

Worksite: 15-309

Date: 01-12-18

SBT05 01-12-18 SM

GRAB @ totally flooded point across ditch, see pics

SBT07 01-12-18 SM @ 1105 DST, TP, TDS, TN

Flooding. Filled dead battery upon removal. outlet completely submerged. Water from point on 12. outlet not visible

SBT19 01-12-18 SM @ 1200 DST, TP, TDS, TN
outlet fully submerged, took video

SBT18 01-12-18 SM @ 1400 DST TP TDS TN
outlet fully submerged, brought new battery connected all leads to battery terminal on solar controller. yellow battery light. panel charging. Meter light showed. Flow meter reading 15.6 working.
Barely any sand in field at 18+19

Scale: 1 square =

Return the Rain

SBT02 01-12-18 SM

320 L/min / 322 GRAB @ 1545 DST

Batteries 11.6V TP TDS TN
Where's outlet?

SBT01 01-12-18 1130 L/min

outlet strongly flowing @ 1630 DST

SBT04 1700 DST 01-12-18

put bed on battery terminal of solar cont.
265 L/min. outlet flowing, partially submerged

fields of 1 2 + 4 are mostly bare

SBT16 1742 DST GRAB SAMPLE 01218

3⁸/16 1/4 13/16 TP TN

outlet submerged box full water to ditch level, 3" SW U.S. and v.s. sensor. see exact measurements above

3L @ Jewell Bldg Bridge 011218
@ 1815 DST

Scale: 1 square =

JBTD5 01-18-18 15-301

78.7 L/min on flowmeter @ 1035 DST

OUTLET COVERED, PANEL CLEAR

MOOSE WEST

Thin cover of snow in field.

JBTD6 0
9 5/16" - 23.654 m

INCHES 1 ft 10 1/16"

angle: 11 5/16" @ 1015 DST mph: 1-16

160" U.S. depth: 9 4 1/16" depth 1 1/2"

panel is clean

ARRIVED @ 1105 DST LEFT @ 1126 DST

Thin cover of snow in field, ice underneath

where field has been wet during 01-12-18 thaw

FID 1, 2, 3, 4 = ~5" of powdery snow on field

JBTD1 @ 12 DST outlet is flowing

flowmeter: 48.6 L/min

rotated small broken panel, 2" panel clean

> a portion of solar cable is frozen in the meter. there seems to be enough slack to be enough slack

JBTD4 @ 1215 DST outlet: flowing

flowmeter: 8 L/min, panel is clear (just a

small bit of snow on it)

BATTS: 11.14V, 11.45V, replaced lower one

1 with charged bat (12.3V)

1.1 regenerated modem

1.15 1.16 1.19 1.5 tilted big panel precariously...

Scale: 1 square = Cable should be lengthened

Worksite:

Date:

JBTD2: Where is outlet? flowmeter = 2.2 L/min

@ 1252 DST panel was clear

JBTD7 @ 1332 DST FLOWMETER: 31.9 L/min

panel is clear. swapped in new battery

where is outlet?

JBTD16 @ 1355 DST where is outlet?

panel is clear. Flowmeter = 48.5 L/min

JBTD19 @ 1410 DST FLOWMETER: 26.5 L/min

where is the outlet? 6" snow @ 18+19

JBTD18 @ 1438 DST FLOWMETER: 21.4 L/min

outlet: very barely flowing, partially submerged

panel had just a bit of ice + snow. cleared.

