
			common dandelion	not listed	12	2	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			prostrate knotweed	not listed	2	1	
			shepherd's-purse	not listed	5	1	
	road	ditch	Canada thistle	Noxious	5	1	--
			hemp-nettle	not listed	2	1	
			lady's-thumb	not listed	2	1	
			smooth brome	not listed	13	2	
			yellow sweet-clover	not listed	2	1	
NW 20-056-06 W5M	road	ditch	Canada thistle	Noxious	3	2	--
			smooth brome	not listed	13	2	
			yellow sweet-clover	not listed	10	2	
	tame forage	hay	common dandelion	not listed	12	2	--
NW 15-056-06 W5M	tame grass	pasture	Canada thistle	Noxious	8	2	--
			common dandelion	not listed	5	2	
			hemp-nettle	not listed	2	1	



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2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
NE 15-056-06 W5M	tame grass	pasture	lamb's-quarters	not listed	3	2	--
			prostrate knotweed	not listed	2	1	
			Canada thistle	Noxious	4	2	
			common dandelion	not listed	10	2	
	tame forage	hay	Canada thistle	Noxious	3	2	A patch of Canada thistle was observed at the west fenceline, both on and off the Project RoW.
			catchfly species ⁶	potentially Noxious ⁶	5	2	
			cicer milk vetch	not listed	2	1	
			common dandelion	not listed	12	2	
	road	ditch	alfalfa	not listed	2	1	--
			smooth brome	not listed	13	2	
			timothy	not listed	3	2	
			white sweet-clover	not listed	2	1	
			yellow sweet-clover	not listed	5	1	
			Canada thistle	Noxious	4	2	--
NW 14-056-06 W5M	road	ditch	alfalfa	not listed	2	1	
			alsike clover	not listed	2	1	
			red clover	not listed	2	1	
			smooth brome	not listed	13	2	
			sweet-clover species	not listed	10	2	
			white sweet-clover	not listed	2	1	
			yellow sweet-clover	not listed	2	1	
	shrubland	pasture	Canada thistle	Noxious	8	2	--
			common dandelion	not listed	8	2	
			lamb's-quarters	not listed	2	1	
			pineappleweed	not listed	3	2	
			prostrate knotweed	not listed	2	1	
			shepherd's-purse	not listed	2	1	
			sweet-clover species	not listed	3	2	
NE 14-056-06 W5M	shrubland	pasture	orange hawkweed	Prohibited Noxious	8	2	Approximately 1000 orange hawkweed plants were observed, primarily in open areas, on the Project RoW (11U 646305 E, 5967964 N).
			Canada thistle	Noxious	6	2	
			tall buttercup	Noxious	2	1	
			common dandelion	not listed	12	2	
			common plantain	not listed	2	1	Tall buttercup plants were observed within an
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			prostrate knotweed	not listed	2	1	



Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	shrubland	road allowance					ephemeral draw on the Project RoW.
			Canada thistle	Noxious	3	2	--
			common tansy	Noxious	1	1	
			common dandelion	not listed	4	2	
			hemp-nettle	not listed	1	1	
			timothy	not listed	10	2	
NW 13-056-06 W5M	tame grass	pasture	Canada thistle	Noxious	6	2	--
			cicer milk vetch	not listed	2	1	
			common dandelion	not listed	10	2	
	shelterbelt	pasture	no weed species observed	n/a	n/a	n/a	--
	No weeds surveys were conducted along railroad or highway crossing.						
	road	ditch	Canada thistle	Noxious	4	2	--
			alsike clover	not listed	2	1	
			common dandelion	not listed	10	3	
			smooth brome	not listed	13	3	
			white sweet-clover	not listed	11	2	
			yellow sweet-clover	not listed	5	2	
	tame grass	pasture	Canada thistle	Noxious	7	3	--
			common dandelion	not listed	12	4	
			hemp-nettle	not listed	2	1	
			stinkweed	not listed	2	1	
	treed	native	common dandelion	not listed	2	1	--
			hemp-nettle	not listed	2	1	
			smooth brome	not listed	2	1	
	tame grass	pasture	Canada thistle	Noxious	9	2	A couple of common tansy plants were observed near the fenceline on the Project RoW.
			common tansy	Noxious	1	1	
			common dandelion	not listed	11	4	
NW 16-056-05 W5M	road	ditch	hemp-nettle	not listed	2	1	--
			smooth brome	not listed	13	3	
	annual crop	cultivation	Canada thistle	Noxious	2	1	A patch of Canada thistle was observed off the Project RoW, on the existing RoW. Tall buttercup plants were observed near crop edge both on and off the Project RoW.
			tall buttercup	Noxious	2	1	
			alfalfa	not listed	2	1	
			alsike clover	not listed	2	1	
			annual hawk's-beard	not listed	2	1	
			barnyard grass	not listed	2	1	
			cleavers	not listed	2	1	



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Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			clover species	not listed	2	1	
			common chickweed	not listed	5	2	
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
			corn spurry	not listed	2	1	
			green hawk's-beard	not listed	2	1	
			hemp-nettle	not listed	2	1	
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	5	2	
			prickly annual sow-thistle	not listed	2	1	
			smooth brome	not listed	2	1	
			stinkweed	not listed	2	1	
			sweet-clover species	not listed	2	1	
			volunteer canola	not listed	5	1	
			wild buckwheat	not listed	2	1	
	shelterbelt	cultivation	Canada thistle	Noxious	4	2	--
			alfalfa	not listed	2	1	
			alsike clover	not listed	2	1	
			annual hawk's-beard	not listed	2	1	
			hemp-nettle	not listed	2	1	
			smooth brome	not listed	11	2	
NW 18-056-04 W5M	road	ditch	Canada thistle	Noxious	1	1	--
			smooth brome	not listed	3	3	
			timothy	not listed	2	2	
	tame forage	hay	Canada thistle	Noxious	8	2	--
			cicer milk vetch	not listed	3	3	
			common dandelion	not listed	10	2	
			dog mustard	not listed	4	2	
			hemp-nettle	not listed	1	1	
			wild buckwheat	not listed	1	1	
	treed	native	Canada thistle	Noxious	1	1	--
SW 21-056-04 W5M	road	ditch	Canada thistle	Noxious	4	2	--
			caraway	not listed	2	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	3	2	



