APPENDIX 7.
CROSSING ASSESSMENT BOOKLETS

## Unnamed Tributary of Nelson River



## Location

Datum: **NAD 83** 

**UTM:** 14N Zone:

Easting: 815112

Northing: 6293739

**Data Source:** 

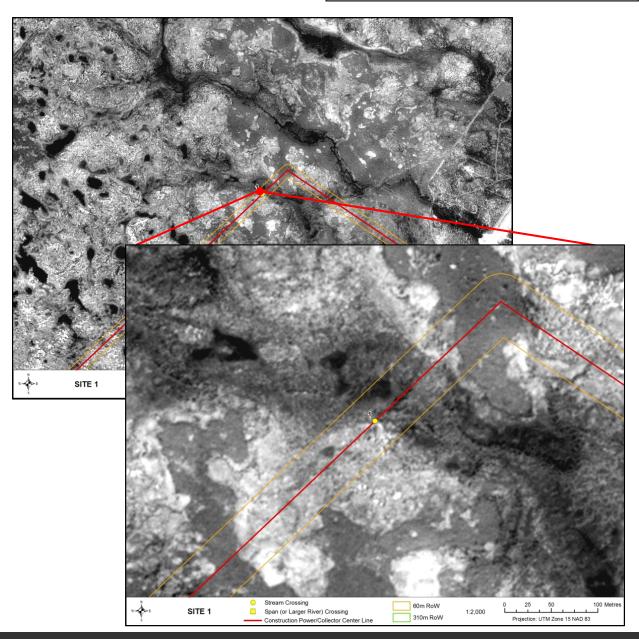
## General Morphology

Stream/Lake: Stream Pattern: IW **Confinement:** UN **Stage:** Moderate Flow Regime: Intermittent

Morphology:

 $0.44 \text{ km}^2$ **U/S Drainage:** 

Distance to Receiving Water: Nelson River 2.51 km









## + Physical Data

#### **Channel Profile**

Channel and Flow		
Wetted Width (m)	-	
Channel Width (m)	-	
Banks (%)		

Right Bank Stability Left Bank Stability

Riparian

Floodplain Distance (m)

Right Bank 90 (total) Left Bank

**Riparian Distance (m)** 

111 (total) Right Bank

Left Bank Riparian Vegetation Type (Y/N)

None Grasses/sedges Shrubs Conifers Deciduous Mixed Forest Canopy Cover (%)

**Substrate** 

**Substrate Type (%)** 

Fines Small Gravel Large Gravel Cobble Boulder

#### **Cover Types**

**Total Cover Available (%) Cover Composition (% of Total)** Large Woody Debris Overhanging Vegetation **Instream Vegetation** Pool Boulder **Undercut Bank** Surface Turbulence

**Habitat Type** 

**Habitat Composition** 

**Turbidity** 

Pool Run Flat Riffle Rapid

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes **DFO Manitoba Agricultural Watershed Classification:** 

**Fish Habitat Classification:** Marginal

Fish Presence: N/A

#### **Comments:**

The RoW crosses the headwaters of this unnamed tributary of the Nelson River. It likely provides habitat for forage fish, with low overwintering potential. At the crossing it consists of bog habitat, with no defined channel and a large soft floodplain.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** 



## Goose Creek



## Location

Datum: **NAD 83** 

UTM: Zone: 14N

Easting: 813821

Northing: 6292281

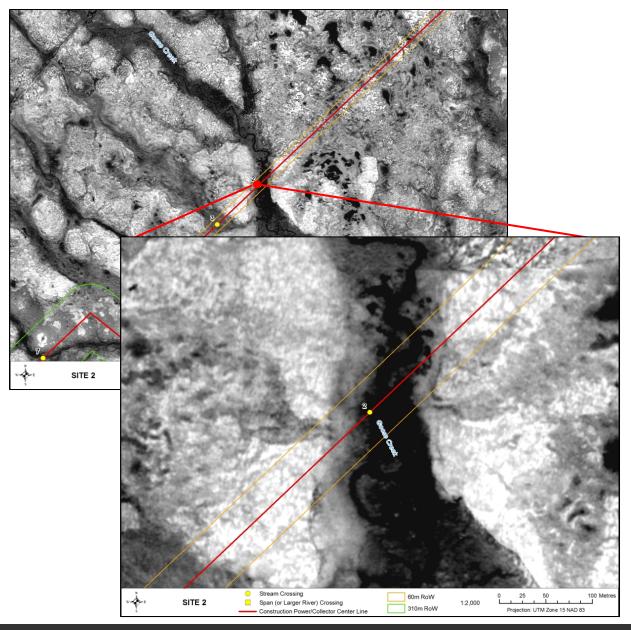
**Data Source:** 

## **General Morphology**

Stream/Lake: Stream Pattern: IM **Confinement:** UN **Stage:** Moderate Flow Regime: Perennial Morphology: LC

U/S Drainage:  $111.07 \text{ km}^2$ 

Distance to Receiving Water: Nelson River 5.18 km





## + Physical Data

#### **Channel Profile**

Channel and Flow		<u>C</u>
Wetted Width (m)	13	T
Channel Width (m)	13	(
Banks (%)		
Right Bank Stability	-	
Left Bank Stability	-	
<u>Riparian</u>		
Floodplain Distance (m)		
Right Bank	31	
Left Bank	0	

48

35

#### Right Bank Left Bank

Riparian Distance (m)

<b>Riparian Vegetation Type (Y/N)</b>		
None	-	
Grasses/sedges	Y	
Shrubs	Y	
Conifers	-	
Deciduous	-	
Mixed Forest	-	
Canopy Cover (%)	0	

### **Substrate**

**Substrate Type (%)** 

Fines Small Gravel Large Gravel Cobble Boulder

#### **Cover Types**

Total Cover Available (%)	_
<b>Cover Composition (% of Total)</b>	-
Large Woody Debris	-
Overhanging Vegetation	-
Instream Vegetation	_
Pool	-
Boulder	_
Undercut Bank	-
Surface Turbulence	-

### **Habitat Type**

**Habitat Composition** 

**Turbidity** 

Pool	-
Run	-
Flat	-
Riffle	-
Rapid	-

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

**Fish Habitat Present** Yes **DFO Manitoba Agricultural Watershed Classification:** 

**Fish Habitat Classification: Important** 

Fish Presence: Kroeker and MacDonell (2006) reported burbot, fathead minnow, sculpins (mottled and slimy), pearl dace, longnose dace, white sucker, and longnose sucker. Swanson et al. (1991) reported burbot, brook trout, brook stickleback, slimy sculpin, longnose dace, finescale dace, pearl dace, white sucker, and longnose sucker. Swanson (1991) also found the stream to provide nursery habitat for brook trout. All sampling was conducted in the lower reaches of the creek.

#### **Comments:**

Goose Creek is known to provide important fish habitat for both indicator and forage fish in the lower reaches of the creek, including rearing and feeding. It likely provides only low overwintering potential. At the crossing it consists of bog habitat, and it is surrounded by a soft floodplain.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

Comments: Soft floodplain and important fish habitat result in a moderate sensitivity rating.



## Unnamed tributary of Goose Creek



## Location

Datum: **NAD 83** 

UTM: 14N Zone:

Easting: 813618

Northing: 6292052

**Data Source:** 



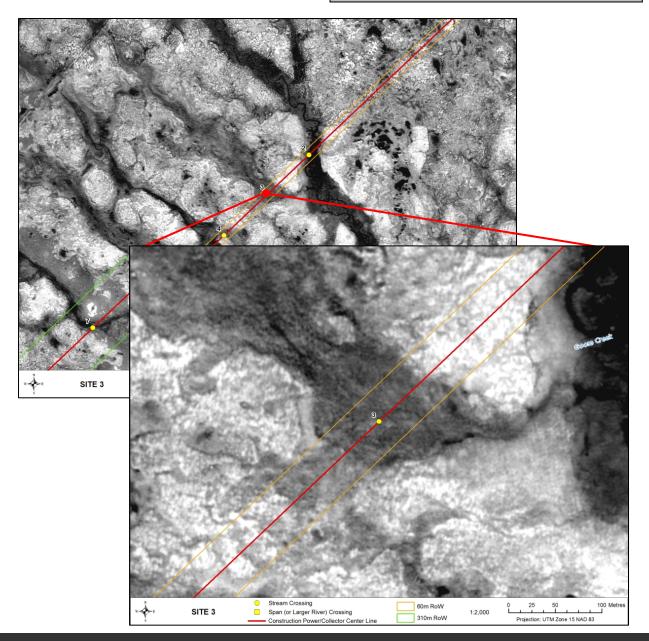
## General Morphology

Stream/Lake: Stream Pattern: IR **Confinement:** UN **Stage:** Low Flow Regime: Intermittent

Morphology:

 $1.46 \text{ km}^2$ U/S Drainage:

Distance to Receiving Water: Goose Creek 0.25 km





## + Physical Data

#### **Channel Profile**

Channel and Flow
Wetted Width (m) Channel Width (m) -

Banks (%)

Right Bank Stability -Left Bank Stability -

**Riparian** 

Floodplain Distance (m)

Right Bank 107 (total) Left Bank -

**Riparian Distance (m)** 

Right Bank 137 (total)

Left Bank
Riparian Vegetation Type (Y/N)

**Substrate** 

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

**Cover Types** 

Total Cover Available (%)

Cover Composition (% of Total)

Large Woody Debris

Overhanging Vegetation

Instream Vegetation

Pool
Boulder
Undercut Bank
Surface Turbulence
Turbidity

**Habitat Type** 

**Habitat Composition** 

Pool
Run
Flat
Riffle
Rapid

## Ø

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification:

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

The unnamed tributary of Goose Creek is a bog drainage that provides marginal fish habitat. Based on low flow conditions and a poorly defined channel fish use is expected to be largely limited to forage fish species. Any large bodied fish use is expected to be restricted to high water conditions.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** 

Soft floodplain and important fish habitat result in a moderate sensitivity rating.



