

Manning Equation - Data Collection

A GENERAL INFORMATION

1. Person conducting measurement: CISCOLL
2. Purpose of measurement: SW
3. Water Right or Claim No. (if known): 69-4020
4. Name of stream: WILD HORSE RIVER
5. Location of diversion:
 - i) Twp _____, Rng _____, Sec _____, $\frac{1}{4}$ _____ $\frac{1}{4}$
 - ii) POD name (if known): WILD HORSE DITCH
 - iii) GPS file name: 120-125 415-119-F/none
 - iv) GPS site tag number: A00 16817

B CROSS SECTION DATA

1. Basis: ☐ high water mark ☒ ditch capacity
2. Location Notes: 6' wide

No.	Reading	Distance	No.	Reading	Distance	No.	Reading	Distance
1	<u>1.8</u>	<u>1'</u>	8	_____	_____	15	_____	_____
2	<u>1.2</u>	<u>2'</u>	9	_____	_____	16	_____	_____
3	<u>1.2</u>	<u>3'</u>	10	_____	_____	17	_____	_____
4	<u>1.7</u>	<u>4'</u>	11	_____	_____	18	_____	_____
5	_____	_____	12	_____	_____	19	_____	_____
6	_____	_____	13	_____	_____	20	_____	_____
7	_____	_____	14	_____	_____			

C SLOPE DATA

1. Basis: ☐ high water mark ☒ channel bottom ☐ land surface
2. Level Readings:

	<u>upstream</u>	<u>downstream</u>
Upper stadia	<u>6.25</u>	<u>8.50</u>
Center <u>460'</u>	<u>3.98</u>	<u>7.98</u> <u>100'</u>
Lower stadia	<u>1.66</u>	<u>7.45</u>
Stadia difference	(_____ + _____) x 100 = _____	

9-30

Date

Signature of person conducting measurement

BASIC "n" CHANNEL MATERIAL				CHANNEL OBSTRUCTIONS			
earth	.020		(1)	negligible	.000		(1)
rock	.025		(2)	minor	.010		(2)
fine gravel	.024		(3)		.015		(3)
coarse gravel	.028		(4)	appreciable	.020		(4)
					.030		(5)
				severe	.040		(6)
					.050		(7)
					.060		(8)
SURFACE IRREGULARITY				VEGETATION			
smooth	.000		(1)	low	.005		(1)
minor	.005		(2)		.010		(2)
moderate	.010		(3)	medium	.015		(3)
severe	.020		(4)		.020		(4)
					.025		(5)
				high	.030		(6)
					.040		(7)
					.050		(8)
				very high	.060		(9)
					.075		(10)
					.100		(11)
				VARIATIONS IN SIZE AND SHAPE OF CROSS-SECTION			
gradual	.000		(1)	minor	1.00		(1)
occasional	.005		(2)	appreciable	1.15		(2)
frequent	.010		(3)	severe	1.30		(3)
	.015		(4)				

MANNING EQUATION CHANNEL CAPACITY RESULTS

12-07-2005

File Number: 69-4020

Claimant:

Channel measured: WILDHORSE RIVER DITCH; A0016817

Date of measurement: 09/30/05

Measurement location:

Calculation prepared by: MIKE CISCELL

Comments about the measurement:

The results of the calculation are:

The length of the channel measured is 500 feet.

The upstream and downstream rod readings are 3.78 and 8.00 feet.

The channel cross section is 3.60 ft-sq.

The wetted perimeter is 5.72 feet.

The hydraulic radius is 0.63 feet.

The slope is 0.0084

The roughness coefficient is 0.0400

The flow velocity is 2.515 ft/sec.

The rate of flow is 9.05 cfs.

CROSS SECTION NUMBER 1

For File Number 69-4020 for the WILDHORSE RIVER DITCH; A0016817

Number	Rod Reading	Water Depth	Distance
1	0.00	0.00	0.00
2	0.80	0.80	1.00
3	1.20	1.20	2.00
4	1.20	1.20	3.00
5	0.40	0.40	4.00
6	0.00	0.00	5.00

The area for this cross section is 3.60 square feet
and the wetted perimeter is 5.72 feet.