
To:	Amy Driessen	From:	Leslie Cho and Xiteng Liu
	Transportation and Economic Corridors		Stantec Consulting Ltd.
File:	123315222	Date:	October 18, 2024

Reference: North Central Region, Edson/Stony Plain Area, Site NC014 - Highway 661:02 North of Fort Assiniboine, Fall 2024 Instrumentation Monitoring Report

1.0 OBSERVATIONS

1.1 FIELD PROGRAM AND INSTRUMENTATION STATUS

The Fall 2024 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 Benjamin Lou, EIT and Olawale Odusi, Geotechnical Technician on September 24, 2024.

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

GPS coordinates of all instruments were surveyed using a Garmin eTrex 22x 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 level in SP06-1 dropped by < 0.1 m while SP06-13 and SP06-14 increased by <0.1 m and 0.2 m, respectively. SP06-19 was dry during the Fall 2024 reading cycle.

2.3.3 Monitoring Wells

Water level in MW18-1 and MW18-2 both increased by 0.1 m compared to the Spring 2024 reading cycle.

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3.0 RECOMMENDATIONS

FUTURE WORK

It is recommended that the next reading cycle take place in Spring 2025.

3.1 INSTRUMENTATION REPAIRS

No instrument repair is needed at this time.

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Table NC014-1: Fall 2024 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 14, 2024 (m bgs)	Change in Water Level (m)
		Northing	Easting						
SP06-1	Apr 2, 2006	6023684	644586	9.1	Operational	Sept. 12, 2016 (1.3)	2.4	2.4	-<0.1
SP06-13	Apr 2, 2006	6023479	644683	10.0	Operational	Oct. 1, 2020 (6.9)	7.0	7.0	<0.1
SP06-14	Mar 28, 2006	6023456	644738	9.2	Operational	May 30, 2017 (6.6)	7.0	7.2	0.2
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	6023215	644995	8.0	Operational	Oct. 1, 2020 (6.3)	Dry	Dry	N/A

(1) Updated September 24, 2024, with approximate accuracy of ± 3 m
 (2) 'bgs' refers to below ground surface

Table NC014-2: Fall 2024 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 14, 2024 (m bgs)	Change in Water Level (m)
		Northing	Easting						
MW18-1	June 2, 2018	6023435	644770	9.1	Operational	Oct. 1, 2020 (7.0)	7.5	7.6	0.1
MW18-2	July 16, 2018	6023425	644782	35.6	Operational	Oct. 1, 2020 (24.9)	26.2	26.3	0.1

(1) Updated September 24, 2024, with approximate accuracy of ± 3 m

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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.

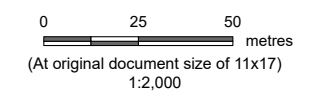
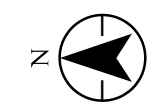
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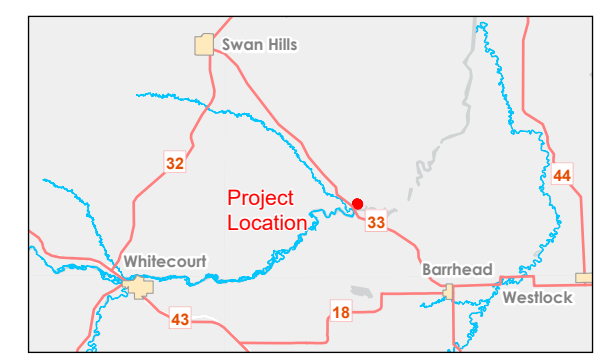
Attachment: Figure 1 – Site Plan Showing Instrument Locations
Standpipe Piezometer Level Depth vs Time Plot
Monitoring Well Level Depth vs Time Plot



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



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).



