

**Watercourse Fact Sheet: Fish Habitat - Page 1**

WATERCOURSE INFORMATION	
Watercourse ID:	<b>Watercourse BL-WC201a-3772</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	CJ,CM
Affiliation:	CBCL Limited
Field Assessment Date:	Nov 4 2022
UTM Coordinates:	Wp. 1587
Datum:	NAD 1983
HABITAT QUALITY	
Overall Habitat Quality	Good
Spawning	Good
Rearing	Moderate
Foraging	
Migration	
Overwintering	Moderate
POTENTIAL FOR FISH PRESENCE	
Overall Fish Potential	High
FISH OBSERVED	
No	
WATER QUALITY AND VELOCITY	
Temperature (Deg. C)	8.1
pH	4.6
Dissolved Oxygen (mg/l)	12.65
Dissolved Oxygen (%)	108
Conductivity (µs/cm)	33.33
Salinity (mg/L)	0.02
Total Dissolved Solids (g/L)	
Turbidity (NTU)	
Average Velocity (m/sec)	4.69
Velocity Location	Crossing

CHANNEL MEASUREMENTS	
Average Channel Width (m)	3.78
Average Wetted Width (m)	3.20
Average Bankful Depth (m)	0.85
Average Water Depth (m)	0.20
Average Pool Depth (m)	0.45
WATERCOURSE MORPHOLOGY	
Watercourse Type	Small Permanent
Stage (season was very dry)	High
Morphology (assumed in dry area)	Run
Channel Depth Class	Class 1: >1.0m
Pattern	Sinuuous
Slope	
Confinement	Frequently Confined
INSTREAM COVER	
Dominant	Instream Vegetation
Subdominant	Boulder
Subdominant	Undercut Banks
Subdominant	
Subdominant	
Trace	Small Woody Debris
Trace	Overhanging Vegetation
Trace	Large Woody Debris
Trace	Deep Pool
Substrate	
Dominant	Cobble
Subdominant	Gravel
Subdominant	Boulder
Trace	Fines
Trace	
BARRIERS	
No Barriers	
STREAM INVERTEBRATES	
None	

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1	Balsam Fir	<i>Abies balsamea</i>
2	Yellow Birch	<i>Betula alleghaniensis</i>
3	Red Maple	<i>Acer rubrum</i>
4	Sphagnum	#N/A
5		#N/A
6		#N/A
7		#N/A
8		#N/A
9		#N/A
10		#N/A
RIPARIAN INFORMATION		
Crown Closure %	51-75%	
Bank Texture	Fines, gravel, cobble, boulder	
Bank Shape	Sloped, overhanging	
Bank Stability		
Vegetation Stage	Mature Forest	
IMPORTANT FEATURES OBSERVED		
Spawning Area / REDD	<input checked="" type="checkbox"/>	
Beaver Dam	<input type="checkbox"/>	
Beaver Pond	<input type="checkbox"/>	
Underground Sections	<input type="checkbox"/>	
Waterfall or Cascade	<input type="checkbox"/>	
No Defined Channel	<input type="checkbox"/>	
Hanging Culvert	<input type="checkbox"/>	
Blocked or Damaged Culvert	<input type="checkbox"/>	
Bridge	<input type="checkbox"/>	
ADDITIONAL NOTES		
Velocity Location: Wp. 1587, Transitional areas: Consistant with small perm WL. Water Quality collected instream at Wp. 1590 @ 11:25 *WQ-PH4-02(. No barriers to fish passage in assessed reach. No fish observed in reach. pH is a little low but within tolerance for Brook Trout. Potential REDDs observed		



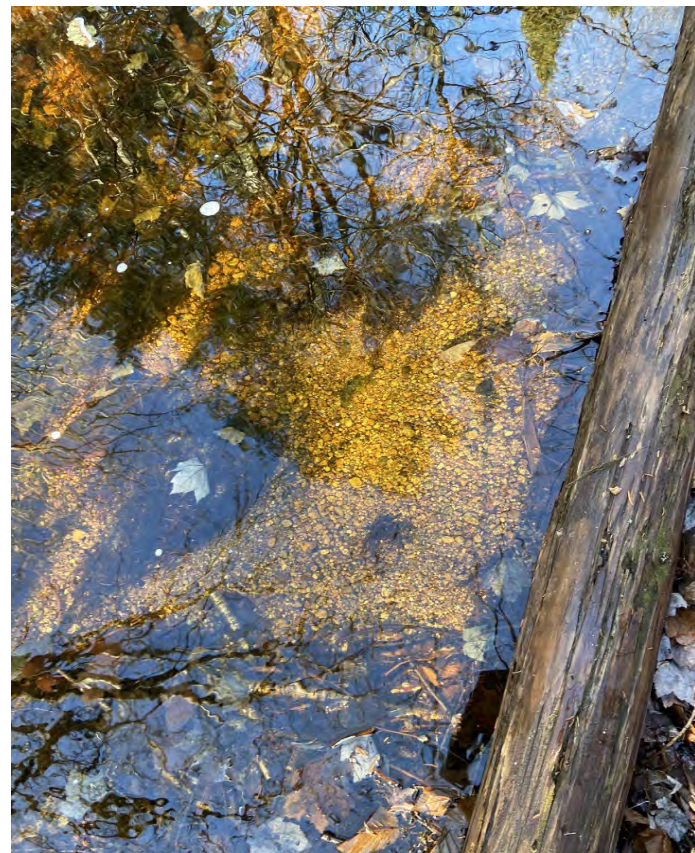
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**Watercourse ID: Watercourse BL-WC201a-3772**