## Unnamed tributary of Goose Creek



## Location

Datum: **NAD 83** 

UTM: 14N Zone:

Easting: 813405

Northing: 6291810

**Data Source:** 

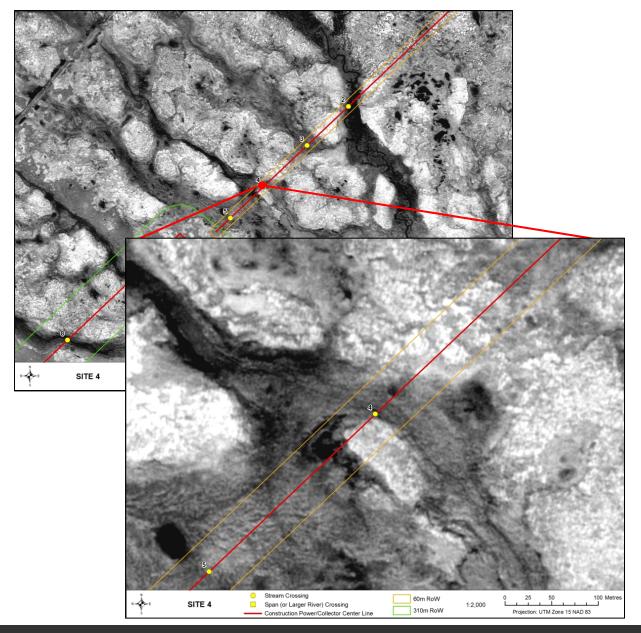
## General Morphology

Stream/Lake: Stream Pattern: SI **Confinement:** UN **Stage:** Moderate Flow Regime: Intermittent

Morphology:

 $2.05 \text{ km}^2$ U/S Drainage:

**Distance to Receiving Water:** Goose Creek 0.9 km



## A

## **Site Conditions**

## + Physical Data

#### **Channel Profile**

Channel and Flow		
Wetted Width (m)	3	
Channel Width (m)	-	

Left Bank Stability

Banks (%)
Right Bank Stability

Riparian

Floodplain Distance (m)

Right Bank 55 (total)
Left Bank Riparian Distance (m)

Right Bank 93 (total) Left Bank -

Riparian Vegetation Type (Y/N)

None Grasses/sedges Y
Shrubs Y
Conifers Deciduous Mixed Forest Canopy Cover (%) 0

**Substrate** 

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

**Cover Types** 

Total Cover Available (%)

Cover Composition (% of Total)

Large Woody Debris

Overhanging Vegetation

Instream Vegetation

Pool

Boulder Undercut Bank Surface Turbulence Turbidity

**Habitat Type** 

**Habitat Composition** 

Pool
Run
Flat
Riffle
Rapid

## A

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification:

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Goose Creek likely provides marginal fish habitat for forage fish only. At the crossing it consists of bog habitat, with a small channel surrounded by a soft floodplain. It likely provides low overwintering potential.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:



## Unnamed tributary of Goose Creek



## Location

Datum: **NAD 83** 

UTM: 14N Zone:

Easting: 813242

Northing: 6291626

**Data Source:** 



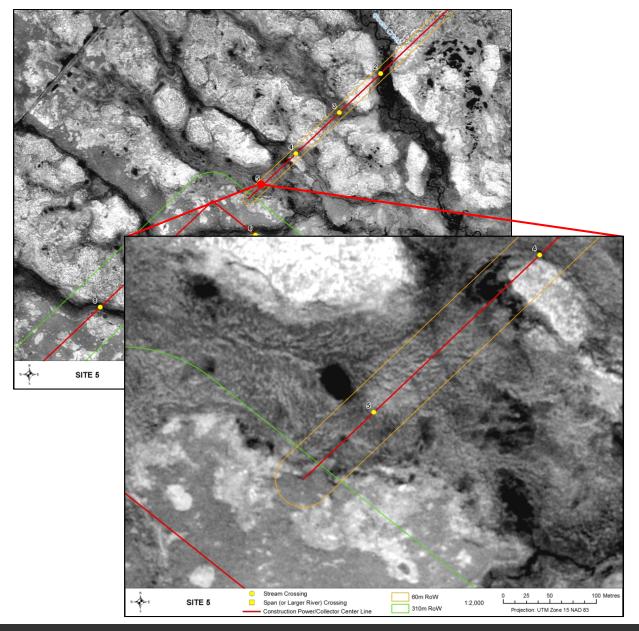
## General Morphology

Stream/Lake: Stream Pattern: SI **Confinement:** UN **Stage:** Low Flow Regime: Intermittent

Morphology:

 $0.22 \text{ km}^2$ U/S Drainage:

Distance to Receiving Water: Goose Creek 1.19 km





## + Physical Data

#### **Channel Profile**

Channel and Flow
Wetted Width (m) Channel Width (m) -

Banks (%)

Right Bank Stability Left Bank Stability -

Riparian

Floodplain Distance (m)

Right Bank 246 (total) Left Bank -

**Riparian Distance (m)** 

Right Bank 296 (total)

Left Bank
Riparian Vegetation Type (Y/N)

None Grasses/sedges Y
Shrubs Y
Conifers Deciduous Mixed Forest Canopy Cover (%) 0

**Substrate** 

**Substrate Type (%)** 

Fines Small Gravel Large Gravel Cobble Boulder -

**Cover Types** 

Total Cover Available (%)
Cover Composition (% of Total)
Large Woody Debris
Overhanging Vegetation
Instream Vegetation
Pool

Boulder Undercut Bank Surface Turbulence

Turbidity

**Habitat Type** 

**Habitat Composition** 

Pool
Run
Flat
Riffle
Rapid

## A

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Goose Creek likely provides marginal fish habitat for forage fish only. At the crossing it consists of bog habitat, with no defined channel and a soft floodplain. It likely provides no overwintering potential.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** 



## Unnamed tributary of Goose Creek



## Location

Datum: **NAD 83** 

UTM: 14N Zone:

Easting: 813225

Northing: 6291355

**Data Source:** 

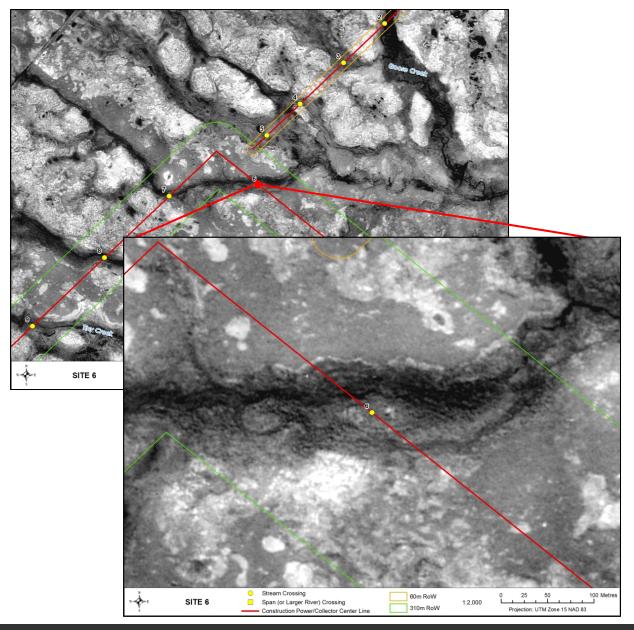
## General Morphology

Stream/Lake: Stream Pattern: SI **Confinement:** UN **Stage:** Moderate Flow Regime: Intermittent

Morphology:

 $4.76 \text{ km}^2$ U/S Drainage:

**Distance to Receiving Water:** Goose Creek 1.2 km



## N

## **Site Conditions**

## + Physical Data

#### **Channel Profile**

Channel and Flow
Wetted Width (m) -

Channel Width (m)

Banks (%)

Right Bank Stability -Left Bank Stability -

**Riparian** 

**Floodplain** Distance (m)

Right Bank 88 (total) Left Bank -

**Riparian Distance (m)** 

Right Bank 108 (total)

Left Bank

Riparian Vegetation Type (Y/N)

None Grasses/sedges Shrubs Conifers Deciduous Mixed Forest -

Canopy Cover (%)

**Substrate** 

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

**Cover Types** 

Total Cover Available (%)
Cover Composition (% of Total)
Large Woody Debris

Large Woody Debris
Overhanging Vegetation
Instream Vegetation
Pool
Boulder
Undercut Bank
Surface Turbulence

Turbidity

**Habitat Type** 

**Habitat Composition** 

Pool
Run
Flat
Riffle
Rapid

## A

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Goose Creek likely provides marginal fish habitat for forage fish only. At the crossing it consists of bog habitat, with no defined channel and a soft floodplain. It likely provides low overwintering potential.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

Comments:

