

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES
BENEFICIAL USE FIELD REPORT

RECEIVED

MAY 15 2012

DEPARTMENT OF
WATER RESOURCES

A Beneficial Use Field Report is prepared by a water right examiner as the result of an examination to clearly confirm and establish the extent of the beneficial use of water established in connection with a permit during the development period authorized by the permit and any extensions of time previously approved.

A. GENERAL INFORMATIONPermit No. 37-226241. Owner Indian Creek Ranch Owners Assn. Inc.

Phone No. _____

Current address PO Box 3411 Hailey ID 83333-34112. Examiner's name Dave TuthillEXAM DATE April 4, 2012

3. Accompanied by _____

Email _____

Address _____

Relationship to permit holder _____

Phone No. _____

4. Source Indian Creektributary to Big Wood River**B. OVERLAP REVIEW**1. Other water rights with the same place of use 37-296B, 37-296C, 37-19740, 37-224902. Other water rights with the same source and point of diversion None**C. DIVERSION AND DELIVERY SYSTEM**

1. Point(s) of Diversion:

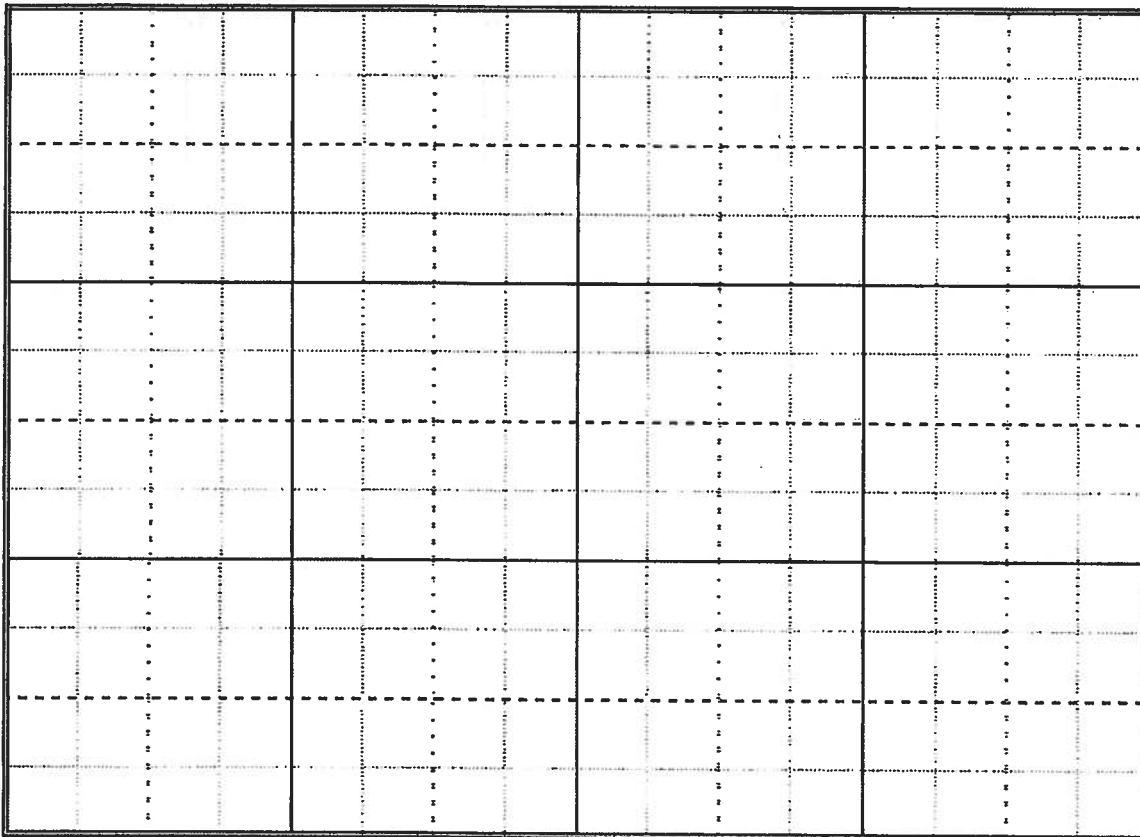
Ident. No.	Gov't Lot	¼	¼	¼	Sec	Twp	Rge	County	Method of Determination/Remarks
		NW	NE	SW	33	3N	18E	Blaine	On-site visit and ArcMap