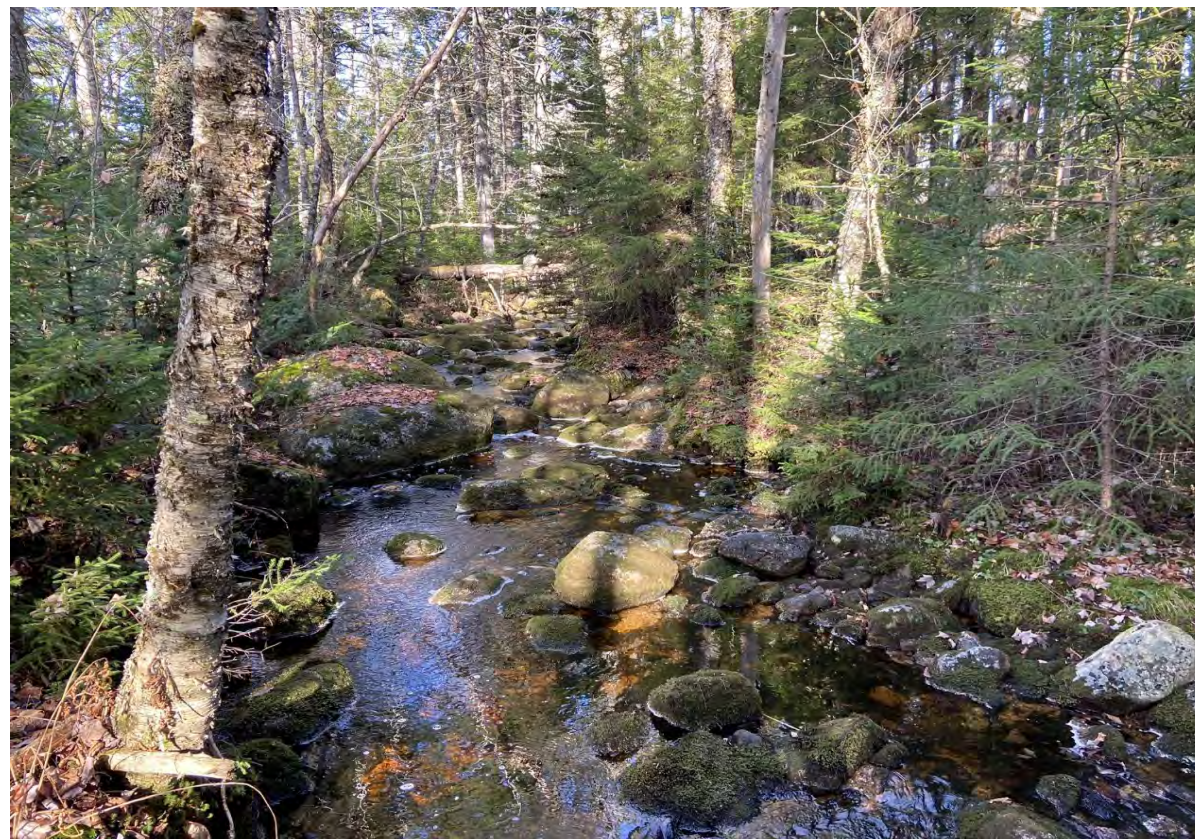
**Photo 1: Upstream of**



**Photo 2: 50m downstream**



**Photo 3: Potential REDD**



**Photo 4: Upstream general habitat**



## Watercourse Fact Sheet: Fish Habitat - Page 1

WATERCOURSE INFORMATION	
Watercourse ID:	<b>Watercourse BL-WC201c-3446</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	CJ,IB
Affiliation:	CBCL Limited
Field Assessment Date:	Nov 8 2022
UTM Coordinates:	
Datum:	NAD 1983
HABITAT QUALITY	
Overall Habitat Quality	Good
Spawning	Moderate
Rearing	Good
Foraging	
Migration	
Overwintering	Poor
POTENTIAL FOR FISH PRESENCE	
Overall Fish Potential	High
FISH OBSERVED	
No	
WATER QUALITY AND VELOCITY	
Temperature (Deg. C)	9.61
pH	4.59
Dissolved Oxygen (mg/l)	12.03
Dissolved Oxygen (%)	
Conductivity (µs/cm)	0.032
Salinity (mg/L)	
Total Dissolved Solids (g/L)	0.021
Turbidity (NTU)	5.8
Average Velocity (m/sec)	1.52
Velocity Location	Upstream

CHANNEL MEASUREMENTS	
Average Channel Width (m)	2.3
Average Wetted Width (m)	2.1
Average Bankful Depth (m)	0.71
Average Water Depth (m)	0.2
Average Pool Depth (m)	0.33
WATERCOURSE MORPHOLOGY	
Watercourse Type	Small Permanent
Stage (season was very dry)	Mid
Morphology (assumed in dry area)	Flat
Channel Depth Class	Class 3: <0.5m
Pattern	
Slope	
Confinement	Unconfined
INSTREAM COVER	
Dominant	Instream Vegetation
Subdominant	Overhanging Vegetation
Subdominant	Large Woody Debris
Subdominant	Small Woody Debris
Subdominant	
Trace	Undercut Banks
Trace	Uprooted Tree Area
Trace	
Trace	
SUBSTRATE	
Dominant	Gravel
Subdominant	Boulder
Subdominant	Fines
Trace	Cobble
Trace	
BARRIERS	
Yes, Partial Barrier	
STREAM INVERTEBRATES	
Moderate (20-60%)	

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1		#N/A
2		#N/A
3		#N/A
4		#N/A
5		#N/A
6		#N/A
7		#N/A
8		#N/A
9		#N/A
10		#N/A
RIPARIAN INFORMATION		
Crown Closure %		
Bank Texture		fines,
Bank Shape		undercut
Bank Stability		
Vegetation Stage		
IMPORTANT FEATURES OBSERVED		
Spawning Area / REDD	<input checked="" type="checkbox"/>	
Beaver Dam	<input type="checkbox"/>	
Beaver Pond	<input type="checkbox"/>	
Underground Sections	<input type="checkbox"/>	
Waterfall or Cascade	<input type="checkbox"/>	
No Defined Channel	<input type="checkbox"/>	
Hanging Culvert	<input type="checkbox"/>	
Blocked or Damaged Culvert	<input type="checkbox"/>	
Bridge	<input type="checkbox"/>	
ADDITIONAL NOTES		
Wetland in upstream, Groundwater sources, no culvert-washout, Wp. 1923 Partial barrier .50cm some areas fish can get through in high flow resident fish could be living upstream and blocked for certain times of year. Lots of blow down here.		



