

Date: 5 Aug 2017

Time: Arrived: 15:00 Departed: 17:00 Collectors: Deb + Joe

Stream: Middle Teton glacial run Location Description: Garnet canyon

Coordinates: N _____ W - _____ Datum: _____

Elevation: _____ ft Site name on GPS: (deb's: 'MTG')

Water quality (Recorded with a YSI Pro Plus Multitprobe)

Parameter	Value	Units
Water temperature	<u>2.6</u>	°C
Barometric pressure	<u>11.4</u>	mmHg
DO	<u>11.4</u>	% saturation
DO	<u>10.8</u>	mg/L
Specific conductivity (SPC)	<u>3.8</u>	µS/cm
Conductivity	<u>2.2</u>	µS/cm
pH	<u>7.3</u>	
ORP	<u>n/a</u>	mV
Air temp		°C

Last calibrated: 8/4 DO: _____
 Photos taken: ☒ Site ☒ Temp Probe ☒
 Weather: partly cloudy
 Substrate type: loose cobbles / boulders
 Number of Surbers collected: 3
 Aspect: S / SE
 Slope: steep
 Biofilm rank: Little Medium Green

Bankuck Index

	Excellent	Good	Fair	Poor	Score
Angularity	Lots of edges (1)	Some edges, some round (2)	Rounded edges (3)	All round (4)	<u>2</u>
Brightness (Dull = biofilm)	Most surfaces dull (1)	Mostly dull, <35% bright (2)	50/50 dull & bright (3)	Mostly bright, >65% (4)	<u>4</u>
Scour	<5% evidence of scour (6)	5-30% of bed scoured (12)	30-50% of bed scoured (18)	>50% of bed scoured (24)	<u>24</u>
Consolidation of substrate	Lots of sizes, tightly packed (2)	Moderately packed, some size overlap (4)	Mostly loose, not much overlap (6)	Totally loose, easily moved (8)	<u>6</u>
Aquatic Veg	Abundant veg, moss in swift water (1)	Common veg or algae, lots in pools (2)	Spotty, in backwater or seasonal algae (3)	Perennial types, very scarce or absent (4)	<u>3</u>

Temp logger number: 20155967 Coordinates: UTM's: N _____ W - _____

Description of logger location: same as last time. Nice pool w/ anchor rock. ~ 30m N/S of waterfall.

Suspended Solids:

Filter number	Ø7	Ø8	Ø9
Volume filtered (mL)	<u>250</u>	<u>200</u>	<u>150</u>

avg mass (g): 0.035 0.034 0.034

Nutrient samples collected: ☒ 150mL total:

DOC collected: ☒ ↑

Chl a collected: ☒ N=3 tubes

Algae collected: ☒ N=3 reps (1N formalin)

Stream Profile: (left edge)

looking down stream

(right edge)

Distance (m)	0	1	2	3	4	5	6	7	8
Depth (cm)	1	2	5	5	6	4	5	4	4

Notes (continue on back):

scrubbed top surface of rock only



Date: 5 Aug 2017

Time: Arrived: 1:46 Departed: 4:00 pm Collectors: JT, SH, Rose Marks, Annika Dodson

Stream: Delta Lake Inlet Location Description: Subalpine, below Marine where transitions to level

Coordinates: N 43.73327 W - 110.77566 Datum: _____

Elevation: 2814 m Site name on GPS: Delta Lake Inlet

Water quality (Recorded with a YSI Pro Plus Multprobe)

Parameter	Value	Units
Water temperature	<u>2.7</u>	°C
Barometric pressure	<u>548.8</u>	mmHg
DO	<u>12.0</u>	% saturation
DO	<u>12.7</u>	mg/L
Specific conductivity (SPC)	<u>8.4</u>	µS/cm
Conductivity	<u>4.8</u>	µS/cm
pH	<u>7.44</u>	
ORP	<u>202.0</u>	mV
Air temp		°C