## Unnamed tributary of Goose Creek



## Location

Datum: **NAD 83** 

UTM: 14N Zone: Easting: 812745

Northing: 6291254

**Data Source:** 



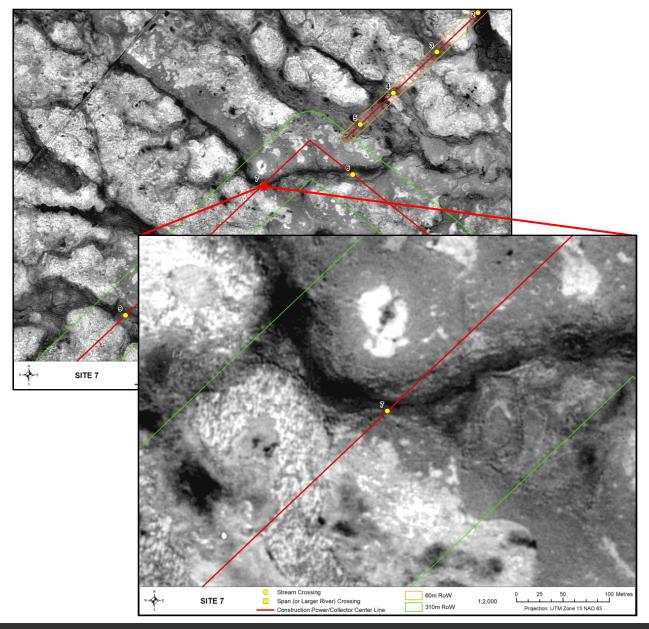
## General Morphology

Stream/Lake: Stream Pattern: SI **Confinement:** UN **Stage:** Moderate Flow Regime: Intermittent

Morphology:

 $4.76 \text{ km}^2$ U/S Drainage:

Distance to Receiving Water: Goose Creek 1.7km





## N

## **Site Conditions**

## + Physical Data

#### **Channel Profile**

Channel and Flow

Wetted Width (m) 
Channel Width (m) -

Banks (%)

Right Bank Stability --Left Bank Stability --

**Riparian** 

**Floodplain** Distance (m)

Right Bank 18 (total) Left Bank -

**Riparian Distance (m)** 

Right Bank 62 (total) Left Bank -

Riparian Vegetation Type (Y/N)

None - Grasses/sedges - Shrubs - Conifers - Deciduous - Mixed Forest -

**Substrate** 

Substrate Type (%)

Canopy Cover (%)

Fines Small Gravel Large Gravel Cobble Boulder -

**Cover Types** 

Total Cover Available (%)

Cover Composition (% of Total)

Large Woody Debris

Overhanging Vegetation

Instream Vegetation

Pool

Boulder

Undercut Bank

Surface Turbulence Turbidity

**Habitat Type** 

**Habitat Composition** 

Pool
Run
Flat
Riffle
Rapid

## A

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification:

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Goose Creek likely provides marginal fish habitat for forage fish only. At the crossing it consists of bog habitat, with no defined channel and a soft floodplain. It likely provides low overwintering potential.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

Commonts.



## Unnamed tributary of Tiny Creek



## Location

Datum: **NAD 83** 

UTM: 14N Zone:

Easting: 812427

Northing: 6290895

**Data Source:** 

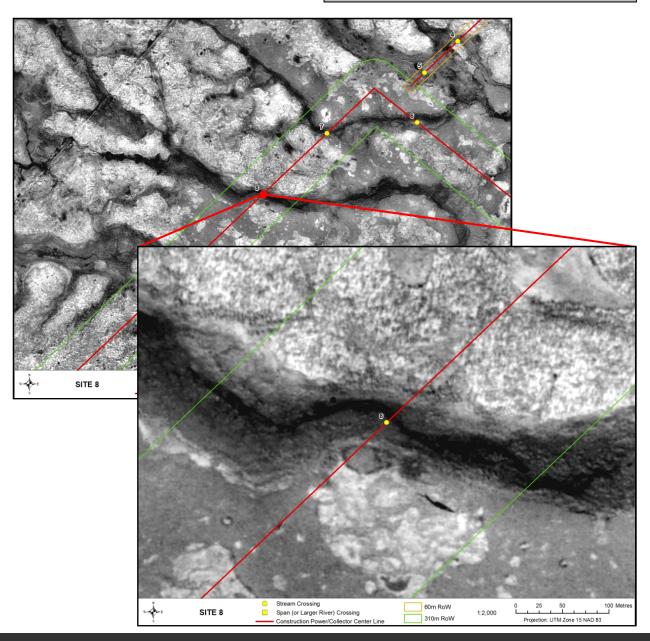
## General Morphology

Stream/Lake: Stream Pattern: SI **Confinement:** UN Moderate **Stage:** Flow Regime: Intermittent

Morphology:

 $8.13 \text{ km}^2$ U/S Drainage:

**Distance to Receiving Water:** Tiny Creek 2.04 km







## + Physical Data

#### **Channel Profile**

Channel and Flow Wetted Width (m)

Channel Width (m) Banks (%)

> Right Bank Stability Left Bank Stability

Riparian

Floodplain Distance (m)

Right Bank 39 (total) Left Bank **Riparian Distance (m)** 

Right Bank

65 (total) Left Bank

Riparian Vegetation Type (Y/N)

None Grasses/sedges Shrubs Conifers Deciduous Mixed Forest Canopy Cover (%)

**Substrate** 

**Substrate Type (%)** 

Fines Small Gravel Large Gravel Cobble Boulder

**Cover Types** 

**Total Cover Available (%) Cover Composition (% of Total)** Large Woody Debris Overhanging Vegetation **Instream Vegetation** Pool Boulder

> Undercut Bank Surface Turbulence **Turbidity**

**Habitat Type** 

**Habitat Composition** 

Pool Run Flat Riffle Rapid

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

**Fish Habitat Present** Yes **DFO Manitoba Agricultural Watershed Classification:** 

**Fish Habitat Classification:** Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Tiny Creek likely provides marginal fish habitat for forage fish only. At the crossing it consists of bog habitat, with no defined channel and a soft floodplain. It likely provides low overwintering potential.

## + Habitat Sensitivity

Sensitivity Rating: Moderate



## Tiny Creek

## Location

Datum: **NAD 83** 

UTM: Zone: 14N

Easting: 812072 Northing: 6290494

**Data Source:** 

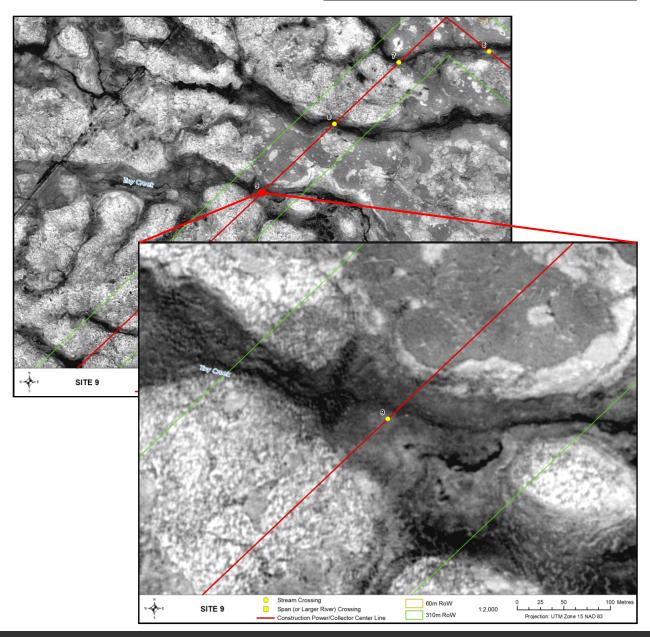
## **General Morphology**

Stream/Lake: Stream Pattern: SI **Confinement:** UN **Stage:** Moderate Flow Regime: Perennial

Morphology:

 $5.52 \text{ km}^2$ U/S Drainage:

**Distance to Receiving Water:** Nelson River 4.24 km





## + Physical Data

#### **Channel Profile**

Channel and Flow		
Wetted Width (m)	11	
Channel Width (m)	-	
Banks (%)		
Right Bank Stability	-	
Left Bank Stability	-	

#### Riparian

<u>Kiparian</u>	
Floodplain Distance (m)	
Right Bank	35
Left Bank	78
Riparian Distance (m)	
Right Bank	56
Left Bank	93

## Riparian Vegetation Type (Y/N)

0		•	
None			-
Grasses/sed	lges		Y
Shrubs			Y
Conifers			-
Deciduous			-
Mixed Fore	est		-
Cover (%)			C

#### **Substrate**

Canopy

Substrate Type (%)

Fines - Small Gravel - Large Gravel - Cobble - Boulder - -

#### **Cover Types**

Total Cover Available (%)	-
<b>Cover Composition (% of Total)</b>	-
Large Woody Debris	-
Overhanging Vegetation	-
Instream Vegetation	_
Pool	_
Boulder	-
Undercut Bank	-
Surface Turbulence	_

#### **Habitat Type**

### **Habitat Composition**

**Turbidity** 

Pool	
Run	
Flat	
Riffle	
Rapid	

## A

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification:

Fish Habitat Classification: Marginal

**Fish Presence:** Kroeker and MacDonell (2006) reported brook trout, brook stickleback, sculpins (mottled and slimy), and longnose dace. Johnson et al (2005) reported brook stickleback, finescale dace, and pearl dace. Swanson et al. (1991) reported brook stickleback and slimy sculpin. Kroeker and MacDonell (2006) found the stream to provide nursery habitat for brook trout. All sampling was conducted in the lower reaches of the creek.

#### **Comments:**

Tiny Creek is known to provide important fish habitat for both indicator and forage fish in the lower reaches of the creek. In the reaches where the RoW crosses the channel it likely provides habitat for forage fish, as well as habitat for indicator fish at wetter times of the year. Tiny Creek likely provides only low overwintering potential. At the crossing the creek consists of bog habitat, surrounded by a soft floodplain.