**Watercourse Fact Sheet: Fish Habitat - Page 2**  
**Watercourse ID: Watercourse 201c-3446**



**Photo 1: Upstream at Crossing**



**Photo 2: Downstream at Crossing Location**



**Photo 3: Partial barrier downstream**



**Photo 4: Downstream, Potential REDD**



## Watercourse Fact Sheet: Fish Habitat - Page 1

WATERCOURSE INFORMATION	
Watercourse ID:	<b>Watercourse BL-WC202a-2795</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	CT, MT
Affiliation:	CBCL Limited
Field Assessment Date:	Nov 22 2022
UTM Coordinates:	Wp.1339
Datum:	NAD 1983
HABITAT QUALITY	
Overall Habitat Quality	Moderate
Spawning	Moderate
Rearing	Moderate
Foraging	Moderate
Migration	Moderate
Overwintering	Moderate
POTENTIAL FOR FISH PRESENCE	
Overall Fish Potential	Moderate
FISH OBSERVED	
No	
WATER QUALITY AND VELOCITY	
Temperature (Deg. C)	4.25
pH	4.84
Dissolved Oxygen (mg/l)	8.45
Dissolved Oxygen (%)	
Conductivity (mS/cm)	0.024
Salinity (ppt)	0.01
Total Dissolved Solids (g/L)	0.016
Turbidity (NTU)	2.5
Average Velocity (m/sec)	10.6
Velocity Location	Upstream

CHANNEL MEASUREMENTS	
Average Channel Width (m)	1.77
Average Wetted Width (m)	1.43
Average Bankful Depth (m)	0.30
Average Water Depth (m)	0.33
Average Pool Depth (m)	0.50
WATERCOURSE MORPHOLOGY	
Watercourse Type	Intermittent
Stage (season was very dry)	Mid
Morphology (assumed in dry area)	Flat
Channel Depth Class	Class 3: <0.5m
Pattern	Straight
Slope	
Confinement	Confined
INSTREAM COVER	
Dominant	Overhanging Vegetation
Subdominant	Undercut Banks
Subdominant	Deep Pool
Subdominant	Instream Vegetation
Subdominant	
Trace	Large Woody Debris
Trace	Small Woody Debris
Trace	Boulder
Trace	
SUBSTRATE	
Dominant	Gravel
Subdominant	Fines
Subdominant	Cobble
Trace	Boulder
Trace	
BARRIERS	
No Barriers	
STREAM INVERTEBRATES	
None	

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1	Sweet Fern	<i>Comptonia peregrina</i>
2	Red Maple	<i>Acer rubrum</i>
3	Balsam Fir	<i>Abies balsamea</i>
4	White Spruce	<i>Picea glauca</i>
5	Speckled Alder	<i>Alnus incana</i>
6	Eastern Hemlock	<i>Tsuga canadensis</i>
7	Paper Birch	<i>Betula papyrifera</i>
8	Cranberry	#N/A
9		#N/A
10		#N/A
RIPARIAN INFORMATION		
Crown Closure %	51-75%	
Bank Texture	Fines	
Bank Shape	Sloped, Vertical, Undercut	
Bank Stability	Poor <50% Stable	
Vegetation Stage	Young Forest	
IMPORTANT FEATURES OBSERVED		
Spawning Area / REDD	<input checked="" type="checkbox"/>	
Beaver Dam	<input type="checkbox"/>	
Beaver Pond	<input type="checkbox"/>	
Underground Sections	<input type="checkbox"/>	
Waterfall or Cascade	<input type="checkbox"/>	
No Defined Channel	<input type="checkbox"/>	
Hanging Culvert	<input type="checkbox"/>	
Blocked or Damaged Culvert	<input type="checkbox"/>	
Bridge	<input type="checkbox"/>	
ADDITIONAL NOTES		
Private property- DS, only assess US. Wait for permission to return. REDD Wp. 1339 @10:21AM- Area near culvert. Assessment moves North from XING towards WL21, Area south of XING is a wet moss ditch. Wp. 1340-WC joins WC-21@WQ Sample 14, Ditch @ DS 50m.		



**Watercourse Fact Sheet: Fish Habitat - Page 2**  
**Watercourse ID: Watercourse BL-WC202a-2795**



**Photo 1: Upstream at Crossing Location**



**Photo 2: Culvert at crossing Location**



**Photo 3: Feature 1 (pool within assessed channel area.)**



**Watercourse Fact Sheet: Fish Habitat - Page 1**

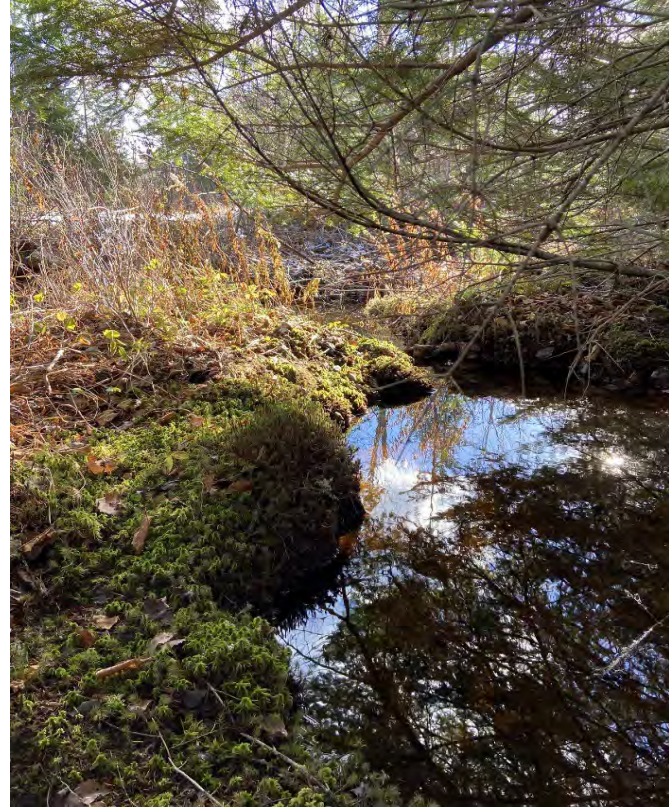
WATERCOURSE INFORMATION	
Watercourse ID:	<b>Watercourse BL-WC202a-3383</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	CJ, NH
Affiliation:	CBCL Limited
Field Assessment Date:	Nov 22 2022
UTM Coordinates:	Wp.1975
Datum:	NAD 1983
HABITAT QUALITY	
Overall Habitat Quality	Poor
Spawning	Poor
Rearing	Moderate
Foraging	Moderate
Migration	
Overwintering	Poor
POTENTIAL FOR FISH PRESENCE	
Overall Fish Potential	High
FISH OBSERVED	
No	
WATER QUALITY AND VELOCITY	
Temperature (Deg. C)	4.26
pH	4.88
Dissolved Oxygen (mg/l)	6.15
Dissolved Oxygen (%)	
Conductivity (mS/cm)	0.022
Salinity (mg/L)	0.01
Total Dissolved Solids (g/L)	0.014
Turbidity (NTU)	3.0
Average Velocity (m/sec)	2.79
Velocity Location	Upstream