Last calibrated: 8/4 DO: 8/5

Photos taken: Site ☒ Temp Probe _____

Weather: Sunny, light breeze

Substrate type: Granite, Cobble

Number of Surbers collected: 3

Aspect: 115°

Slope: 6°

Biofilm rank: Little Medium Green

Rankuck Index

	Excellent	Good	Fair	Poor	Score
Angularity	Lots of edges (1)	Some edges, some round (2)	Rounded edges (3)	All round (4)	<u>2</u>
Brightness (Dull = biofilm)	Most surfaces dull (1)	Mostly dull, <35% bright (2)	50/50 dull & bright (3)	Mostly bright, >65% (4)	<u>2</u>
Scour	<5% evidence of scour (6)	5-30% of bed scoured (12)	30-50% of bed scoured (18)	>50% of bed scoured (24)	<u>12</u>
Consolidation of substrate	Lots of sizes, tightly packed (2)	Moderately packed, some size overlap (4)	Mostly loose, not much overlap (6)	Totally loose, easily moved (8)	<u>6</u>
Aquatic Veg	Abundant veg, moss in swift water (1)	Common veg or algae, lots in pools (2)	Spotty, in backwater or seasonal algae (3)	Perennial types, very scarce or absent (4)	<u>2</u>

Temp logger number: 20155969 Coordinates: UTM: N Same as above W - _____

Description of logger location: In pool where stream tran

Suspended Solids: Delta Lake Inlet

Filter number	1	2	3
Volume filtered (mL)	<u>600 x 9</u>	<u>7 x 60</u>	<u>8 x 60</u>

Nutrient samples collected: 2 bottles

DOC collected: →

Chl a collected: 3x

Algae collected: 3x

Date: 8/5/17

Stream Profile: (left edge)

looking down stream

(right edge)

Distance (m)	0	.5 m	1 m	1.5 m	2 m	2.5 m	3 m		
Depth (cm)	10	21	29	39	22	10			

Notes (continue on back):

Rock tracing



#2



#3



Date: 7 Aug 2017

Time: Arrived: 11:15 am Departed: 12:45 Collectors: AT, SH, DF, JG

Stream: Grizzly Inlet stream Location Description: Cut off trail before Parthoush Divide

Coordinates: N 43.79752 W - 110.80715 Datum: NAD83

Elevation: 2950 ft Site name on GPS: Grizzly Inlet Stream

Water quality (Recorded with a YSI Pro Plus Multitprobe)

Parameter	Value	Units
Water temperature	<u>2.8</u>	°C
Barometric pressure	<u>537</u>	mmHg
DO	<u>125</u>	% saturation
DO	<u>11.9</u>	mg/L
Specific conductivity (SPC)	<u>14.6</u>	µS/cm
Conductivity	<u>8.3</u>	µS/cm
pH	<u>7.5</u>	
ORP <u>NO₃</u>	<u>0.78</u>	mV
Air temp		°C

Last calibrated: 8/4 DO: 8/7
Photos taken: Site ☒ Temp Probe ☒
Weather: Calm, Cloudy
Substrate type: Cobble
Number of Surbers collected: 3
Aspect: 343°
Slope: 6°
Biofilm rank: Little Medium Green

Sankuck Index

	Excellent	Good	Fair	Poor	Score
Angularity	Lots of edges (1)	Some edges, some round (2)	Rounded edges (3)	All round (4)	<u>2</u>
Brightness (Dull = biofilm)	Most surfaces dull (1)	Mostly dull, <35% bright (2)	50/50 dull & bright (3)	Mostly bright, >65% (4)	<u>3</u>
Scour	<5% evidence of scour (6)	5-30% of bed scoured (12)	30-50% of bed scoured (18)	>50% of bed scoured (24)	<u>12</u>
Consolidation of substrate	Lots of sizes, tightly packed (2)	Moderately packed, some size overlap (4)	Mostly loose, not much overlap (6)	Totally loose, easily moved (8)	<u>4</u>
Aquatic Veg	Abundant veg, moss in swift water (1)	Common veg or algae, lots in pools (2)	Spotty, in backwater or seasonal algae (3)	Perennial types, very scarce or absent (4)	<u>3</u>