2. Place(s) of Use:

Method of determination On-site visit and ArcMap

Twp	Rge	Sec	NE				NW				SW				SE				Totals
			NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	NE	NW	SW	SE	
3N	18E	33									X								

3. **Delivery System Diagram:** Indicate all major components and distances between components. Indicate weir size/ditch size/pipe diameter (inside), as applicable. Use the space provided or ☐ see attached.



Scale: 1" = _____

- ☐ Copy of USGS Quadrangle attached showing location(s) of point(s) of diversion and place(s) of use (required)
☐ Aerial photo attached (required for irrigation of 10+ acres)
☐ Photo of diversion and system attached

4.

Well or Diversion Identification No.*	Motor Make	Hp	Motor Serial No.	Pump Make	Pump Serial No. or Discharge Size

*Code to correspond with no. on map and aerial photo

D. FLOW MEASUREMENTS

1.

Measurement Equipment	Type	Make	Model No.	Serial No.	Size	Calib. Date
Son Tek Flow Tracker				P3388		

2. **Measurements:** _____

Two open channel measurements were made. The measurement at the point of diversion just downstream from the headgate equaled 2.86 cfs. The measurement at the outflow of the lower pond equaled 2.77 cfs.

E. NARRATIVE/REMARKS/COMMENTS

Water from Indian Creek is diverted through an open ditch into two small ponds where the outflow of the first pond flows into the second larger pond. Outflow from the larger pond flows back into Indian Creek a few feet before the creek discharges into Hiawatha Canal. The larger pond also acts as an equalizer pond for an irrigation pump. At the head of the ditch there is a 9 foot concrete culvert with a metal slide gate to regulate the diversion rate from the creek into the ponds. Labelled on the attached aerial photo is the delivery system. Also attached are four photographs showing the major features of the delivery system. On April 4, 2012, two open channel flow measurements were made using a Flow Tracker ADP. The location of the first measurement was just downstream from the concrete culvert mentioned above. The lat/long location for this measurement was N43.5487, W114.3195. The location of the second measurement was in the outflow channel of the larger pond. The lat/long location for this measurement was N43.5482, W114.3201. A printout of each measurement is attached. The measurement results reveal the ditch capacity is greater than the 1.0 cfs approved for diversion by permit 37-22624 and there was only 3% difference between the two measures indicating loss within the system is less than the generally accepted standard for accuracy of a measuring device. In fact Jim Baldwin who owns property adjacent to the two ponds stated when no water is being diverted into the ponds it takes about two weeks for the larger pond to empty through seepage and evaporation.

Has the permit holder met all conditions of permit approval, including any mitigation requirements and/or measuring device installation requirements? ☒ Yes ☐ No If no, what must be done to meet the permit requirements?

F. FLOW CALCULATIONS☒ Additional computation sheets attached

Measured Method:

Printouts of the flow measurements are attached.

G. VOLUME CALCULATIONS

1. Volume Calculations for Irrigation:

 $V_{I.R} = (\text{Acres Irrigated}) \times (\text{Irrigation Requirement}) =$ _____ $V_{D.R} = [\text{Diversion Rate (cfs)}] \times (\text{Days in Irrigation Season}) \times 1.9835 =$ _____ $V = \text{Smaller of } V_{I.R} \text{ and } V_{D.R} =$ _____

2. Volume Calculations for Other Uses:

H. RECOMMENDATIONS

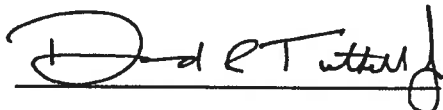
1. Recommended Amounts

Beneficial Use	Period of Use		Rate of Diversion Q (cfs)	Annual Volume V (afa)
	From	To		
Aesthetic	01/01	12/31	1.00	
Recreation	01/01	12/31	1.00	
Wildlife	01/01	12/31	1.00	
Totals:			1.00	