## + Habitat Sensitivity

Sensitivity Rating: Moderate



## Unnamed tributary of Nelson River

## Location

Datum: **NAD 83** 

UTM: 14N Zone:

Easting: 811038

Northing: 6289326

**Data Source:** 

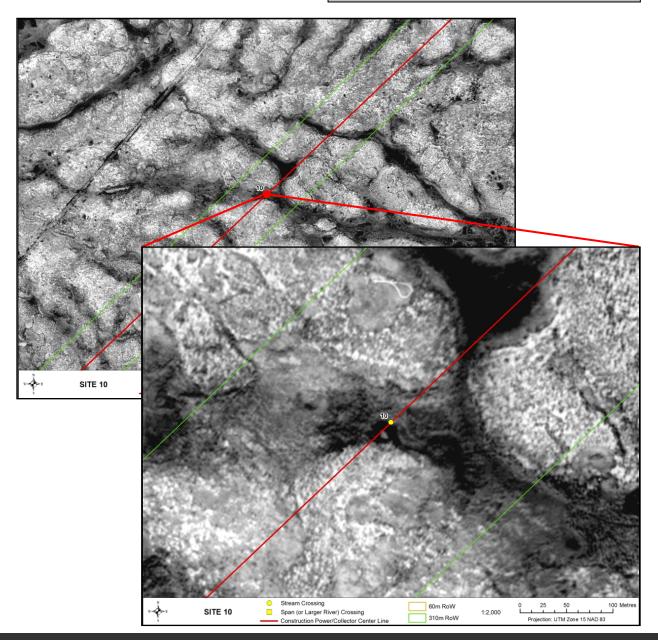
## General Morphology

Stream/Lake: Stream Pattern: SI **Confinement:** UN **Stage:** Moderate Flow Regime: Intermittent

Morphology:

 $0.32 \text{ km}^2$ **U/S Drainage:** 

Distance to Receiving Water: Nelson River 4.9 km





## + Physical Data

#### **Channel Profile**

Channel and Flow

Wetted Width (m) 
Channel Width (m) -

Banks (%)

Right Bank Stability -Left Bank Stability -

**Riparian** 

**Floodplain** Distance (m)

Right Bank 63 (total)
Left Bank -

**Riparian Distance (m)** 

Right Bank 90 (total) Left Bank -

Riparian Vegetation Type (Y/N)

None Grasses/sedges Y
Shrubs Y
Conifers Deciduous Mixed Forest Canopy Cover (%) 0

**Substrate** 

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

#### **Cover Types**

Total Cover Available (%)
Cover Composition (% of Total)
Large Woody Debris
Overhanging Vegetation
Instream Vegetation
Pool
Boulder

Undercut Bank
Surface Turbulence
Turbidity

**Habitat Type** 

**Habitat Composition** 

Pool
Run
Flat
Riffle
Rapid

## V

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification:

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Nelson River likely provides marginal fish habitat for forage fish only. At the crossing it consists of bog habitat, with no defined channel and a soft floodplain. It likely provides low overwintering potential.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** 

## Unnamed tributary of Swift Creek



## Location

Datum: **NAD 83** 

UTM: Zone: 14N Easting: 810705

Northing: 6288950

**Data Source:** 



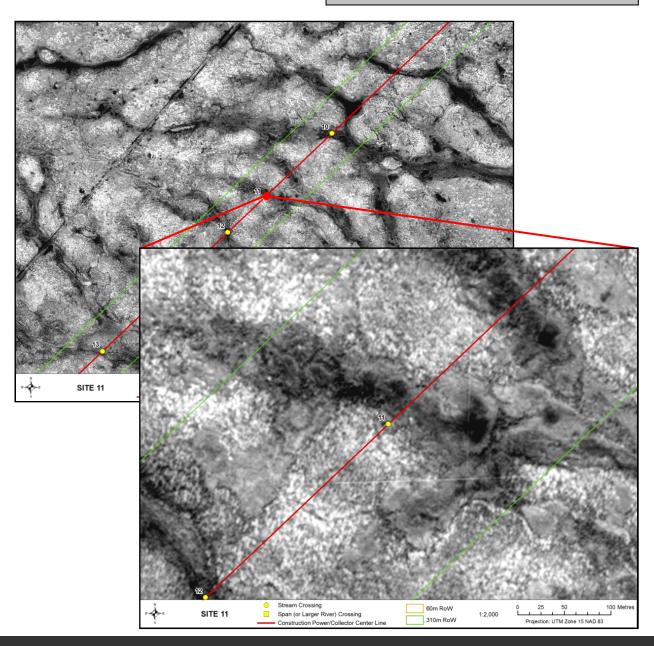
## General Morphology

Stream/Lake: Stream Pattern: SI **Confinement:** UN **Stage:** Moderate Flow Regime: Intermittent

Morphology:

 $0.10 \text{ km}^2$ U/S Drainage:

Distance to Receiving Water: Swift Creek 3.66 km





## + Physical Data

#### **Channel Profile**

Channel and Flow Wetted Width (m) Channel Width (m)

Banks (%)

Right Bank Stability Left Bank Stability

Riparian

Floodplain Distance (m)

Right Bank 45 (total) Left Bank **Riparian Distance (m)** 

Right Bank

83 (total) Left Bank

Riparian Vegetation Type (Y/N)

None Grasses/sedges Y Shrubs Y Conifers Deciduous Mixed Forest Canopy Cover (%)

**Substrate** 

**Substrate Type (%)** 

Fines Small Gravel Large Gravel Cobble Boulder

#### **Cover Types**

**Total Cover Available (%) Cover Composition (% of Total)** Large Woody Debris Overhanging Vegetation **Instream Vegetation** 

Pool Boulder Undercut Bank Surface Turbulence **Turbidity** 

#### **Habitat Type**

**Habitat Composition** 

Pool 80 Run 20 Flat Riffle Rapid

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

**Fish Habitat Present** Yes **DFO Manitoba Agricultural Watershed Classification:** 

**Fish Habitat Classification:** Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Swift Creek likely provides marginal fish habitat for forage fish only. At the crossing it consists of bog habitat, with no defined channel and a soft floodplain. It likely provides low overwintering potential.

## + Habitat Sensitivity

Sensitivity Rating: Moderate



## Unnamed tributary of Swift Creek



## Location

Datum: **NAD 83** 

UTM: 14N Zone:

Easting: 810526

Northing: 6288747

**Data Source:** 



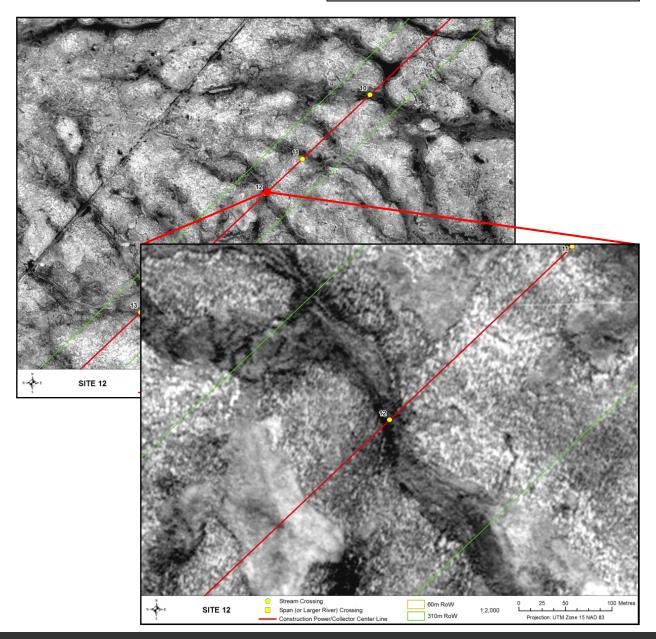
## General Morphology

Stream/Lake: Stream Pattern: SI **Confinement:** UN **Stage:** Moderate Flow Regime: Intermittent

Morphology:

 $0.36 \text{ km}^2$ U/S Drainage:

Distance to Receiving Water: Swift Creek 3.57 km





## + Physical Data

#### **Channel Profile**

Channel and Flow
Wetted Width (m) - T
Channel Width (m) - C

Banks (%)
Right Bank Stability

Right Bank Stability -Left Bank Stability -

**Riparian** 

Floodplain Distance (m)

Right Bank 23 (total)
Left Bank 
Riparian Distance (m)

Right Bank 37 (total) Left Bank -

Riparian Vegetation Type (Y/N)

None Grasses/sedges Y
Shrubs Y
Conifers Deciduous Mixed Forest Canopy Cover (%) 0

**Substrate** 

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

#### **Cover Types**

Total Cover Available (%)

Cover Composition (% of Total)

Large Woody Debris

Overhanging Vegetation

Instream Vegetation

Pool

Boulder

Boulder
Undercut Bank
Surface Turbulence
Turbidity

**Habitat Type** 

**Habitat Composition** 

Pool 20
Run 80
Flat Riffle Rapid -

## A

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification:

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Swift Creek likely provides marginal fish habitat for forage fish only. Overwintering potential is low. The crossing site consists of bog habitat, with no defined channel and a soft floodplain. The small upstream drainage area indicates flows are likely low.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** 



## Unnamed tributary of Swift Creek



## Location

Datum: **NAD 83** 

UTM: Zone: 14N

Easting: 809910

Northing: 6288052

**Data Source:** 

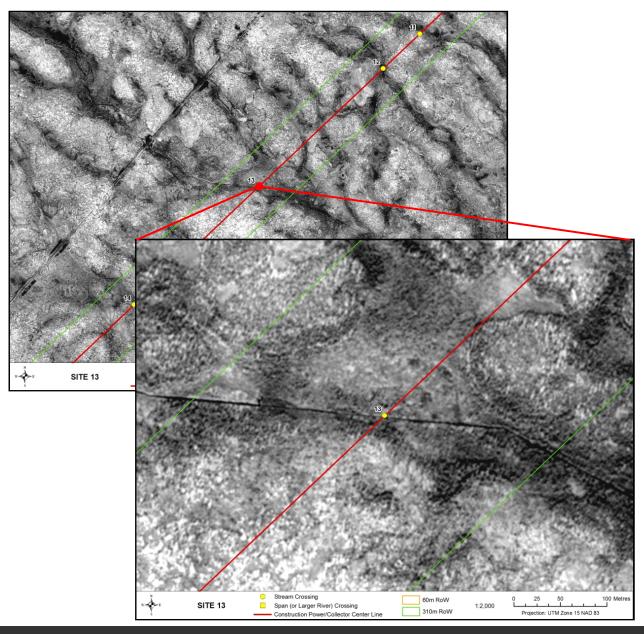
## General Morphology

Stream/Lake: Stream Pattern: SI **Confinement:** UN **Stage:** Moderate Flow Regime: Intermittent