Temp logger number: 20155861 Coordinates: UTM: N 43.797708 W - 110.807245

Description of logger location: 50 yd before dropping over edge

Suspended Solids: Griz

Filter number	1	2	3
Volume filtered (mL)	<u>600</u>	<u>600</u>	<u>600</u>

Nutrient samples collected: 2 fallcon

DOC collected: →

Chl a collected: 3x

Algae collected: 3x

Stream Profile: (left edge)

looking down stream

(right edge)

Distance (cm)	0	50	100	150	200	235			
Depth (cm)	1	6	7	2	6	3			

Notes (continue on back):

Some of stream still snow covered.
Shallow + wide in many places.
Few inverts. Still large snow field.



Date: 6 Aug 2017

Time: Arrived: 7 pm Departed: 8:15 Collectors: AT, SH, SG, DF + Reese Markes

Stream: Paintbrush Rock Glacier Location Description: S. side of Paintbrush Canyon

Coordinates: N 43.78543 W - 110.79361 Datum: NAD83

Elevation: 2805 ft Site name on GPS: Paintbrush Rock Glacier

Water quality (Recorded with a YSI Pro Plus Multprobe)

Parameter	Value	Units
Water temperature	<u>2.1</u>	°C
Barometric pressure	<u>547.</u>	mmHg
DO	<u>100</u>	% saturation
DO	<u>9.8</u>	mg/L
Specific conductivity (SPC)	<u>20.3</u>	µS/cm
Conductivity	<u>11.4</u>	µS/cm
pH	<u>7.8</u>	
ORP <u>NO₃⁻</u>	<u>0.34</u>	mV
Air temp	<u>Cool</u>	°C

Last calibrated: 8/4 DO: 8/6

Photos taken: Site Temp Probe

Weather: Sunny, Clear + Calm

Substrate type: Cobble

Number of Surbers collected: 3

Aspect: 41°

Slope: 9°

Biofilm rank: Little Medium Green

ankuck Index

	Excellent	Good	Fair	Poor	Score
Angularity	Lots of edges (1)	Some edges, some round (2)	Rounded edges (3)	All round (4)	<u>1</u>
Brightness (Dull = biofilm)	Most surfaces dull (1)	Mostly dull, <35% bright (2)	50/50 dull & bright (3)	Mostly bright, >65% (4)	<u>4</u>
Scour	<5% evidence of scour (6)	5-30% of bed scoured (12)	30-50% of bed scoured (18)	>50% of bed scoured (24)	<u>12</u>
Consolidation of substrate	Lots of sizes, tightly packed (2)	Moderately packed, some size overlap (4)	Mostly loose, not much overlap (6)	Totally loose, easily moved (8)	<u>4</u>
Aquatic Veg	Abundant veg, moss in swift water (1)	Common veg or algae, lots in pools (2)	Spotty, in backwater or seasonal algae (3)	Perennial types, very scarce or absent (4)	<u>1</u>

Temp logger number: 20174694 Coordinates: UTM's: N 43.78543 W - 110.79335

Description of logger location:

Suspended Solids: Paintbrush RG

Filter number	1	2	3
Volume filtered (mL)	<u>600</u>	<u>600</u>	<u>600</u>

Nutrient samples collected: ✓ 2 full canister

DOC collected: ✓

Chl a collected: 3x

Algae collected: 3x

Stream Profile: (left edge)

looking down stream

(right edge)

Distance (cm)	0	50	100	150	200	250	266		
Depth (cm)	0	5	12	8	11	4	0		

↓
Right bank

Notes (continue on back):

Loggia from last year is buried in snow!
So we did not collect it. We deployed a
new loggia downstream at the snow's edge.
Snow likely just melted off from where we
sampled. Probably a combo of rock
glacier water + snow melt.

