

**SWAN LAKE FIRST NATION – MATRIX SOLUTIONS
INC. PARTNERSHIP**

INDIGENOUS CONSTRUCTION MONITORING

WEEKLY REPORT

SPREAD 8

NOVEMBER 5TH TO NOVEMBER 10TH

1. PURPOSE OF THIS REPORT

The report is a weekly summary of the daily reports submitted by the Indigenous Construction Monitors that are working on spread eight. The social and cultural findings have been tabulated with locations and mitigation measures below. A summary of the construction activities has been summarized for the weeks of November 5th to November 10th, 2018.

Social and Cultural Features

Field Observation	# of occurrences	Description and Mitigation Measures	Mitigation Status	Further Action Required (Yes/No)
Traditional Use Area (hunting, fishing, gathering, trapping)	N/A			
Rock Formations (rocks of significance, tipi rings, etc.)	N/A			
Artifacts	N/A			
Bones	N/A			
Potential Gravesites	N/A			

Environmental Features

Field Observation	# of occurrences	Description and Mitigation Measures	Mitigation Status	Further Action Required (Yes/No)
Medicinal or Cultural Plants	N/A			
Aquatic Life	N/A			
Animal Observations or Burrows	N/A			
Bird Nests	N/A			
Trees (Red Willow)	N/A			
Wetlands	N/A			
Watercourse Crossing	N/A			

Additional Observations and Summary of Activities or Concerns

Weekly activity included attending daily tailgate meetings and continue to check access points on the ROW and monitor Spread 8.

November 5, 2018 - Safety included: Stay out of swing zones while on site. Watch for wildlife. Watch for wide loads on hwy#2. Be careful walking up and down steep slopes. Slips, trips, falls, Driving conditions - No cruise control on wet roads, Congested sites, Wildlife - deer coming out of ditches, Distracted driving, Fatigue. Watch out for Busses on rural roads and school zones. Watch out for vehicles in uncontrolled intersections. Stay out of machine swing zones and blind spots. Watch for dangerous drivers. Watch out for domestic animals. Be careful on mats vehicle too low to the ground. Drive to weather conditions.

Weather forecast/Environment: Mix of Sun and Cloud, High of 5

Fine clean and bleach when entering a new RM or land owner requested wash.

Watch for ruts on ROW. Colder in the morning dress warm and delayer as the day warms up.

General: Attended morning meeting.

SF 6 (KP 918+256) crew is onsite putting back top soil. Excavator is placing soil on the ROW for the dozer to push and spread throughout the ROW. Approach on the West side of the road is removed, culvert is to be removed later. SF 8 Oak Creek crossing. Crew is onsite putting back top soil, pig pens have been removed, bridge has been removed. Silt fencing is still installed near the near. Excavator and a dozer are working together to put back all top soil. [SF 15 \(KP929+983\)](#) Tie-in crew is onsite on the East side of the road. Welders are the trench tying into the mainline, Side booms are used to hold pipe into place. Stairs are built into the trench walls, ladders have been put in place on the North side of the trench and are secure. Open trench has signage and is fenced and roped off. SF 22Crew is onsite removing the approach on the South side of the road. Excavator is removing soil and geo cloth. SF 48 Tie-in and Bore crew is onsite. Bore crew is digging Bore pit in preparation of drilling under the road. Tie in crew is welding sections of the pipe together in preparation for lowering in. SF 41A Excavator is being unloaded at the access. Semi and pilot truck have proper signage and flagging on vehicles. Flaggers are being used to stop traffic. Crew arrived onsite to dig Bore ditch. Soil is being removed and placed on the ROW. SF9 Hydro-vac and HD drill on site. SF10 KP 923+315 Tie-in crew and three side booms moving the pipe together to weld. SF12 KP 926+634 Grader levelling the clay and two tractors are discing on the West side. An excavator removing the clay down to the mulch while spotter watching on the East side. SF14 KP 928+318 Two side booms and an excavator holding pipe for the tie in crew. [SF15 kp 929+926](#) Welding crew doing weld repair on the pipe. Ladder tied on to the T-posts. Crew wearing PPE.

