

Manning Equation - Data Collection

A GENERAL INFORMATION

1. Person conducting measurement: CUSCELL
2. Purpose of measurement: Bu
3. Water Right or Claim No. (if known): 69-4003
4. Name of stream: INDIAN CREEK
5. Location of diversion:
 - i) Twp _____, Rng _____, Sec _____, $\frac{1}{4}$ _____ $\frac{1}{4}$
 - ii) POD name (if known): CLAYTON DITCH
 - iii) GPS file name: 283-290, 293-299 HASTINGS SPRING
 - iv) GPS site tag number: A00 16825 - 30' upstream on ditch from headgate
100' downstream of head.

B CROSS SECTION DATA

1. Basis: ☐ high water mark ☐ ditch capacity
2. Location Notes: 15" pipe = overflow at rd limits flow.
MEASUREMENT TAKEN @ "

No.	Reading	Distance	No.	Reading	Distance	No.	Reading	Distance
1	<u>0</u>	<u>0</u>	8	_____	_____	15	_____	_____
2	<u>0.4</u>	<u>0.5</u>	9	_____	_____	16	_____	_____
3	<u>0.4</u>	<u>1.0</u>	10	_____	_____	17	_____	_____
4	<u>0.3</u>	<u>1.5</u>	11	_____	_____	18	_____	_____
5	<u>0.3</u>	<u>2.0</u>	12	_____	_____	19	_____	_____
6	<u>0.3</u>	<u>2.5</u>	13	_____	_____	20	_____	_____
7	<u>0</u>	<u>3</u>	14	_____	_____			

C SLOPE DATA

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

Upstream	downstream	
Upper stadia	_____	_____
Center	<u>75</u> <u>5.28</u>	<u>6.89</u> <u>100'</u>
Lower stadia	_____	_____
Stadia difference	(_____ + _____) x 100 = _____	

Date

Signature of person conducting measurement

10-21-05

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				DEGREE OF MEANDERING			
	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:

Claimant:

Channel measured: INDIAN CREEK DITCH CLAIMS; A0016825

Date of measurement: 10/21/05

Measurement location:

Calculation prepared by: MIKE CISCELL

Comments about the measurement:

The results of the calculation are:

The length of the channel measured is 175 feet.

The upstream and downstream rod readings are 5.28 and 6.89 feet.

The channel cross section is 0.85 ft-sq.

The wetted perimeter is 3.23 feet.

The hydraulic radius is 0.26 feet.

The slope is 0.0092

The roughness coefficient is 0.0500

The flow velocity is 1.173 ft/sec.

The rate of flow is 1.00 cfs.

CROSS SECTION NUMBER 1

For File Number for the INDIAN CREEK DITCH CLAIMS; A0016825

Number	Rod Reading	Water Depth	Distance
1	0.00	0.00	0.00
2	0.40	0.40	0.50
3	0.40	0.40	1.00
4	0.30	0.30	1.50
5	0.30	0.30	2.00
6	0.30	0.30	2.50
7	0.00	0.00	3.00

The area for this cross section is 0.85 square feet
and the wetted perimeter is 3.23 feet.