#1

#3

#2



Date: 8 Aug 2017


Time: Arrived: 15:00 Departed: 17:00 Collectors: Deb (solo!)

Stream: N. Fork Teton Creek Location Description: alpine reach - Jed. Smith wilderness

Coordinates: N (same) W - Datum:

Elevation: (same) ft Site name on GPS: "NTeton" (deb's)

Water quality (Recorded with a YSI Pro Plus Multitprobe)

Parameter	Value	Units
Water temperature	<u>4.9</u>	°C
Barometric pressure	<u>538</u>	mmHg
DO	<u>100</u>	% saturation
DO	<u>9.1</u>	mg/L
Specific conductivity (SPC)	<u>8.5</u>	µS/cm
Conductivity	<u>5.2</u>	µS/cm
pH	<u>6.6</u>	
 [NO ₃ -N]	<u>0.07</u>	mg L
Air temp	<u>12.0</u>	°C

Last calibrated: today DO: ✓

Photos taken: Site ✓ Temp Probe ✓

Weather: partly cloudy (rain earlier)

Substrate type: mostly cobbles + boulders

Number of Surbers collected: 3

Aspect: South

Slope: low ~2%

Biofilm rank: Little Medium Green

Bankuck Index

	Excellent	Good	Fair	Poor	Score
Angularity	Lots of edges (1)	Some edges, some round (2)	Rounded edges (3)	All round (4)	<u>1</u>
Brightness (Dull = biofilm)	Most surfaces dull (1)	Mostly dull, <35% bright (2)	50/50 dull & bright (3)	Mostly bright, >65% (4)	<u>1</u>
Scour	<5% evidence of scour (6)	5-30% of bed scoured (12)	30-50% of bed scoured (18)	>50% of bed scoured (24)	<u>6</u>
Consolidation of substrate	Lots of sizes, tightly packed (2)	Moderately packed, some size overlap (4)	Mostly loose, not much overlap (6)	Totally loose, easily moved (8)	<u>4</u>
Aquatic Veg	Abundant veg, moss in swift water (1)	Common veg or algae, lots in pools (2)	Spotty, in backwater or seasonal algae (3)	Perennial types, very scarce or absent (4)	<u>2</u>

14

Temp logger number: 20174693 Coordinates: UTM's: N (same as before) W -

Description of logger location: Right by big boulder on river right in middle of sample reach (same as 1st time)

Suspended Solids: (Lydia's filters)

Filter number	<u>10</u>	<u>11</u>	<u>12</u>
Volume filtered (mL)	<u>500</u>	<u>500</u>	<u>400</u>

orig mass: 0.034 0.036 0.036
(g)

Nutrient samples collected:

DOC collected: coll. 100 mL filtered H₂O

Chl a collected: N=3

Algae collected: N=3 x 4 cm² scraped

Date: 8 Aug

R bank



looking down stream

Stream Profile: (left edge)

(right edge)

Distance (cm)	0	50	100	130					
Depth (cm)	10	12	10	10					

Notes (continue on back):

chla 1 of 3:

chla 2 of 3:

chla
3 of 3
↘

Date: 8 Aug 2017

Time: Arrived: 1:45 Departed: 4:00 Collectors: LT, JG

Stream: Wind Cave Location Description: Up Darby Canyon

Coordinates: N _____ W - _____ Datum: _____

Elevation: _____ ft Site name on GPS: _____

Water quality (Recorded with a YSI Pro Plus Multitprobe)