SF20 Crew moving pumps, hoses and other equipment to one area to be picked up. Excavator removing sheet piles and placing them to be picked up later. Excavator also removed the trench box and placed it to the side. Tandem trucks are hauling sand to site. Excavator starting to backfill ditch. Stick excavator was moving wet clay to the side. Crew bus was parked on the side. Crew are wearing PPE.

Work Forecast: Continue to monitor construction activities, and monitor wetland and traditional land use areas.

November 6, 2018 - Safety included: Stay out of swing zones while on site. Watch for wildlife. Watch for wide loads on Hwy#2. Be careful walking up and down steep slopes. Slips, trips, falls, Driving conditions - No cruise control on wet roads, Congested sites, Wildlife - deer coming out of ditches, Distracted driving, Fatigue. Watch out for Busses on rural roads and school zones. Watch out for vehicles in uncontrolled intersections. Stay out of machine swing zones and blind spots. Watch for dangerous drivers. Watch out for domestic animals. Be careful on mats vehicle too low to the ground. Drive to weather conditions - Blowing snow, roads are icy.

Weather forecast/Environment: High of 0C. Raining, turning to snow. Very icy conditions.

Fine clean and bleach when entering a new RM or land owner requested wash.

Watch for ruts on ROW. Colder in the morning dress warm and delayer as the day warms up.

General: Attended morning meeting

SF 6 (KP918+376) Clean-up crew is onsite putting back top soil. Excavators are working from East to West pulling top soil piles from the edge of the ROW so the dozers will have enough room to get behind and push/ spread the soil piles throughout the ROW. No rutting has occurred, soil is not sticking to the machines enough to be a concern. Picker truck arrived at access to drop off two Rig mats on the West side of the road. SF 15 West side of the road. Excavators are piling soil making mounds on top of where the pipe lays. East side of the road welders are onsite tying into the mainline. Crew set up a canopy to provide some coverage from the weather. Stairs are built into the trench wall next to where they are working, ladders are on the North side of the trench opposite of the stairs and it is secure. Flaggers arrived onsite and uncovered road signage and flagged for the excavators crossing to the East side of the road. Fencing was removed so the excavators can work. Excavators worked together to backfill tie in ditch. SF 22B East side of the road. Wetlands crew is onsite installing sheet metal piles. A crane with vibrating hammer attachment was used to put the sheet piles into the ground, an excavator was used to pick up sheet piles and hold in place until the crane takes over. Silt fencing has been installed along the North side of the ROW. Sit is matted. Road leading to site is muddy and has ruts, drive with caution.

Due to weather and road conditions, Junior monitors and myself left early. Winter tires have not been provided for the Ford Escapes that were provided to us. I have inquired about winter tires before snow fall and again after the snow fall.

SF12 Grader levelling transition. Three tractors working. One tractor with a ripper and the other two are pulling discs. Snowing out. SF20 Excavators are backfilling the ditch. A caterpillar was moving clay closer to the ditch for them. The crew are loading equipment such as pumps, ladders, hoses and hauling them to another location. Skids are piled on a skid sloop to be picked up. SF22B A crane with vibrating hammer and an excavator were sheet piling. The site is matted. Due to weather and road conditions we left early.

Work Forecast: Continue to monitor construction activities, and monitor wetland and traditional land use areas.

November 7, 2018 - Safety included: Stay out of swing zones while on site. Watch for wildlife. Watch for wide loads on Hwy#2. Be careful walking up and down steep slopes. Snow and ice conditions. Slips, trips, falls, Driving conditions - No cruise control on snow covered or icy roads, Congested sites - Stay off site if you do not need to be there, Wildlife - deer coming out of ditches, Distracted driving, Fatigue. Watch out for Busses on rural roads and school zones. Watch out for vehicles in uncontrolled intersections. Stay out of machine swing zones and blind spots. Watch for dangerous drivers. Watch out for domestic animals. Be careful on mats vehicle too low to the ground.

