Idaho Dept of Water Resources
ESPA Spring Diversion Inventory

District 36A **Date** 7/12/04

Basin 36 **Ditch or users association**

Diversion Name Padgett ditch **POD Number** 410010

Spring Name **Tributary to**

GPS site ID 40001537 **Inventory Examiner** C. Knowles

Owner Cliff Jensen (contact) **Operator**

Measuring Device Data			
Type of Device or Method	4' Contract Rec weir	(Standard)	Non-standard
If non-standard describe:			

Discharge and Measurement Method	
How Measurement was taken: (Staff gauge, current meter, polysonic meter)	S.G.
Staff gauge Head Reading .51	(Current Meter) or poly-sonic measurement: 4.84 cfs 7/13/04
Time of Day 14:40	
Table used for Q ~~#38~~ 47-2	Meter Measurement Confidence 2% 5% 10% +10%
Total Flow = 4.73 gb 3.54 CFS	Does device meet IDWR standards? (YES) NO
Discharge notes attached? YES (NO)	Measurement Taken by: T. Luke/L. Bab
Calculations Attached? YES (NO)	Is follow-up Needed? YES NO

Concerns about measuring device: Just above Padgett diversion a 1 HP end suction pump in ditch - spring above Motel is now dumping into Padgett just below diversion. Somewhat a trade due to conveyance issues. / 2 small diversions above measuring device. Some water is returned to creek after irrigation water is taken out.

On 7/13/04 - meas 4.84 cfs using current meter, weir reading @ same time was 4.32 cfs; water was diverted upstream of weir.

Current meter measurement

Site: Padgett Ditch
Date: 7/13/2004
WMIS ID: 410010
Source: Billingsley Creek

Staff gage readings: 0.48 feet @
feet @

Meter type: 4-foot contracted rectangular weir
Rating curve: Standard contracted rectangular weir formula
Meter discharge: 4.32 ft^3/s

Measured approximately 100 feet below the headgate, there are two small diversions between the current meter location and the weir. This measurement is intended to measure the total diversion, not calibrate the weir.

	Distance feet	Depth feet	Obs Depth	Velocity ft/sec	Width feet	Area ft^2	Discharge ft^3/s
REW	1.7	0.8		0	0.15	0.12	0
	2	0.8	0.6	0.07	0.4	0.32	0.0224
	2.5	0.8	0.6	0.36	0.5	0.4	0.144
	3.0	0.9	0.6	1.32	0.5	0.45	0.594
	3.5	1.0	0.6	1.17	0.5	0.5	0.585
	4	1.0	0.6	1.25	0.5	0.5	0.625
	4.5	0.97	0.6	1.64	0.5	0.485	0.7954
	5	1.0	0.6	1.26	0.5	0.5	0.63
	5.5	1.0	0.6	0.76	0.5	0.5	0.38
	6	0.95	0.6	0.23	0.5	0.475	0.10925
	6.5	1.0	0.6	0.9	0.5	0.5	0.45
	7.0	1.0	0.6	1.21	0.4	0.4	0.484
LEW	7.3	1.0	calc	0.87	0.15	0.15	0.1305
Total					5.6	5.3	4.95
Error							NA

Average Velocity = 0.93 ft/sec

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

Water District 36-A

DISCHARGE MEASUREMENT NOTES

Meas. No. _____

Comp. by TL

Checked by JB

Sta. No. _____

PADGETT Ditch

Date 7/13-04 Party T. LUKE

Width _____ Area _____ Vel. _____ G. H. _____ Disch. 4.84 cfs

Method 6 No. secs. 13 G. H. change _____ in _____ hrs. Susp. _____

Method coef. _____ Hor. angle coef. _____ Susp. coef. _____ Meter No. _____

GAGE READINGS				
Time		Recorder	Inside	Outside
Weighted M. G. H.				
G. H. correction				
Correct M. G. H.				

Type of meter SWOFFER 2100

Date rated _____ for rod, other.

Meter _____ ft. above bottom of weight.

Spin before meas. OK after OK

Meas. plots ____ % diff. from rating _____

Wading, cable, ice, boat, upstr., downstr., side bridge _____ feet, mile, above, below gage, and _____

Check-bar, found _____ changed to _____ at _____

Correct _____

Levels obtained _____

Measurement rated excellent (2%), good (5%), fair (8%), poor (over 8%), based on following conditions: Cross section Fairly Flat Bottom w/small Rock

Flow Smooth/Laminar Weather Sunny/Hot

Other _____ Air _____ °F@ _____

Gage _____ Water _____ °F@ _____

_____ Record removed _____ Intake flushed U L

Observer _____

Control _____

Remarks MEAS. R/W Headgate in Ditch = 100'
Rock BANKS. LARGE Rock = 6' From REW
WEIR D/S = 0.48' on HandGage = 4.32 cfs

G. H. of zero flow _____ ft. 0.47' on Stilwell.
4' Rect. Weir

River at—

Angle coefficient	Dist. from initial point	Width	Depth	Observation depth	Revolutions	Time in seconds	VELOCITY: At point	VELOCITY: Mean in vertical	Adjusted for hor. angle or	Area	Discharge
		60B	on								
REW	1.7'	.15 .015	0.8				0			.12 .012	0
	2.0	.4	0.8				.07			.32	.02
	2.5	.5	0.8				.26			.40	.14
	3.0	.5	0.9				1.32			.45	.59
	3.5	.5	1.0				1.17			.5	.59
	4.0	.5	1.0				1.25			.5	.63
	4.5	.5	0.97				1.64			.485	.80
	5.0	.5	1.0				1.26			.5	.63
	5.5	.5	1.0				0.76			.5	.38
	6.0	.5	.85				0.23			0.475 .5	0.14 .12
	6.5	.5	1.0				0.90			.5	.45
	7.0	.40	1.0				1.21			.40	.48
LEW	7.3	.15 .015	1.0				0.87 0.60	est. @ Rock abutment		.15 0.015	.016 .13
	6.26 pm										4.84
⊙											4.95

V @ 0.3d ≈ 0.90 V_n = 1.21 fps

V_n = 1.34 fps

@ wall V = 0.65 V_n = 0.87 fps