

Pre-Restoration

13-01-78-13 W6 Bridge Installation

Problem

Hanging culvert, undersized (1200mm)
High-unsatisfactory erosion and
sedimentation

Stream Characteristics

Small permanent watercourse with 2.4 m
bankfull width and 105 cm channel depth
Strahler Order 2
Watershed size: 119.28 ha



Outlet

Post-Restoration

13-01-78-13 W6 Bridge Installation

Hanging and undersized culvert replaced with a 60' bridge.

Silt fencing, grass seeding and willow staking implemented

Channel rebuilt to match upstream natural

Upstream Habitat Restored: 130.32 km

Cost: \$333,600



Pre-Restoration

6-1-49-18 W5 Arch

Problem

Hanging and undersized (800 mm) culvert

High-unsatisfactory erosion and sedimentation due to hanging outlet

Stream Characteristics

Small permanent watercourse with 1.6 m bankfull width and 57 cm channel depth

Strahler Order 1

Critical habitat for Athabasca Rainbow Trout

Watershed size: 45.9 ha



Post-Restoration

6-1-49-18 W5 Arch

Undersized hanging culvert replaced
with 2000 mm open-bottom arch

Willow staking, native grass seeding
and silt fencing implemented

Upstream Habitat Restored: 5.48 km

Cost: \$115,000



Outlet Upstream

Pre-Restoration

4-10-64-11 W5 Arch

Problem

Multiple crushed and undersized (1100 mm & 800 mm) culverts

High-unsatisfactory erosion and sedimentation

Stream Characteristics

Small permanent watercourse with 2.1 m bankfull width and 56 cm channel depth

Strahler Order 2

Critical habitat for Athabasca Rainbow Trout

Watershed size: 1008.89 ha



Inlet Downstream



Outlet Upstream

Post-Restoration

4-10-64-11 W5 Arch

Culverts replaced with a 10 m x 3000 mm open-bottom low-profile arch.

Structure is rated for L140 with engineered reinforcements

Channel rebuilt to match upstream natural

ATRT CH Stream

Upstream Habitat Restored: 30.93 km

Cost: \$176,563



Outlet Upstream

Pre-Restoration

1-9-60-22 W5 Arch

Problem

Undersized (1200 mm x 12 m) and
hanging culvert

Structurally damaged

Erosion and sedimentation

Stream Characteristics

Small permanent watercourse with a 2.3 m
bankfull width and 68 cm channel depth

Strahler Order 2

Special concern watercourse for Bull Trout

Watershed size: 1559 ha



Post-Restoration

1-9-60-22 W5 Arch

Culvert replaced with 3500 mm x 13 m open-bottom low-profile arch.

Channel rebuilt to match upstream natural

Willow staking will be implemented in spring 2025.

Upstream Habitat Restored: 57.68 km

Cost: \$237,000



Outlet Upstream

Pre-Restoration

16-22-56-25 W5
Culvert → Bridge

Problem

Multiple hanging and undersized culverts
(1200 mm x 21 m)

High-unsatisfactory erosion and
sedimentation from hanging culverts

Channel running along ditch for 30 m

Stream Characteristics

Small permanent watercourse with a 1.9 m
bankfull width and 65 cm channel depth

Strahler Order 2

Critical habitat for Athabasca Rainbow
Trout and Bull Trout

Watershed size: 780.1 ha



Upstream Natural

Post-Restoration

16-22-56-25 W5
Culvert → Bridge

Culverts replaced with a 30' bridge

Channel redirected out of the ditch and rebuilt approximately 75 m. 30' Culverts removed and replaced with a 30' bridge

Upstream Habitat Restored: 24.04 km

Cost: \$220,000



Pre-Restoration

12-34-56-20 W5 Bridge Installation

Problem

Emergency repair and permitting

Undersized hanging, embedded and blocked culverts (800 mm & 500 mm)

High-unsatisfactory erosion and sedimentation

NOTE: Failed crossing is only 11 years old

Stream Characteristics

Small permanent watercourse with 2.4 m bankfull width and 48 cm channel depth

Strahler Order 1

Endangered/Threatened habitat for Bull Trout and Athabasca Rainbow Trout

Watershed size (ha): 249.89



Post-Restoration

12-34-56-20 W5 Bridge Installation

Work completed within 38 days from discovery

Culverts replaced with 60' bridge on steel pilings.

Silt fencing, and native grass seed implemented. Willow staking will occur in spring 2025

Upstream Habitat Restored: 5.38 km

Cost: \$298,000



Inlet Downstream

Pre-Restoration

12-15-67-10 W5 (1) Removal and Restoration

Problem

A historic flume installed by Alberta Government in the 70's was the initial barrier on this tributary to the Swan River. The road accessed 2 wells that were near end of life.

Stream Characteristics

Small permanent watercourse with 5.4 m bankfull width and 55 cm channel depth

Strahler Order 3

Threatened habitat for Arctic Grayling

Watershed size (ha): xxx



Outlet Upstream

Upstream Natural

Post-Restoration

12-15-67-10 W5 (1) Removal and Restoration

Upstream Habitat Restored: 22.85 km

This is one of four barriers removed on this drainage to restore access to almost 23km of Grayling habitat.

Cost: \$365,000



Inlet Downstream

Pre-Restoration

1-36-62-25-W5 Arch Installation

Problem

Installed a one-piece Type II open bottomed arch on a failed undersized culvert.

Arch structure is set in place on concrete loc-bloc foundation.

Stream Characteristics

Small permanent watercourse with 4.4 m bankfull width and 55 cm channel depth

Strahler Order 2

Threatened habitat for AtRT

Watershed size (ha): xx



Outlet Upstream



Upstream Natural

Post-Restoration

14-9-67-10 W5 (1) Removal and Restoration

High use road near facility, structure is L100 rated.

Upstream Habitat Restored: 5.7 km for Bull Trout.

Cost: \$128,000



Outlet Downstream

Pre-Restoration

2-2-59-25-W5 Removal and Restoration

Problem

Historical road no longer used by disposition owner was reclaimed along with 4 crossings. This is the largest of the four and has been in place for over 25 years

Stream Characteristics

Small permanent watercourse with 4.4 m bankfull width and 55 cm channel depth

Strahler Order 3

Threatened habitat for Bull and AT Rainbow Trout

Watershed size (ha): 188.5 Ha



Outlet Upstream

Post-Restoration

2-2-59-25-W5 Removal and Restoration

Complete removal of the road and fill and creation of a new stream channel. New riparian area is planted with conifer and deciduous stems and staked with willows.

Upstream Habitat Restored: 44.3km

Cost: \$186,000



Outlet
Downstream