Weather forecast/Environment: High of -1C. Snow flurries all day. Wind 15 to 25 km/h Fine clean and bleach when entering a new RM or land owner requested wash.

Watch for ruts on ROW. Colder in the morning dress warm and delayer as the day warms up.

General: Attended morning meeting.

SF 6 Clean-up crew is onsite cleaning equipment on rig mats. Silt fencing has been installed on the sides of the mats. Air compressors, generators and lights all have spill trays underneath them. Crew members were cleaning the equipment with hand chisels, track shovels and using compressed air. Hand chisels and track shovels were used to clean the bigger chunks of soil and loosen soil for the compressed air to blow off.

SF 10 Clean-up crew is onsite levelling out seconds piles. Excavators followed and pulled the Top soil piles from the edges of the ROW to give room for the dozers to get behind and push/spread the soil throughout the ROW. SF 11 (Rd 88W) Small crew onsite removing half of the approach on the East side of the road. Excavator is removing soil and placing on the ROW. Geo cloth was piled near approach for removal later. SF Tractors are onsite tilling the ROW in preparation for placing seconds and Top soils back. SF 17 Bore crew is onsite. Drill rig is on the North side of the road drilling South East. Excavator is digging bell hole in front of the drill rig. Hydro Vac is on the South side of the road removing water from sump pit. SF 35 Site is spraying Tackifier on the Soil piles on the South side of the road. SF 41A (KP979+410) Tie in crew is onsite touching up trench walls before pipe is lowered in.

SF9 On the South side two excavators are backfilling the ditch. On the North side there are three side booms holding up the pipe for the tie-in crew.

SF10 A caterpillar is levelling transition. SF14 There are two excavators backfilling the ditch. SF17A KP 933+360 Excavator moving the reamer to be attached to the shaft. HD drill is on site. Crew bus was leaking coolant on the ROW close to the restrooms. Asked bus driver to get a spill tray put underneath. Reported to my supervisor who called environmental, a picture was taken of the spill. SF41A Excavator digging ditch and loading rock truck with spotter working with excavator. Fuel truck on site fuelling up the side booms that are holding the pipe for the tie-in crew. Crew bus on site. Crew wearing PPE. An excavator with spraying attachment spraying tackifier on the topsoil. Tandem truck hauling water for the spray crew.

Work Forecast: Continue to monitor construction activities, and monitor wetland and traditional land use areas.

November 8, 2018 - Safety included: Stay out of swing zones while on site. Watch for wildlife. Watch for wide loads on Hwy#2. Be careful walking up and down steep slopes. Snow and ice conditions. Slips, trips, falls, Driving conditions - No cruise control on snow covered or icy roads, Congested sites - Stay off site if you do not need to be there, Wildlife - deer coming out of ditches, Distracted driving, Fatigue. Watch out for Busses on rural roads and school zones. Watch out for vehicles in uncontrolled intersections. Stay out of machine swing zones and blind spots. Watch for dangerous drivers. Watch out for domestic animals. Be careful on mats vehicle too low to the ground.

Weather forecast/Environment: High of -8C with snow flurries all day. Winds 10 to 15 km/h.

Fine clean and bleach when entering a new RM or land owner requested wash.

Watch for frozen ruts on ROW. Dress for colder temperatures.

General: Attended morning meeting and progress meeting.

SF 8 (KP921+260) Dozer is onsite putting back the last of the top soil at the Oak creek crossing #1. Dozer is spreading top soil throughout the ROW.

SF 11 clean-up crew is onsite removing the rest of the approach and geo cloth. Low boy arrived onsite with a dozer. Semi and pilot truck had proper signage and flagging on their vehicles. Flaggers were onsite to stop traffic while the Dozer was unloaded from the low boy.