CHANNEL MEASUREMENTS	
Average Channel Width (m)	1.6
Average Wetted Width (m)	1.5
Average Bankful Depth (m)	0.4
Average Water Depth (m)	0.3
Average Pool Depth (m)	0.4
WATERCOURSE MORPHOLOGY	
Watercourse Type	Intermittent with Ephemeral Characteristics
Stage (season was very dry)	Mid
Morphology (assumed in dry area)	Run
Channel Depth Class	Class 3: <0.5m
Pattern	Regular Meanders
Slope	
Confinement	None
INSTREAM COVER	
Dominant	Overhanging Vegetation
Subdominant	Instream Vegetation
Subdominant	Undercut Banks
Subdominant	
Subdominant	
Trace	Small Woody Debris
Trace	
Trace	
Trace	
SUBSTRATE	
Dominant	Gravel
Subdominant	Fines
Subdominant	Cobble
Trace	
Trace	
BARRIERS	
Yes, Full Barrier	
STREAM INVERTEBRATES	
None	

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1	Balsam Fir	<i>Abies balsamea</i>
2	Eastern Hemlock	<i>Tsuga canadensis</i>
3	Cinnamon Fern	<i>Osmunda cinnamomea</i>
4	Sphagnum moss	#N/A
5	Red spruce	<i>Picea rubens</i>
6	Yellow Birch	<i>Betula alleghaniensis</i>
7	Red Maple	<i>Acer rubrum</i>
8	American Beech	<i>Fagus grandifolia</i>
9	Evergreen Wood Fern	#N/A
10		#N/A
RIPARIAN INFORMATION		
Crown Closure %	51-75%	
Bank Texture	fines	
Bank Shape	sloped, vertical, undercut	
Bank Stability	Good >80% Stable	
Vegetation Stage	Mature Forest	
IMPORTANT FEATURES OBSERVED		
Spawning Area / REDD	<input type="checkbox"/>	
Beaver Dam	<input type="checkbox"/>	
Beaver Pond	<input type="checkbox"/>	
Underground Sections	<input checked="" type="checkbox"/>	
Waterfall or Cascade	<input type="checkbox"/>	
No Defined Channel	<input type="checkbox"/>	
Hanging Culvert	<input type="checkbox"/>	
Blocked or Damaged Culvert	<input type="checkbox"/>	
Bridge	<input type="checkbox"/>	
ADDITIONAL NOTES		
American Beech @ Wp.1979, Groundwater input @ Wp. 1976 Saw WC branching off, one branch went to WC-06 see CT.MT notes. <u>Only US assessed</u> . Also a Wetland check. Rearing: May get some juvenile fish in summer/fall/spring but they likely move out for winter.		



**Watercourse Fact Sheet: Fish Habitat - Page 2**  
**Watercourse ID: Watercourse BL-WC202a-3383**



**Photo 1: Upstream at Crossing Location**



**Photo 2: Upstream general habitat**



**Photo 3: Upstream example of undercut bank**



**Photo 4: Upstream underground section**



## Watercourse Fact Sheet: Fish Habitat - Page 1

WATERCOURSE INFORMATION	
Watercourse ID:	<b>Watercourse BL-WC202d-669</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	MB, NH
Affiliation:	CBCL LIMITED
Field Assessment Date:	DEC 15 2022
UTM Coordinates:	20T 0405816 4961333
Datum:	NAD 1983 (WP 202)
HABITAT QUALITY	
Overall Habitat Quality	Moderate
Spawning	Moderate
Rearing	Good
Foraging	Poor
Migration	Moderate
Overwintering	Moderate
POTENTIAL FOR FISH PRESENCE	
Overall Fish Potential	Moderate
FISH OBSERVED	
No	
WATER QUALITY AND VELOCITY	
Temperature (Deg. C)	2.3
pH	6.3
Dissolved Oxygen (mg/l)	10.16
Dissolved Oxygen (%)	75.2
Conductivity (µs/cm)	26.7
Salinity (mg/L)	0.01
Total Dissolved Solids (g/L)	0.018
Turbidity (NTU)	Clear
Average Velocity (m/sec)	N/A
Velocity Location	N/A

CHANNEL MEASUREMENTS	
Average Channel Width (m)	2.03
Average Wetted Width (m)	1.70
Average Bankful Depth (m)	N/A
Average Water Depth (m)	N/A
Average Pool Depth (m)	0.3
WATERCOURSE MORPHOLOGY	
Watercourse Type	Small Permanent with Intermittent Characteristics
Stage (season was very dry)	Mid
Morphology (assumed in dry area)	Riffle
Channel Depth Class	Class 3: <0.5m
Pattern	Sinuuous
Slope	1%
Confinement	Unconfined
INSTREAM COVER	
Dominant	Undercut Banks
Subdominant	Deep Pool
Subdominant	Boulder
Subdominant	Overhanging Vegetation
Subdominant	Instream Vegetation
Trace	Large Woody Debris
Trace	Small Woody Debris
Trace	
Trace	
SUBSTRATE	
Dominant	Fines
Subdominant	Gravel
Subdominant	Cobble
Trace	Boulder
Trace	
BARRIERS	
Yes, Partial Barrier	
STREAM INVERTEBRATES	
None	

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1		#N/A
2		#N/A
3		#N/A
4		#N/A
5		#N/A
6		#N/A
7		#N/A
8		#N/A
9		#N/A
10		#N/A
RIPARIAN INFORMATION		
Crown Closure %		
Bank Texture		
Bank Shape		
Bank Stability		
Vegetation Stage		
IMPORTANT FEATURES OBSERVED		
Spawning Area / REDD	<input type="checkbox"/>	
Beaver Dam	<input type="checkbox"/>	
Beaver Pond	<input type="checkbox"/>	
Underground Sections	<input type="checkbox"/>	
Waterfall or Cascade	<input type="checkbox"/>	
No Defined Channel	<input type="checkbox"/>	
Hanging Culvert	<input type="checkbox"/>	
Blocked or Damaged Culvert	<input checked="" type="checkbox"/>	
Bridge	<input type="checkbox"/>	
ADDITIONAL NOTES		
Potential blockage due to large log debris and drop. Good cover, gravels, good flow, & WQ. Culvert @ CL CSP(700,750mm) = DAMAGED under main road. Small drips @ CL, good pool by culvert (Ice cover)		