Morphology:

 $6.29 \text{ km}^2$ U/S Drainage:

Distance to Receiving Water: Swift Creek 3.11 km





## + Physical Data

#### **Channel Profile**

Channel and Flow	
Wetted Width (m)	2
Channel Width (m)	2
Banks (%)	

Right Bank Stability

Left Bank Stability

**Riparian** 

Floodplain Distance (m)

Right Bank 208
Left Bank 14

Riparian Distance (m)
Right Bank 225
Left Bank 27

Riparian Vegetation Type (Y/N)

None Grasses/sedges Y
Shrubs Y
Conifers Y
Deciduous Mixed Forest Canopy Cover (%) 0

**Substrate** 

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

#### **Cover Types**

Total Cover Available (%)

Cover Composition (% of Total)

Large Woody Debris

Overhanging Vegetation

Instream Vegetation

Pool

Boulder

Undercut Bank

Surface Turbulence
Turbidity

#### **Habitat Type**

**Habitat Composition** 

 Pool

 Run
 100

 Flat

 Riffle

 Rapid

## A

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification:

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Swift Creek likely provides marginal fish habitat for forage fish only. At the crossing the tributary is channelized and lies within a bog habitat. Two channels meet the tributary on the right bank creating a large and soft floodplain. Habitat at the crossing provides low overwintering potential.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** 



## Unnamed tributary of Swift Creek



## Location

Datum: **NAD 83** 

UTM: Zone: 14N

Easting: 809300

Northing: 6287363

**Data Source:** 



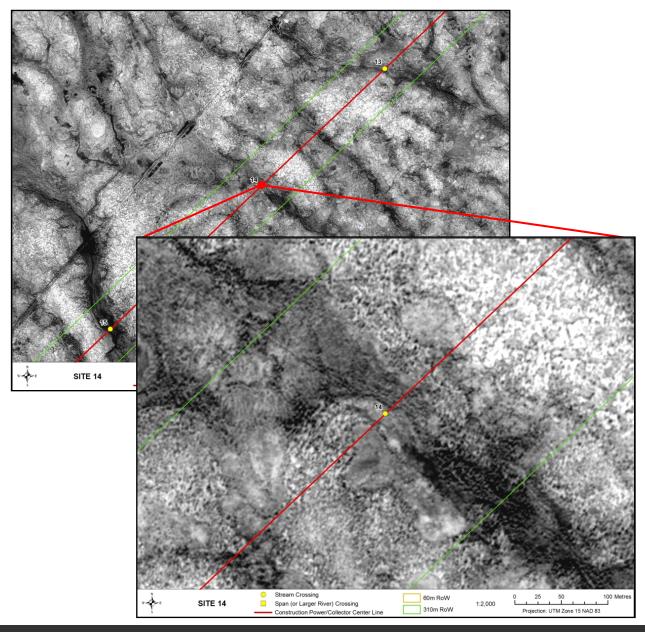
## General Morphology

Stream/Lake: Stream Pattern: SI **Confinement:** UN **Stage:** Low Flow Regime: Intermittent

Morphology:

 $2.13 \text{ km}^2$ U/S Drainage:

Distance to Receiving Water: Swift Creek 3.15 km





## + Physical Data

#### **Channel Profile**

Channel and Flow
Wetted Width (m)

Tota

Channel Width (m) - Cover Co

Banks (%)
Right Bank Stability -

Left Bank Stability -

**Riparian** 

Floodplain Distance (m)

Right Bank 32 (total) Left Bank -

**Riparian Distance (m)** 

Right Bank 170 (total)

Left Bank

Riparian Vegetation Type (Y/N)

None Grasses/sedges Y
Shrubs Y
Conifers Y
Deciduous Mixed Forest -

Canopy Cover (%)

**Substrate** 

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

**Cover Types** 

Total Cover Available (%)
Cover Composition (% of Total)
Large Woody Debris
Overhanging Vegetation

Surface Turbulence Turbidity

**Habitat Type** 

Habitat Composition

Pool
Run
Flat
Riffle
Rapid

## A

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification:

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Swift Creek likely provides marginal fish habitat for forage fish only. At the crossing it consists of bog habitat, with no defined channel and a soft floodplain. It likely provides no overwintering potential. An abandoned railway crossing exists 440m upstream of the RoW

## + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** 



## Unnamed tributary of Swift Creek



## Location

Datum: **NAD 83** 

UTM: Zone: 14N Easting: 808560

Northing: 6286527

**Data Source:** 



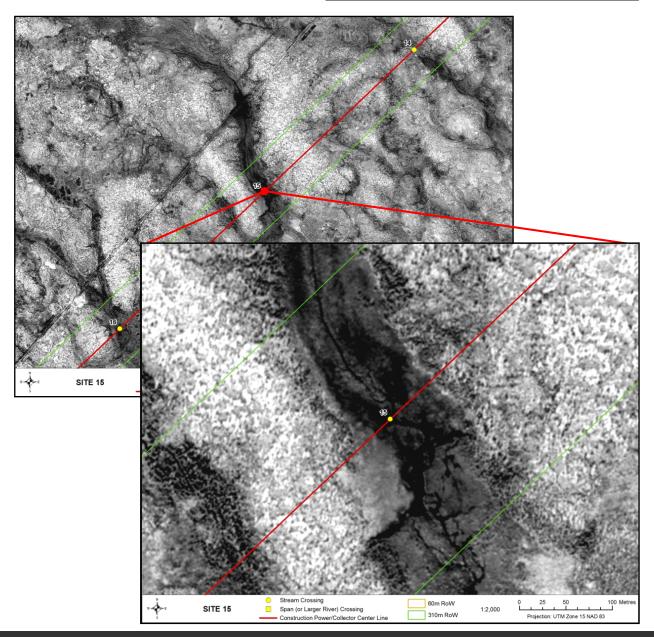
## General Morphology

Stream/Lake: Stream Pattern: SI **Confinement:** UN **Stage:** Moderate Flow Regime: Intermittent

Morphology:

 $18.92 \text{ km}^2$ U/S Drainage:

Distance to Receiving Water: Swift Creek 3.79 km



## + Physical Data

#### **Channel Profile**

Channel and Flow		
Wetted Width (m)	5	
Channel Width (m)	-	
Banks (%)		
Right Bank Stability	-	
Left Bank Stability	-	

<u> Riparian</u>	
Floodplain Distance (m)	
Right Bank	46
Left Bank	52
Riparian Distance (m)	
Right Bank	79
Left Bank	80

## Riparian Vegetation Type (Y/N)

-	<b>V</b> • • • • • • • • • • • • • • • • • • •	•	
	None		-
	Grasses/sedges		Y
	Shrubs		Y
	Conifers		-
	Deciduous		-
	Mixed Forest		-
Canopy	Cover (%)		0

#### **Substrate**

**Substrate Type (%)** 

Fines Small Gravel Large Gravel Cobble Boulder

### **Cover Types**

Total Cover Available (%)	-
<b>Cover Composition (% of Total)</b>	-
Large Woody Debris	-
Overhanging Vegetation	-
Instream Vegetation	-
Pool	-
Boulder	-
Undercut Bank	-
Surface Turbulence	_

### **Habitat Type**

#### **Habitat Composition**

**Turbidity** 

Pool	30
Run	70
Flat	-
Riffle	-
Rapid	_

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

**Fish Habitat Present** Yes **DFO Manitoba Agricultural Watershed Classification:** 

**Fish Habitat Classification:** Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Swift Creek likely provides marginal fish habitat for forage fish only. At the crossing it consists of bog habitat with a soft floodplain. It likely provides low overwintering potential. Downstream areas have been impacted by beaver dams. An abandoned railway crossing exists 327 m upstream of the RoW

## + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** 



## Unnamed tributary of Swift Creek



Datum: **NAD 83** 

UTM: Zone: 14N

Easting: 807854

Northing: 6285729

**Data Source:** 



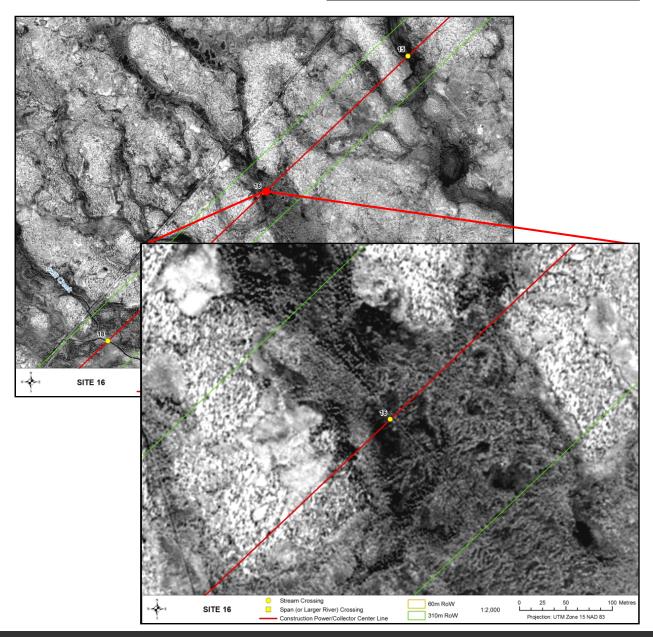
## General Morphology

Stream/Lake: Stream Pattern: SI **Confinement:** UN **Stage:** Moderate Flow Regime: Intermittent