SF 17A (KP933+335) Bore crew is onsite on the South side of the road. Side booms are used to hold pipe in place while the pipe is being pulled through the bore hole. Hydro Vac is onsite removing water and soupy mud from the sump pit. Drill rig is on the North side of the road drilling and pulling the pipe through the bore hole. Trenches are fenced off and has proper signage.

SF 41A South side of Hwy #2 Bore crew is onsite drilling under Hwy, trenches are fenced off and have proper signage.

SF 11 Clean-up crew is onsite putting back top soil. Dozers are working together to spread the top soil throughout the ROW.

SF10 KP 923+315 Excavator digging up the approach, removing clay, culverts and geo-tec. Crew removing the geo-tec silt fences, T-posts and culverts to the side to be picked up. Crew wearing PPE. Caterpillar levelling clay and other caterpillars and excavators levelling topsoil. SF11 KP 924+979 Excavator digging up the approach and removing culverts, geo-tec and T-posts. Crew cleaning up silt fences. SF17A KP 933+360 Hydro-vac de-watering the ditch. SF41A KP 979+415 Sloop filled with ladders, geo-tec and other equipment. On the West side Ultra-sound crew cleaning weld for testing. Excavator cleaning ditch and moving clay to the side. ladders tied to T-posts.

Work Forecast: Continue to monitor construction activities, and monitor wetland and traditional land use areas.

November 9, 2018 - Safety included: Stay out of swing zones while on site. Watch for wildlife. Watch for wide loads on Hwy#2. Be careful walking up and down steep slopes.

Snow and ice conditions. Slips, trips, falls, Driving conditions - No cruise control on snow covered or icy roads, Congested sites - Stay off site if you do not need to be there, Wildlife - deer coming out of ditches, Distracted driving, Fatigue. Watch out for Busses on rural roads and school zones. Watch out for vehicles in uncontrolled intersections. Stay out of machine swing zones and blind spots. Watch for dangerous drivers. Watch out for domestic animals. Be careful on mats vehicle too low to the ground.

Weather forecast/Environment: High of -10C. Snow flurries for all day.

Winds West at 10 to 15 km/h

Fine clean and bleach when entering a new RM or land owner requested wash.

Watch for frozen ruts on ROW

Dress for colder temperatures

General: Attended morning meeting.

SF 6 Clean-up crew is onsite. Excavator is removing the approach, dozer is spreading the soil throughout the ROW. Crimping crew is waiting to spread straw and crimp it.

SF 9 Backfill crew is on the North side of Hwy #2. Excavator is placing soil into tie-in trench, oiler is with excavator spotting and looking for rocks.

SF 11 Clean-up crew is onsite putting back top soil. Excavator pulled top soil from the edges of the ROW to give room for the dozers to get behind and push top soil piles throughout the ROW.

SF 41A (KP979+410) Tie-in crew is onsite. Side booms with slings are being used to hold pipe into place while the welders tie into the mainline. A trench box was used where the crew members were working. Stairs have been built into the trench wall and a ladder that is secure is in place on the North side of the trench near workers.

SF 43A (KP983+023) Coating crew is onsite. Crew is using a canopy for cover over top of area they need to coat. Stairs have been built into the trench wall and a secured ladder is in place next to workers. Crew members are applying the coating material onto the welded joints of the pipe. Trench is fenced off and has proper signage.

Spoke with Council members from Swan Lake First Nation, they are happy with the progress of the pipeline. Any questions that were asked I answered to the best of my ability. Received pipe yard sign off sheet.

SF6 KP 918+256 Excavator removing the approach with spotter watching. Caterpillar levelling clay and breaking up the frozen lumps. SF11 KP 924+979 Excavator moving topsoil away from the edge of ROW so the caterpillars can level it out easier.

