

Indian R. Gage Install  
07/11/13

Level Logger Launch  
# 2022433 (m5)

Indian River

1945.150

future start: 2:00:00 pm

synchronized

computer time 12:15

Unit " "

Level Ft

Temp °C

Level Logger Launch

# 2022433 (m5)

Indian River

1945.150

future start: 2:00:00 pm

synchronized Time: 2:18

comp time: 2:18

Level Ft

Temp °C

Time In Out

Time 2:30 6:45

S.G. 1.61 1.61

Indian R. Gage Install  
07/11/13

Unit # 2022433 attached to  
river weight ops of stilling  
well ~ 10' unit # 2022433  
is located in stilling well with  
steel plate. Both units were  
put in the water at 4:00 pm

SonTek Flow Tracker  
# P-176A

40 sec. ave vel.

Photo Log:

# 7530 - site location pre-install  
754 - " "

755, 6 - bottom install unit (2022433)

757:62 - mrg surveying

763 - Q-transsect 4 → RT

64

65

66, 67

68, 69

70, 71

looking d/s

u/s

RT → LT

mat on Q-tr

gage site is 50 ft back

(3.61)

India R. Level Loop & WSE

7/11/13

STA BS HI FS Elev Rod

BM-1 (nail) 1.09 101.09 100.00

BM-2 (nail) 1.17 99.92

Rock 5.03 96.06

Rock (TP) 5.20 98.89

BM-2 1.39 99.92

BM-1 1.27 99.99 / ok

STM WSE well 6.37 (3.00 pm)

Top staff Plate 4.66

bottom WSE 6.40

d/s WSE 6.61

d/s bottom 7.94

w/s WSE 4.99

w/s bottom 6.66

STM WSE well 6.39 (6:30 pm)