2. Recommended Amendments

☐ Change P.D. as reflected on page 1☐ Add P.D. as reflected on page 1☒ None☐ Change P.U. as reflected on page 1☐ Add P.U. as reflected on page 1☐ Other**I. AUTHENTICATION**

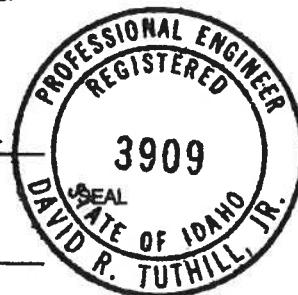
Field Examiner's Signature



Date 5/14/2012

Reviewer _____

Date _____



Beneficial Use Field Report Permit 37-22624



RE: Aerial Photo of the Delivery System



Figure 1 Aerial photo of delivery system

Beneficial Use Field Report
Permit 37-22624



RE: Photographs of delivery system

Figure 1 is a photograph of the point of diversion for Permit 37-22624 with the headgate in the channel on the left and Indian Creek continuing in the channel to the right.



Figure 1 Point of Diversion



Figure 2 is a photo of the delivery ditch downstream from the headgate.

Figure 2 Ditch



Figure 3 is a photo looking downstream at the small pond with the larger pond in the background.

Figure 3 Small Pond

Figure 4 is taken looking across the larger pond with the outlet in the opposite bank.



Figure 4 Larger Pond

Discharge Measurement Summary

Date Generated: Tue May 8 2012

File Information

File Name INDCR01.121.WAD
Start Date and Time 2012/04/05 11:56:32

Site Details

Site Name - *Point of Diversion*
Operator(s) ECARLSEN

System Information

Sensor Type FlowTracker
Serial # P3388
CPU Firmware Version 3.7
Software Ver 2.30
Mounting Correction 0.0%

Units (English Units)

Distance ft
Velocity ft/s
Area ft²
Discharge cfs

Discharge Uncertainty

Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	0.5%	3.0%
Velocity	2.2%	7.5%
Width	0.2%	0.2%
Method	2.4%	-
# Stations	3.6%	-
Overall	5.0%	8.1%

Summary

Averaging Int.	20	# Stations	14
Start Edge	REW	Total Width	3.898
Mean SNR	33.8 dB	Total Area	1.955
Mean Temp	44.86 °F	Mean Depth	0.502
Disch. Equation	Mid-Section	Mean Velocity	1.4641
		Total Discharge	2.8627

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	11:56	2.00	None	0.200	0.0	0.0	0.0000	1.00	0.8468	0.030	0.0254	0.9
1	11:57	2.30	0.6	0.450	0.6	0.180	0.8468	1.00	0.8468	0.135	0.1143	4.0
2	11:58	2.60	0.6	0.520	0.6	0.208	0.4701	1.00	0.4701	0.156	0.0733	2.6
3	11:59	2.90	0.6	0.580	0.6	0.232	1.5285	1.00	1.5285	0.174	0.2659	9.3
4	12:00	3.20	0.6	0.600	0.6	0.240	2.3356	1.00	2.3356	0.180	0.4203	14.7
5	12:01	3.50	0.6	0.600	0.6	0.240	2.0663	1.00	2.0663	0.180	0.3718	13.0
6	12:02	3.80	0.6	0.600	0.6	0.240	1.6739	1.00	1.6739	0.180	0.3012	10.5
7	12:04	4.10	0.6	0.520	0.6	0.208	1.5814	1.00	1.5814	0.156	0.2466	8.6
8	12:06	4.40	0.6	0.650	0.6	0.260	1.5676	1.00	1.5676	0.195	0.3055	10.7
9	12:08	4.70	0.6	0.550	0.6	0.220	2.1850	1.00	2.1850	0.165	0.3603	12.6
10	12:10	5.00	0.6	0.600	0.6	0.240	1.2218	1.00	1.2218	0.180	0.2198	7.7
11	12:12	5.30	0.6	0.460	0.6	0.184	0.4137	1.00	0.4137	0.138	0.0571	2.0
12	12:17	5.60	0.6	0.240	0.6	0.096	-1.1631	-1.00	1.1631	0.072	0.0838	2.9
13	12:17	5.90	None	0.100	0.0	0.0	0.0000	1.00	1.1631	0.015	0.0174	0.6

Rows in italics indicate a QC warning. See the Quality Control page of this report for more information.

