Stantec

Memo

To:	Amy Driessen Transportation and Economic Corridors	From:	Leslie Cho and Lawrence Onwude Stantec Consulting Ltd.
File:	123315222	Date:	October 31, 2025

Reference: North Central Region, Edson/Stony Plain Area, Site NC014 - Highway 661:02 North of Fort Assiniboine, Fall 2025 Instrumentation Monitoring Report

1.0 OBSERVATIONS

1.1 FIELD PROGRAM AND INSTRUMENTATION STATUS

The Fall 2025 reading cycle consisted of instrument readings of four standpipe piezometers (SP06-1, SP06-13, SP06-14 and SP06-19) and two monitoring wells (MW18-1 and MW18-2). SP06-18 is leaning downhill significantly and was blocked near ground surface since 2022. **Figure 1** attached provides a schematic of the site. The instruments were read by Akintola Fakinlede, GIT and Adham Zahr, Geotechnical EIT and on October 3, 2025.

The standpipes and monitoring wells were measured using a Heron Instruments water tape.

GPS coordinates of all instruments were surveyed using a Garmin eTrex 10 handheld GPS unit.

2.0 INTERPRETATION

2.1 GENERAL

Standpipe piezometer results are summarized in **Table NC014-1** and in the following sections with resulting plots attached.

Monitoring well results are summarized in **Table NC014-2** and in the following sections with resulting plots attached.

2.2 INSTRUMENTATION READINGS

2.3.1 Slope Inclinometers

Slope inclinometer readings were not obtained since the access agreement to enter private property was not extended after 2021.

2.3.2 Piezometers

Water levels in SP06-1 and SP06-13 showed little to no change. SP06-14 decreased by 0.1 m, and SP06-19 was dry during the Fall 2025 reading cycle.

Reference: **North Central Region, Edson/Stony Plain Area, Site NC014 - Highway 661:02 North of Fort Assiniboine, Fall 2025 Instrumentation Monitoring Report**

2.3.3 Monitoring Wells

Water levels in MW18-1 decreased by 0.1 m and MW18-2 showed little to no change when compared to the Spring 2025 reading cycle.

3.0 RECOMMENDATIONS

FUTURE WORK

It is recommended that the next reading cycle take place in Spring 2026.

3.1 INSTRUMENTATION REPAIRS

Currently, no instrument repair is needed.

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Table NC014-1: Fall 2025 Piezometer Reading Summary

Instrument Name	Date Initialized	Coordinates (1) (UTM 11U, NAD1983) (m)		Bottom Depth (m bgs)	Current Status	Highest Recorded Water Level (m bgs)	Measured Water Level (m bgs)	Previous Water Level May 7, 2025 (m bgs)	Change in Water Level (m) (3)
		Northing	Easting						
SP06-1	Apr 2, 2006	6023684	644588	5.7	Operational	Sept. 12, 2016 (1.3)	2.5	2.5	0.0
SP06-13	Apr 2, 2006	6023481	644684	8.3	Operational	Oct. 1, 2020 (6.9)	7.0	7.0	0.0
SP06-14	Mar 28, 2006	6023454	644739	7.6	Operational	May 30, 2017 (6.6)	7.1	7.2	-0.1
SP06-18	Apr 2, 2006	6023377	644831	9.4	Non-operational	Sept. 12, 2016 (1.9)	Blocked near ground surface since 2022		
SP06-19	Apr 2, 2006	6023217	644996	8.0	Operational	Oct. 1, 2020 (6.3)	Dry	Dry	N/A

(1) Operational Instruments were updated October 3, 2025, with approximate accuracy of ± 3 m
(2) 'bgs' refers to below ground surface
(3) Negative (-) indicates decrease in water level

Table NC014-2: Fall 2025 Monitoring Well Reading Summary

Instrument Name	Date Initialized	Coordinates (1) (UTM 11U, NAD1983) (m)		Bottom Depth (m bgs),	Current Status	Maximum Water Level (m bgs)	Measured Water Level (m bgs),	Previous Water Level May 7, 2025 (m bgs)	Change in Water Level (m)(2)
		Northing	Easting						
MW18-1	June 2, 2018	6023437	644771	8.4	Operational	Oct. 1, 2020 (7.0)	7.5	7.6	-0.1
MW18-2	July 16, 2018	6023426	644784	35.6	Operational	Oct. 1, 2020 (24.9)	26.4	26.3	<0.1

(1) Operational Instruments were updated October 3, 2025, with approximate accuracy of ± 3 m
(2) Negative (-) indicates decrease in water level

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CLOSING

We trust this instrumentation report meets your requirements. If you have any questions, please do not hesitate to contact the undersigned.

Stantec Consulting Ltd.