JBTD11 @ 1514 DST flowmeter = 182.6 L/min

outlet: flowing 6" snow on field

JBTD6 opened @ 1550 DST,

hopped in @ 1552

U.S. Depth = @ 1554 9 3/16" 9 4 1/16"

INCH @ 1556 = down down 2 3/16" 2 1/16"

1608 DST: U.S.: 9 4 1/16"

CLOSED @ 1616 DST

depth: 1 13/16"

1.18 1.18 1.17 1.2 1.22 1.17

Scale: 1 square =

Notes on the Rain

15-309 SAMPLING 02-21-18

JB707 @ 1520 DST OUTLET = SUBMERGED
 FLOW = 196.7 L/min CHANGED DESSICANT
 JB716 @ 1543 DST OUTLET = FLOWING
 FLOW = 272.7 L/min CHANGED DESSICANT
 JB716 - DUPE SAME TIME

Worksheet 15-309 SAMPLING Date: 02-21-18

SB705 @ ~ 935 DST ~ 700 L/min
 DESSICANT OUTLET SUBMERGED
 JB706 @ 1000 DST DEPTH 4 5/16" @ 1005 DST
 FLOW = 307.82 DEPTH 5.5" US DEPTH 4 5/16" @ 1013 DST
 CLOSED LD @ 1018 DST SAMPLED @ 1020 DST
 DESSICANT, FLOWING
 JB701 SAMPLED @ 1100 DST OUTLET FLOWING
 FLOW = 972 L/min DESSICANT OK
 JB704 SAMPLED @ 1126 DST OUTLET FLOWING
 FLOW = 210 L/min DESSICANT CHANGED
 JB702 SAMPLED @ 1132 DST OUTLET SUBMERGED
 FLOW = 216.4 L/min DESSICANT: CHANGED
 JB719 @ 1228 DST OUTLET: SUBMERGED
 FLOW = 297.4 L/min DESSICANT CHANGED
 very turbid tried to let run to clear but remained turbid
 JB718 @ 1245 DST OUTLET: PARTLY SUBMERGED BUT
 FLOW 132.8 L/min CHANGED DESSICANT
 JB714 @ 1347 DST OUTLET: SUBMERGED
 FLOW = 676 L/min DESSICANT CHANGED
 JB713 @ 1400 DST OUTLET SUBMERGED
 FLOW = 266 L/min DESSICANT CHANGED
 JB711 @ 1449 DST OUTLET FLOWING. PARTLY SUBMERGED
 FLOW = 987 L/min DESSICANT CHANGED



Scale: 1 square =

Plot on the form

NO TN THIS WEEK

2-26-18 15-309 Weekly Sampling

JBT19, RESET MODEM, OUTLET FLOWING FLOW: 30.8 L/min SAMPLED @ 930 DST INFLOW IS STUCK, SOME SEDIMENT BEING IN ABOVE INFLOW PIPE? TURBID BUT CLEARER THAN 2-21-18 VIGIT. NO DIFFERENT THAN USING SAMPLING ROD. DESSICANT GOOD, ODD OF MAJURE AS WALKED ACROSS THE FIELD JBT18, OUTLET FLOWING INST. FLOW: 26.3 L/min SAMPLED @ 953 DST DESSICANT GOOD JBT16, OUTLET FLOWING SAMPLED @ 1029 DST, PES. JBT07, OUTLET FLOWING INST. FLOW: 55.7 L/min SAMPLED @ 1050 DST DESSICANT IS GOOD JBT11, OUTLET FLOWING INST. FLOW: 190.4 L/min SAMPLED @ 1120 DST DESSICANT IS GOOD JBT14 - OUTLET SUBMERGED INST. FLOW: 135.5 L/min SAMPLED @ 1208 DST DESSICANT IS GOOD JBT13 OUTLET SUBMERGED INST. FLOW: 9.5 L/min SAMPLED @ 1218 DST DESSICANT IS GOOD

Scale: 1 square =

Worksite: 15-309

Date: 2/26/18

JBT02, outlet submerged INST. FLOW: 16.5 L/min SAMPLED @ 1308 DST DESSICANT IS GOOD HARD TO FILTER JBT01 outlet: flowing INST. FLOW: 213.4 L/min SAMPLED @ 1323 DST DESSICANT NEEDS A HARD TO FILTER JBT04 outlet: flowing INST. FLOW: 31.1 L/min SAMPLED @ 1335 DST DESSICANT NEEDS NEW CAP HARD TO FILTER JBT06 SAMPLED @ 1413 DST DESSICANT CHANGED OUTLET IS FLOWING, OPENED LID @ 1419 DST U-S DEPTH @ 1422 DST: 7' 7/16" FLOW @ 1423- DST 1.93 DEPTH: 0.25 FT. 1428 1.94 2.00 2.06 1.78 7' 7/16" @ LID CLOSED @ 1434 DST JBT05 OUTLET: SUBMERGED INST. FLOW: 170 L/min INST FLOW COUNT FROM 112 - 220 L/min... SAMPLED @ 1505 DST CHANGED DESSICANT DIPS @ JBT05