Discharge Measurement Summary

Date Generated: Tue May 8 2012

File Information

File Name

INDCR01.121.WAD

Start Date and Time

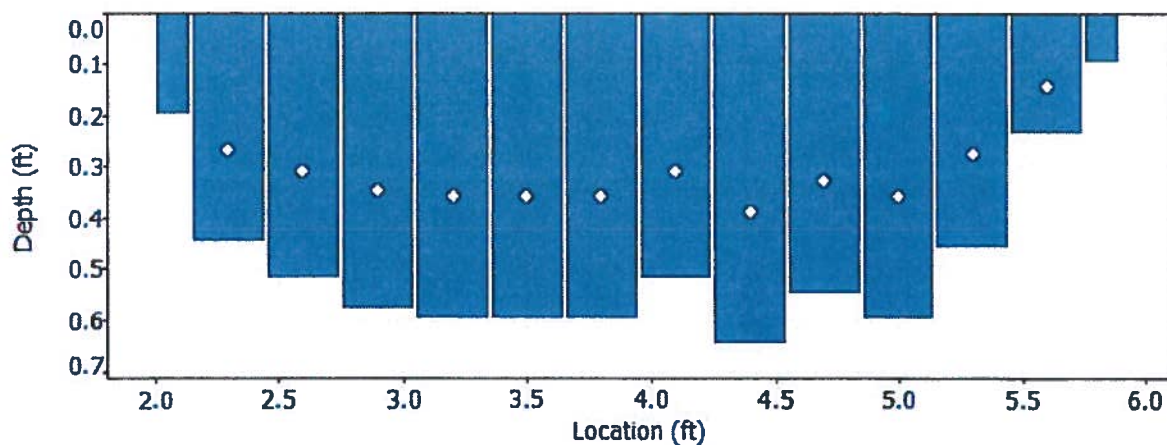
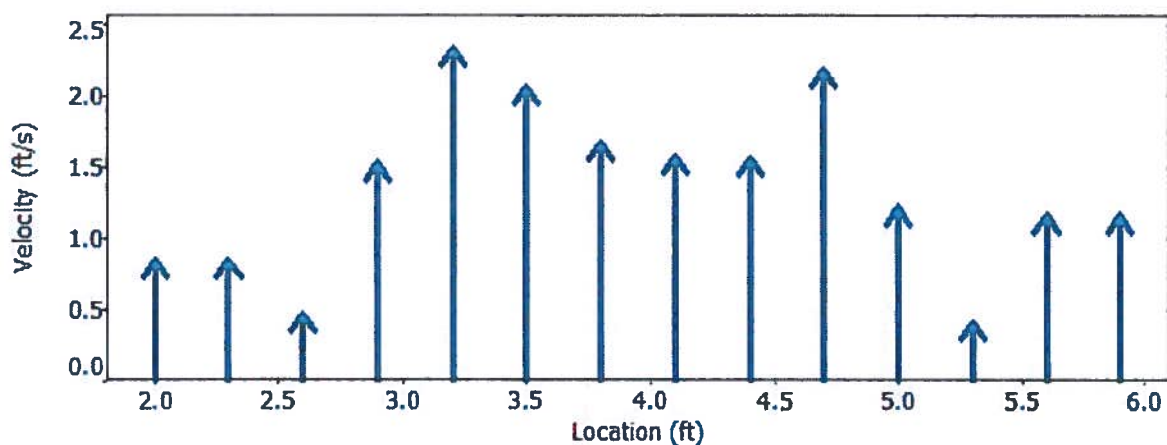
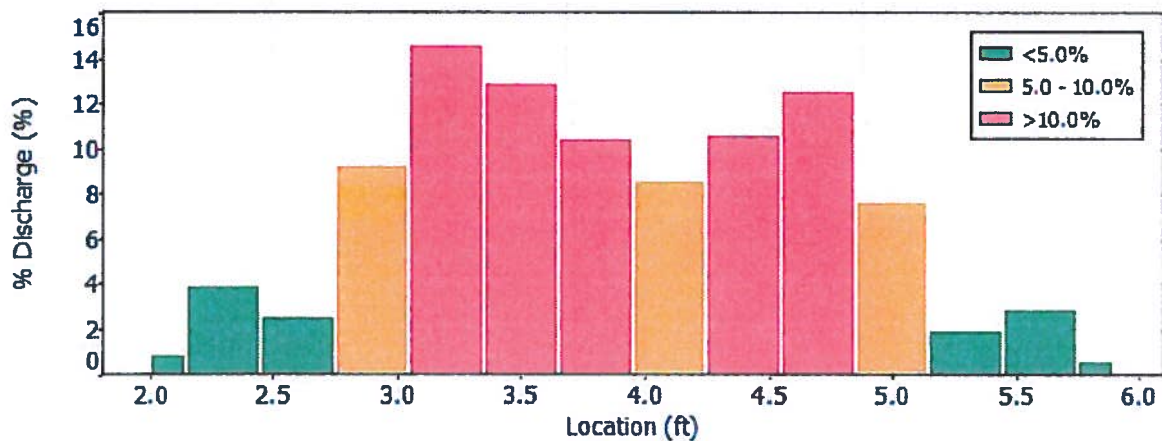
2012/04/05 11:56:32