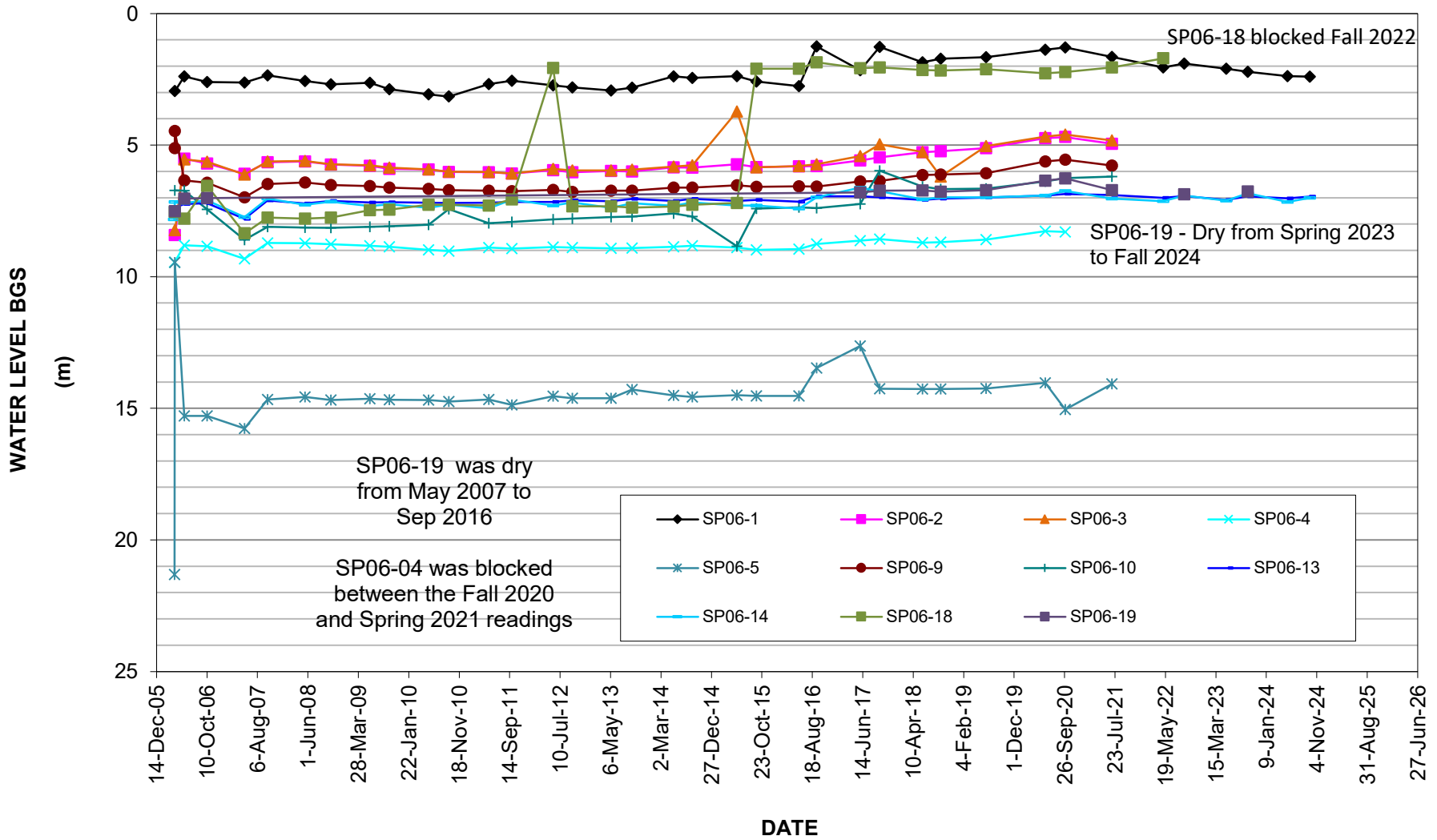
Project Location
 SW-28- and SE-29-056-08W5, Alberta
 Prepared by SP on 2024-09-30
 TR by LC on 2024-09-30
 IR by XL on 2024-09-30

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

Figure No.
 1
Title
 Site Plan

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PIEZOMETER DATA



MONITORING WELLS DATA