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2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	tame grass	pasture	prostrate knotweed	not listed	2	1	A 150m x 150m patch of Canada thistle was observed within a wetland, both on and off of the Project RoW.
			timothy	not listed	10	2	
			Canada thistle	Noxious	9	3	
			common tansy	Noxious	1	1	
			tall buttercup	Noxious	11	2	
			annual hawk's-beard	not listed	1	1	
			bull thistle	not listed	2	1	
			caraway	not listed	2	1	
			common dandelion	not listed	10	2	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	4	2	
	treed	pasture	Canada thistle	Noxious	1	1	--
			common dandelion	not listed	5	2	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	4	2	
SE 21-056-04 W5M	treed	pasture	Canada thistle	Noxious	9	2	--
			tall buttercup	Noxious	5	2	
			common dandelion	not listed	5	1	
			flixweed	not listed	2	1	
			hemp-nettle	not listed	4	2	
	tame grass	pasture	Canada thistle	Noxious	9	3	--
			tall buttercup	Noxious	6	2	
			common dandelion	not listed	5	2	
	treed	pasture	Canada thistle	Noxious	5	1	--
			tall buttercup	Noxious	2	1	
			common dandelion	not listed	5	1	
			hemp-nettle	not listed	2	1	
			Canada thistle	Noxious	11	3	
			cicer milk vetch	not listed	2	1	
			common chickweed	not listed	4	3	
			flixweed	not listed	2	1	
			prostrate knotweed	not listed	2	1	
			shepherd's-purse	not listed	2	1	
			yellow sweet-clover	not listed	2	1	
	road	ditch	alfalfa	not listed	2	1	--
			alsike clover	not listed	2	1	
			cicer milk vetch	not listed	4	2	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
SW 22-056-04 W5M	road	ditch	smooth brome	not listed	10	2	--
			timothy	not listed	2	1	
			yellow sweet-clover	not listed	3	2	
			alsike clover	not listed	2	1	
			common dandelion	not listed	5	1	
			smooth brome	not listed	13	3	
			timothy	not listed	5	2	
			yellow sweet-clover	not listed	5	2	
	treed	native	Canada thistle	Noxious	6	2	--
			tall buttercup	Noxious	2	1	
			alsike clover	not listed	2	1	
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	6	2	
			Canada thistle	Noxious	9	2	
			perennial sow thistle	Noxious	2	1	
			alfalfa	not listed	2	1	
			alsike clover	not listed	11	2	
			caraway	not listed	2	1	
			cicer milk vetch	not listed	2	1	
			common dandelion	not listed	5	1	
			orchard grass	not listed	2	1	
			red clover	not listed	5	1	
			smooth brome	not listed	10	2	
			timothy	not listed	5	2	
			yellow sweet-clover	not listed	2	1	
SE 23-056-04 W5M	tame grass	pasture	Canada thistle	Noxious	5	1	--
			common dandelion	not listed	10	3	
			hemp-nettle	not listed	3	2	
			lamb's-quarters	not listed	1	1	
			redtop	not listed	3	2	
			stinkweed	not listed	1	1	
SE 24-056-04 W5M	tame forage	field line	Canada thistle	Noxious	4	2	--
			common dandelion	not listed	10	2	
	tame forage	hay	Canada thistle	Noxious	2	1	--
			common dandelion	not listed	2	1	
			flixweed	not listed	2	1	
			white sweet-clover	not listed	5	2	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	road	ditch	yellow sweet-clover	not listed	10	1	--
			Canada thistle	Noxious	2	1	
			alsike clover	not listed	5	1	
			red clover	not listed	2	1	
			smooth brome	not listed	13	2	
			yellow sweet-clover	not listed	11	2	
NW 20-056-03 W5M	road	ditch	Canada thistle	Noxious	2	1	--
			alfalfa	not listed	5	1	
			alsike clover	not listed	2	1	
			common dandelion	not listed	2	1	
			smooth brome	not listed	13	3	
			timothy	not listed	5	2	
	tame grass	pasture	Canada thistle	Noxious	5	1	--
			common dandelion	not listed	12	3	
	treed	pasture	Canada thistle	Noxious	4	2	Canada thistle was observed mainly along the watercourse.
			common dandelion	not listed	5	2	
	tame grass	pasture	Canada thistle	Noxious	2	1	--
			common dandelion	not listed	12	3	
			prostrate knotweed	not listed	2	1	
NE 20-056-03 W5M	tame grass	pasture	Canada thistle	Noxious	7	2	--
			common dandelion	not listed	12	2	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	2	1	
	road	ditch	alfalfa	not listed	2	1	--
			alsike clover	not listed	5	2	
			cicer milk vetch	not listed	5	2	
			common dandelion	not listed	2	1	
			red clover	not listed	2	1	
			smooth brome	not listed	13	3	
			sweet-clover species	not listed	2	1	
			timothy	not listed	5	2	
NW 21-056-03 W5M	road	ditch	Canada thistle	Noxious	3	2	--
			cicer milk vetch	not listed	4	2	
			red clover	not listed	2	1	
			smooth brome	not listed	2	1	
			white sweet-clover	not listed	3	2	
			yellow sweet-clover	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	tame grass	hay	Canada thistle	Noxious	2	1	Canada thistle plants were only observed along the east fenceline, both on and off the Project RoW.
			common dandelion	not listed	10	3	
SE 24-056-03 W5M	tame grass	pasture	Canada thistle	Noxious	2	1	--
			common dandelion	not listed	10	2	
	treed	pasture	common dandelion	not listed	2	1	--
	road	ditch	alfalfa	not listed	2	1	--
			common dandelion	not listed	2	1	
			red clover	not listed	5	1	
			smooth brome	not listed	13	2	
			timothy	not listed	5	1	
			yellow sweet-clover	not listed	2	1	
SW 19-056-02 W5M	road	ditch	Canada thistle	Noxious	2	1	--
			alfalfa	not listed	2	1	
			red clover	not listed	11	2	
			smooth brome	not listed	5	1	
			timothy	not listed	13	2	
	tame grass	pasture	Canada thistle	Noxious	4	2	Canada thistle plants were observed along the west fenceline and the dugout, both on and off the Project RoW.
			barnyard grass	not listed	2	1	
			common dandelion	not listed	5	1	
			common plantain	not listed	2	1	
			flixweed	not listed	4	2	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	2	1	
			pineappleweed	not listed	2	1	
			prostrate knotweed	not listed	2	1	
	tame forage	hay	annual hawk's-beard	not listed	2	1	--
			common dandelion	not listed	11	2	
			common plantain	not listed	2	1	
	tame forage	field line	hemp-nettle	not listed	2	1	--
SE 19-056-02 W5M	shelterbelt	field line	common dandelion	not listed	2	1	--
	tame forage	hay	common dandelion	not listed	10	3	--
			common plantain	not listed	2	1	
	treed	native	common dandelion	not listed	5	1	--



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			hemp-nettle	not listed	5	1	Common tansy plants were only observed along the east fenceline, both on and off the Project RoW.
	tame grass	pasture	common dandelion	not listed	11	2	
	treed	pasture	common tansy	Noxious	2	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
	road	ditch	common dandelion	not listed	2	1	
			red clover	not listed	5	1	
			sweet-clover species	not listed	5	1	
			timothy	not listed	13	2	
SW 20-056-02 W5M	road	ditch	Canada thistle	Noxious	2	1	Common tansy plants were only observed along the west fenceline, both on and off the Project RoW.
			common tansy	Noxious	1	1	
			alfalfa	not listed	5	1	
			alsike clover	not listed	8	2	
			common dandelion	not listed	2	1	
			red clover	not listed	2	1	
			smooth brome	not listed	13	3	
			timothy	not listed	5	2	
			yellow sweet-clover	not listed	5	2	
	tame forage	hay	Canada thistle	Noxious	4	2	Common tansy plants were only observed along the west fenceline, both on and off the Project RoW.
			common tansy	Noxious	3	2	
			perennial sow thistle	Noxious	4	2	
			common dandelion	not listed	5	1	
			common plantain	not listed	2	1	
			dog mustard	not listed	1	1	
			hemp-nettle	not listed	3	2	
			lamb's-quarters	not listed	2	1	
			night-flowering catchfly	not listed	2	1	
			prickly annual sow-thistle	not listed	3	2	
			stinkweed	not listed	2	1	
			white sweet-clover	not listed	2	1	
			wild buckwheat	not listed	2	1	
	treed	native	common tansy	Noxious	2	1	Common tansy plants were only observed along the west fenceline, both on and off the Project RoW.
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	2	1	
			red clover	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
SE 20-056-02 W5M	tame grass	pasture	smooth brome	not listed	3	3	--
			timothy	not listed	3	2	
			tufted vetch	not listed	2	1	
			Canada thistle	Noxious	8	2	
			tall buttercup	Noxious	8	1	
			annual hawk's-beard	not listed	1	1	
			common dandelion	not listed	10	2	
			common plantain	not listed	1	1	
			redtop	not listed	4	2	
			stinkweed	not listed	2	1	
			tufted vetch	not listed	7	2	
	treed	pasture	common dandelion	not listed	3	2	--
			tufted vetch	not listed	3	2	
	road	ditch	Canada thistle	Noxious	2	1	--
			common dandelion	not listed	2	2	
			smooth brome	not listed	10	3	
			tufted vetch	not listed	3	2	
NE 21-056-02 W5M	annual crop	field line	Canada thistle	Noxious	2	2	A dense patch of Canada thistle was observed at west fenceline, just south from the Project RoW.
			white cockle	Noxious	2	1	
			alfalfa	not listed	5	2	
			alsike clover	not listed	2	1	
			annual hawk's-beard	not listed	1	1	
			common chickweed	not listed	2	1	
			common dandelion	not listed	5	2	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	2	1	
			smooth brome	not listed	4	2	
			stinkweed	not listed	4	1	
			volunteer canola	not listed	2	1	
			volunteer wheat	not listed	2	1	
			wild buckwheat	not listed	1	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			alfalfa	not listed	2	1	
			alsike clover	not listed	5	1	
			annual hawk's-beard	not listed	5	1	
			ball mustard	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			common chickweed	not listed	2	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	5	1	
			lamb's-quarters	not listed	2	1	
			prickly annual sow-thistle	not listed	2	1	
			stinkweed	not listed	5	1	
			tufted vetch	not listed	1	1	
			volunteer canola	not listed	5	1	
			volunteer wheat	not listed	10	1	
			wild buckwheat	not listed	4	2	
			wild carrot	not listed	1	1	
	annual crop	field line	Canada thistle	Noxious	2	2	White cockle plants were observed mainly at crop edge, both on and off the Project RoW.
			perennial sow thistle	Noxious	2	1	
			white cockle	Noxious	6	2	
			alfalfa	not listed	2	2	
			alsike clover	not listed	2	2	
			ball mustard	not listed	2	1	
			common dandelion	not listed	5	2	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	3	2	
			orchard grass	not listed	2	1	
			smooth brome	not listed	4	2	
			stinkweed	not listed	3	2	
			timothy	not listed	3	2	
			volunteer canola	not listed	2	1	
			volunteer wheat	not listed	2	1	
			wild buckwheat	not listed	3	2	
	treed	pasture	Canada thistle	Noxious	4	2	--
			common tansy	Noxious	3	2	
			tall buttercup	Noxious	1	1	
			common chickweed	not listed	2	1	
			common dandelion	not listed	4	2	
			hemp-nettle	not listed	5	2	
			lamb's-quarters	not listed	3	2	
			wild buckwheat	not listed	4	2	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	road	ditch	Canada thistle	Noxious	4	2	--
			smooth brome	not listed	6	2	
NW 22-056-02 W5M	road	ditch	Canada thistle	Noxious	2	2	A patch of common tansy plants were observed off of the Project RoW to the south, on the existing RoW.
			alfalfa	not listed	1	1	
			common dandelion	not listed	2	1	
			orchard grass	not listed	2	1	
			red clover	not listed	2	1	
			smooth brome	not listed	13	2	
			stinkweed	not listed	2	1	
			tufted vetch	not listed	2	1	
			white sweet-clover	not listed	2	1	
			yellow sweet-clover	not listed	5	2	
	tame forage	hay	Canada thistle	Noxious	5	2	Canada thistle plants were only observed along the western and southern fencelines, both on and off the Project RoW. One common tansy plant was observed near the eastern fenceline on the Project RoW.
			common tansy	Noxious	1	1	
			white cockle	Noxious	2	1	
			annual hawk's-beard	not listed	2	1	
			ball mustard	not listed	2	1	
			common chickweed	not listed	5	2	
			common dandelion	not listed	10	3	
			common plantain	not listed	2	1	
			corn spurry	not listed	5	2	
			dog mustard	not listed	1	1	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			shepherd's-purse	not listed	1	1	
			tufted vetch	not listed	2	1	
			volunteer canola	not listed	2	1	
			wild buckwheat	not listed	10	2	
	tame grass	pasture	Canada thistle	Noxious	4	2	--
			common tansy	Noxious	1	1	
			common dandelion	not listed	12	2	
			tufted vetch	not listed	1	1	
NE 22-056-02 W5M	tame forage	hay	common dandelion	not listed	5	1	A patch of common tansy plants were observed off the Project RoW along the south fenceline.
			common plantain	not listed	2	1	
			pineappleweed	not listed	2	1	
			prostrate knotweed	not listed	2	1	
			volunteer canola	not listed	1	1	



Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	tame grass	pasture	Canada thistle	Noxious	5	2	--
			common dandelion	not listed	5	1	
	annual crop	cultivation	Canada thistle	Noxious	4	1	A patch of perennial sow thistle was found along the access road, both on and off the Project RoW.
			perennial sow thistle	Noxious	3	2	
			alfalfa	not listed	10	2	
			annual hawk's-beard	not listed	3	2	
			cleavers	not listed	5	1	
			common chickweed	not listed	2	1	
			common dandelion	not listed	2	1	
			corn spurry	not listed	5	2	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	2	1	
			night-flowering catchfly	not listed	1	1	
			prickly annual sow-thistle	not listed	2	1	
			volunteer canola	not listed	12	2	
			wild buckwheat	not listed	1	1	
	road	ditch	Canada thistle	Noxious	5	1	A patch of perennial sow thistle was found near the east fenceline, both on and off the Project RoW.
			common tansy	Noxious	1	1	
			perennial sow thistle	Noxious	3	2	
			alfalfa	not listed	2	1	
			alsike clover	not listed	5	2	
			common dandelion	not listed	10	2	
			orchard grass	not listed	5	1	
			red clover	not listed	5	1	
			smooth brome	not listed	10	2	
			timothy	not listed	10	2	
			white sweet-clover	not listed	3	2	
			yellow sweet-clover	not listed	3	2	
NW 23-056-02 W5M	road	ditch	Canada thistle	Noxious	6	2	--
			perennial sow thistle	Noxious	4	2	
			alfalfa	not listed	2	1	
			alsike clover	not listed	2	1	
			common dandelion	not listed	5	1	
			red clover	not listed	5	2	
			smooth brome	not listed	13	2	
			sweet-clover species	not listed	2	1	



Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	annual crop	cultivation	timothy	not listed	5	2	--
			Canada thistle	Noxious	10	2	
			perennial sow thistle	Noxious	2	1	
			catchfly species ⁶	potentially Noxious ⁶	5	2	
			alfalfa	not listed	2	1	
			annual hawk's-beard	not listed	5	1	
			bluebur	not listed	2	1	
			common chickweed	not listed	5	2	
			common plantain	not listed	2	1	
			corn spurry	not listed	10	2	
			green hawk's-beard	not listed	7	2	
			hemp-nettle	not listed	5	2	
			lady's-thumb	not listed	2	1	
			low cudweed	not listed	6	2	
			red clover	not listed	2	1	
			sweet-clover species	not listed	2	1	
			wild buckwheat	not listed	5	1	
			wild oat	not listed	2	1	
	annual crop	field line	Canada thistle	Noxious	5	1	--
			alfalfa	not listed	2	1	
			alsike clover	not listed	5	1	
			common dandelion	not listed	10	3	
			smooth brome	not listed	13	2	
			timothy	not listed	13	2	
NE 23-056-02 W5M	annual crop	cultivation	Canada thistle	Noxious	6	2	Canada thistle plants were mainly along the west fenceline, both on and off the Project RoW.
			perennial sow thistle	Noxious	2	1	
			alfalfa	not listed	10	2	
			alsike clover	not listed	2	1	
			annual hawk's-beard	not listed	4	1	
			clover species	not listed	2	1	
			common dandelion	not listed	5	2	
			common plantain	not listed	2	1	
			corn spurry	not listed	2	1	
			volunteer oat	not listed	1	1	
			hemp-nettle	not listed	3	2	
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			low cudweed	not listed	5	2	
			prickly annual sow-thistle	not listed	2	1	
			smooth brome	not listed	4	2	
			timothy	not listed	5	2	
			volunteer canola	not listed	2	1	
			wild buckwheat	not listed	5	1	
	tame forage	hay	common dandelion	not listed	10	2	--
	road	ditch	alfalfa	not listed	2	1	A patch of Canada thistle plants and two perennial sow thistle plants were observed off of the Project RoW to the south.
			common dandelion	not listed	5	2	
			smooth brome	not listed	13	2	
			timothy	not listed	5	2	
NW 24-056-02 W5M	road	ditch	common tansy	Noxious	2	1	A few common tansy plants were observed along the west fenceline on the Project RoW.
			alfalfa	not listed	2	1	
			alsike clover	not listed	2	1	
			common dandelion	not listed	5	2	
			smooth brome	not listed	13	2	
			timothy	not listed	5	2	
			tufted vetch	not listed	2	1	
	tame grass	pasture	Canada thistle	Noxious	8	3	Dense patches of Canada thistle were observed within an ephemeral draw, both on and off the Project RoW.
			tall buttercup	Noxious	1	1	
			common dandelion	not listed	10	2	
			common plantain	not listed	2	1	
			crested wheatgrass	not listed	4	2	
			flixweed	not listed	4	2	
			lamb's-quarters	not listed	2	1	
			pineappleweed	not listed	2	1	
			prostrate knotweed	not listed	2	1	
			prostrate saltbush	not listed	2	1	
			redtop	not listed	3	2	
			shepherd's-purse	not listed	2	1	
			stinkweed	not listed	2	1	
			tufted vetch	not listed	2	1	
			yellow sweet-clover	not listed	2	1	
SW 24-056-02 W5M	tame grass	pasture	Canada thistle	Noxious	2	1	--
			cicer milk vetch	not listed	5	1	
			common dandelion	not listed	12	3	



Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	treed	pasture	stinkweed	not listed	1	1	A large patch of Canada thistle was observed both on and off the Project RoW at 11U 686327 E, 5970690 N. A couple of common tansy plants were observed at the treeline on the Project RoW at 11U 686437 E, 5970683 N.
			Canada thistle	Noxious	6	2	
			common tansy	Noxious	1	1	
			white cockle	Noxious	2	1	
			common chickweed	not listed	1	1	
			common dandelion	not listed	4	2	
			flixweed	not listed	2	1	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			prostrate knotweed	not listed	3	2	
			shepherd's-purse	not listed	1	1	
			wild buckwheat	not listed	2	1	
	tame grass	pasture	Canada thistle	Noxious	6	2	--
			tall buttercup	Noxious	7	1	
			common dandelion	not listed	11	3	
			common plantain	not listed	2	1	
SE 24-056-02 W5M	treed	native	Canada thistle	Noxious	3	2	--
			tall buttercup	Noxious	3	2	
			common dandelion	not listed	2	1	--
			smooth brome	not listed	5	2	
	tame grass	hay	Canada thistle	Noxious	2	1	--
			tall buttercup	Noxious	2	1	
			common dandelion	not listed	5	2	
	road	ditch	Canada thistle	Noxious	2	1	--
			alfalfa	not listed	2	1	
			alsike clover	not listed	2	1	
			cicer milk vetch	not listed	1	1	
			common dandelion	not listed	2	1	
			red clover	not listed	2	1	
			smooth brome	not listed	13	3	
			timothy	not listed	5	2	
			white sweet-clover	not listed	2	2	
			yellow sweet-clover	not listed	2	2	
SW 19-056-01 W5M	road	ditch	Canada thistle	Noxious	4	1	A dense patch of white cockle plants were observed along the east fenceline on the Project RoW.
			perennial sow thistle	Noxious	2	1	
			white cockle	Noxious	3	3	
			alfalfa	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			alsike clover	not listed	2	1	
			ball mustard	not listed	1	1	
			cicer milk vetch	not listed	3	3	
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	6	2	
			lamb's-quarters	not listed	4	2	
			orchard grass	not listed	3	2	
			smooth brome	not listed	2	2	
			stinkweed	not listed	4	2	
			timothy	not listed	5	2	
			wild buckwheat	not listed	5	2	
			yellow sweet-clover	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	White cockle plants were only observed at the western crop edge, both on and off the Project RoW.
			white cockle	Noxious	4	2	
			alfalfa	not listed	5	1	
			annual hawk's-beard	not listed	5	1	
			clover species	not listed	2	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
			corn spurry	not listed	2	1	
			lamb's-quarters	not listed	6	2	
			low cudweed	not listed	2	1	
			shepherd's-purse	not listed	3	2	
			stinkweed	not listed	3	2	
			wild buckwheat	not listed	4	1	
			Canada thistle	Noxious	8	3	The Project RoW encounters a weedy patch within a wetland for approximately 70 m.
			perennial sow thistle	Noxious	2	1	
			alsike clover	not listed	5	2	
			common dandelion	not listed	6	3	
			hemp-nettle	not listed	9	3	
			lamb's-quarters	not listed	4	3	
			prickly annual sow-thistle	not listed	5	1	
			stinkweed	not listed	4	2	
			timothy	not listed	3	2	
			white sweet-clover	not listed	2	1	
			wild carrot	not listed	1	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	fallow	cultivation	yellow sweet-clover	not listed	4	2	--
			Canada thistle	Noxious	9	3	
			perennial sow thistle	Noxious	5	1	
			white cockle	Noxious	5	2	
			alfalfa	not listed	2	1	
			alsike clover	not listed	2	1	
			annual hawk's-beard	not listed	4	2	
			common dandelion	not listed	2	1	
			flixweed	not listed	1	1	
			hemp-nettle	not listed	9	3	
			lamb's-quarters	not listed	6	3	
			night-flowering catchfly	not listed	2	1	
			shepherd's-purse	not listed	2	1	
			smooth brome	not listed	7	2	
			stinkweed	not listed	6	3	
			timothy	not listed	6	2	
			volunteer wheat	not listed	1	1	
			wild buckwheat	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	5	1	--
			white cockle	Noxious	1	1	
			alsike clover	not listed	2	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
			lady's-thumb	not listed	5	2	
			lamb's-quarters	not listed	2	1	
			night-flowering catchfly	not listed	1	1	
			wild buckwheat	not listed	2	1	
	annual crop	field line	Canada thistle	Noxious	5	1	--
			annual hawk's-beard	not listed	2	1	
			smooth brome	not listed	4	2	
SE 19-056-01 W5M	tame grass	hay	Canada thistle	Noxious	4	2	--
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
	treed	pasture	Canada thistle	Noxious	3	2	--
			common dandelion	not listed	2	1	
	tame grass	pasture	Canada thistle	Noxious	2	1	--
			tall buttercup	Noxious	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			common dandelion	not listed	5	2	
			common plantain	not listed	2	1	
			flixweed	not listed	2	1	
			hemp-nettle	not listed	2	1	
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			prostrate knotweed	not listed	2	1	
			Russian pigweed	not listed	4	2	
			stinkweed	not listed	2	1	
			wild buckwheat	not listed	2	1	
	road	ditch	Canada thistle	Noxious	2	1	--
			tall buttercup	Noxious	2	1	
			alfalfa	not listed	2	1	
			common dandelion	not listed	10	1	
			red clover	not listed	2	1	
		smooth brome	not listed	13	2		
		white sweet-clover	not listed	2	1		
Barrhead County							
NW 20-056-01 W5M	tame grass	pasture	common dandelion	not listed	5	1	--
Lac Ste. Anne County							
SE 20-056-01 W5M	tame grass	pasture	Canada thistle	Noxious	5	1	--
			common dandelion	not listed	5	1	
			common plantain	not listed	5	1	
Barrhead County							
NE 20-056-01 W5M	tame grass	pasture	Canada thistle	Noxious	8	3	--
			common tansy	Noxious	4	1	
			absinthe wormwood	not listed	4	1	
			common dandelion	not listed	10	2	
			common plantain	not listed	6	2	
			hemp-nettle	not listed	4	1	
	treed	native	common dandelion	not listed	2	1	--
			hemp-nettle	not listed	1	1	
	tame forage	hay	Canada thistle	Noxious	6	2	Canada thistle was mainly observed on the east side of the field and scentless chamomile was mainly observed on the west side of
			scentless chamomile	Noxious	4	1	
			annual hawk's-beard	not listed	5	1	
			common dandelion	not listed	10	2	
			corn spurry	not listed	5	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			hemp-nettle	not listed	6	1	the field, both on and off the Project RoW.
			lady's-thumb	not listed	4	2	
			lamb's-quarters	not listed	4	2	
			low cudweed	not listed	1	1	
			pineappleweed	not listed	2	1	
			stinkweed	not listed	4	1	
			wild buckwheat	not listed	8	2	
			yellow sweet-clover	not listed	2	1	
	tame forage	field line	Canada thistle	Noxious	6	3	--
			perennial sow thistle	Noxious	1	1	
			cicer milk vetch	not listed	3	3	
			common dandelion	not listed	5	1	
			hemp-nettle	not listed	2	1	
			redtop	not listed	3	2	
NW 21-056-01 W5M	annual crop	cultivation	Canada thistle	Noxious	7	1	--
			alfalfa	not listed	2	1	
			alsike clover	not listed	2	2	
			annual hawk's-beard	not listed	10	1	
			common dandelion	not listed	5	1	
			common plantain	not listed	3	2	
			corn spurry	not listed	9	2	
			hemp-nettle	not listed	6	2	
			lady's-thumb	not listed	9	2	
			lamb's-quarters	not listed	11	3	
			low cudweed	not listed	4	3	
			redtop	not listed	3	2	
			smooth brome	not listed	4	2	
			stinkweed	not listed	4	1	
			timothy	not listed	2	1	
			tufted vetch	not listed	1	1	
			volunteer canola	not listed	10	3	
			volunteer wheat	not listed	10	3	
			wild buckwheat	not listed	10	2	
	annual crop	field line	Canada thistle	Noxious	6	2	--
			alfalfa	not listed	2	1	
			annual hawk's-beard	not listed	4	2	
			cicer milk vetch	not listed	4	3	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
NE 21-056-01 W5M	treed	native	smooth brome	not listed	11	3	A patch of common tansy was observed at the fenceline, both on and off the Project RoW.
			volunteer canola	not listed	2	1	
			Canada thistle	Noxious	6	2	
			common tansy	Noxious	3	2	
			absinthe wormwood	not listed	4	2	
			caraway	not listed	4	2	
			common dandelion	not listed	5	2	
			common plantain	not listed	4	2	
			red clover	not listed	2	1	
			smooth brome	not listed	2	2	
			timothy	not listed	2	2	
			orange hawkweed	Prohibited Noxious	3	2	The Project RoW parallels a weedy existing RoW for approximately 300 m. A small patch of orange hawkweed was observed at the edge of the existing RoW, extending both on and off the Project RoW (11U 691728 E, 5971435 N).
			Canada thistle	Noxious	6	2	
			tall buttercup	Noxious	2	1	
			absinthe wormwood	not listed	6	2	
			cicer milk vetch	not listed	2	1	
			common dandelion	not listed	5	2	
			lamb's-quarters	not listed	2	1	
			volunteer canola	not listed	1	1	
	shrubland	pasture	absinthe wormwood	not listed	2	2	--
			annual hawk's-beard	not listed	2	1	
			common dandelion	not listed	10	3	
			volunteer wheat	not listed	2	1	
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	5	2	
			stinkweed	not listed	2	1	
			sweet-clover species	not listed	1	1	
	treed	native	orange hawkweed	Prohibited Noxious	3	2	Four orange hawkweed plants were observed on the Project RoW (11U 692079 E, 5971456 N).
			common dandelion	not listed	5	2	
			common plantain	not listed	2	2	
			red clover	not listed	2	1	
			smooth brome	not listed	2	2	
			timothy	not listed	2	2	
	annual crop	cultivation	Canada thistle	Noxious	1	1	--
			absinthe wormwood	not listed	2	1	
			alfalfa	not listed	1	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			annual hawk's-beard	not listed	1	1	
			clover species	not listed	2	1	
			common dandelion	not listed	5	2	
			common plantain	not listed	1	1	
			corn spurry	not listed	1	1	
			hemp-nettle	not listed	3	2	
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	2	1	
			red clover	not listed	2	1	
			stinkweed	not listed	2	1	
			sweet-clover species	not listed	1	1	
			tufted vetch	not listed	1	1	
			volunteer wheat	not listed	2	1	
			wild buckwheat	not listed	2	1	
	tame grass	pasture	orange hawkweed	Prohibited Noxious	7	2	Two patches of orange hawkweed were observed in a low-lying area within a 70 m by 20 m patch, both on and off the Project RoW (11U 692260 E, 5971542 N).
			Canada thistle	Noxious	4	2	
			scentless chamomile	Noxious	4	2	
			absinthe wormwood	not listed	5	2	
			annual hawk's-beard	not listed	2	1	
			common dandelion	not listed	11	3	
			green hawk's-beard	not listed	1	1	
			hemp-nettle	not listed	6	2	
			lady's-thumb	not listed	1	1	
			lamb's-quarters	not listed	4	2	
			large-seeded false flax	not listed	2	1	
			low cudweed	not listed	2	2	
			prostrate knotweed	not listed	2	1	
			wild buckwheat	not listed	1	1	
	road	ditch	Canada thistle	Noxious	2	2	--
			smooth brome	not listed	13	3	
			white sweet-clover	not listed	1	1	
NE 22-056-01 W5M	tame grass	pasture	Canada thistle	Noxious	5	1	White cockle plants were mainly observed in west side of pasture, both on and off the Project RoW.
			perennial sow thistle	Noxious	3	2	
			tall buttercup	Noxious	1	1	
			white cockle	Noxious	6	2	
			annual hawk's-beard	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments			
			cicer milk vetch	not listed	3	2				
			common dandelion	not listed	6	2				
			common plantain	not listed	2	1				
			corn spurry	not listed	3	2				
			hemp-nettle	not listed	3	3				
			lamb's-quarters	not listed	2	1				
			prostrate knotweed	not listed	3	3				
			wild oat	not listed	8	2				
Sturgeon County										
SW 23-056-01 W5M	road	ditch	Canada thistle	Noxious	2	1	A small patch of perennial sow thistle plants were observed off the Project RoW.			
			clover species	not listed	2	1				
			common dandelion	not listed	5	2				
			smooth brome	not listed	13	2				
	treed	native	Canada thistle	Noxious	7	2	Canada thistle was observed in a dense blanket along the existing RoW. A patch of perennial sow thistle was observed at the treeline, both on and off the Project RoW.			
			perennial sow thistle	Noxious	3	2				
			common dandelion	not listed	2	1				
			hemp-nettle	not listed	8	2				
			smooth brome	not listed	5	1				
			timothy	not listed	2	1				
			annual crop	cultivation	Canada thistle	Noxious		6	2	--
					tall buttercup	Noxious		1	1	
	barnyard grass	not listed			7	2				
	common plantain	not listed			2	1				
	hemp-nettle	not listed			2	1				
	lamb's-quarters	not listed			2	1				
	low cudweed	not listed			2	1				
	volunteer canola	not listed			2	1				
	SE 23-056-01 W5M	annual crop	cultivation	wild buckwheat	not listed	5	2	--		
				wild oat	not listed	2	1			
Canada thistle				Noxious	6	2				
perennial sow thistle				Noxious	4	2				
absinthe wormwood				not listed	3	2				
barnyard grass				not listed	2	1				
common dandelion				not listed	2	1				
common plantain				not listed	2	1				
hemp-nettle	not listed	2	1							
lamb's-quarters	not listed	2	1							