**Watercourse Fact Sheet: Fish Habitat - Page 2**  
**Watercourse ID: Watercourse 202d-669**



**Photo 1: Upstream at Crossing Location**



**Photo 2: Downstream at Crossing Location**



**Photo 3: Deep Pool by Culvert**



**Photo 4: Potential Fish Barrier**



## Watercourse Fact Sheet: Fish Habitat - Page 1

WATERCOURSE INFORMATION	
Watercourse ID:	<b>Watercourse BL-WC202e-2187</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	CM
Affiliation:	CBCL Limited
Field Assessment Date:	Nov 18 2022
UTM Coordinates:	
Datum:	NAD 1983
HABITAT QUALITY	
Overall Habitat Quality	Moderate
Spawning	Poor
Rearing	Moderate
Foraging	
Migration	
Overwintering	Moderate
POTENTIAL FOR FISH PRESENCE	
Overall Fish Potential	Moderate
FISH OBSERVED	
No	
WATER QUALITY AND VELOCITY	
Temperature (Deg. C)	7.23
pH	4.75
Dissolved Oxygen (mg/l)	9.21
Dissolved Oxygen (%)	
Conductivity (µs/cm)	42
Salinity (mg/L)	0.02
Total Dissolved Solids (g/L)	0.027
Turbidity (NTU)	8.5
Average Velocity (m/sec)	0.12
Velocity Location	

CHANNEL MEASUREMENTS	
Average Channel Width (m)	1.13
Average Wetted Width (m)	1.01
Average Bankful Depth (m)	
Average Water Depth (m)	0.11
Average Pool Depth (m)	0.3
WATERCOURSE MORPHOLOGY	
Watercourse Type	Intermittent
Stage (season was very dry)	High
Morphology (assumed in dry area)	Cascade
Channel Depth Class	Class 3: <0.5m
Pattern	Sinuuous
Slope	
Confinement	Frequently Confined
INSTREAM COVER	
Dominant	Small Woody Debris
Subdominant	
Subdominant	
Subdominant	
Subdominant	
Trace	Boulder
Trace	Large Woody Debris
Trace	Instream Vegetation
Trace	
SUBSTRATE	
Dominant	Fines
Subdominant	Boulder
Subdominant	Cobble
Trace	Gravel
Trace	Bedrock
BARRIERS	
No Barriers	
STREAM INVERTEBRATES	
None	

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1	Yellow Birch	<i>Betula alleghaniensis</i>
2	Red Maple	<i>Acer rubrum</i>
3	Red Spruce	<i>Picea rubens</i>
4	Eastern Hemlock	<i>Tsuga canadensis</i>
5	Sphagnum	#N/A
6		#N/A
7		#N/A
8		#N/A
9		#N/A
10		#N/A
RIPARIAN INFORMATION		
Crown Closure %	51-75%	
Bank Texture	Fines	
Bank Shape	Sloped, vertical	
Bank Stability		
Vegetation Stage	Mature Forest	
IMPORTANT FEATURES OBSERVED		
Spawning Area / REDD	<input type="checkbox"/>	
Beaver Dam	<input type="checkbox"/>	
Beaver Pond	<input type="checkbox"/>	
Underground Sections	<input checked="" type="checkbox"/>	
Waterfall or Cascade	<input type="checkbox"/>	
No Defined Channel	<input type="checkbox"/>	
Hanging Culvert	<input type="checkbox"/>	
Blocked or Damaged Culvert	<input type="checkbox"/>	
Bridge	<input type="checkbox"/>	
ADDITIONAL NOTES		
<p>Wp 2706= ephem drainage channel (pics @ 13:38), adjust WC-49.                      Wp.2708 = Pileated Woodpecker tree/habitat. Culvert @ 2711-0.50m dia steel corrugated pipe. WC U/S of culvert is fed by ditch along road and WL73. Habitat D/S of culvert may provide short section of rearing habitat from juvenile salmonids if accessible. D/S was private property and not assessed.</p>		



**Watercourse Fact Sheet: Fish Habitat - Page 2**  
**Watercourse ID: Watercourse BL-WC202e-2187**



**Photo 1: Upstream at crossing location**



**Photo 2: Downstream at crossing location**



**Photo 3: Small cascade feature upstream**



**Photo 4: Example of undercut bank, potential cover for fish**



**Watercourse Fact Sheet: Fish Habitat - Page 1**

WATERCOURSE INFORMATION	
Watercourse ID:	<b>Watercourse BL-WC202e-3441</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	CM,NH
Affiliation:	CBCL Limited
Field Assessment Date:	NOV 18 2022
UTM Coordinates:	
Datum:	NAD 1983
HABITAT QUALITY	
Overall Habitat Quality	Good
Spawning	Moderate
Rearing	Good
Foraging	Moderate
Migration	Moderate
Overwintering	Moderate
POTENTIAL FOR FISH PRESENCE	
Overall Fish Potential	High
FISH OBSERVED	
No	
WATER QUALITY AND VELOCITY	
Temperature (Deg. C)	6.47
pH	4.14
Dissolved Oxygen (mg/l)	9.9
Dissolved Oxygen (%)	
Conductivity (mS/cm)	0.042
Salinity (mg/L)	0.02
Total Dissolved Solids (g/L)	0.027
Turbidity (NTU)	4.5
Average Velocity (m/sec)	0.22
Velocity Location	

CHANNEL MEASUREMENTS	
Average Channel Width (m)	2.79
Average Wetted Width (m)	2.30
Average Bankful Depth (m)	0.45
Average Water Depth (m)	0.19
Average Pool Depth (m)	0.44
WATERCOURSE MORPHOLOGY	
Watercourse Type	Small Permanent
Stage (season was very dry)	High
Morphology (assumed in dry area)	Run
Channel Depth Class	Class 3: <0.5m
Pattern	Sinuuous
Slope	
Confinement	Confined
INSTREAM COVER	
Dominant	
Subdominant	
Subdominant	
Trace	Deep Pool
Trace	Undercut Banks
Trace	Small Woody Debris
Trace	Boulder
Trace	Overhanging Vegetation
Trace	Large Woody Debris
SUBSTRATE	
Dominant	Gravel
Dominant	Fines
Subdominant	Cobble
Trace	Boulder
Trace	
BARRIERS	
Yes, Full Barrier	
STREAM INVERTEBRATES	
None	