Site Details

Site Name

Operator(s)

ECARLSEN



Discharge Measurement Summary

Date Generated: Tue May 8 2012

File Information

File Name INDCR01.121.WAD
Start Date and Time 2012/04/05 11:56:32

Site Details

Site Name
Operator(s) ECARLSEN

Quality Control

St	Loc	%Dep	Message
7	4.10	0.6	High standard error: 0.161
8	4.40	0.6	High standard error: 0.161
9	4.70	0.6	High standard error: 0.147
10	5.00	0.6	Boundary QC is Good; possible boundary interference
11	5.30	0.6	Boundary QC is Fair; possible boundary interference
12	5.60	0.6	High number of spikes: 3
		0.6	High angle: -175

Discharge Measurement Summary

Date Generated: Tue May 8 2012

File Information

File Name INDCCR2.121.WAD
Start Date and Time 2012/04/05 12:33:22

Site Details

Site Name - *Outflow from low pond.*
Operator(s) ECARLSEN

System Information

Sensor Type FlowTracker
Serial # P3388
CPU Firmware Version 3.7
Software Ver 2.30
Mounting Correction 0.0%

Units (English Units)

Distance ft
Velocity ft/s
Area ft²
Discharge cfs

Discharge Uncertainty

Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	0.4%	1.3%
Velocity	1.3%	7.1%
Width	0.1%	0.1%
Method	2.0%	-
# Stations	2.6%	-
Overall	3.7%	7.3%

Summary

Averaging Int.	20	# Stations	19
Start Edge	REW	Total Width	3.600
Mean SNR	32.6 dB	Total Area	1.616
Mean Temp	46.28 °F	Mean Depth	0.449
Disch. Equation	Mid-Section	Mean Velocity	1.7176
		Total Discharge	2.7758