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			night-flowering catchfly	not listed	2	1	
			prickly annual sow-thistle	not listed	2	1	
			stinkweed	not listed	2	1	
			wild buckwheat	not listed	5	1	
			wild oat	not listed	2	1	
	treed	native	Canada thistle	Noxious	7	2	--
			perennial sow thistle	Noxious	7	2	
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	8	2	
			night-flowering catchfly	not listed	3	2	
			smooth brome	not listed	5	2	
			timothy	not listed	2	1	
	road	ditch	Canada thistle	Noxious	1	1	--
			hemp-nettle	not listed	2	1	
			smooth brome	not listed	13	3	
SW 24-056-01 W5M	road	ditch	Canada thistle	Noxious	3	2	--
			smooth brome	not listed	13	2	
	annual crop	cultivation	Canada thistle	Noxious	8	2	Patches of Canada thistle were observed at the north edge of the Project RoW and within ephemeral draws, both on and off the RoW.
			catchfly species ⁶	potentially Noxious ⁶	2	1	
			alfalfa	not listed	1	1	
			bluebur	not listed	1	1	
			cleavers	not listed	5	1	
			clover species	not listed	2	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	4	2	
			corn spurry	not listed	2	1	
			flixweed	not listed	2	1	
			hemp-nettle	not listed	10	1	
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	4	2	
			prickly annual sow-thistle	not listed	2	1	
			prostrate knotweed	not listed	1	1	
			shepherd's-purse	not listed	1	1	
			smooth brome	not listed	8	2	
			stinkweed	not listed	2	1	
			volunteer canola	not listed	5	1	

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2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			volunteer pea	not listed	1	1	
			white sweet-clover	not listed	2	1	
			wild buckwheat	not listed	2	1	
			wild oat	not listed	2	1	
			Canada thistle	Noxious	4	2	
			smooth brome	not listed	13	2	
NW 20-056-27 W4M	annual crop	field line	Canada thistle	Noxious	10	4	A dense occurrence of Canada thistle was observed along the west fenceline, both on and off of the Project RoW.
			annual hawk's-beard	not listed	1	1	
	annual crop	field line	annual sow-thistle	not listed	1	1	
			cleavers	not listed	4	3	
			common chickweed	not listed	1	1	
			common plantain	not listed	1	1	
			hemp-nettle	not listed	5	2	
			lamb's-quarters	not listed	1	1	
			night-flowering catchfly	not listed	1	1	
			prickly annual sow-thistle	not listed	1	1	
			smooth brome	not listed	4	2	
			stinkweed	not listed	2	2	
			timothy	not listed	2	1	
			volunteer canola	not listed	1	1	
			wild buckwheat	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			annual hawk's-beard	not listed	5	1	
			annual sow-thistle	not listed	2	1	
			bluebur	not listed	2	1	
			cleavers	not listed	2	1	
			common dandelion	not listed	2	1	
			dog mustard	not listed	2	1	
			green hawk's-beard	not listed	1	1	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	4	2	
			night-flowering catchfly	not listed	2	1	
			shepherd's-purse	not listed	2	1	
			stinkweed	not listed	2	1	
			volunteer canola	not listed	5	1	
			wild buckwheat	not listed	2	1	



Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	annual crop	field line	Canada thistle	Noxious	6	3	--
			perennial sow thistle	Noxious	2	1	
			alsike clover	not listed	4	2	
			annual hawk's-beard	not listed	5	2	
			annual sow-thistle	not listed	2	1	
			cleavers	not listed	2	1	
			common dandelion	not listed	5	2	
			hemp-nettle	not listed	4	2	
			prickly annual sow-thistle	not listed	2	1	
			smooth brome	not listed	11	3	
			sweet-clover species	not listed	1	1	
			volunteer canola	not listed	5	1	
			wild buckwheat	not listed	1	1	
			wild oat	not listed	2	1	
NE 21-056-27 W4M	annual crop	field line	Canada thistle	Noxious	5	2	--
			smooth brome	not listed	13	4	
	annual crop	cultivation	Canada thistle	Noxious	5	2	Canada thistle plants were observed near the west fenceline, both on and off of the Project RoW.
			clover species	not listed	2	1	
			flixweed	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			stinkweed	not listed	2	1	
			wild buckwheat	not listed	2	1	
			yellow sweet-clover	not listed	1	1	
	annual crop	field line	Canada thistle	Noxious	5	2	--
			alsike clover	not listed	2	1	
			annual hawk's-beard	not listed	2	1	
			annual sow-thistle	not listed	1	1	
			common dandelion	not listed	10	2	
			dog mustard	not listed	1	1	
			hemp-nettle	not listed	2	1	
			shepherd's-purse	not listed	1	1	
			smooth brome	not listed	13	3	
SW 24-056-27 W4M	road	ditch	Canada thistle	Noxious	13	2	A small patch of common tansy was observed off of the
			perennial sow thistle	Noxious	2	1	
			alsike clover	not listed	2	1	



Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			cicer milk vetch	not listed	2	1	Project RoW to the south, along the existing RoW.
			common dandelion	not listed	4	2	
			hemp-nettle	not listed	2	1	
			smooth brome	not listed	13	3	
	annual crop	cultivation	Canada thistle	Noxious	6	2	--
			alsike clover	not listed	2	1	
			annual hawk's-beard	not listed	2	1	
			common chickweed	not listed	2	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
			corn spurry	not listed	2	1	
			hemp-nettle	not listed	2	1	
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	11	3	
			pineappleweed	not listed	6	2	
			prickly annual sow-thistle	not listed	4	2	
			stinkweed	not listed	2	1	
			volunteer wheat	not listed	5	1	
			wild buckwheat	not listed	10	2	
			wild oat	not listed	2	1	
	shelterbelt	cultivation	Canada thistle	Noxious	4	2	--
			alsike clover	not listed	4	2	
			common dandelion	not listed	5	1	
			smooth brome	not listed	13	2	
			wild buckwheat	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	Canada thistle plants were observed at the western crop edge.
			common chickweed	not listed	2	1	
			common dandelion	not listed	5	1	
			hemp-nettle	not listed	2	1	
			night-flowering catchfly	not listed	2	1	
			volunteer canola	not listed	2	1	
			wild buckwheat	not listed	10	2	
			wild oat	not listed	5	1	
SE 24-056-27 W4M	annual crop	cultivation	Canada thistle	Noxious	2	1	Canada thistle plants were observed at the southern crop edge.
			alfalfa	not listed	2	1	
			common chickweed	not listed	2	1	