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1	Balsam Fir	<i>Abies balsamea</i>
2	Red Spruce	<i>Picea rubens</i>
3	Red Maple	<i>Acer rubrum</i>
4	Eastern Hemlock	<i>Tsuga canadensis</i>
5	Cinnamon Fern	<i>Osmunda cinnamomea</i>
6	Three-seeded Sedge	#N/A
7	Sphagnum	#N/A
8		#N/A
9		#N/A
10		#N/A
RIPARIAN INFORMATION		
Crown Closure %	51-75%	
Bank Texture	Fines, Gravel, Boulder	
Bank Shape	Left Bank: Sloped, Vertical. Right Bank: Sloped, Vertical, Undercut	
Bank Stability		
Vegetation Stage	Mature Forest	
IMPORTANT FEATURES OBSERVED		
Spawning Area / REDD	<input type="checkbox"/>	
Beaver Dam	<input type="checkbox"/>	
Beaver Pond	<input type="checkbox"/>	
Underground Sections	<input type="checkbox"/>	
Waterfall or Cascade	<input type="checkbox"/>	
No Defined Channel	<input type="checkbox"/>	
Hanging Culvert	<input type="checkbox"/>	
Blocked or Damaged Culvert	<input checked="" type="checkbox"/>	
Bridge	<input type="checkbox"/>	
ADDITIONAL NOTES		
Wp.2696 Culvert @ road, Culverts @ road crossing @11:26 (NH Pics) =Twin 60cm dia corrugated steel pipes. East Pipe completely blocked, and road is washed out. Cascade feature DS - potential rearing barrier. pH-low across all assessed WC @ BL		



**Watercourse Fact Sheet: Fish Habitat - Page 2**  
**Watercourse ID: Watercourse 202e-3441**



**Photo 1: Upstream at Crossing Location with Culvert**



**Photo 2: Downstream, general WC habitat, suitable habitat**



**Photo 3: Blocked culvert near road, causing washout**



**Photo 4: Cascade feature, possible barrier to fish**



## Watercourse Fact Sheet: Not Fish Habitat

WATERCOURSE INFORMATION	
<b>Watercourse ID:</b>	<b>Watercourse BL-WC102-815</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	CJ
Affiliation:	CBCL LIMITED
Field Assessment Date:	Sept 08 2022
UTM Coordinates:	Wp. 1608
Datum:	NAD 1983
SUBSTRATE	
Dominant	Fines
Subdominant	
Subdominant	
Trace	
Trace	
Trace	
CHANNEL MEASUREMENTS	
Average Channel Width (m)	
Average Wetted Width (m)	
Average Bankful Depth (m)	
Average Water Depth (m)	
Average Pool Depth (m)	
WATERCOURSE MORPHOLOGY	
Watercourse Type	Ephemeral
Stage (season was very dry)	Low

### PHOTOS



Photo 1: Upstream at approximate crossing location.



Photo 2: Downstream at approximate crossing location.

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1		#N/A
2		#N/A
3		#N/A
4		#N/A
5		#N/A
6		#N/A
7		#N/A
8		#N/A
9		#N/A
10		#N/A
RIPARIAN INFORMATION		
Vegetation Stage		
IMPORTANT FEATURES OBSERVED		
Vegetated Across		<input type="checkbox"/>
Flows into Fish Habitat Downstream		<input type="checkbox"/>
Underground Sections or Groundwater		<input type="checkbox"/>
Surface Flow		<input type="checkbox"/>
Wetland Corridor (Flow Between Wetlands)		<input type="checkbox"/>
Barrier		<input type="checkbox"/>
Artificial Channelization		<input type="checkbox"/>
Culvert or Bridge		<input checked="" type="checkbox"/>
Water Flowing over Road (no Culvert)		<input type="checkbox"/>
No Defined Channel		<input checked="" type="checkbox"/>
ADDITIONAL NOTES		
U/S is ephemeral, no channel. Channel along the ditch D/S wp.1609 no defined channel found. Likely ephemeral rainage. Culvert		



## Watercourse Fact Sheet: Not Fish Habitat

WATERCOURSE INFORMATION	
<b>Watercourse ID:</b>	<b>Watercourse BL-WC102-851</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	CJ
Affiliation:	CBCL LIMITED
Field Assessment Date:	Sept 08 2022
UTM Coordinates:	Wp. 1625
Datum:	NAD 1983
SUBSTRATE	
Dominant	
Subdominant	
Subdominant	
Trace	
Trace	
Trace	
CHANNEL MEASUREMENTS	
Average Channel Width (m)	0.44
Average Wetted Width (m)	
Average Bankful Depth (m)	
Average Water Depth (m)	
Average Pool Depth (m)	
WATERCOURSE MORPHOLOGY	
Watercourse Type	Ephemeral
Stage (season was very dry)	Dry

### PHOTOS



Photo 1: Upstream at approximate crossing location.



Photo 2: Downstream at approximate crossing location.

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1		#N/A
2		#N/A
3		#N/A
4		#N/A
5		#N/A
6		#N/A
7		#N/A
8		#N/A
9		#N/A
10		#N/A
RIPARIAN INFORMATION		
Vegetation Stage		
IMPORTANT FEATURES OBSERVED		
Vegetated Across		<input type="checkbox"/>
Flows into Fish Habitat Downstream		<input type="checkbox"/>
Underground Sections or Groundwater		<input type="checkbox"/>
Surface Flow		<input type="checkbox"/>
Wetland Corridor (Flow Between Wetlands)		<input type="checkbox"/>
Barrier		<input type="checkbox"/>
Artificial Channelization		<input type="checkbox"/>
Culvert or Bridge		<input type="checkbox"/>
Water Flowing over Road (no Culvert)		<input type="checkbox"/>
No Defined Channel		<input checked="" type="checkbox"/>
ADDITIONAL NOTES		
Ephemeral drainage, new along ditch. Channalized section, small section. 44 cm channel. Wet but no depth or wetted.		



# Watercourse Fact Sheet: Not Fish Habitat

WATERCOURSE INFORMATION	
<b>Watercourse ID:</b>	<b>Watercourse BL-WC102-869</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	CJ
Affiliation:	CBCL LIMITED
Field Assessment Date:	Sept 08 2022
UTM Coordinates:	Wp.1605
Datum:	NAD 1983
SUBSTRATE	
Dominant	
Subdominant	
Subdominant	
Trace	
Trace	
Trace	
CHANNEL MEASUREMENTS	
Average Channel Width (m)	
Average Wetted Width (m)	
Average Bankful Depth (m)	
Average Water Depth (m)	
Average Pool Depth (m)	
WATERCOURSE MORPHOLOGY	
Watercourse Type	Ephemeral with Intermittent Characteristics
Stage (season was very dry)	Dry

## PHOTOS



Photo 1: Upstream at assumed crossing



Photo 2: Downstream at assumed crossing

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1	Cinnamon Fern	<i>Osmunda cinnamomea</i>
2	New york Fern	<i>Thelypteris noveboracensis</i>
3		#N/A
4		#N/A
5		#N/A
6		#N/A
7		#N/A
8		#N/A
9		#N/A
10		#N/A
RIPARIAN INFORMATION		
Vegetation Stage		
IMPORTANT FEATURES OBSERVED		
Vegetated Across	<input type="checkbox"/>	
Flows into Fish Habitat Downstream	<input type="checkbox"/>	
Underground Sections or Groundwater	<input type="checkbox"/>	
Surface Flow	<input type="checkbox"/>	
Wetland Corridor (Flow Between Wetlands)	<input type="checkbox"/>	
Barrier	<input type="checkbox"/>	
Artificial Channelization	<input type="checkbox"/>	
Culvert or Bridge	<input checked="" type="checkbox"/>	
Water Flowing over Road (no Culvert)	<input type="checkbox"/>	
No Defined Channel	<input checked="" type="checkbox"/>	
ADDITIONAL NOTES		
U/s no channel, likely ephemeral.		