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	12:33	1.90	None	0.250	0.0	0.0	0.0000	1.00	1.5653	0.025	0.0392	1.4
1	12:33	2.10	0.6	0.250	0.6	0.100	1.5653	1.00	1.5653	0.050	0.0783	2.8
2	12:35	2.30	0.6	0.380	0.6	0.152	1.9636	1.00	1.9636	0.076	0.1493	5.4
3	12:36	2.50	0.6	0.450	0.6	0.180	3.1168	1.00	3.1168	0.090	0.2808	10.1
4	12:37	2.70	0.6	0.500	0.6	0.200	2.9173	1.00	2.9173	0.100	0.2919	10.5
5	12:38	2.90	0.6	0.500	0.6	0.200	0.7126	1.00	0.7126	0.100	0.0713	2.6
6	12:39	3.10	0.6	0.500	0.6	0.200	1.9442	1.00	1.9442	0.100	0.1946	7.0
7	12:40	3.30	0.6	0.500	0.6	0.200	1.6854	1.00	1.6854	0.100	0.1686	6.1
8	12:40	3.50	0.6	0.500	0.6	0.200	1.7060	1.00	1.7060	0.100	0.1707	6.2
9	12:42	3.70	0.6	0.560	0.6	0.224	1.9180	1.00	1.9180	0.112	0.2150	7.7
10	12:43	3.90	0.6	0.510	0.6	0.204	2.1047	1.00	2.1047	0.102	0.2147	7.7
11	12:44	4.10	0.6	0.530	0.6	0.212	2.2172	1.00	2.2172	0.106	0.2351	8.5
12	12:45	4.30	0.6	0.550	0.6	0.220	1.9885	1.00	1.9885	0.110	0.2188	7.9
13	12:46	4.50	0.6	0.500	0.6	0.200	1.8248	1.00	1.8248	0.100	0.1826	6.6
14	12:47	4.70	0.6	0.450	0.6	0.180	1.6545	1.00	1.6545	0.090	0.1483	5.3
15	12:50	4.90	0.6	0.490	0.6	0.196	1.1998	1.00	1.1998	0.097	0.1165	4.2
16	12:53	5.10	0.6	0.430	0.6	0.172	0.0003	1.00	0.0003	0.085	0.0000	0.0
17	12:54	5.30	0.6	0.360	0.6	0.144	-0.0003	1.00	-0.0003	0.072	0.0000	0.0
18	12:54	5.50	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

Rows in italics indicate a QC warning. See the Quality Control page of this report for more information.