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Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			common dandelion	not listed	5	1	
			hemp-nettle	not listed	2	1	
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			pineappleweed	not listed	4	2	
			volunteer canola	not listed	2	1	
			wild buckwheat	not listed	10	1	
			wild oat	not listed	5	1	
	shelterbelt	cultivation	Canada thistle	Noxious	13	3	--
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	2	1	
			smooth brome	not listed	10	2	
NE 13-056-27 W4M	annual crop	field line	Canada thistle	Noxious	5	2	--
			perennial sow thistle	Noxious	1	1	
			common chickweed	not listed	2	1	
			hemp-nettle	not listed	2	2	
			lamb's-quarters	not listed	1	1	
			redtop	not listed	4	3	
			smooth brome	not listed	5	4	
			stinkweed	not listed	2	1	
			wild buckwheat	not listed	1	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			cleavers	not listed	2	2	
			common chickweed	not listed	5	1	
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	4	2	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	2	1	
			stinkweed	not listed	2	1	
			wild buckwheat	not listed	2	1	
	treed	native	Canada thistle	Noxious	5	2	--
			common plantain	not listed	1	1	
			hemp-nettle	not listed	2	2	
			smooth brome	not listed	5	3	
	road	ditch	orchard grass	not listed	5	2	--
			timothy	not listed	5	2	
NW 18-056-26 W4M	shelterbelt	field line	Canada thistle	Noxious	2	2	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			smooth brome	not listed	13	4	A patch of Canada thistle, common tansy, scentless chamomile, and perennial sow thistle was observed off the Project RoW to the north at the approach to the field.
	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			perennial sow thistle	Noxious	2	1	
			annual sow-thistle	not listed	2	1	
			barnyard grass	not listed	5	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	2	1	
			corn spurry	not listed	5	1	
			hemp-nettle	not listed	2	1	
			low cudweed	not listed	2	1	
			pineappleweed	not listed	2	1	
			volunteer rye	not listed	5	1	
			volunteer canola	not listed	11	2	
			wild buckwheat	not listed	11	2	
			Canada thistle	Noxious	4	2	A weedy patch of approximately 20 m by 35 m was observed at an ephemeral draw.
			perennial sow thistle	Noxious	3	2	
			alsike clover	not listed	4	2	
			annual hawk's-beard	not listed	5	2	
			annual sow-thistle	not listed	2	1	
			common dandelion	not listed	5	1	
			common plantain	not listed	2	1	
			lamb's-quarters	not listed	1	1	
			pineappleweed	not listed	2	1	
			prickly annual sow-thistle	not listed	4	2	
			smooth brome	not listed	2	2	
			stinkweed	not listed	2	1	
			timothy	not listed	2	2	
	annual crop	field line	Canada thistle	Noxious	4	3	--
			smooth brome	not listed	13	4	--
SW 15-056-26 W4M	road	ditch	Canada thistle	Noxious	2	2	
			cleavers	not listed	2	2	
			hemp-nettle	not listed	2	2	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	annual crop	cultivation	smooth brome	not listed	13	2	
			stinkweed	not listed	2	1	
			volunteer canola	not listed	2	1	
			wild mustard	not listed	2	1	
			Canada thistle	Noxious	5	1	--
			perennial sow thistle	Noxious	2	1	
			barnyard grass	not listed	3	3	
			common chickweed	not listed	5	1	
			common storksbill	not listed	1	1	
			hemp-nettle	not listed	5	1	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	6	2	
			pineappleweed	not listed	1	1	
			prickly annual sow-thistle	not listed	5	1	
			stinkweed	not listed	2	1	
			volunteer canola	not listed	2	1	
			volunteer wheat	not listed	2	1	
			wild buckwheat	not listed	2	1	
			wild oat	not listed	5	1	
			Canada thistle	Noxious	3	2	A weedy patch of approximately 40 m by 60 m was observed associated with an ephemeral draw.
			annual hawk's-beard	not listed	2	1	
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	2	1	
			lady's-thumb	not listed	5	1	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	8	3	
			prickly annual sow-thistle	not listed	2	2	
			wild oat	not listed	2	2	
			Canada thistle	Noxious	4	3	A weedy patch of approximately 40 m by 80 m was observed associated with a wetland.
			common dandelion	not listed	2	1	
			lady's-thumb	not listed	2	1	
			smooth brome	not listed	2	1	
			Canada thistle	Noxious	4	2	A weedy patch of approximately 20 m by 50 m was observed associated with a wetland.
			barnyard grass	not listed	3	2	
			common chickweed	not listed	2	1	
			common plantain	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	annual crop	field line	hemp-nettle	not listed	2	1	--
			lady's-thumb	not listed	3	3	
			low cudweed	not listed	3	3	
			prickly annual sow-thistle	not listed	5	1	
			volunteer wheat	not listed	2	1	
			Canada thistle	Noxious	5	2	
			common chickweed	not listed	2	1	
			hemp-nettle	not listed	2	1	
			prickly annual sow-thistle	not listed	3	2	
			smooth brome	not listed	5	2	
			stinkweed	not listed	2	1	
SW 13-056-26 W4M	road	ditch	Canada thistle	Noxious	2	1	A patch of Canada thistle and perennial sow thistle was observed off of the Project RoW to the south, on the existing RoW.
			common chickweed	not listed	2	1	
			common dandelion	not listed	2	1	
			common groundsel	not listed	2	1	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	2	1	
			lady's-thumb	not listed	2	1	
			low cudweed	not listed	2	1	
			oxtongue	not listed	2	1	
			prickly annual sow-thistle	not listed	5	2	
			smooth brome	not listed	2	1	
			stinkweed	not listed	5	2	
			summer-cypress	not listed	13	2	
			volunteer canola	not listed	5	1	
			wild oat	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			common chickweed	not listed	2	1	
			hemp-nettle	not listed	2	1	
			low cudweed	not listed	2	1	
			wild buckwheat	not listed	2	1	
SE 13-056-26 W4M	annual crop	cultivation	Canada thistle	Noxious	2	1	Canada thistle plants were observed primarily within a drainage both on and off the Project RoW.
			alsike clover	not listed	2	1	
			annual hawk's-beard	not listed	2	1	
			common dandelion	not listed	2	1	
			green hawk's-beard	not listed	2	1	
			hemp-nettle	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			low cudweed	not listed	2	1	
			pineappleweed	not listed	2	1	
			prickly annual sow-thistle	not listed	2	1	
			red clover	not listed	2	1	
			wild buckwheat	not listed	2	1	
	road	ditch	barnyard grass	not listed	6	2	--
			common dandelion	not listed	2	1	
			common groundsel	not listed	2	1	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	2	1	
			low cudweed	not listed	2	1	
			pineappleweed	not listed	2	1	
			prickly annual sow-thistle	not listed	11	2	
			shepherd's-purse	not listed	2	1	
			smooth brome	not listed	2	1	
			stinkweed	not listed	2	1	
			volunteer canola	not listed	13	2	
			wild oat	not listed	5	2	
SW 25-055-25 W4M	annual crop	field line	Canada thistle	Noxious	3	2	--
			perennial sow thistle	Noxious	1	1	
			cleavers	not listed	2	1	
			hemp-nettle	not listed	2	1	
			smooth brome	not listed	10	3	
			wild oat	not listed	1	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	Canada thistle plants were mainly found along west and south crop edges, both on and off the Project RoW.
			hemp-nettle	not listed	2	1	
			henbit	not listed	2	1	
			prickly annual sow-thistle	not listed	2	1	
			wild buckwheat	not listed	2	1	
	annual crop	field line	Canada thistle	Noxious	3	2	--
			perennial sow thistle	Noxious	1	1	
			cleavers	not listed	2	1	
			common chickweed	not listed	1	1	
			common dandelion	not listed	2	1	
			common groundsel	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
SE 25-055-25 W4M			hemp-nettle	not listed	2	1	
			henbit	not listed	1	1	
			lamb's-quarters	not listed	1	1	
			smooth brome	not listed	10	2	
			stinkweed	not listed	2	1	
			wild buckwheat	not listed	2	1	
	annual crop	cultivation	perennial sow thistle	Noxious	1	1	--
			henbit	not listed	2	1	
			prickly annual sow-thistle	not listed	2	1	
			stinkweed	not listed	2	1	
			Canada thistle	Noxious	2	2	A weedy patch of approximately 100m by 65 m was observed within a wetland both on and off of the Project RoW.
			cleavers	not listed	1	1	
			common dandelion	not listed	1	1	
			dog mustard	not listed	1	1	
			hemp-nettle	not listed	1	1	
			henbit	not listed	1	1	
			lamb's-quarters	not listed	2	2	
			prickly annual sow-thistle	not listed	2	2	
			stinkweed	not listed	2	2	
			wild buckwheat	not listed	2	2	
	shrubland	native	Canada thistle	Noxious	8	3	--
			perennial sow thistle	Noxious	5	2	
			alsike clover	not listed	5	2	
			annual sow-thistle	not listed	1	1	
			common dandelion	not listed	2	2	
			common plantain	not listed	4	2	
			hemp-nettle	not listed	2	1	
			prickly annual sow-thistle	not listed	2	2	
			redtop	not listed	4	2	
			smooth brome	not listed	5	2	
			stinkweed	not listed	2	1	
			timothy	not listed	2	1	
			tufted vetch	not listed	9	3	
	road	ditch	Canada thistle	Noxious	2	1	--
			perennial sow thistle	Noxious	5	2	
			common dandelion	not listed	5	1	
			common plantain	not listed	4	2	



Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
NE 24-055-25 W4M			prickly annual sow-thistle	not listed	1	1	
			smooth brome	not listed	4	2	
			stinkweed	not listed	2	1	
			timothy	not listed	1	1	
			tufted vetch	not listed	7	2	
			yellow sweet-clover	not listed	1	1	
	road	ditch	perennial sow thistle	Noxious	1	1	--
			alsike clover	not listed	2	2	
			common dandelion	not listed	2	1	
			common groundsel	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			prickly annual sow-thistle	not listed	2	1	
			smooth brome	not listed	5	2	
			white sweet-clover	not listed	3	1	
			wild buckwheat	not listed	1	1	
			wild oat	not listed	1	1	
	annual crop	cultivation	Canada thistle	Noxious	4	1	Yellow toadflax plants were only observed at the east edge of crop, both on and off the Project RoW.
			yellow toadflax	Noxious	2	1	
			cleavers	not listed	2	1	
			common dandelion	not listed	2	1	
			common groundsel	not listed	5	1	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	7	2	
			low cudweed	not listed	3	2	
			prickly annual sow-thistle	not listed	6	1	
			stinkweed	not listed	2	1	
			tufted vetch	not listed	3	2	
			wild buckwheat	not listed	2	1	
	road	ditch	Canada thistle	Noxious	2	1	--
			perennial sow thistle	Noxious	1	1	
			common dandelion	not listed	2	1	
			common plantain	not listed	1	1	
			smooth brome	not listed	2	2	
			stinkweed	not listed	1	1	
			tufted vetch	not listed	2	2	
			tumbling mustard	not listed	3	2	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
NE 19-055-24 W4M	annual crop	cultivation	wild buckwheat	not listed	1	1	--
			Canada thistle	Noxious	2	1	
			scentless chamomile	Noxious	1	1	
			annual hawk's-beard	not listed	2	1	
			cleavers	not listed	6	2	
			common chickweed	not listed	3	2	
			common dandelion	not listed	3	2	
			common groundsel	not listed	3	2	
			common plantain	not listed	2	1	
			common storksbill	not listed	3	2	
			lamb's-quarters	not listed	4	2	
			prickly annual sow-thistle	not listed	2	1	
			prostrate knotweed	not listed	3	2	
			shepherd's-purse	not listed	4	2	
			volunteer canola	not listed	2	1	
			wild buckwheat	not listed	5	2	
	annual crop	field line	Canada thistle	Noxious	5	1	--
			perennial sow thistle	Noxious	5	2	
			yellow toadflax	Noxious	9	2	
			alfalfa	not listed	1	1	
			common dandelion	not listed	6	2	
			volunteer oat	not listed	1	1	
			red clover	not listed	3	2	
			smooth brome	not listed	13	2	
			stinkweed	not listed	2	1	
			timothy	not listed	4	2	
			tufted vetch	not listed	3	2	
			white sweet-clover	not listed	2	1	
SE 19-055-24 W4M	annual crop	cultivation	Canada thistle	Noxious	4	2	--
			alfalfa	not listed	8	2	
			annual hawk's-beard	not listed	2	1	
			cleavers	not listed	6	2	
			common dandelion	not listed	8	2	
			lady's-thumb	not listed	2	1	
			lamb's-quarters	not listed	4	2	
			prickly annual sow-thistle	not listed	5	1	
			shepherd's-purse	not listed	5	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			stinkweed	not listed	4	2	A weedy patch approximately 10 m by 40 m in size was observed associated with a drainage canal, extending off of the Project RoW to the north and south.
			volunteer wheat	not listed	2	1	
			wild buckwheat	not listed	10	2	
			wild oat	not listed	1	1	
			Canada thistle	Noxious	10	2	
			perennial sow thistle	Noxious	2	1	
			cleavers	not listed	2	1	
			common dandelion	not listed	4	2	
			hemp-nettle	not listed	2	1	
			smooth brome	not listed	6	2	
			stinkweed	not listed	4	2	
	annual crop	cultivation	alfalfa	not listed	5	2	--
			cleavers	not listed	1	1	
			common dandelion	not listed	6	2	
			prickly annual sow-thistle	not listed	2	1	
			stinkweed	not listed	2	1	
			volunteer canola	not listed	8	2	
			wild buckwheat	not listed	4	1	
			wild oat	not listed	1	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	
			alfalfa	not listed	8	2	
			annual hawk's-beard	not listed	2	1	
			cleavers	not listed	4	2	
			common dandelion	not listed	8	2	
			hemp-nettle	not listed	2	1	
			lamb's-quarters	not listed	4	2	
			prickly annual sow-thistle	not listed	5	1	
			shepherd's-purse	not listed	5	2	
			smooth brome	not listed	2	1	
			stinkweed	not listed	4	2	
			wild buckwheat	not listed	8	2	
	road	ditch	Canada thistle	Noxious	3	3	--
			cleavers	not listed	3	2	
			common groundsel	not listed	2	1	
			hemp-nettle	not listed	2	1	
			prickly annual sow-thistle	not listed	2	1	
			smooth brome	not listed	4	2	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
SW 20-055-24 W4M	road	ditch	stinkweed	not listed	5	2	--
			summer-cypress	not listed	2	1	
			volunteer canola	not listed	1	1	
			Canada thistle	Noxious	9	2	
			annual sow-thistle	not listed	2	1	
			bluebur	not listed	4	2	
			cleavers	not listed	8	2	
			common dandelion	not listed	2	1	
			common groundsel	not listed	2	1	
			pineappleweed	not listed	2	1	
			prickly annual sow-thistle	not listed	5	1	
			smooth brome	not listed	13	3	
			stinkweed	not listed	6	2	
			summer-cypress	not listed	4	2	
	annual crop	cultivation	Canada thistle	Noxious	4	2	--
			cleavers	not listed	6	2	
			common chickweed	not listed	4	2	
			common groundsel	not listed	2	1	
			hemp-nettle	not listed	4	2	
			prickly annual sow-thistle	not listed	2	1	
			shepherd's-purse	not listed	4	2	
			volunteer canola	not listed	10	1	
			wild buckwheat	not listed	4	2	
	shelterbelt	cultivation	Canada thistle	Noxious	9	2	--
			cleavers	not listed	2	1	
			common dandelion	not listed	5	2	
			hemp-nettle	not listed	4	2	
			smooth brome	not listed	10	2	
NW 17-055-24 W4M	shelterbelt	cultivation	Canada thistle	Noxious	9	2	--
			perennial sow thistle	Noxious	2	1	
			cleavers	not listed	9	2	
			common dandelion	not listed	9	3	
			hemp-nettle	not listed	5	3	
			lamb's-quarters	not listed	2	1	
			smooth brome	not listed	13	3	
			stinkweed	not listed	2	1	
			wild oat	not listed	1	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	annual crop	cultivation	Canada thistle	Noxious	2	1	--
			annual hawk's-beard	not listed	2	1	
			cleavers	not listed	5	2	
			common chickweed	not listed	2	1	
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	5	1	
			lamb's-quarters	not listed	2	1	
			summer-cypress	not listed	1	1	
			volunteer canola	not listed	5	2	
			wild buckwheat	not listed	2	1	
			wild oat	not listed	5	1	
	treed	native	Canada thistle	Noxious	8	2	--
			smooth brome	not listed	7	3	
	annual crop	cultivation	Canada thistle	Noxious	4	2	--
			cleavers	not listed	5	2	
			common chickweed	not listed	2	1	
			common dandelion	not listed	2	1	
			hemp-nettle	not listed	2	1	
			volunteer canola	not listed	5	2	
			wild oat	not listed	10	2	
SE 17-055-24 W4M	shelterbelt	cultivation	Canada thistle	Noxious	6	2	--
			annual sow-thistle	not listed	1	1	
			hemp-nettle	not listed	6	2	
			lamb's-quarters	not listed	2	1	
			smooth brome	not listed	13	3	
			stinkweed	not listed	1	1	
			tufted vetch	not listed	1	1	
			wild buckwheat	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	4	2	A patch of Canada thistle was observed at the eastern crop edge, both on and off the Project RoW.
			cleavers	not listed	10	2	
			common chickweed	not listed	5	2	
			common dandelion	not listed	2	1	
			lamb's-quarters	not listed	5	2	
			night-flowering catchfly	not listed	1	1	
			prickly annual sow-thistle	not listed	1	1	
			stinkweed	not listed	2	1	
			wild buckwheat	not listed	10	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	road	ditch	wild oat	not listed	4	2	--
			Canada thistle	Noxious	6	2	
			perennial sow thistle	Noxious	1	1	
			common dandelion	not listed	5	2	
			smooth brome	not listed	13	3	
			stinkweed	not listed	2	1	
SW 16-055-24 W4M	road	ditch	common dandelion	not listed	2	1	--
			common plantain	not listed	2	1	
			shepherd's-purse	not listed	1	1	
			smooth brome	not listed	5	2	
			volunteer canola	not listed	2	1	
	annual crop	cultivation	Canada thistle	Noxious	2	1	Canada thistle plants were mainly observed near the western and southern crop edges, both on and off the Project RoW.
			cleavers	not listed	2	1	
			common chickweed	not listed	5	1	
			hemp-nettle	not listed	5	1	
			stinkweed	not listed	2	1	
			volunteer canola	not listed	1	1	
			wild buckwheat	not listed	2	1	
	road	ditch	Canada thistle	Noxious	2	1	--
			common dandelion	not listed	2	1	
			shepherd's-purse	not listed	1	1	
			smooth brome	not listed	10	3	
			stinkweed	not listed	1	1	
NW 09-055-24 W4M	road	ditch	timothy	not listed	2	1	--
			Canada thistle	Noxious	9	3	
			perennial sow thistle	Noxious	3	2	
			cleavers	not listed	2	1	
			common dandelion	not listed	3	2	
			smooth brome	not listed	5	2	
			stinkweed	not listed	2	1	
			timothy	not listed	2	1	
			volunteer canola	not listed	2	1	
	annual crop	cultivation	yellow sweet-clover	not listed	2	1	--
			Canada thistle	Noxious	4	1	
			annual sow-thistle	not listed	3	2	
			cleavers	not listed	4	1	
			common chickweed	not listed	2	1	