SF12 KP 926+634 Excavators and caterpillars levelling topsoil on both sides of the road. SF14 KP 928+318 Grader levelling topsoil along the edge of the ROW. Caterpillar is levelling clay. A tractor is discing also. Crew bus is on site. SF20 A Loader is loading mats and sheet piles onto a truck. An excavator with hydraulic vibrating packer attachment is working on the ditch. Other excavators are backfilling.

SF41A Five side-booms are holding the pipe for the tie-in crew welding inside the trench box. The clean-up crew are removing T-posts and fences and loading up skids and ladders. Crew have on PPE.

Work Forecast: Continue to monitor construction activities, and monitor wetland and traditional land use areas.

November 10, 2018 - Safety included: Stay out of swing zones while on site. Watch for wildlife. watch for wide loads on Hwy#2. Be careful walking up and down steep slopes. Snow and ice conditions. Slips, trips, falls, Driving conditions - No cruise control on snow covered or icy roads, Congested sites - Stay off site if you do not need to be there, Wildlife - deer coming out of ditches, Distracted driving, Fatigue. Watch out for Busses on rural roads and school zones. Watch out for vehicles in uncontrolled intersections. Stay out of machine swing zones and blind spots. Watch for dangerous drivers. Watch out for domestic animals. Be careful on mats vehicle too low to the ground.

Weather forecast/Environment: High of -7C. Snow flurries for all day.

Winds West at 15 to 30 km/h

Fine clean and bleach when entering a new RM or land owner requested wash.

Watch for frozen ruts on ROW. Dress for colder temperatures

General: Attended morning meeting

SF 9 South side of Hwy #2 crew is removing the approach and geo cloth. Soil is being placed on the ROW. Geo cloth is being piled for later disposal. SF 11 Rd 87W Clean-up crew is onsite putting back top soil. Dozers are on the east side of road spreading and levelling top soil. West side of the road an excavator is finishing deficiencies, Crew members flagged for the excavator when it crossed over to the East side of Rd 87W.

SF 12 Clean-up crew is onsite putting top soil back onto the ROW. Excavators on both side are pulling top soil piles from the edges of the ROW so they dozers can get behind and spread the top soil. Lowboy arrived onsite with an excavator. Semi and pilot truck both had proper wide load signage and flagging. Flaggers were used to stop traffic while they unloaded the machine. SF 17 Backfill tie in crew is onsite. Excavator is placing soil back into trench covering the pipe. Oiler is watching for rocks that could potentially damage the pipe, when found they are removed and put to the side.

SF 22B East side of the road. Wetlands crew is onsite installing sheet metal piles. A excavator is being used to hold sheet piles in place while the crane with a vibrating hammer attachment is used to pound the sheet piles into place. Generators and light plants have spill trays under them.

SF 41 Bore crew is onsite. Hydro Vac is removing water from the bell hole.

SF 43 Backfill tie in crew is onsite. Excavators and a dozer are working together to backfill tie in trench.

SF 50 Caterpillar pushing clay away from the ditch. Ditch open with no pipe yet.

SF43 Excavators backfilling ditch and caterpillars levelling clay.

SF17A Excavators backfilling the ditch and cleaning the clay down to the mulch.

SF17 Excavators backfilling the ditch. Five side-booms parked.

SF9 Excavator on the south side of the road is removing the approach.

Caterpillar on the North side of the road is removing the approach.

Work Forecast: Continue to monitor construction activities, and monitor wetland and traditional land use areas.

Photos of Sites Visited & Topics Discussed This Week

November 5, 2018



Description & Location:

SF12 KP 926+634 Spotter watches as the operator carefully removes the clay piled on the mulch.



Description & Location:

SF15 KP 929+962 Welding crew repairing welding and the welding inspector is with them. Crew wearing PPE and the ladder is tied to the T-posts.

Photo



Description & Location:

Photo facing West
SF 8 Oak creek crossing
View of Oak creek crossing, soil is being put back.

Photo



Description & Location:

Photo facing North
SF 41A
Excavator is being unloaded, flaggers are in place stopping traffic.