# Watercourse Fact Sheet: Not Fish Habitat

WATERCOURSE INFORMATION	
<b>Watercourse ID:</b>	<b>Watercourse BL-WC102-891</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	CJ
Affiliation:	CBCL Limited
Field Assessment Date:	Sept 08 2022
UTM Coordinates:	Wp.1639
Datum:	NAD 1983
SUBSTRATE	
Dominant	
Subdominant	
Subdominant	
Trace	
Trace	
Trace	
CHANNEL MEASUREMENTS	
Average Channel Width (m)	
Average Wetted Width (m)	
Average Bankful Depth (m)	
Average Water Depth (m)	
Average Pool Depth (m)	
WATERCOURSE MORPHOLOGY	
Watercourse Type	Ephemeral with Intermittent Characteristics
Stage (season was very dry)	Dry

## PHOTOS



Photo 1: Culvert at the crossing, no water.



Photo 2: General habitat around watercourse

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1		#N/A
2		#N/A
3		#N/A
4		#N/A
5		#N/A
6		#N/A
7		#N/A
8		#N/A
9		#N/A
10		#N/A
RIPARIAN INFORMATION		
Vegetation Stage		
IMPORTANT FEATURES OBSERVED		
Vegetated Across		<input type="checkbox"/>
Flows into Fish Habitat Downstream		<input type="checkbox"/>
Underground Sections or Groundwater		<input checked="" type="checkbox"/>
Surface Flow		<input checked="" type="checkbox"/>
Wetland Corridor (Flow Between Wetlands)		<input type="checkbox"/>
Barrier		<input type="checkbox"/>
Artificial Channelization		<input type="checkbox"/>
Culvert or Bridge		<input type="checkbox"/>
Water Flowing over Road (no Culvert)		<input type="checkbox"/>
No Defined Channel		<input type="checkbox"/>
ADDITIONAL NOTES		
<p>U/S mostly surface or underground flow. Wp. 1640 - Channelized section, no water, likely flows at some point. 44cm wide channel. U/S Wp.1641 Watercourse observed going underground. U/S Ephemeral with intermittent characteristics. Area had wetland vegetation, looked like hillside drainage, on slope, hydrology wasn't right.</p>		



# Watercourse Fact Sheet: Not Fish Habitat

WATERCOURSE INFORMATION	
<b>Watercourse ID:</b>	<b>Watercourse BL-WC102-2198</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	CJ
Affiliation:	CBCL LIMITED
Field Assessment Date:	Sept 08 2022
UTM Coordinates:	Wp. 1616
Datum:	NAD 1983
SUBSTRATE	
Dominant	
Subdominant	
Subdominant	
Trace	
Trace	
Trace	
CHANNEL MEASUREMENTS	
Average Channel Width (m)	
Average Wetted Width (m)	
Average Bankful Depth (m)	
Average Water Depth (m)	
Average Pool Depth (m)	
WATERCOURSE MORPHOLOGY	
Watercourse Type	Ephemeral
Stage (season was very dry)	Low

## PHOTOS

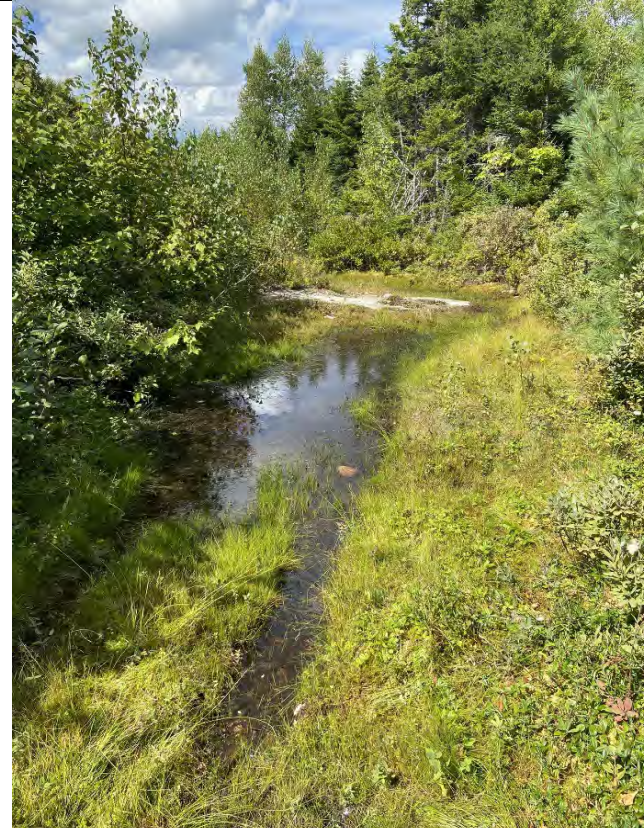


Photo 1: Upstream at approximate crossing location.