PROFESSIONAL ENGINEER ALBERTA
LESLIE CHO
October 31, 2025
ID# 139079

31-Oct-2025

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Attachment: Figure 1 – Site Plan Showing Instrument Locations
Standpipe Piezometer Level Depth vs Time Plot
Monitoring Well Level Depth vs Time Plot

PERMIT TO PRACTICE
STANTEC CONSULTING LTD.
Signature ID# 74389
Date 6-Nov-2025
PERMIT NUMBER: P 0258
The Association of Professional Engineers and Geoscientists of Alberta

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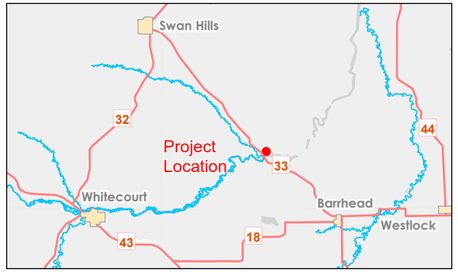
- Non-Operational Instrument
- Operational Instrument
- Photo and Direction
- Previous Observation/ Site Detail
- 2024 Observation
- Ground Elevation Contours (m AMSL)[4.]
- Quarter Section

N

0 25 50 metres
(At original document size of 11x17)
1:2,000

Notes
1. Coordinate System: NAD 1983 CSRS UTM Zone 11N
2. Data Sources: Geogratis, ©Department of Natural Resources Canada, All rights reserved.
3. Background: Light Gray Base: Esri Canada, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NRCan, Parks Canada
Google Satellite: © OpenStreetMap (and) contributors, CC-BY-SA
4. Reference: Thurber Project No. 15-16-258, August 2011 (original Scale 1:2000).



Project Location
SW-28- and SE-29-056-08W5, Alberta

Prepared by SP on 2024-09-30
TR by LC on 2024-09-30
IR by XL on 2024-09-30

Client/Project 123315222
Transportation and Economic Corridors
Geohazard Monitoring Program
NC014-1: HWY 661:02 Fort Assiniboine (km 1.8)

Figure No.
1

Title
Site Plan

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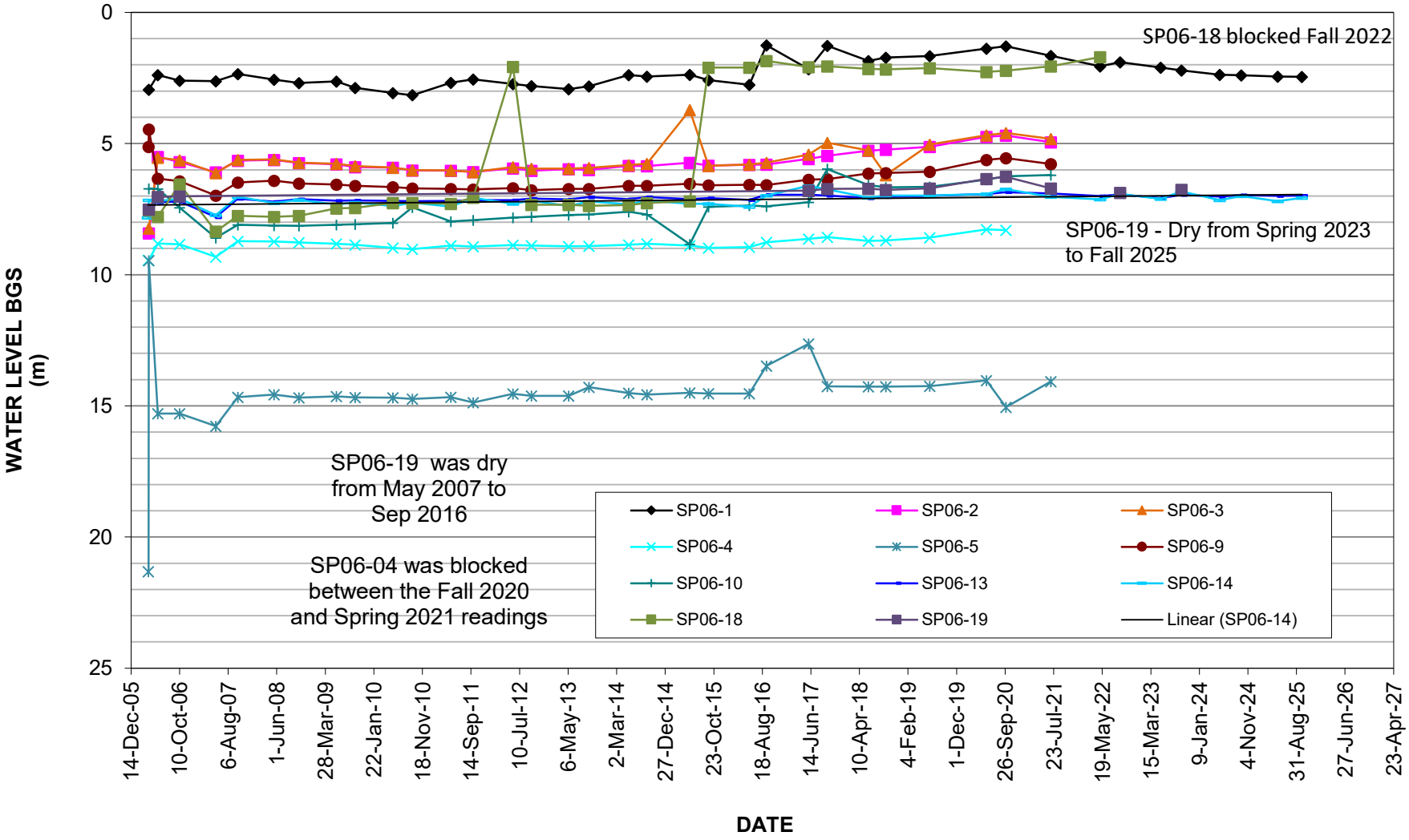
PIEZOMETER DATA