Scale: 1 square =

Altitude: 1000 ft

03-09-18 SAMPLING VISIT: TP, DDP, TN

JBT13 @ 1037 EDT FLOW: 14.1 L/min
 COUNT FIND OUTLET, PANEL MOSTLY CLEAR
 ~ 6 IN SNOW ON FIELD

JBT14 @ 1054 EDT FLOW: 157.1 L/min ^{RESTORED} MODERN
 COUNT FIND OUTLET: PANEL SNOW COVERED - CLEARED

JBT11 @ 1143 EDT FLOW: 150.1 L/min OUTLET: FLOWING
 PANEL 1/2 SNOW COVERED - CLEARED, 1/2 STARTED MODERN

JBT16 @ 1216 EDT FLOW: 80.1 L/min OUTLET: FLOWING
 ABSTRACTED MODERN, PANEL PART COVERED - CLEARED

JBT11 @ 1243 EDT FLOW: ? OUTLET: FLOWING
 RESTARTED MODERN, PANEL PART COVERED - CLEARED

JBT18 1325 EDT FLOW: 21.2 L/min OUTLET: FLOWING
 PANEL PARTLY COVERED, CLEARED

JBT19 @ 1344 EDT FLOW: 34 L/min OUTLET: FLOWING
 PANEL CLEAR, SAMPLE IS TURBID

JBT02 @ 1424 EDT FLOW: 5 L/min ^{CAN'T} FIND
 PANEL IS CLEAR

JBT01 @ 1435 EDT FLOW: 84.3 L/min OUTLET: FLOWING
 PANEL IS CLEAR

Scale: 1 square =

Worksheet:

Date:

JBT04 @ 1447 EDT FLOW: 79 L/min OUTLET: FLOWING
 PANEL IS CLEAR

JBT06 @ 1518 EDT
 PANEL IS CLEAR

JBT05 @ 1537 EDT OUTLET: CAN'T FIND FLOW: 173 L/min
 PLUS DUP 3, PANEL IS CLEAR

ALL BLANKS W/ DI; TP, TN, 13 TDP AS FLOWING'S.
 BLANKS A: STEELWEX VAL B: FLAT FILTER C: CARTRIDGE
 W/ DISTILLED WATER

Scale: 1 square =

Return to the Point

on surface of each hole much clearer.

JBT18 @ 1138 EDT OUTLET: FLOW METER: 290.6 $\frac{L}{MIN}$
just a little cloudy but with scattered coarse sand \rightarrow gravel grains

JBT16 @ 1218 EDT OUTLET: FLOWING METER: 186.9 $\frac{L}{MIN}$
water pretty clear compared to other sites. field seems not as wet

JBT07 @ 1236 EDT OUTLET: FLOWING METER: 284.2 $\frac{L}{MIN}$
CLOUDY WATER

JBT11 @ 1302 EDT OUTLET: FLOWING METER: 823.7 $\frac{L}{MIN}$
water pretty clear. A little milky

JBT13 @ 1358 EDT OUTLET: SUBMERGED
METER: 43.7 $\frac{L}{MIN}$

JBT14 @ 1351 EDT OUTLET: SUBMERGED
METER: 968.5 $\frac{L}{MIN}$ DUPE @ 14
METER

Scale: 1 square =

Worksite: 15-309

Date: 3/30/18

SAMPLING, ALL ANALYTES

JBT05 @ 827 EDT FLOW: 874.7 $\frac{L}{MIN}$

OUTLET: SUBMERGED, DITCH FLOODED ONLY
TO SHED

JBT06 @ 858 EDT OUTLET: FLOWING, $\frac{1}{2}$ SUBMERGED
BACKWATER? NO

OPENED LID @ 904 EDT U.S. DEPTH: 2 $\frac{11}{16}$ " @ 60X 908
VEL: 155, 490, 177, 419, 477, 475 @ EDT 917
DEPTH: 0.56 FT