checked bottom

India R Q-Profile

7/11/13

STA BS HT FS Elev

RWP 0.0 101.26 1.96

2.2 2.16

2.8 4.21

RWF 7.5 6.22 RWE

LWE 65.0 6.25 LWE

74.5 5.62

80.9 5.82

84.7 5.30

89.2 3.99

103.8 4.12

116.0 3.70

122.2 4.15

130.5 3.86

138.8 3.90

143.0 4.55

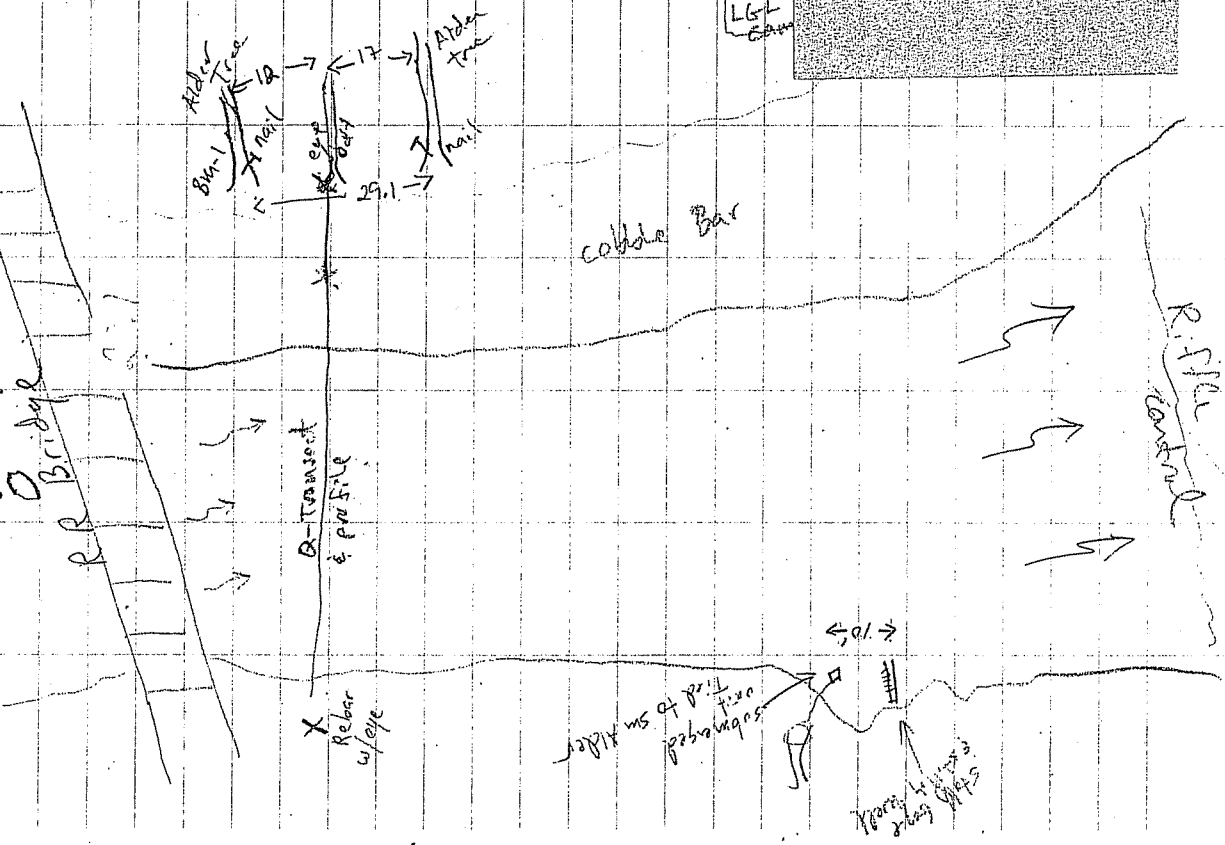
146.0 2.58

146.7 2.33

157

4

Indian R. Site  
Map



Indian R. Q-measurement 7/11/13  
Flow Tracker

STA	Depth	Vel	STA	Depth	Vel
7.5	0.0	0.0			
8.5	0.15	0.05			
9.5	0.30	-0.05			
11.5	1.00	1.52			
13.5	1.05	1.87			
15.5	1.10	2.31			
17.5	1.10	2.0			
19.5	1.30	2.53			
21.5	1.25	2.47			
23.5	1.20	3.03			
25.5	1.40	2.89			
27.5	1.60	2.86			
29.5	1.60	2.86			
31.5	1.80	2.82			
33.5	2.00	2.58			
35.5	2.10	2.76			
37.5	2.1	2.13			
39.5	2.6	3.91			
41.5	2.5	4.20			
43.5	2.6	3.22			
45.5	2.10	3.27			
47.5	1.90	2.98			

u/s bld  
check station depth in chit  
\* Flow Tracker File  
Name Indian 2\*

49.5 1.7 3.32  
51.5 1.7 3.22  
53.5 1.4 3.11  
55.5 1.4 2.47  
57.5 0.9 1.91  
59.5 0.65 0.34  
61.5 0.30 0.10  
LWE 65.0 0.0 0.0

(231.77 cfs)

Unnamed Trib. 144.6 07/12/13

Gaging Time

Arrival 11:00

Departure 1:00

Crew: M. Gagan  
M. Tiedemann  
Alan  
Troy

Stream is dry! Appears to have gone dry in the past 5-10 days. Unable to establish monitoring station or measure discharge. Recorded GPS coordinates and took site photographs  
\* Walked ups ~ 300' & found flowing water  
Location: N 62.80489  
W 149.59410 } dry location

Photos: 1781-1784

dry  
Looking ups & d/s at trib mouth  
large alluvial fan  
1785

07/12/13

Unnamed Trib. 144.6 Q-measurement  
Flow Tracker P176A

40 sec. AVE

STA	Depth	Vel	RWE
0.0	0.0	0.0	RWE
0.5	0.35	0.02	
1.0	0.40	0.59	
1.5	0.30	0.97	
2.0	0.35	0.39	
2.5	0.0	0.0	LWE