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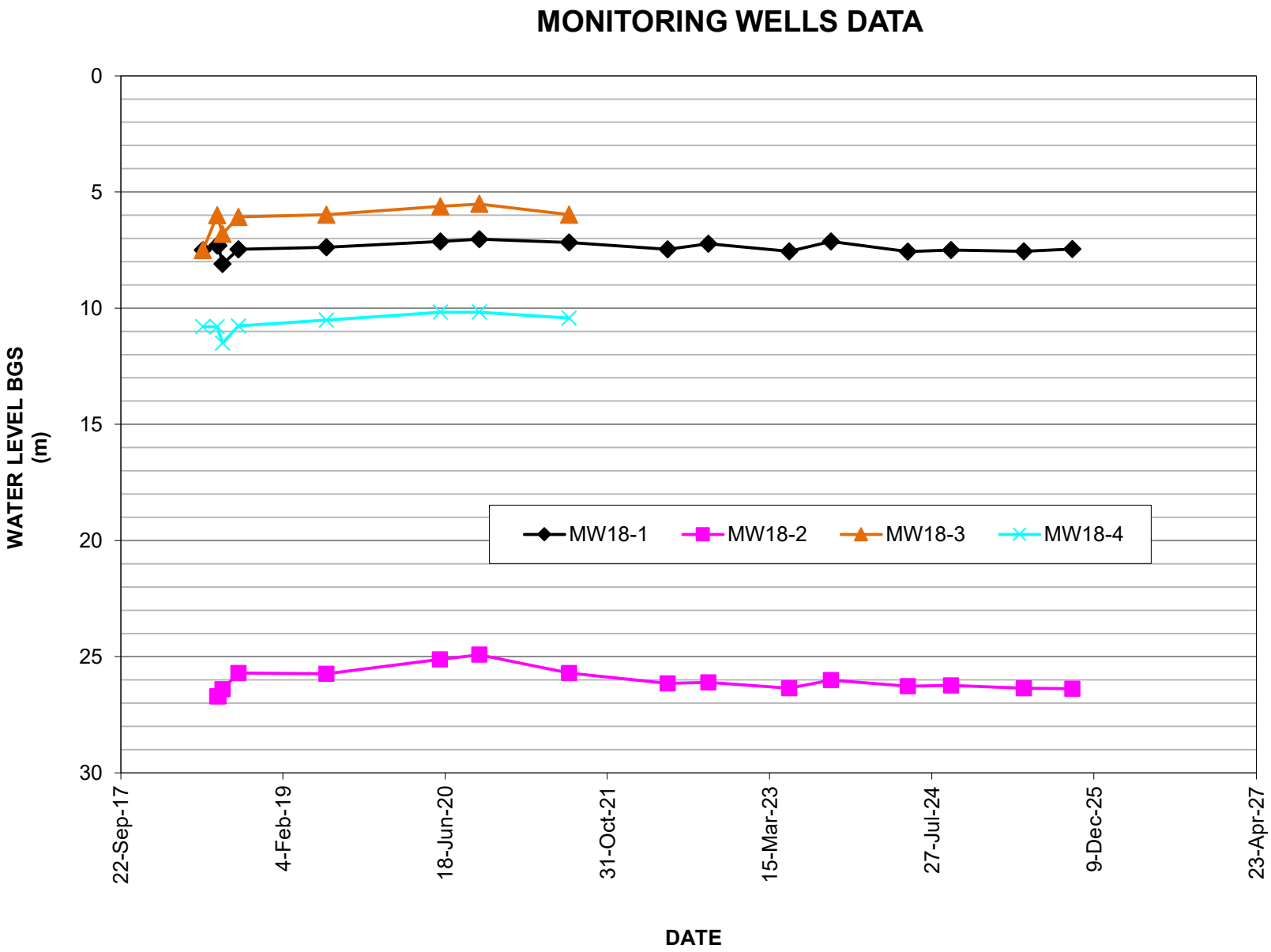
MONITORING WELLS DATA
WATER LEVEL BGS (m)
0
5
10
15
20
25
30
MW18-1
MW18-2
MW18-3
MW18-4
22-Sep-17
4-Feb-19
18-Jun-20
31-Oct-21
15-Mar-23
27-Jul-24
9-Dec-25
23-Apr-27
DATE