Morphology:

 $1.11 \text{ km}^2$ U/S Drainage:

Distance to Receiving Water: Swift Creek 3.02 km





## + Physical Data

#### **Channel Profile**

Channel and Flow
Wetted Width (m)

Channel Width (m)

Banks (%)

Right Bank Stability

Left Bank Stability
-

**Riparian** 

Floodplain Distance (m)

Right Bank 211 (total) Left Bank -

**Riparian Distance (m)** 

Right Bank 247 (total)

Left Bank
Riparian Vegetation Type (Y/N)

None Grasses/sedges Y
Shrubs Y
Conifers Deciduous Mixed Forest Canopy Cover (%) 0

**Substrate** 

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

**Cover Types** 

Total Cover Available (%)
Cover Composition (% of Total)
Large Woody Debris
Overhanging Vegetation
Instream Vegetation

Pool
Boulder
Undercut Bank
Surface Turbulence
Turbidity

**Habitat Type** 

**Habitat Composition** 

Pool - Run - Flat - Riffle - Rapid - Flat - Flat - Rapid - Flat -

## V

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Swift Creek likely provides marginal fish habitat for forage fish only. At the crossing it consists of bog habitat, with no defined channel and a soft floodplain. It likely provides no overwintering potential. An abandoned railway crossing exists 131m upstream of the RoW

## + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** 



## Unnamed tributary of Swift Creek



## Location

Datum: **NAD 83** 

UTM: Zone: 14N

Easting: 807537

Northing: 6285370

**Data Source:** 



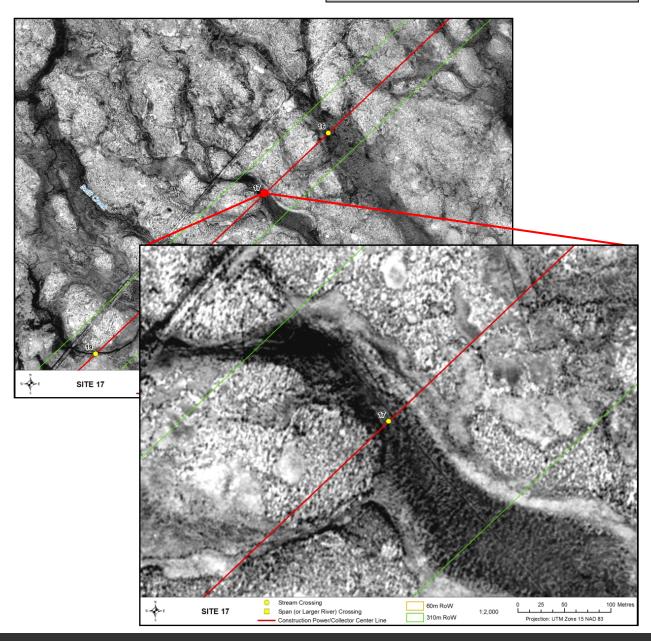
## General Morphology

Stream/Lake: Stream Pattern: SI **Confinement:** UN **Stage:** Low Flow Regime: Intermittent

Morphology:

 $0.72 \text{ km}^2$ U/S Drainage:

Distance to Receiving Water: Swift Creek 3.25 km





## + Physical Data

#### **Channel Profile**

Channel and Flow
Wetted Width (m) Channel Width (m) -

Banks (%)

Right Bank Stability -Left Bank Stability -

Riparian

Floodplain Distance (m)

Right Bank 46 (total) Left Bank -

**Riparian Distance (m)** 

Right Bank 105 (total)

Left Bank
Riparian Vegetation Type (Y/N)

**Substrate** 

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

**Cover Types** 

Total Cover Available (%)

Cover Composition (% of Total)

Large Woody Debris

Overhanging Vegetation

Instream Vegetation

Pool
Boulder
Undercut Bank
Surface Turbulence
Turbidity

Turbianty

**Habitat Type** 

**Habitat Composition** 

Pool - Run - Flat - Riffle - Rapid - Flat - Flat - Rapid - Flat -

## A

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification:

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Swift Creek likely provides marginal fish habitat for forage fish only. At the crossing it consists of bog habitat, with no defined channel and a soft floodplain. It likely provides no overwintering potential. An abandoned railway crossing exists 111m upstream of the RoW

## + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** 



## Swift Creek



## Location

Datum: **NAD 83** 

UTM: Zone: 14N

Easting: 807085

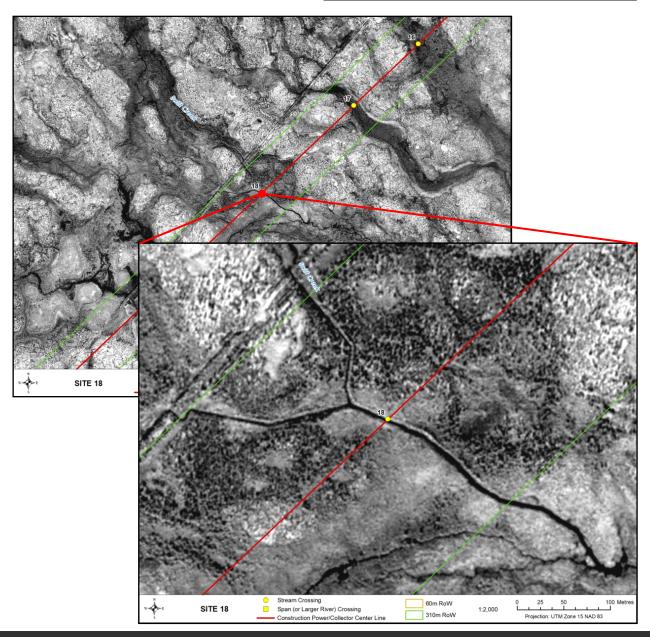
Northing: 6284860

**Data Source:** 

## **General Morphology**

Stream/Lake: Stream Pattern: IW **Confinement:** UN **Stage:** Moderate Flow Regime: Perennial Morphology: LC U/S Drainage:  $3.21 \text{ km}^2$ 

Distance to Receiving Water: Nelson River 10.9 km





### + Physical Data

<b>Channel Prof</b>	116
---------------------	-----

Channel and Flow		
Wetted Width (m)	6	
Channel Width (m)	6	
Banks (%)		
Right Bank Stability	-	
Left Bank Stability	-	
Riparian		
Floodplain Distance (m)		

| Right Bank | 34 | | Left Bank | 32 | | Riparian Distance (m) | Right Bank | 216 | Left Bank | 339 |

### Riparian Vegetation Type (Y/N)

None Grasses/sedges Y
Shrubs Y
Conifers Y
Deciduous Mixed Forest Canopy Cover (%) 0

#### **Substrate**

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

#### **Cover Types**

Total Cover Available (%)

Cover Composition (% of Total)

Large Woody Debris

Overhanging Vegetation

Instream Vegetation

Pool

Boulder

Undercut Bank

Surface Turbulence

#### **Habitat Type**

**Habitat Composition** 

**Turbidity** 

 Pool

 Run
 100

 Flat

 Riffle

 Rapid

## A

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification:

Fish Habitat Classification: Marginal

**Fish Presence:** Kroeker and MacDonell (2006) reported burbot, brook stickleback, sculpins (mottled and slimy), longnose dace, pearl dace, white sucker, and longnose sucker. Johnson et al (2005) reported burbot, brook stickleback, slimy sculpin, longnose dace, pearl dace, white sucker, longnose sucker, johnny darter. Swanson et al. (1991) reported burbot, brook trout, brook stickleback, slimy sculpin, longnose dace, finescale dace, pearl dace, white sucker, and longnose sucker. Swanson (1991) found the stream to provide nursery habitat for brook trout. All sampling was conducted in the lower reaches of the creek.

#### Comments

Swift Creek is known to provide important fish habitat for both indicator and forage fish in the lower reaches of the creek. In the reaches where the RoW crosses the channel, the creek likely provides habitat for forage fish, as well as indicator fish during times of highwater. Swift Creek likely provides only low overwintering potential. Habitat at the crossing consists of bog habitat, with a well-defined channel and soft floodplain. An abandoned railway crossing exists 20m upstream of the RoW

## + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** The soft floodplain results in a moderate sensitivity rating, despite marginal fish habitat.