Parameter	Value	Units
Water temperature	<u>2.4</u> <u>2.9</u>	°C
Barometric pressure	<u>559.4</u> <u>557.8</u>	mmHg
DO	<u>112</u> <u>120</u>	% saturation
DO	<u>11.3</u> <u>11.9</u>	mg/L
Specific conductivity (SPC)	<u>141.6</u> <u>141.8</u>	µS/cm
Conductivity	<u>80.4</u> <u>81.9</u>	µS/cm
pH	<u>8.70</u> <u>8.35</u>	
ORP	<u>215.4</u> <u>206.8</u>	mV
Air temp	<u>inside</u> <u>outside</u>	°C

Last calibrated: 8/4 DO: 8/8

Photos taken: Site ☒ Temp Probe _____

Weather: Cloudy, Rained all morning

Substrate type: Cobble

Number of Surbers collected: 3

Aspect: 15°

Slope: 32°

Biofilm rank: Little Medium Green

Bankuck Index Where water emerges from rocks

	Excellent	Good	Fair	Poor	Score
Angularity	Lots of edges (1)	Some edges, some round (2)	Rounded edges (3)	All round (4)	<u>1</u>
Brightness (Dull = biofilm)	Most surfaces dull (4)	Mostly dull, <35% bright (2)	50/50 dull & bright (3)	Mostly bright, >65% (4)	<u>1</u>
Scour	<5% evidence of scour (6)	5-30% of bed scoured (12)	30-50% of bed scoured (18)	>50% of bed scoured (24)	<u>12</u>
Consolidation of substrate	Lots of sizes, tightly packed (2)	Moderately packed, some size overlap (4)	Mostly loose, not much overlap (6)	Totally loose, easily moved (8)	<u>4</u>
Aquatic Veg	Abundant veg, moss in swift water (1)	Common veg or algae, lots in pools (2)	Spotty, in backwater or seasonal algae (3)	Perennial types, very scarce or absent (4)	<u>1</u>

Temp logger number: 10767834 Coordinates: UTM: N _____ W - _____

Description of logger location: In pool below moss covered bedrock below cave

Suspended Solids: Wind Cave

Filter number	1	2	3
Volume filtered (mL)	<u>600</u>	<u>600</u>	<u>600</u>

Nutrient samples collected: 2-20 mL

DOC collected: _____

Chl a collected: 3x

Algae collected: 3x

Stream Profile: (left edge)

looking down stream

(right edge)

Distance (cm)	0	25	50	75	100	125	155		
Depth (cm)	3	3	6	7	2	1.5	2		

Notes (continue on back):