U.S. DEPTH: 2 $\frac{10}{16}$ " 919 @ EPT CLOSED LID @ EDT

JBT02 @ 1014 EDT OUTLET: SUBMERGED / FLOWING
FLOW: 623 $\frac{L}{MIN}$ CATHODE R/ETER, CLOUDY WATER

JBT01 @ 1021 EDT OUTLET: FLOWING METER: 548.4 $\frac{L}{MIN}$
CLOUDY WATER

JBT04 @ 1030 EDT OUTLET: FLOW METER: 113.7 $\frac{L}{MIN}$
CLOUDY WATER

JBT19 @ 1124 EDT OUTLET: SUBMERGED / FLOWING
CAN SEE TURBID CLOUD FROM PIPE IN CLEARER
DITCH WATER. FLOW METER: 250.2 $\frac{L}{MIN}$
Scale: 1 square = 1 square used sampling 100% water

15-309 3-22-18

JBT14 SAMPLED @ 11⁰⁰ EDT FLOW = 49.8 L/MIN
OUTLET = SUBMERGED. HEANT APPR TO BE FLOWING. MAY BE
BARELY FLOWING.

JBT13 SAMPLED @ 1151 EDT FLOW = 6.6 L/MIN
OUTLET = ?

JBT07 SAMPLED @ 12⁰⁰ EDT FLOW = 18 L/MIN
OUTLET = TRICKLING BEHIND ICE

JBT16 SAMPLED @ 12⁵⁴ EDT FLOW = 37.3 L/MIN
OUTLET = FLOWING. DUP @ JBT16. USED
STERNEX FOR BOTH

JBT18 SAMPLED @ 1345 EDT FLOW = 12.1 L/MIN
OUTLET = COVERED IN SNOW.
MANHOLE = NO ICE, NO APPARENT FLOW, RAINBOW SHEEN

JBT19 SAMPLED @ EDT FLOW = 15.4 L/MIN
OUTLET = FLOWING
MANHOLE = SAMPLE INTAKE LINE BURIED
DIDNT SAMPLE DUE TO SEDIMENT.

Scale: 1 square =

Worksite: 15-309 SAMPLING ANNULUS ALL STATES
Date: 3-22-17

JBT05 SAMPLED @ 818 EDT FLOW = 74 L/MIN
OUTLET = ICED OVER

JBT06 OPENED LID @ 848 EDT

VS DEPTH TO 2120N: 9 1/8" @ 848 EDT

VEL: 0.544 mph depth: 1.5" @ 855 EDT

VS DEPTH @ 854 EDT = 9 1/8" CLOSED LID @ 900 EDT

SAMPLED @ 913 EDT FLOWING, NOT

→ AVG: 0.51, 0.42, 0.61, 0.55, 0.63 BACKWATERED

JBT02 SAMPLED @ 944 EDT FLOW = 15.4 L/MIN

OUTLET = ICED IN MANHOLE: THIN LAYER OF ICE

OTHERWISE SUBMERGED. DOESNT SEEM TO BE FLOWING.

USED STERNEX

JBT01 SAMPLED @ 10⁰⁰ EDT FLOW = 33.1 L/MIN

OUTLET = FLOWING MANHOLE = NO ICE, FLOWING

JBT04 SAMPLED @ 1011 EDT FLOW = 6.7 L/MIN

OUTLET = FLOWING MANHOLE = NO ICE, FLOWING

JBT11 SAMPLED @ 1055 EDT FLOW = 59.3 L/MIN

OUTLET = FLOWING