Fox Creek to Namao Junction
2016 Weed Surveys

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
	annual crop	field line	common dandelion	not listed	3	2	--
			lamb's-quarters	not listed	1	1	
			Canada thistle	Noxious	4	2	
			annual hawk's-beard	not listed	2	1	
			annual sow-thistle	not listed	6	1	
			cleavers	not listed	2	1	
			common dandelion	not listed	5	2	
			smooth brome	not listed	10	3	
			wild oat	not listed	1	1	
NE 09-055-24 W4M	field line	hay	Canada thistle	Noxious	6	2	--
			scentless chamomile	Noxious	3	1	
			annual sow-thistle	not listed	6	3	
			cleavers	not listed	1	1	
			common dandelion	not listed	13	2	
			henbit	not listed	2	1	
			lamb's-quarters	not listed	2	1	
			volunteer canola	not listed	1	1	
	tame forage	hay	annual hawk's-beard	not listed	2	1	--
			annual sow-thistle	not listed	4	2	
			common dandelion	not listed	9	2	
			flixweed	not listed	4	1	
			lamb's-quarters	not listed	2	1	
			stinkweed	not listed	2	1	
	field line	hay	Canada thistle	Noxious	13	3	--
			annual hawk's-beard	not listed	1	1	
			common dandelion	not listed	10	2	
			lamb's-quarters	not listed	2	1	
			wild buckwheat	not listed	1	1	
NE 33-054-24 W4M	road	ditch	Canada thistle	Noxious	2	1	--
			alsike clover	not listed	7	3	
			cleavers	not listed	2	1	
			smooth brome	not listed	5	2	
			stinkweed	not listed	1	1	
			white sweet-clover	not listed	2	1	
			yellow sweet-clover	not listed	4	2	
	annual crop	cultivation	cleavers	not listed	2	1	--

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
			lamb's-quarters	not listed	2	1	A weedy patch approximately 15 m by 40 m was observed associated with an ephemeral draw, extending off of the Project RoW to the east and west.
			Canada thistle	Noxious	4	2	
			perennial sow thistle	Noxious	2	1	
			cleavers	not listed	2	1	
			hemp-nettle	not listed	1	1	
			timothy	not listed	2	2	
			wild buckwheat	not listed	1	1	
			yellow hemp-nettle	not listed	1	1	
	tame forage	hay	Canada thistle	Noxious	2	1	--
			perennial sow thistle	Noxious	2	1	
			annual hawk's-beard	not listed	1	1	
			cleavers	not listed	2	1	
			common chickweed	not listed	2	1	
			common dandelion	not listed	5	2	
			common plantain	not listed	1	1	
			lamb's-quarters	not listed	2	1	
			stinkweed	not listed	2	1	
			tumbling mustard	not listed	1	1	
			volunteer canola	not listed	1	1	
	road	ditch	Canada thistle	Noxious	2	1	--
			smooth brome	not listed	3	2	
			yellow hemp-nettle	not listed	1	1	

Notes: 1 Nomenclature follows the Alberta *Weed Control Act* if listed and ACIMS 2015a if not listed.

2 Species listed in bold font are designated as **Noxious** under the Alberta Weed Control Act.

3 Agronomic species typically included within hay and pasture seed mixes (e.g., alfalfa, clover, timothy, orchard grass, smooth brome) are not included as weeds within hay or pasture land uses.

4 Distribution codes from 1-13 (Appendix A, Table A-1) (Adams et al. 2009).

5 Density codes from 1-4 (Appendix A, Table A-2) (BC MFLNRO date unknown).

6 This species was unable to be identified due to the condition or phenology of the observed plants (e.g., no observable reproductive structures). While there are many catchfly species that are not listed, the potential exists that this may be the Noxious weed "white cockle".

**Table A-4: 2016 Weed Survey Results of Proposed Vehicle Access Locations**

Location	Land Cover	Land Use	Weed Species ^{1,2,3}	Weed Status	Distribution ⁴	Density ⁵	Comments
Woodlands County							
SE 03-060-11 W5M (Athabasca River Access)	road	ditch	Canada thistle	Noxious	2	1	--
			common dandelion	not listed	2	1	
			smooth brome	not listed	13	2	
			timothy	not listed	13	2	
	tame grass	disturbed	Canada thistle	Noxious	8	2	Perennial sow thistle was observed only within proposed temporary workspace.
			perennial sow thistle	Noxious	2	1	
			cicer milk vetch	not listed	3	2	
			common dandelion	not listed	10	2	
			common plantain	not listed	2	1	
			hemp-nettle	not listed	1	1	
			sweet-clover species	not listed	2	1	
NE 18-058-09 W5M (Proposed Access Road)	road	ditch	Canada thistle	Noxious	5	1	--
			perennial sow thistle	Noxious	5	1	
			tall buttercup	Noxious	2	1	
			common dandelion	not listed	5	2	
			smooth brome	not listed	13	2	
			timothy	not listed	11	2	
			tufted vetch	not listed	3	2	
	tame grass	pasture	Canada thistle	Noxious	2	1	--
			tall buttercup	Noxious	4	1	
			common dandelion	not listed	10	2	
			common plantain	not listed	1	1	
			flixweed	not listed	1	1	
			prostrate knotweed	not listed	1	1	
			shepherd's-purse	not listed	1	1	
NE 06-057-07 W5M (Proposed shoo-fly)	tame grass	pasture	Canada thistle	Noxious	8	2	--
			oxeye daisy	Noxious	5	2	
			tall buttercup	Noxious	10	2	
			cicer milk vetch	not listed	3	2	
			common dandelion	not listed	12	3	
			white sweet-clover	not listed	2	1	
			yellow sweet-clover	not listed	2	1	



- Notes:**
- 1 Nomenclature follows the Alberta *Weed Control Act* if listed and ACIMS 2015a if not listed.
 - 2 Species listed in bold font are designated as **Noxious** under the Alberta Weed Control Act.
 - 3 Agronomic species typically included within hay and pasture seed mixes (*e.g.*, alfalfa, clover, timothy, orchard grass, smooth brome) are not included as weeds within hay or pasture land uses.
 - 4 Distribution codes from 1-13 (Appendix A, Table A-1) (Adams et al. 2009).
 - 5 Density codes from 1-4 (Appendix A, Table A-2) (BC MFLNRO date unknown).