Flow Tracker cal. Q = 0.33

Photos: 1785-1792  
Q-location

Location: UTM 144.6 Q  
N 62.80398  
W 149.59135

Skull Cr. Gage Install 7/12/13

Time S.G.  
Arrive 2:15 0.96 FT  
Depart 5:00 0.96 FT

Crew: M. Gagnier  
M. Tiedemann

Equipment: Flow Tracker

Photo Log:  
1793 Mat looking d/s  
1794 m. vs. Allen  
1795 " looking d/s  
1796 stuff Plate tag  
1797 " WSE  
1798 installation site  
1799 LT → RT across TR  
80 RT → LT  
81 RT → LT  
82 looking u/s  
1803 looking u/s  
1804 100 km d/s  
1805 Bara logger

Skull Cr. Level Logger 7/12/13

Level Logger Unit:  
# 0102023480  
• set to FT & °C  
• synchronized to computer at AST  
• 15-minute interval  
• start time 12:00:00

Bara Logger Unit:  
# 0012023122  
• set to KPa & °C  
• synchronized to computer time at AST  
• 15-minute intervals  
• start time set @ 3:00:00

GPS Coord: N 62, 65753  
W 149, 93254

STA	Level BS	Loop HI	Gaging E WSE	Station Elevation
BM-1	2.71	102.71		100.0
BM-2			5.17	97.54
Top Loop			4.58	98.13
(TP)				
Top Loop	4.82	102.96		98.13
BM-2			5.42	97.54
BM-1			2.96	100.00 ✓
stiling well WSE			9.04	
Top stiling plate			6.68	
WSE transect			9.16	
WSE d/s transect 65'			11.66	
WSE u/s " 65'			7.24	
stiling well WSE			9.05	
BM-1			2.96	

STA	Depth	Val	RWE
9.3	1.00	0.0	RWE
10.3	0.30	0.12	
11.3	0.35	-0.17	
12.3	0.25	1.55	
13.3	0.35	1.07	
14.3	0.45	1.08	
15.3	0.50	1.61	
16.3	0.50	1.38	
17.3	0.40	1.28	
17.8	0.50	1.24	
18.3	0.50	1.12	
18.8	0.45	1.37	
19.3	0.60	1.63	
19.8	0.45	2.02	
20.3	0.55	1.45	
21.3	0.45	1.38	
22.3	0.60	0.69	o/s bid
23.3	0.70	1.07	
24.3	0.60	0.13	
25.3(4)	0.20	0.64	
26.2	0.0	0.0	

SKU Cr. G-measments  
07/12/13

Incorrectly entered  
as 14.8 in  
Flow tracker  
15.8 / 0.5 / 1.49  
22.8 / 0.65 / 0.50

← Flow tracker delete  
station 24.3 use  
25.7  
LWFE



Kosina Cr.

N 62° 46.9520'

W 147° 56.5252'

Oshetna

N 62° 38.3181

W 147° 22.8627

### General site locations

Oshetna Flow Gage Site  
7/13/13

Unit # 2023490

Primary in stilling well

Unit # 2023213

Backup placed on brick  
(see site map)

	In	Out
Time	10:00	12:15
S.G	1.55	1.55

### Gage Location:

Oshetna Gage - N 62.62852

W 147.36983

Oshetna Backup - N 62.62856

W 147.36987

Oshetna Bench Marks - N 62.62859

W 147.36951



Kosina Cr. Geog. Site  
07/13/13

In Out  
Time 1:30 4:05  
S.G. 1:46 1:48

Levelogger Unit: 2022426  
Baralloger Unit: 0012023129  
\* both units in stilling well \*  
Location: N 62.75597  
W 147.95515

BM-1 N 62.75599  
W 147.95540  
~~BM-2 N~~  
W  
BM-2 N 62.75591  
W 147.95547

Kosina Cr. Level Loop E WSE  
07/13/13

STA	BS	HI	FS	Elevs
BM-1	1.81	101.81		100.00
BM-2		2.07	99.74	
Tallest Eurepost staying well		5.76	96.05	
Tallest Eurepost (JP)	5.86	101.91	2.17	99.74
BM-2		101.91	1.91	100.00
BM-1		8.68	6.84	
still well WSE		10.17		
Top staff plate Bottom at still well		8.70		
WSE				