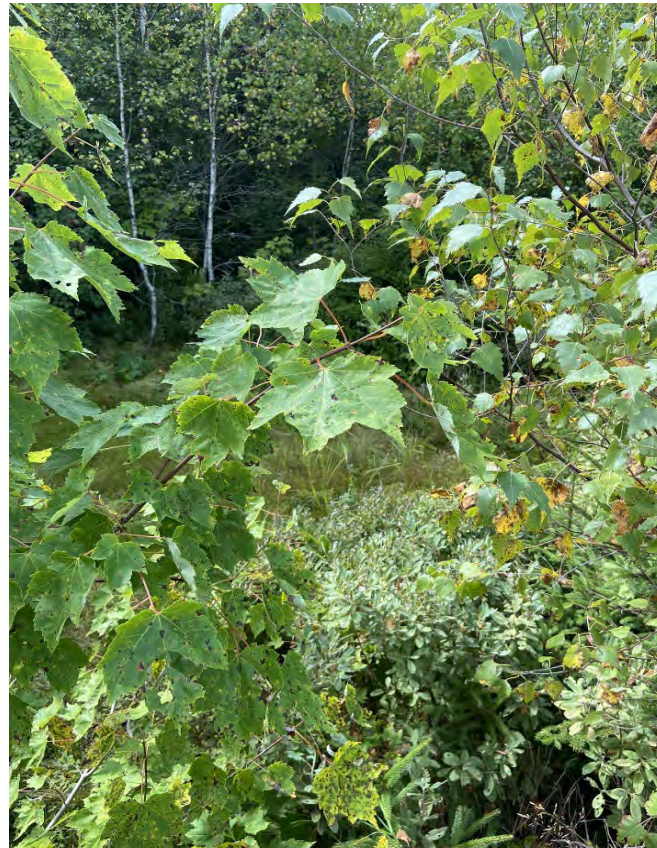


Photo 2: Downstream at approximate crossing location.

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1		#N/A
2		#N/A
3		#N/A
4		#N/A
5		#N/A
6		#N/A
7		#N/A
8		#N/A
9		#N/A
10		#N/A
RIPARIAN INFORMATION		
Vegetation Stage		
IMPORTANT FEATURES OBSERVED		
Vegetated Across		<input type="checkbox"/>
Flows into Fish Habitat Downstream		<input type="checkbox"/>
Underground Sections or Groundwater		<input type="checkbox"/>
Surface Flow		<input type="checkbox"/>
Wetland Corridor (Flow Between Wetlands)		<input type="checkbox"/>
Barrier		<input type="checkbox"/>
Artificial Channelization		<input type="checkbox"/>
Culvert or Bridge		<input checked="" type="checkbox"/>
Water Flowing over Road (no Culvert)		<input type="checkbox"/>
No Defined Channel		<input checked="" type="checkbox"/>
ADDITIONAL NOTES		
Ephemeral drainage no defined channel, Wp. 1617 Culvert. Culvert is broken and collapsed. Wp. 1618 D/S no defined channel ephemeral drainage. Wp.1619 Bear Print		



## Watercourse Fact Sheet: Not Fish Habitat

WATERCOURSE INFORMATION	
<b>Watercourse ID:</b>	<b>Watercourse BL-WC102-2585</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	CJ
Affiliation:	CBCL LIMITED
Field Assessment Date:	Sept 08 2022
UTM Coordinates:	Wp. 1630-1632
Datum:	NAD 1983
SUBSTRATE	
Dominant	
Subdominant	
Subdominant	
Trace	
Trace	
Trace	
CHANNEL MEASUREMENTS	
Average Channel Width (m)	0.66
Average Wetted Width (m)	
Average Bankful Depth (m)	
Average Water Depth (m)	
Average Pool Depth (m)	
WATERCOURSE MORPHOLOGY	
Watercourse Type	Ephemeral with Intermittent Characteristics
Stage (season was very dry)	Low

### PHOTOS



Photo 1: Upstream at crossing, culvert present.



Photo 2: Downstream at approximate crossing location.

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1		#N/A
2		#N/A
3		#N/A
4		#N/A
5		#N/A
6		#N/A
7		#N/A
8		#N/A
9		#N/A
10		#N/A
RIPARIAN INFORMATION		
Vegetation Stage		
IMPORTANT FEATURES OBSERVED		
Vegetated Across		<input type="checkbox"/>
Flows into Fish Habitat Downstream		<input type="checkbox"/>
Underground Sections or Groundwater		<input type="checkbox"/>
Surface Flow		<input type="checkbox"/>
Wetland Corridor (Flow Between Wetlands)		<input type="checkbox"/>
Barrier		<input type="checkbox"/>
Artificial Channelization		<input type="checkbox"/>
Culvert or Bridge		<input checked="" type="checkbox"/>
Water Flowing over Road (no Culvert)		<input type="checkbox"/>
No Defined Channel		<input type="checkbox"/>
ADDITIONAL NOTES		
No Defined Channel @ xing, ephemeral drainage. Wp.1631. Channelized area no flow, 66 cm channel with intermittent flows, likely in spring run off or heavy rain old machine tracks. D/S plunge pool (dry) at bottom of culvert. Scouring suggests there are heavy rainfall events or spring run off, plundge pool channel 112 cm wide. Channel dry 40 cm. Wp.1632 Channel Dry 47 cm looks like it flows.		



# Watercourse Fact Sheet: Not Fish Habitat

WATERCOURSE INFORMATION	
<b>Watercourse ID:</b>	<b>Watercourse BL-WC102-2822</b>
General Site Location:	Bear Lake
Watercourse Assessor(s):	CJ
Affiliation:	CBCL LIMITED
Field Assessment Date:	Sept 08 2022
UTM Coordinates:	Wp.1603
Datum:	NAD 1983
SUBSTRATE	
Dominant	
Subdominant	
Subdominant	
Trace	
Trace	
Trace	
CHANNEL MEASUREMENTS	
Average Channel Width (m)	
Average Wetted Width (m)	
Average Bankful Depth (m)	
Average Water Depth (m)	
Average Pool Depth (m)	
WATERCOURSE MORPHOLOGY	
Watercourse Type	Ephemeral
Stage (season was very dry)	Dry

## PHOTOS



Photo 1: Upstream at approximate crossing location.



Photo 2: Downstream at approximate crossing location.

RIPARIAN VEGETATION SPECIES		
#	Common Name	Scientific Name
1		#N/A
2		#N/A
3		#N/A
4		#N/A
5		#N/A
6		#N/A
7		#N/A
8		#N/A
9		#N/A
10		#N/A
RIPARIAN INFORMATION		
Vegetation Stage		
IMPORTANT FEATURES OBSERVED		
Vegetated Across		<input type="checkbox"/>
Flows into Fish Habitat Downstream		<input type="checkbox"/>
Underground Sections or Groundwater		<input type="checkbox"/>
Surface Flow		<input type="checkbox"/>
Wetland Corridor (Flow Between Wetlands)		<input type="checkbox"/>
Barrier		<input type="checkbox"/>
Artificial Channelization		<input type="checkbox"/>
Culvert or Bridge		<input checked="" type="checkbox"/>
Water Flowing over Road (no Culvert)		<input type="checkbox"/>
No Defined Channel		<input checked="" type="checkbox"/>
ADDITIONAL NOTES		
No channel, emperial. U/S dry emperal when not likely runs down ditch. D/S ephemeral no channle dry, culvert.		