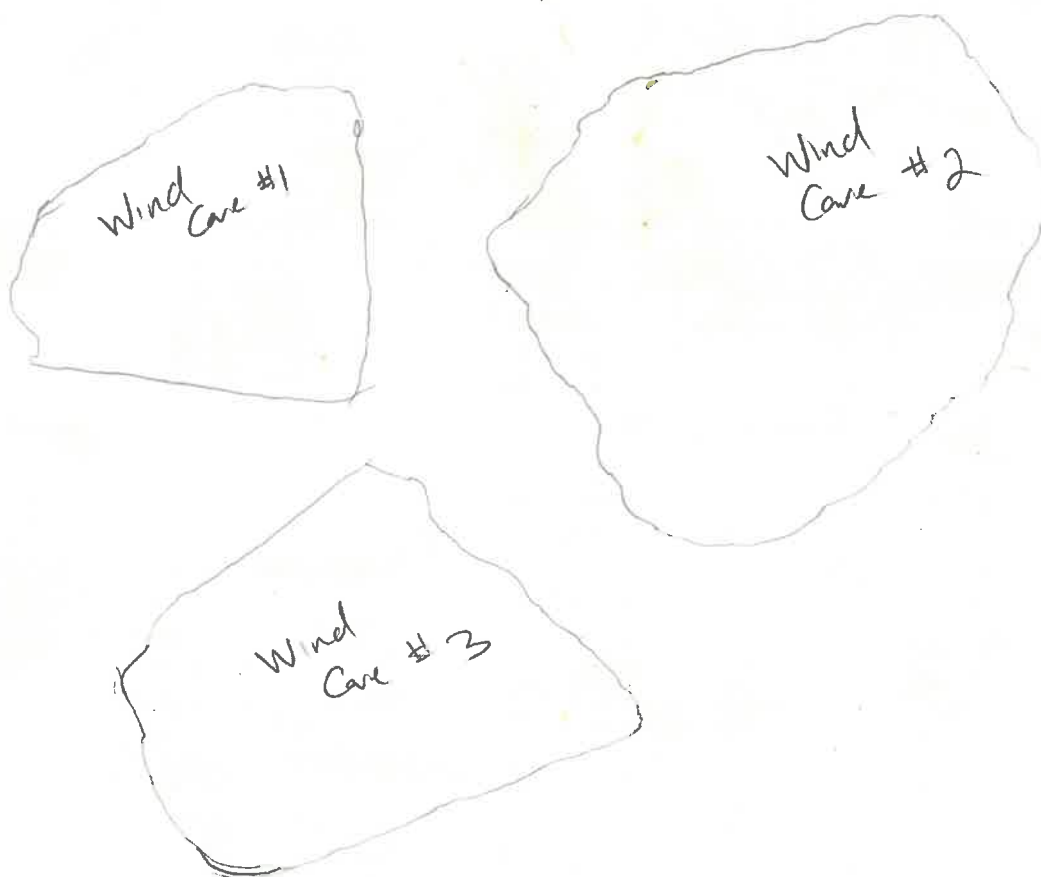
Algae *Hydrurus foetidus* - Golden algae - very thick here
Joe thinks is *Lednia* food

Geology at wind cave is limestone!

Lednia in moss, perhaps *Zapada* too

Highest densities in ^{little} pools w/ moss on bedrock

Joe collected adults. Collected live individuals for
thermotolerance test



Teton Stoneflies 2017
WYNDD-Tronstad 307-766-3115

Date: 13 Aug 2017

Time: Arrived: 16:15 Departed: 17:40 Collectors: Deb + Lydia → did all except H2O5 (Scott + Joe later)
Stream: S. Fork Teton-Snowmelt (aka: Alaska Basin snowmelt - upper site) Location Description:

Coordinates: N _____ W - _____ Datum: _____

Elevation: _____ ft Site name on GPS: "AKSND" (Deb's)

Water quality (Recorded with a YSI Pro Plus Multitprobe)

Parameter	Value	Units
Water temperature	9.9	°C
Barometric pressure	530.7	mmHg
DO	110	% saturation
DO	8.4	mg/L
Specific conductivity (SPC)	64.7	µS/cm
Conductivity	39.0	µS/cm
pH	8.0	
ORP	0.14	mg/L
Air temp	10.0	°C

Last calibrated: 11th Aug DO: ✓

Photos taken: Site _____ Temp Probe _____

Weather: Mostly cloudy, windy, some rain

Substrate type: cobble/boulder

Number of Surbers collected: 3

Aspect: W

Slope: 2-3% (guess) 1W-btm!

Biofilm rank: Little Medium Green

Bankuck Index

	Excellent	Good	Fair	Poor	Score
Angularity	Lots of edges (1)	Some edges, some round (2)	Rounded edges (3)	All round (4)	1
Brightness (Dull = biofilm)	Most surfaces dull (1)	Mostly dull, <35% bright (2)	50/50 dull & bright (3)	Mostly bright, >65% (4)	4
Scour	<5% evidence of scour (6)	5-30% of bed scoured (12)	30-50% of bed scoured (18)	>50% of bed scoured (24)	12
Consolidation of substrate	Lots of sizes, tightly packed (2)	Moderately packed, some size overlap (4)	Mostly loose, not much overlap (6)	Totally loose, easily moved (8)	4
Aquatic Veg	Abundant veg, moss in swift water (1)	Common veg or algae, lots in pools (2)	Spotty, in backwater or seasonal algae (3)	Perennial types, very scarce or absent (4)	2

Temp logger number: 20174695 Coordinates: UTM: N _____ W - _____

Description of logger location: [leaving for Scott + Joe] Scott has photos!