(M 0.02' change  
since start)

Kosina Cr. Q-Profile 07/13/13

STA	BS	HI	FS	Eleva
LWP = +113 (tree) 101.91				
0.0			3.57	
10.0			4.84	
15.0			4.56	
31.5			5.82	
32.5			6.56	
41.5			6.92	
43.0			7.40	
54.0			8.61	LWE
55.0			8.62	LWS
143.0			8.50	RWE
138.0			8.56	RWS
145.0			7.23	
144.3			6.24	
base RWP - +3.0			4.19	
WSE			8.70	
			8.68	

Keeler  
tag line

Swaffar # 4441 Prop # 19A  
Calibration # 175  
Q-Measurement 07/13/13  
Notes by S.M.G.T

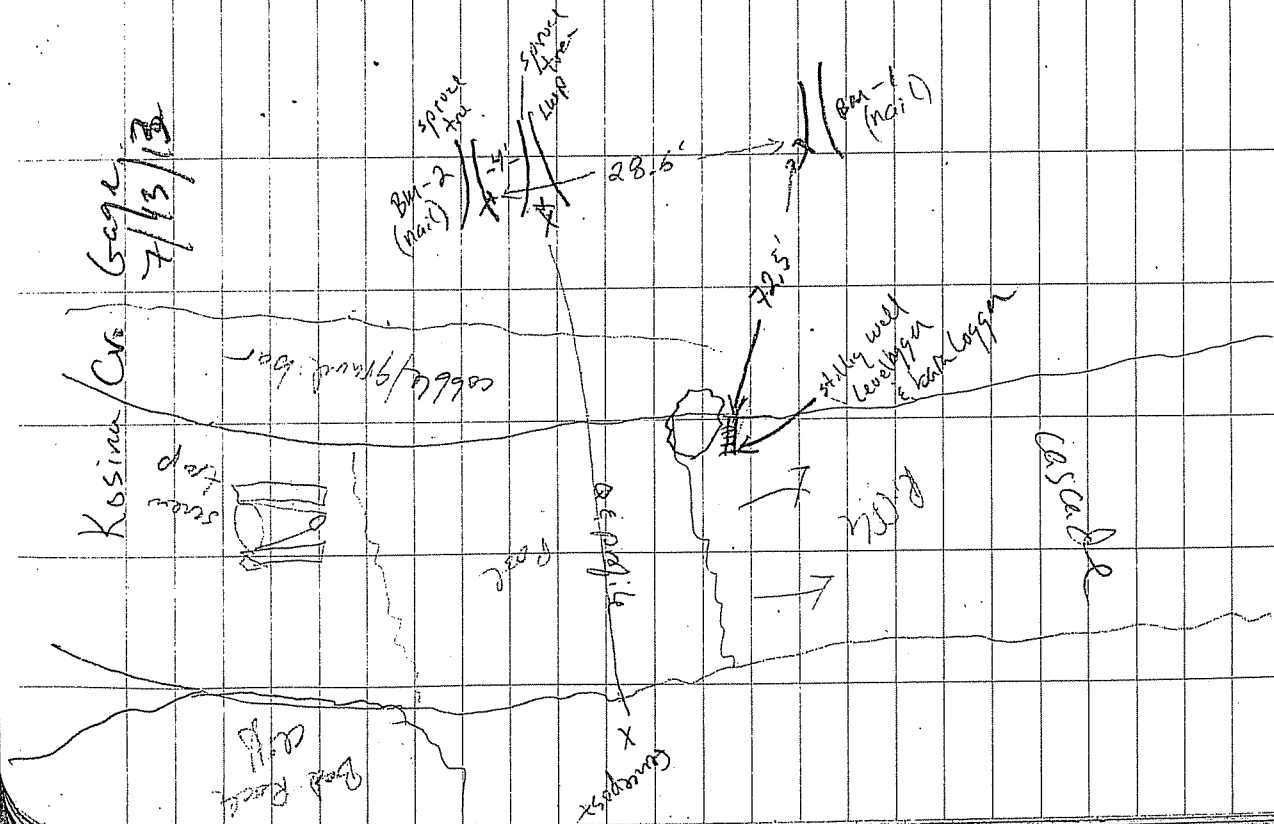
Station	Depth	Velocity	Notes
54.0	0	0	REW
57.5	1.05	1.05	
60.0	1.45	0.87	
65.0	2.0	1.92	
70.0	1.85	1.95	
75.0	2.4	2.39	
80.0	2.7	2.63	
90.0	4.0	1.07.99	Switch top to bottom
100.0	5.0	4.08	Bottom rock
		0.79	
		3.55	(0.6 depth)
<del>106.0</del>	<del>5.5</del>	<del>3.88</del>	<del>that way</del>
106.0	5.5	3.88	that way
110.0	2.7	4.18	LE Boulder
112.0	5.0	4.18	Behind boulder
117.0	3.7	4.28	RE Boulder
125.0	3.9	2.12.95	
130.0	2.6	1.44	
135.0	1.7	0.81	
139.0	1.5	0.58	
140	0.4	0.72	Top boulder
143	0	0	LEW
120	4.3	2.88	
		2.43	
95	2.0	3.64	Extra stations to fill
85	3.0	3.09	at XS profile
		1.44	