## Unnamed tributary of Swift Creek



### Location

Datum: **NAD 83** 

**UTM:** 14N Zone:

Easting: 806710

Northing: 6284436

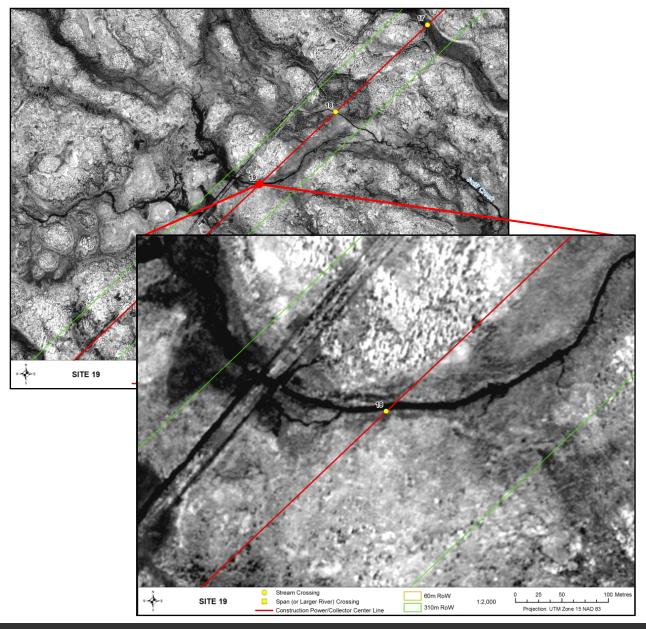
**Data Source:** 

## General Morphology

Stream/Lake: Stream Pattern: IW **Confinement:** UN **Stage:** Moderate Flow Regime: Intermittent

Morphology: LC  $15.80 \text{ km}^2$ U/S Drainage:

Distance to Receiving Water: Swift Creek 0.69 km





### + Physical Data

#### **Channel Profile**

Channel and Flow		
Wetted Width (m)	10	
Channel Width (m)	10	
Banks (%)		
Right Bank Stability	-	
Left Bank Stability	-	

#### Riparian

Floodplain Distance (m)		
Right Bank	24	
Left Bank	10	
Riparian Distance (m)		
Right Bank	35	
Left Bank	120	

## Riparian Vegetation Type (Y/N)

	None	-
	Grasses/sedges	Y
	Shrubs	Y
	Conifers	Y
	Deciduous	-
	Mixed Forest	-
Canopy	Cover (%)	0

#### **Substrate**

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

#### **Cover Types**

Total Cover Available (%)

rotar cover rivaliable (70)	
Cover Composition (% of Total)	-
Large Woody Debris	-
Overhanging Vegetation	-
Instream Vegetation	-
Pool	-
Boulder	-
Undercut Bank	-
Surface Turbulence	-

#### **Habitat Type**

#### **Habitat Composition**

**Turbidity** 

Pool	-
Run	10
Flat	-
Riffle	-
Rapid	-

## A

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification:

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Swift Creek likely provides marginal fish habitat for forage fish only. At the crossing, the creek has a well-defined channel and broad floodplain that appears poorly drained. An abandoned railway crossing exists 122 m upstream of the site within the RoW.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** 

The soft floodplain results in a moderate sensitivity rating, despite marginal fish habitat.



## Unnamed tributary of Beaver Creek



### Location

Datum: NAD 83

UTM: Zone: 14N

Easting: 805699

Northing: 6283294

Data Source: DOI.

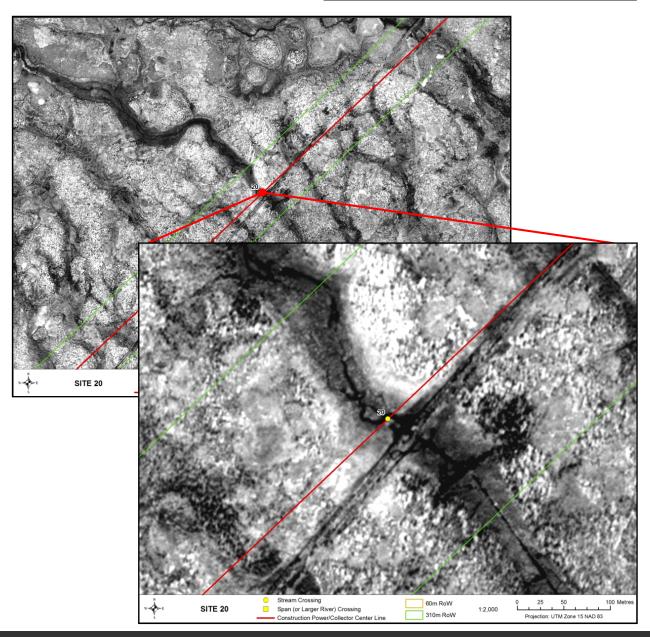
## V

## General Morphology

Stream/Lake:StreamPattern:IRConfinement:UNStage:ModerateFlow Regime:IntermittentMorphology:LC

Worphology: LC U/S Drainage: 6.15 km<sup>2</sup>

Distance to Receiving Water: Beaver Creek 3.68 km



## A

#### **Site Conditions**

### + Physical Data

#### **Channel Profile**

Channel and Flow	
Wetted Width (m)	6
Channel Width (m)	6
Banks (%)	
Right Bank Stability	-
Left Bank Stability	-
•	-

Left Bunk Stubinty	
<u>Riparian</u>	
Floodplain Distance (m)	
Right Bank	37
Left Bank	49
Riparian Distance (m)	
Right Bank	53
Left Bank	67
Rinarian Vegetation Type (V/N)	

Riparian Vegetation Type (Y/N)	
None	-
Grasses/sedges	Y
Shrubs	-
Conifers	Y
Deciduous	-
Mixed Forest	-
Canopy Cover (%)	0

#### **Substrate**

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

#### **Cover Types**

Total Cover Available (%)	-
Cover Composition (% of Total)	-
Large Woody Debris	-
Overhanging Vegetation	-
Instream Vegetation	-
Pool	-
Boulder	-
Undercut Bank	-
Surface Turbulence	-

#### **Habitat Type**

#### **Habitat Composition**

**Turbidity** 

Pool	15
Run	85
Flat	-
Riffle	-
Rapid	_

## M

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification:

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of Beaver Creek likely provides marginal fish habitat for forage fish only. At the crossing it consists of bog habitat with a soft floodplain. It likely provides no overwintering potential. Downstream areas are heavily impacted by beaver dams. An abandoned railway crossing exists 16 m downstream of site within the RoW.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** 

Soft floodplain results in a moderate sensitivity rating, despite marginal fish habitat.



## Beaver Creek



### Location

Datum: **NAD 83** 

UTM: Zone: 14N

Easting: 804383 Northing: 6281807

**Data Source:** 

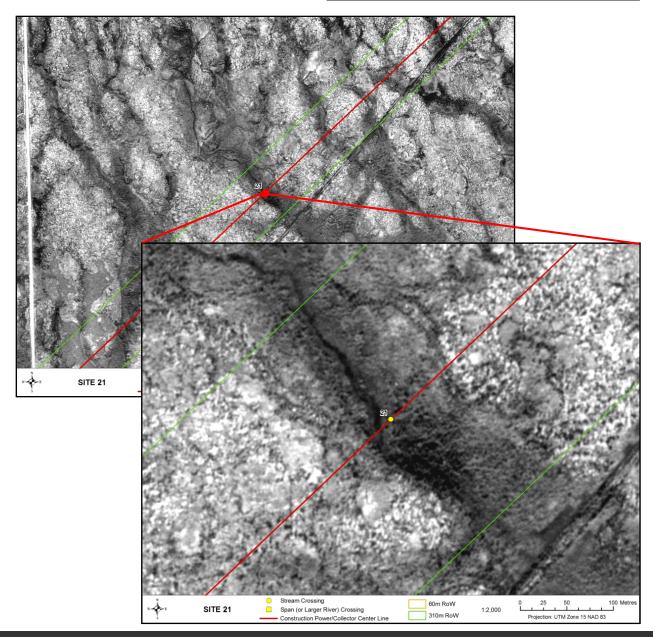
## **General Morphology**

Stream/Lake: Stream Pattern: IR **Confinement:** UN **Stage:** Low Flow Regime: Intermittent

Morphology:

 $6.56 \,\mathrm{km}^2$ U/S Drainage:

Distance to Receiving Water: Nelson River 5.21 km





## + Physical Data

#### **Channel Profile** Channel and Flow

Chamier and Flow		
Wetted Width (m)	7	
Channel Width (m)	16	
Banks (%)		
Right Bank Stability	-	
Left Bank Stability	-	

### Riparian

Floodplain Distance (m) Right Bank 27 Left Bank 15 **Riparian Distance (m)** 

Right Bank 82 Left Bank 39 Riparian Vegetation Type (Y/N)

None Grasses/sedges Shrubs Conifers Deciduous Mixed Forest Canopy Cover (%)

#### **Substrate**

**Substrate Type (%)** 

Fines Small Gravel Large Gravel Cobble Boulder

#### **Cover Types**

**Total Cover Available (%) Cover Composition (% of Total)** Large Woody Debris Overhanging Vegetation **Instream Vegetation** Pool Boulder Undercut Bank

Surface Turbulence

#### **Habitat Type**

**Habitat Composition** 

**Turbidity** 

Pool Run Flat Riffle Rapid

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes **DFO Manitoba Agricultural Watershed Classification:** 

**Fish Habitat Classification:** Marginal

Fish Presence: Kroeker and MacDonell (2006) reported brook trout, brook stickleback, fathead minnow, sculpins (mottle and slimy), longnose dace, white sucker, and longnose sucker. Johnson et al (2005) reported brook trout, brook stickleback, fathead minnow, slimy sculpin, finescale dace, longnose dace, pearl dace, white sucker, longnose sucker, and catostomid young of the year. Swanson et al (1991) reported burbot, brook trout, brook stickleback, stickleback spp., slimy sculpin, sculpin spp., longnose dace, blacknose dace, dace spp., white sucker, longnose sucker, sucker spp., and northern pike. All studies also found the creek to provide nursery habitat for brook trout, and all sampling was conducted in the lower reaches of the creek.

#### **Comments:**

Beaver Creek is known to provide important fish habitat for both indicator and forage fish in the lower reaches of the creek. In the reaches where the RoW crosses the channel it likely provides habitat for forage fish, as well as habitat for indicator fish at wetter times of the year. The crossing consists of bog habitat with a defined channel, a soft floodplain, and little water. An abandoned railway crossing exists 65m DS of the RoW.

