

Born ditches

Estimating Conveyance Loss using the Worstell Method

Claim No. 75-4403

Formula: $S = (w)(i)(0.0667)$

Where: S = loss in cfs per mile

w = top width of the high water mark in feet

i = loss rate in feet per day (see Table)

Type of soil	i (ft/day)
medium clay loam	0.5 - 1.5
impervious clay	0.5
medium soils	1.0
somewhat pervious soils	1.5 - 2.0
gravels	2.5 - 5.0

Worksheet:

$$w = 2.7'$$

$$i = 2 \text{ ft/day}$$

$$\text{ditch length (mi.)} = 2,640' = 0.5 \text{ mile}$$

Conveyance Loss:

$$S = (2.7)(2)(0.0667) = 0.36 \text{ cfs/mile}$$

$$\text{Loss} = 0.18 \text{ cfs}$$

$$(0.36 \text{ cfs/mile})(0.5 \text{ miles}) = 0.18 \text{ cfs}$$

$$9.7 \text{ Ac} \times 0.02 \text{ cfs/Ac} = 0.19 \text{ cfs}$$

$$\text{ditch loss} = +0.18 \text{ cfs}$$

$$\underline{0.37 \text{ cfs}}$$

File IRON CREEK 5

Jimmy

Start Date and Time ----- 2004/06/02 11:39:52
 Sensor Type ----- FlowTracker Handheld ADV
 SerialNumber ----- P170
 Averaging Time ----- 20 sec
 Units system ----- ENGLISH
 Staff height ----- 0.00 ft
 Gauge height ----- 0.00 ft
 Rated discharge ----- 0.000 cfs
 Starting edge of water ----- LEW
 Number of stations ----- 8
 Total width ----- 2.7 ft
 Total area ----- 0.82 ft^2
 Total discharge ----- 1.572 cfs
 Mean velocity ----- 1.858 ft/s
 Mean SNR ----- 31.9 dB
 Mean std. error of vel. ----- 0.09 ft/s
 Mean boundary conditions -- 0 (BEST)
 Boundary condition (Bnd) -- 0: BEST
 1: GOOD
 2: FAIR
 3: POOR

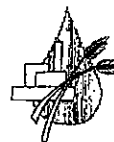
ST.	Loc.	Depth	IceD	MDep	Clock	Npts	Spike	Vel	SNR	Angle	Verr	Bnd	Temp	Corr	MeanV	Area	Flow
	(ft)	(ft)	(ft)	(*D)	(ft/s)	(dB)	(deg)	(ft/s)	(degF)	Fact	(ft/s)	(ft^2)	(cfs)				
0	1.0	0.00	0.00	.0	00:00	0	0	0.00	0.0	0	0.0	0	0.00	1.00	0.802	0.00	0.000
1	1.3	0.20	0.00	.6	11:39	20	0	0.802	29.6	1	0.03	0	47.01	1.00	0.802	0.060	0.048
2	1.6	0.20	0.00	.6	11:40	20	0	1.383	31.3	7	0.02	0	46.96	1.00	1.383	0.060	0.083
3	1.9	0.30	0.00	.6	11:41	20	1	2.764	30.5	7	0.07	0	46.87	1.00	2.764	0.090	0.249
4	2.2	0.35	0.00	.6	11:41	20	0	3.227	30.9	5	0.18	0	46.87	1.00	3.227	0.105	0.338
5	2.5	0.40	0.00	.6	11:42	20	0	3.205	31.3	12	0.14	0	46.89	1.00	3.205	0.120	0.384
6	2.8	0.45	0.00	.6	11:43	20	0	2.814	31.3	10	0.09	0	46.89	1.00	2.814	0.135	0.380
7	3.1	0.45	0.00	.6	11:44	20	1	0.665	30.0	-12	0.17	0	46.90	1.00	0.665	0.135	0.090
8	3.4	0.40	0.00	.6	11:45	20	0	0.003	39.9	27	0.00	0	46.94	1.00	0.003	0.120	0.000
9	3.7	0.00	0.00	.0	00:00	0	0	0.00	0.0	0	0.0	0	0.00	1.00	0.003	0.00	0.000

SCANNED

1170

JUN 16 1983

STATE OF IDAHO
DEPARTMENT OF WATER RESOURCES



Department of Water Resources
Eastern District Office

CLAIM TO A WATER RIGHT

Under the provisions of Section 42-243, Idaho Code, any person using or claiming rights to the public waters of Idaho established by diversion and application to a beneficial use must file a claim with the Department of Water Resources on or before June 30, 1983. Exempted from this filing are single family domestic uses as defined in Section 42-230(d), Idaho Code. Also exempted are rights represented by a permit, license, decree, adjudicated right, or a previously filed claim.

The filing of this claim does not confirm the water right claimed but failure to file may result in forfeiture of a water right.

Notice is hereby given that Eugene G. Hursey
(Name of Claimant)

Star Route Box 117, Salmon, Idaho 83467
(Mailing Address) (Zip Code)

Telephone No. _____

claims a right to the diversion and beneficial use of the surface or ground water. The extent and nature of said claim is as follows:

(1) Date of priority: (When was the water first applied to a beneficial use) April 22, 1931

A claim is not acceptable on a ground water source with a priority later than March 25, 1963 or on a surface water source with a priority later than May 20, 1971. An exception is that a claim may be filed on single family domestic use from a ground water source.

(2) Describe the source of water: (Name of stream, lake, spring, etc., or ground water)

Iron Creek tributary to Salmon

(3) Describe the purpose for which the water has been used and the time during the year when you have used the right claimed:

(cfs, gpd, AFA)		(Domestic, Irrigation, Stock, Etc.)		(Both dates inclusive)	
				(Mo., Day)	(Mo., Day)
Quantity	<u>0.20 cfs</u>	Use	<u>Irrigation</u>	Period of Use From <u>4/1</u>	To <u>11/1</u>
Quantity	_____	Use	_____	Period of Use From _____	To _____
Quantity	_____	Use	_____	Period of Use From _____	To _____
Quantity	_____	Use	_____	Period of Use From _____	To _____
Quantity	_____	Use	_____	Period of Use From _____	To _____

(4) 0.20 cfs TOTAL QUANTITY USED.
(cfs. apd. A'FA)

(5) A) Point of diversion: (Location of point where water is diverted from its source)

Sw $\frac{1}{4}$ NW $\frac{1}{4}$, Sec. 8 Twp. 18N Rge. 21E B.M., County of Lemhi

Additional points of diversion:

B) Describe means of diversion of water: (Pump and pipeline, well, diversion dam, reservoir, length of ditch and field, etc.). Give sizes and capacities: be as specific as possible. Describe any changes in the system and give the date of the change. *Diversion Dam to ditch for flood*

(6) A) Describe location of use by listing number of irrigated acres within each 40-acre tract in appropriate box. If use is not for irrigation, place an "X" in appropriate box to show location.

[illegible]

No. of acres 10

B) If water is used for other than irrigation, fully describe that use, being as specific as possible: _____

NOTE: Include here the type and number of stock watered:

(7) If you are claiming water as a member of an organization, list name of organization:

MEGROFILMED