Oshetna & Kosina Photos

6/13/13

- Photo # 1813 - Oshetna bed up logger
- 1814 - " pre install " side
- 15 - " tie off pin "
- 16 - Oshetna pre install
- 17 - " staff plate & still
- 18 - " staff plate
- 19 - " looking d/s
- 20 - " looking u/s
- 21 - " @ gage side
- 22 - " looking d/s
- 23 - Kosina looking across
- 24 - " heli
- 25 - " looking at O-TR
- 26 - " gage install
- 27 - " staff gage
- 28 - " looking u/s
- 29 - " "
- 30 - " heli
- 31 - contact board

Kosina/Crs Gage  
7/13/13



# Birch Creek (middle - off highway)

Flow Tracker, operator: MAT

Note taker: JR (Bear Guard)

7/14/13 Start 10:02 AM

End: 10:45 AM

Q - Measurement

Sta	Depth	Velocity	Notes
6.2	0	0	LEW CUT-bank
7.5	1.4	0.46	
9.0	1.4	0.58	
11.0	1.9	0.56	
13.0	1.8	0.91	
15.0	1.9	<del>0.79</del> 0.83	
17.0	1.9	1.09	
19.0	1.6	0.88	
21.5	1.4	0.63	Increased stationing due to bad vegetation
24.0	1.3	1.24	
26.0	1.5	1.06	
28.0	1.3	1.07	
30.0	1.0	0.97	
32.0	1.20	0.43	
34.0	1.30	0.05	
36.0	1.0	-0.05	
37.0	1.0	0.31	

Birch Cr. Q - Conting. 7/14/13  
 STA Depth Vel. Notes

39.0 1.1 0.58 (37.35 cfs main channel)

40.0 0.9 0.42

41.4 0.0 0.0 RWE main ch.

46.4 0.0 0.0 LWE side ch. (RT)

47.4 0.75 0.38

49.0 0.80 0.26

51.0 0.80 0.16

53.0 0.80 0.0

54.0 0.70 0.0

55.0 0.40 0.0

RWE 55.5

RT. ch RWE

Unit #: 2023476 Levee loggers  
 N 62.25056 (wpt 018) in st. wall  
 W 150.08957

Unit #: 2023477 Levee loggers  
 N 62.25049 (wpt 030) back up unit  
 W 150.08975

B.M. - 1  
 N 62.25062  
 W 150.08961  
 B.M. - 2 (wpt 232)  
 N 62.25061  
 W 150.08949