## + Habitat Sensitivity

Sensitivity Rating: Marginal

**Comments:** The soft floodplain results in a moderate sensitivity rating, despite marginal fish habitat.



## Unnamed tributary of Sundance Creek



#### Location

**Datum:** NAD 83

UTM: Zone: 14N

Easting: 803110

Northing: 6280369

Data Source: DOI



## General Morphology

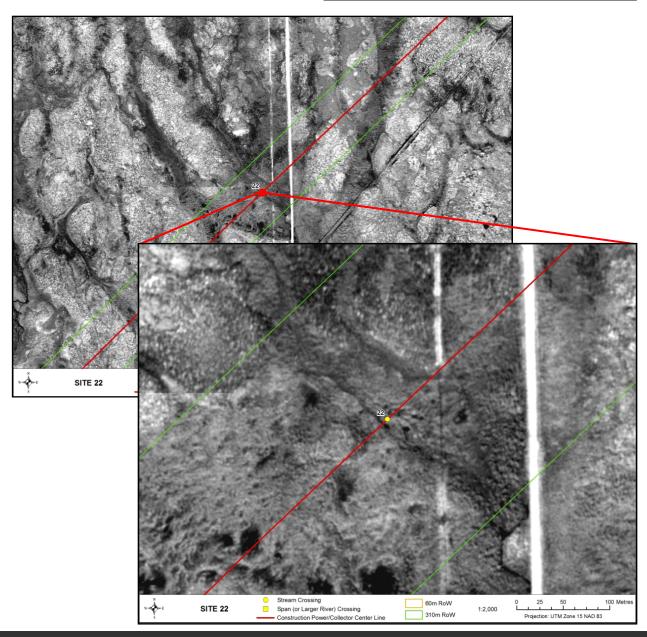
Stream/Lake:StreamPattern:IRConfinement:UNStage:LowFlow Regime:Intermittent

Morphology:

U/S Drainage: 5.00 km<sup>2</sup>

Distance to Receiving Water: Sundance Creek

3.88 km





#### + Physical Data

#### **Channel Profile**

Channel and Flow Wetted Width (m)

Channel Width (m) Banks (%)

Right Bank Stability Left Bank Stability

Riparian

Floodplain Distance (m)

Right Bank 331 (total) Left Bank

**Riparian Distance (m)** Right Bank 336 (total)

Left Bank

Riparian Vegetation Type (Y/N)

None Grasses/sedges Shrubs Conifers Deciduous Mixed Forest

Canopy Cover (%)

**Substrate** 

**Substrate Type (%)** 

Fines Small Gravel Large Gravel Cobble Boulder

**Cover Types** 

**Total Cover Available (%) Cover Composition (% of Total)** Large Woody Debris Overhanging Vegetation **Instream Vegetation** Pool Boulder

Undercut Bank Surface Turbulence **Turbidity** 

**Habitat Type** 

**Habitat Composition** 

Pool Run Flat Riffle Rapid

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

**Fish Habitat Present** Yes **DFO Manitoba Agricultural Watershed Classification:** 

**Fish Habitat Classification:** Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary of SundanceCreek likely provides marginal fish habitat for forage fish only. At the crossing it consists of bog habitat, with no defined channel and a soft floodplain. It likely provides no overwintering potential.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

Soft floodplain results in a moderate sensitivity rating, despite marginal fish habitat.

## Sundance Creek



### Location

Datum: **NAD 83** 

UTM: Zone: 14N

Easting: 801693 Northing: 6278712

**Data Source:** 



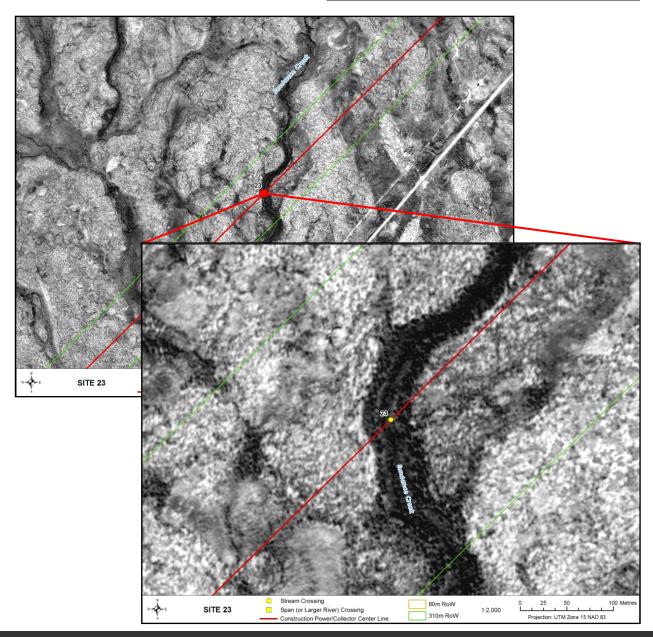
## **General Morphology**

Stream/Lake: Stream Pattern: IM **Confinement:** UN **Stage:** Moderate Flow Regime: Perennial

Morphology:

 $31.47 \text{ km}^2$ U/S Drainage:

Distance to Receiving Water: Nelson River 7.38 km





#### + Physical Data

#### **Channel Profile**

Channel and Flow	
Wetted Width (m)	3
Channel Width (m)	3
Banks (%)	

Right Bank Stability
Left Bank Stability

#### **Riparian**

Floodplain Distance (m)
Right Bank 11
Left Bank 12
Riparian Distance (m)
Right Bank 22

Left Bank
Riparian Vegetation Type (Y/N)

None Grasses/sedges Y
Shrubs Y
Conifers Y
Deciduous Mixed Forest Canopy Cover (%) -

#### **Substrate**

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

#### **Cover Types**

Total Cover Available (%)

Cover Composition (% of Total)

Large Woody Debris

Overhanging Vegetation

Instream Vegetation

Pool

Boulder

Undercut Bank
Surface Turbulence

#### **Habitat Type**

**Habitat Composition** 

**Turbidity** 

Pool
Run
Flat
Riffle
Rapid

## A

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification:

Fish Habitat Classification: Marginal

24

**Fish Presence:** Kroeker and MacDonell (2006) reported brook trout, brook stickleback, sculpins (mottled and slimy), longnose dace, and longnose sucker. Johnson et al. (2005) reported brook trout, brook stickleback, slimy sculpin, longnose dace, white sucker, and longnose sucker. Both studies also found the creek to provide nursery habitat for brook trout. All sampling was conducted in the lower reaches of the creek.

#### **Comments:**

Sundance Creek is known to provide important fish habitat for both indicator and forage fish in the lower reaches of the creek. Where the RoW crosses the channel it likely provides habitat for forage fish, as well as habitat for indicator fish at wetter times of the year. The crossing consists of a soft floodplain with little water.

## + Habitat Sensitivity

Sensitivity Rating: Moderate

Comments: The soft floodplain results in a moderate sensitivity rating, despite marginal fish habitat.



## Unnamed tributary of Raindance Creek



**Datum:** NAD 83

UTM: Zone: 14N

Easting: 800391

Northing: 6277183

Data Source: DOI.

## A

## General Morphology

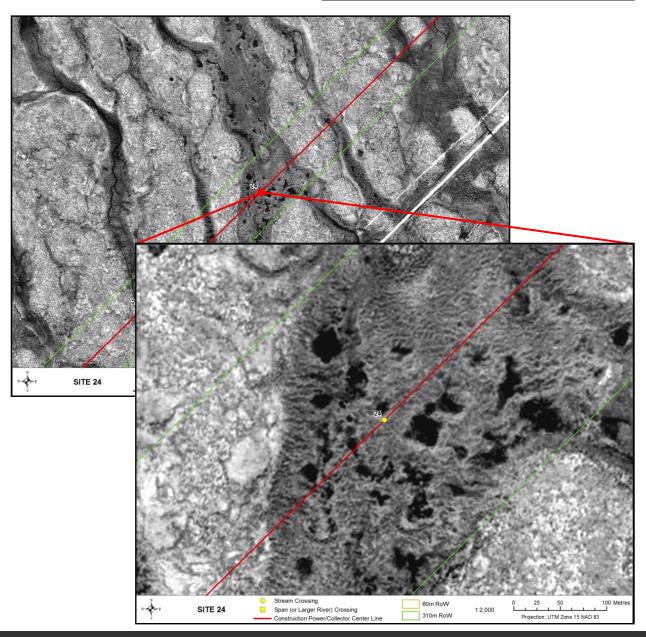
Stream/Lake:StreamPattern:-Confinement:UNStage:ModerateFlow Regime:Intermittent

Morphology: -

U/S Drainage: 8.56 km<sup>2</sup>

Distance to Receiving Water: Raindance Creek

1.49 km





#### + Physical Data

#### **Channel Profile**

Channel and Flow
Wetted Width (m) Channel Width (m) -

Banks (%)
Right Bank Stability -

Right Bank Stability -Left Bank Stability -

<u>Riparian</u>

Floodplain Distance (m)

Right Bank 232 (total) Left Bank -

**Riparian Distance (m)** 

Right Bank 270 (total)
Left Bank -

Riparian Vegetation Type (Y/N)

None Grasses/sedges Y
Shrubs Y
Conifers Y
Deciduous Mixed Forest Canopy Cover (%) 0

**Substrate** 

Substrate Type (%)

Fines Small Gravel Large Gravel Cobble Boulder -

#### **Cover Types**

Total Cover Available (%)
Cover Composition (% of Total)
Large Woody Debris
Overhanging Vegetation
Instream Vegetation
Pool
Boulder

Undercut Bank
Surface Turbulence
Turbidity

**Habitat Type** 

**Habitat Composition** 

Pool Run Flat Riffle Rapid -

## A

## Fish Habitat Classification and Sensitivity

#### + Fish Habitat

Fish Habitat Present Yes
DFO Manitoba Agricultural Watershed Classification: -

Fish Habitat Classification: Marginal

Fish Presence: N/A

#### **Comments:**

This unnamed tributary likely provides marginal fish habitat for forage fish only. The tributary consists of bog habitat, with no defined channel and a soft floodplain. It likely provides no overwintering potential.

### + Habitat Sensitivity

Sensitivity Rating: Moderate

**Comments:** 

Soft floodplain results in a moderate sensitivity rating, despite marginal fish habitat.