Discharge Measurement Summary

Date Generated: Tue May 8 2012

File Information

File Name

INDCR2.121.WAD

Start Date and Time

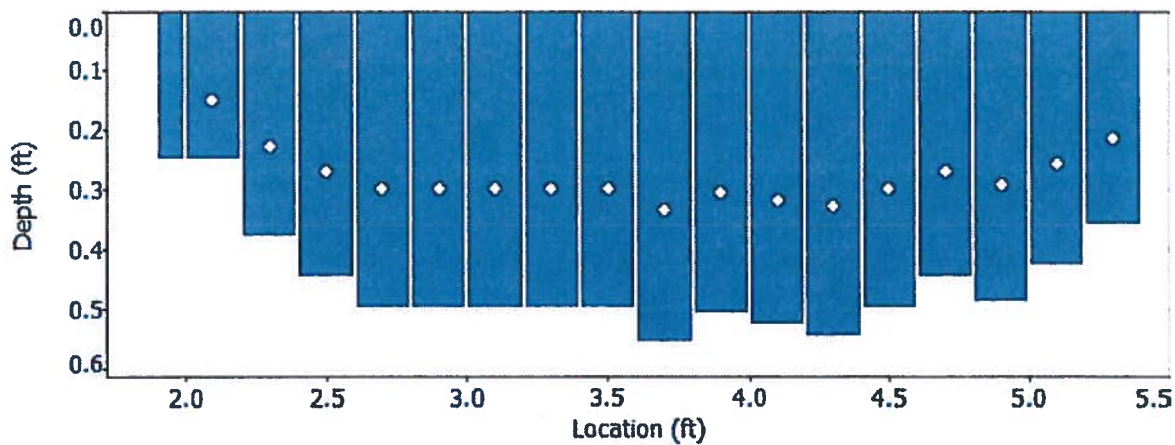
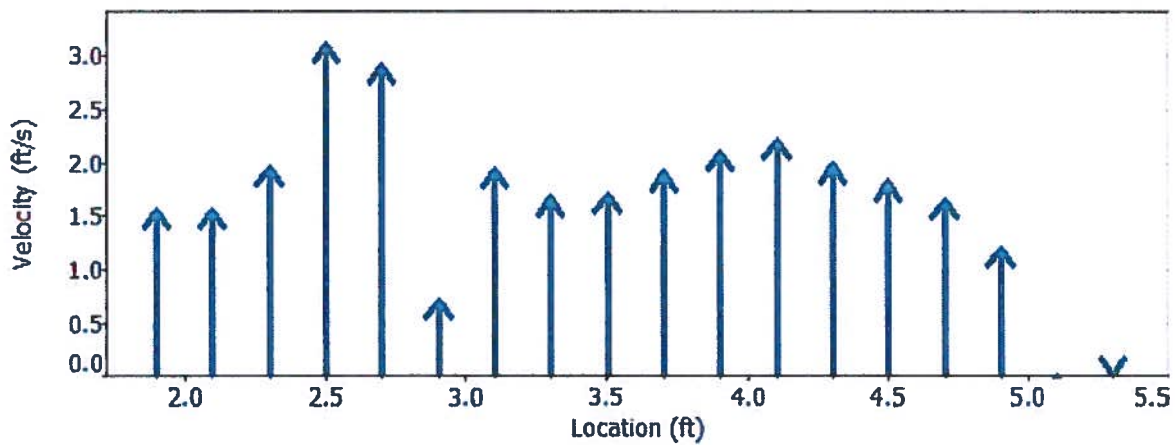
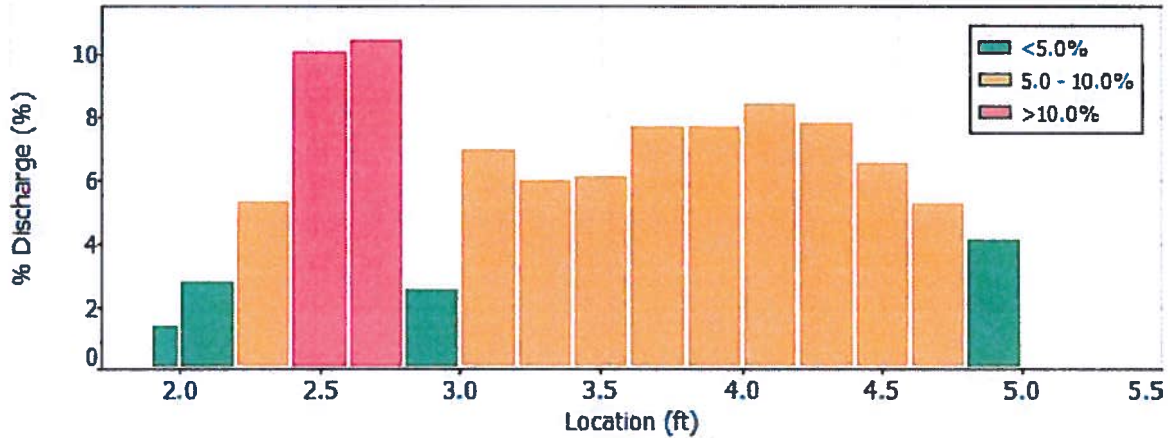
2012/04/05 12:33:22

Site Details

Site Name

Operator(s)

ECARLSEN



Discharge Measurement Summary

Date Generated: Tue May 8 2012

File Information

File Name INDCR2.121.WAD
Start Date and Time 2012/04/05 12:33:22

Site Details

Site Name
Operator(s) ECARLSEN

Quality Control

St	Loc	%Dep	Message
1	2.10	0.6	High standard error: 0.151
2	2.30	0.6	High standard error: 0.161
3	2.50	0.6	High number of spikes: 3
5	2.90	0.6	High standard error: 0.133
15	4.90	0.6	High standard error: 0.146
16	5.10	0.6	High number of spikes: 5
17	5.30	0.6	SNR (61.9) is different from typical SNR (32.6)
		0.6	High SNR variation during measurement: 6.0,4.3