Suspended Solids:

Filter number	DF01	DF02	DF03
Volume filtered (mL)	600	600	600

Nutrient samples collected:

DOC collected:

Chl a collected: N=3

Algae collected: N=3

100mL filtered H2O

Date: 13 Aug

Stream Profile: (left edge)

looking down stream

(right edge)

Distance (cm)	0	40	80	120	130				
Depth (cm)	1	14	16	13	7				

Notes (continue on back):



Date: 12 Aug 2017

Time: Arrived: 15:30 Departed: _____ Collectors: Deb, Lydia (Joe + Scott did Surbers earlier)

Stream: AK Basin - south icy seep Location Description: The "original" ! i icy seep w/ lednia

Coordinates: N _____ W - _____ Datum: _____

Elevation: _____ ft Site name on GPS: "AKBASS" (Debs)

Water quality (Recorded with a YSI Pro Plus Multitprobe)

Parameter	Value	Units
Water temperature	<u>1.9</u>	°C
Barometric pressure	<u>541</u>	mmHg
DO	<u>114</u>	% saturation
DO	<u>11.2</u>	mg/L
Specific conductivity (SPC)	<u>197</u>	µS/cm
Conductivity	<u>110</u>	µS/cm
pH	<u>8.1</u>	
ORP <u>[NO₃-N]</u>	<u>0.35</u>	mg/L
Air temp	<u>17</u>	°C

Last calibrated: 11 Aug. 17 (except NO₃) DO: ☒

Photos taken: Site ☒ Temp Probe ☒

Weather: clouds, a few rain drops

Substrate type: cobbles

Number of Surbers collected: 3 (Joe)

Aspect: N/NW

Slope: med ~ 3% or so

Biofilm rank: Little Medium Green

Bankuck Index

	Excellent	Good	Fair	Poor	Score
Angularity	Lots of edges (1)	Some edges, some round (2)	Rounded edges (3)	All round (4)	<u>1</u>
Brightness (Dull = biofilm)	Most surfaces dull (1)	Mostly dull, <35% bright (2)	50/50 dull & bright (3)	Mostly bright, >65% (4)	<u>2</u>
Scour	<5% evidence of scour (6)	5-30% of bed scoured (12)	30-50% of bed scoured (18)	>50% of bed scoured (24)	<u>6</u>
Consolidation of substrate	Lots of sizes, tightly packed (2)	Moderately packed, some size overlap (4)	Mostly loose, not much overlap (6)	Totally loose, easily moved (8)	<u>4</u>
Aquatic Veg	Abundant veg, moss in swift water (1)	Common veg or algae, lots in pools (2)	Spotty, in backwater or seasonal algae (3)	Perennial types, very scarce or absent (4)	<u>1</u>

Temp logger number: 20155966 Coordinates: UTM's: N _____ W - _____

Description of logger location: same as last time (right @ source)

Suspended Solids: (Lydia's filters)

Filter number	<u>50</u>	<u>51</u>	<u>52</u>
Volume filtered (mL)	<u>600</u>	<u>600</u>	<u>750</u>

avg mass: 0.036 0.035 0.038
(g)

Nutrient samples collected: _____

DOC collected: _____

Chl a collected: 3X ☒ 100 mL

Algae collected: 3X ☒

F Hared
H₂O
collected:

Date: 12 Aug 2017

Stream Profile: (left edge)

looking down stream

(right edge)

Distance (cm)	0	40	80	120	160	165			
Depth (cm)	0	9	10	8	6	4			

Notes (continue on back):

