

SITE NUMBER AND NAME: S045-I West Fisher Creek		HIGHWAY & KM: 549:02, 10.704	PREVIOUS INSPECTION DATE: May 6, 2019	INSPECTION DATE: June 8, 2020
LEGAL DESCRIPTION: 16-08-021-03 W5M	NAD 83 COORDINATES: UTM Northing Easting 11 5626463 683084		RISK ASSESMENT: PF: 11 CF: 4 TOTAL: 44	
AVERAGE ANNUAL DAILY TRAFFIC (AADT): 760 (east), (Ref. No. 65170)			CONTRACTOR MAINTENANCE AREA (CMA): 27	

SUMMARY OF SITE INSTRUMENTATION: None	INSPECTED BY: Chris Morgan (KCB) Margot Lederman (KCB) Alex Frotten (AT) Roger Skirrow (AT)
LAST READING DATE: N/A	

PRIMARY SITE ISSUE: Active slope erosion due to seasonal high flows and flood flows at meander bend in Fisher Creek. Seepage and surface runoff erosion threatens to undermine road. Crest of the erosion feature is approximately 1.4 m from edge of pavement (was 2.7 m during 2016 inspection, 2.0 m during the 2017 and 2018 inspections, and 1.9 m during 2019 inspection).

APPROXIMATE DIMENSIONS: Approximately 70 m long.

DATE OF ANY REMEDIAL ACTION: HTCB installed in 2014.

ITEM	CONDITION EXISTS		DESCRIPTION AND LOCATION	NOTICABLE CHANGE FROM LAST INSPECTION	
	YES	NO		YES	NO
Pavement Distress	X		Some minor cracks at center of the westbound lane		X
Slope Movement	X		Oversteepened and undermined erosion bank has caused numerous slump blocks and sloughing		X
Erosion	X		Erosion has progressed in the past 6 years during periods of high water. Seepage in slope and gully erosion from highway ditch draining over bank continues. The downstream bend is eroding, extending the erosion site.		X
Seepage	X		Seepage evident from the eroded slope		X
Culvert Distress		X			X

COMMENTS

Fisher Creek, in this reach, is a freely meandering stream in a wide silt-sand-gravel plain, showing cut-offs, oxbow lakes, meander scars and point bars.

This bank has a high attack angle (85°), gravel bed, scour hole formed, and erodible material in the bank slope. Due to gravel/cobble beds, significant changes to the bed and channel only occur during high energy runoff events.

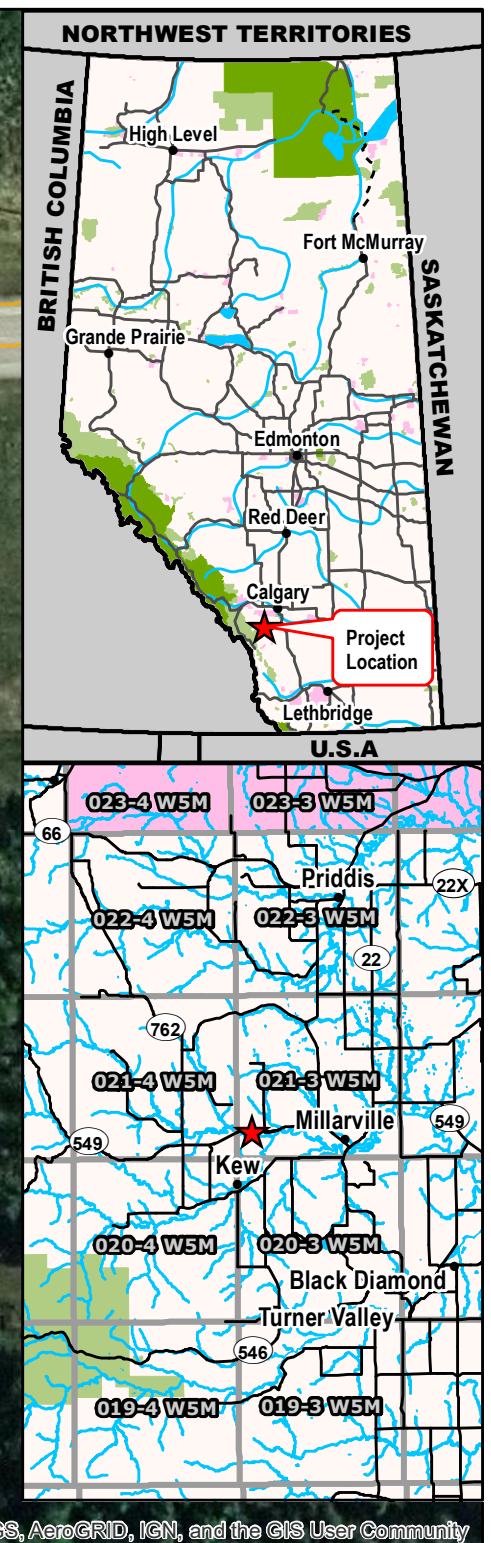
Slope appears saturated. Seepage located midslope near thick black utility cable.

Erosion and sloughing of the slope are undermining the fence. Recently displaced blocks of grass and soil were observed. The equivalent of thirteen fence posts were hanging during 2020 site visit (same number as last year).

Four utility cables exposed by erosion (two of which have snapped), unclear if any are still active





Recommendations:

- Short-Term
 - Monitor location during and after high flows and significant antecedent rain or snow melt.
 - Divert surface water flow away from site.
- Long-Term
 - Progress design solution using slope reconstruction with traditional riprap armouring and turf reinforcement mats.





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

-  Flow Direction
-  Bank Erosion
-  GPS Track (June 8, 2020)
-  Scour Hole



NOTES: 1. HORIZONTAL DATUM: NAD83 2. GRID ZONE: UTM Zone 11N 3. IMAGE SOURCE: World Imagery from ESRI ArcGIS Online. Source date January 15, 2015	CLIENT	PROJECT
	 	SOUTHERN REGION GEOHAZARD RISK MANAGEMENT PROGRAM TITLE Site Plan S045-I - West Fisher Creek Hwy 549:02, km 10.704
	SCALE	PROJECT No.
	1:1,000	A05115A03
		FIG No.
		1

Time: 10:49:19 AM
 Date: June 24, 2020
 File: Z:\AEDM\A05115A03 ABT Southern Region GRMP\A00 Drawings\2020\2. Section BIM\XDS\045_1_200623.mxd

Photo 1 Active slope erosion from creek flow. Ditch has eroded and is draining onto the slope. Hanging fence and exposed utility cables in scarp. Gravel channel bed and erodible slope. Photo was taken facing east on June 8, 2020.



Photo 2 Active slope erosion from creek flow. Photo was taken facing west on June 8, 2020.



Photo 3 Upstream corner of slope erosion (west end). Photo was taken facing southwest on June 8, 2020.



Photo 4 Displaced grass and soil due to surface runoff and ongoing bank erosion from Fisher Creek. Photo taken facing east on June 8, 2020.