Birch Cr. Level Loop & WSE

7/14/13

STA	BS	HI	FS	Elev
BM-1	3.08	103.08		100.00
BM-2	3.07		3.07	100.01
Top wood staff board	3.01		3.01	100.07
Top wood staff TP	3.07			100.07
BM-2		103.14	3.12	100.02
BM-1			3.14	100.00 ✓
staff wall WSE	5.22			97.92
Top staff plate metal	3.74			99.40
bed at staff	7.11			96.03
WSE	5.22			97.92
WSE at back-up unit	5.23			97.91

Birch Cr. Bank Profile

7/14/13

STA	BS	HI	FS	Elev
				1.43
				1.89
				3.33
				5.24
LWS				5.22 LWS
RWS				5.22 RWS
46.4		(40.0)		5.275 RWE
49.0				5.28 RWE
46.4	LCh	LWE		5.32 LCh LWE
49.0	R.Ch	WSE		5.25 WSE
55.5	R.Ch	RWE		5.23 RWE
59.0	bank			4.64
63.0	bank			4.40
				In
				Out
				1.85 1.85
				9:00 11:00

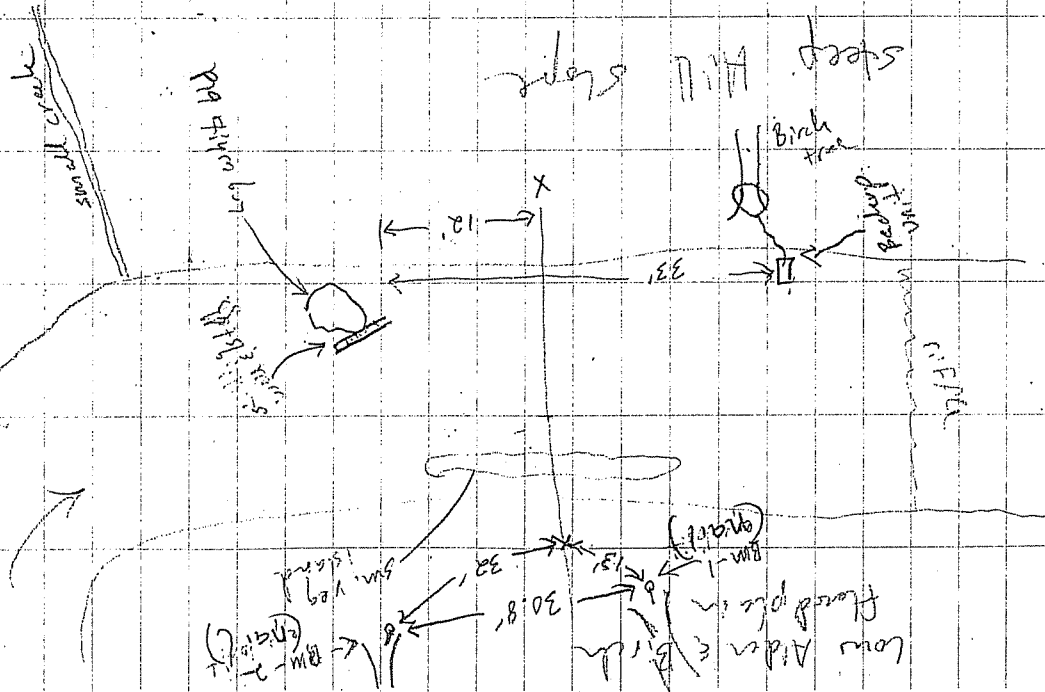
Photo: 1832, 33 gage location

1834 - Q. Profile left → RH  
 35 " left bank  
 1836 a " R → L  
 1887 looking d/s  
 1838 staff plate

Talked to Henry

# Birch Cr. Map

Private Rd



Birch Cr/Sloop & Susatus Camp  
7/14/13

Logger #: 2023495

placed on stilling work at 12:48 pm

still gauge = 1.89'

Time out: 1:30 pm

STA BS HI FS Elev

BM-1 3.59 103.59 100.00

4.27 99.32

6.54 97.05

97.05

2.74.47 99.31

3.78 100.00

103.59

8.84

7.41

11.11

3.78

Top staff board

Ⓢ Top staff board 6.73

BM-2

BM-1

still well

WSE

Top still bottom

BM-1

Birch Cr. Slough Conf.