Photo



Description & Location:

Photo facing West
SF 41A West side of the road.
Crew is excavating Bore ditch.

Photo

Right Click
Change Picture..

Description & Location:

November 6, 2018



Description & Location:

SF12 KP 926+634 Facing East
Grader leveling clay, three tractors working. One tractor is ripping and the other two are discing.



Description & Location:

SF22B Facing East
Crane with vibrating hammer and an excavator sheet piling.

Photo



Description & Location:

Photo facing South East
SF 6 (KP918-376)
Clean up crew is putting back top soil.

Photo



Description & Location:

Photo facing East
SF 15 East side of the road.
Excavators are backfilling tie in trench.

Photo



Description & Location:

Photo facing East
SF 22B East side of the road.
Wetlands crew is installing sheet metal piles.

Photo

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Change Picture..

Description & Location:

November 7, 2018



Description & Location:

SF17A KP 933+360 Facing South East
Crew bus leaking coolant



Description & Location:

SF41A KP 979+415 Facing East
Excavator with spraying attachment
spraying tackifier on the topsoil.

Photo



Description & Location:

Photo facing North East
SF 6 (KP918-376)
Clean up crew is clebbing equipment before
leaving site.

Photo



Description & Location:

Photo facing South East
SF 11 Rd 88W
Excavators is removing half of the approach.

Photo



Description & Location:

Photo facing South
SF 35 South side of the road.
Site is spraying Tackifier on the soil piles.

Photo

Right Click
Change Picture..

Description & Location:

November 8, 2018



Description & Location:

SF10 KP 923+315 Facing East
Excavator Taking out approach and Crew cleaning up.



Description & Location:

SF17A KP 933+360 Facing East
Hydro-vac is de-watering the ditch.

Photo



Description & Location:

Photo facing West
SF 8 (KP921+260)
View of top soil put back at Oak creek crossing #1

Photo



Description & Location:

Photo facing East
SF 11 Rd 88W
Excavators is removing the rest of the approach.

Photo



Description & Location:

Photo facing East
SF 17A (KP933+335)
Bore crew is onsite in the process of pulling the pipe through the bore hole.

Photo

Right Click
Change Picture..

Description & Location:

November 9, 2018



Description & Location:

SF11 KP 924+979 Facing West
Excavator moving topsoil away from the edge of the ROW.



Description & Location:

SF14 KP 928+318 Facing West
Grader leveling topsoil along the edge of the ROW.

Photo



Description & Location:

Photo facing South East
SF 6 East side of the road.
Excavator is removing approach, dozer is spread top soil throughout the ROW.

Photo



Description & Location:

Photo facing West
SF 41A (KP979+410)
Crew using a trench box. Welders are tying into the mainline.

Photo



Description & Location:

Photo facing South West
SF 43A (KP 983+023)
Crew is coating the weld joints on the pipe.

Photo

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Description & Location:

November 19, 2018



Description & Location:

SF50 Facing North
Caterpillar moving clay away from the ditch
and pilling it to the side.



Description & Location:

SF43 Facing South East KP 982+774
Excavators backfilling the ditch.

Photo



Description & Location:

Photo facing South East.
SF 9 South of Hwy #2.
Excavator is removing the approach and geo
cloth.

Photo



Description & Location:

Photo facing West
SF 17 West side of the road.
Excavator is backfilling tie in trench.

Photo



Description & Location:

Photo facing South East
SF 43 South side of the road.
Excavators and dozer are backfilling trench.

Photo

Right Click
Change Picture..

Description & Location:

APPROVALS

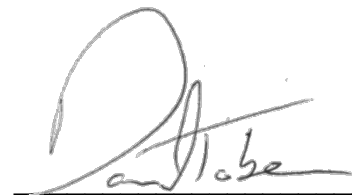


Justin McKinney

Senior Construction Monitor

December 18, 2018

Date



Daniel Tober

Senior Environmental Scientist

December 18, 2018

Date