7/14/13

Photo Log:

- 1839 stilling well site
- 40 stop photo
- 41 B.M. - 1 in tree
- 42 B.M. - 2 in birch tree
- 43 looking w/s
- 1844 " d/s
- 1845 " w/s at mouth Birch Cr.
- 1846 " d/s at conf. Birch Cr. & Slough

GPS Location:

- stilling wells N 62.22339
- W 150.11682

- ~~B.M. - 1~~ N 62.22313
- W 150.11679

- Conf. line w/pt 016
- N 62.22311
- W 150.11655

- Birch Cr. & Slough Conf. line w/pt 017
- N 62.22167
- W 150.11046

Deshka R. Gege Site  
7/15/13

In Out  
Time 10:30 1:00  
WSE 95.45 95.47

Main Unit : 2023482

Backup Unit : 2023479

Barometer : 601202079  
(wpt 24 N 61.75457)  
W 150.32863

GPS Points

Q-Transit RW ; wpt 233 N 61.75467  
W 150.32874

Q-Tr. LWP : wpt 234 N 61.75484  
W 150.32771

Q-Tr. BM-2 wpt 235 N 61.75455

Q-Tr. BM-1 wpt 236 N 61.75460  
W 150.32880

Backup Unit wpt 237 N 61.75452

Main Unit wpt 238 N 61.75423  
W 150.32854

Deshka Level Loop & WSE  
STA BS HI FS E level 7/15/13

BM-1 2.64 102.64 180.00

BM-2 1.87 100.77

Back R Backup Unit 6.91 95.73

Back L Backup Unit 7.13 95.73

BM-2 2.09 100.77

BM-1 2.86 100.00

TR- WSE 7.41 95.45

WSE Backup Unit 7.40 95.46

Middle tube elev. 8.41 94.45

WSE Main Unit 7.43 95.43

Middle tube elev. 10.00 92.86

BM-2 1.92 100.77

Backup WSE 7.22 95.47

Deshka Q-measurement 7/15/13

Flow Tracker

STA Depth Vel Comments

186.0 0.0 (1.6V) (2x steel for support)

LWE 13.6' 0.0 LWE

20.0 0.45 0.14

25.0 0.80 0.64

30.0 0.90 0.60

40.0 1.00 0.81

50.0 1.30 0.94

60.0 1.90 1.09

70.0 2.40 1.05

80.0 2.65 1.22 0.91

90.0 3.00 1.45 0.92

100.0 3.10 1.44 1.00

105.0 3.10 1.40 0.97

110.0 3.20 1.43 1.04

115.0 3.20 1.50 0.92

120.0 3.00 1.41 0.93

125.0 2.80 1.44 0.96

130.0 2.60 1.46 0.65

140.0 2.10 1.02

150.0 1.75 0.94

160.0 0.95 0.25

165.0 0.70 -0.02

170.0 0.0 0.0 RWE

RWP 186.0

Deshka R. Bank Survey 7/15/13

STA BS HI FS Elevation

RWP 186.0 102.39 3.67 RWP

185.0 3.86

180.0 5.03

175.0 6.47

170.0 7.41

RWS 7.41 RWS

LWS 13.6 7.41 LWS

12.0 6.92

11.3 6.38

9.0 5.89

5.0 5.24

4.92

LWP - 0.0 4.60

+5.0' 3.15

Photo Log:

Deshka Gege Map  
7/15/13

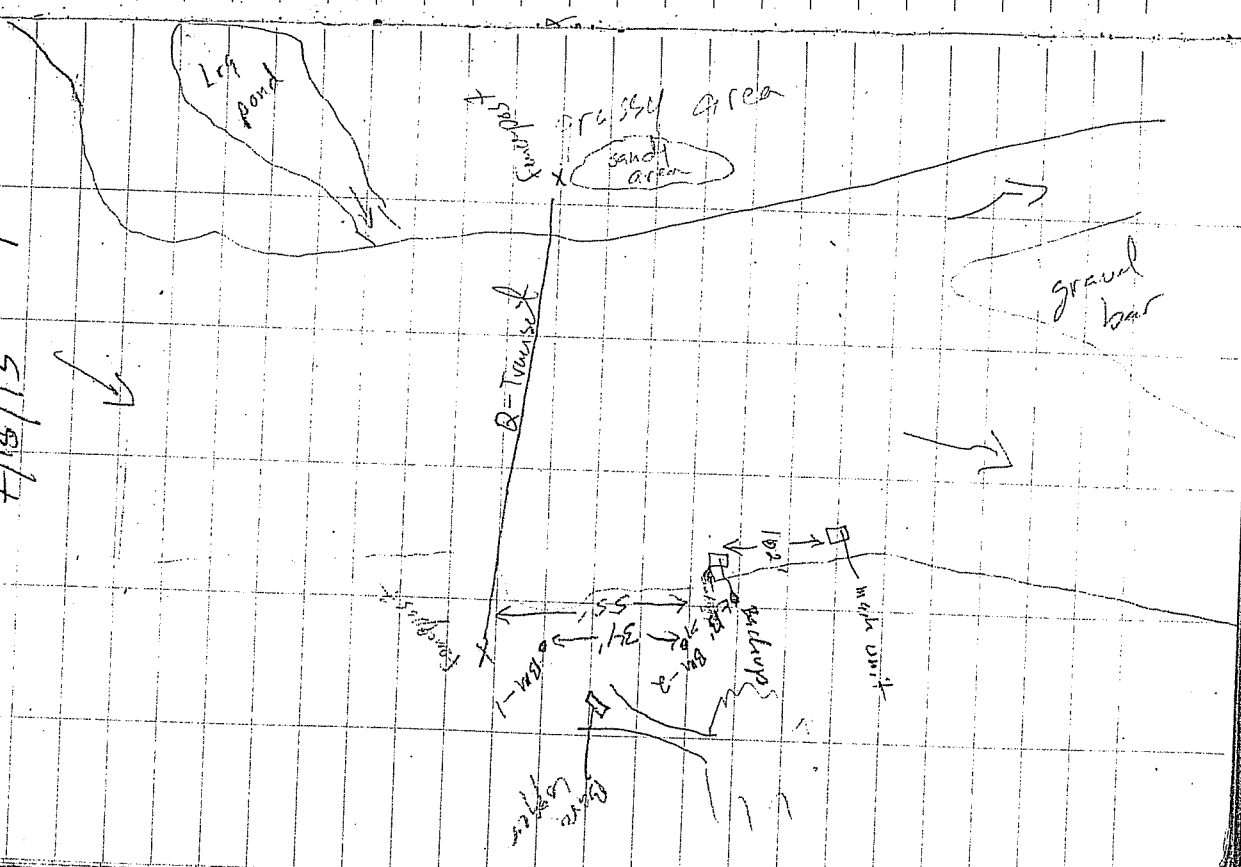
Deshka/Susitna Confluence  
7/15/13

In Out  
Time 1:00 3:15  
5-6 1.64 1.64

\* river is very surgy, hard to read steady state reading \*  
Logger #: 2023487

Photo Log:

GPS Location:  
wpt 244 BM-1 N 61.69656 W 150.31377  
" 245 BM-2 N 61.69657 W 150.31377  
" 246 ST. H. well N 61.69653 W 150.31364



Deshka/Susitra Conf  
 Level/Log & WSE  
 7/5/13

STA BS HI PS Eleva

BM-1 3.84 103.84 100.00 (nail)

BM-2 5.02 98.82 (nail)

Log (TP) 4.32 99.52

Log 4.50 99.52

104.02

BM-2 5.20 98.82

BM-1 4.02 100.00

11.87 92.15

9.55 94.47

14.33 89.69

st<sup>n</sup> well WSE

Top staff plate  
 & board

bottom  
 of well