

Manning Equation - Data Collection

A GENERAL INFORMATION

1. Person conducting measurement: CISCCELL
2. Purpose of measurement: BU
3. Water Right or Claim No. (if known): 69-4077/69-4105
4. Name of stream: DEAN CR
5. Location of diversion:
 - i) Twp _____, Rng _____, Sec _____, $\frac{1}{4}$ _____ $\frac{1}{4}$
 - ii) POD name (if known): WARNER DITCH
 - iii) GPS file name: _____
 - iv) GPS site tag number: A00 16892

B CROSS SECTION DATA

1. Basis: ☐ high water mark ☒ ditch capacity
2. Location Notes: TAKEN @ RD CROSSING

No.	Reading	Distance	No.	Reading	Distance	No.	Reading	Distance
1	<u>0</u>	<u>0</u>	8	<u>0</u>	<u>0</u>	15	<u>0.85</u>	<u>7</u>
2	<u>1.75</u>	<u>1</u>	9	<u>0.7</u>	<u>1</u>	16	<u>0</u>	<u>8</u>
3	<u>1.85</u>	<u>2</u>	10	<u>1.45</u>	<u>2</u>	17	_____	_____
4	<u>1.9</u>	<u>3</u>	11	<u>1.45</u>	<u>3</u>	18	_____	_____
5	<u>1.85</u>	<u>4</u>	12	<u>1.45</u>	<u>4</u>	19	_____	_____
6	<u>1.5</u>	<u>5</u>	13	<u>1.35</u>	<u>5</u>	20	_____	_____
7	<u>0</u>	<u>6</u>	14	<u>1.35</u>	<u>6</u>			

C SLOPE DATA

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

upstream Upper stadia _____ Center <u>75'</u> <u>4.94</u> Lower stadia _____ Stadia difference _____	downstream Upper stadia _____ Center <u>90'</u> <u>6.86</u> Lower stadia _____ Stadia difference _____
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(_____ + _____) x 100 = _____

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				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: WARNER DITCH CLAIMS
Claimant:
Channel measured: BEAR CREEK DITCH
Date of measurement: 10/13/05
Measurement location:

Calculation prepared by: MIKE CISCELL
Comments about the measurement:

The results of the calculation are:

The length of the channel measured is 165 feet.
The upstream and downstream rod readings are 4.94 and 6.86 feet.
The channel cross section is 8.73 ft-sq.
The wetted perimeter is 8.40 feet.
The hydraulic radius is 1.04 feet.
The slope is 0.0116
The roughness coefficient is 0.0400
The flow velocity is 4.123 ft/sec.
The rate of flow is 35.97 cfs.

CROSS SECTION NUMBER 1

For File Number WARNER DITCH CLAIMS for the BEAR CREEK DITCH

Number	Rod Reading	Water Depth	Distance
1	0.00	0.00	0.00
2	1.75	1.75	1.00
3	1.85	1.85	2.00
4	1.90	1.90	3.00
5	1.85	1.85	4.00
6	1.50	1.50	5.00
7	0.00	0.00	6.00

The area for this cross section is 8.85 square feet
and the wetted perimeter is 7.89 feet.

CROSS SECTION NUMBER 2

For File Number WARNER DITCH CLAIMS for the BEAR CREEK DITCH

Number	Rod Reading	Water Depth	Distance
1	0.00	0.00	0.00
2	0.70	0.70	1.00
3	1.45	1.45	2.00
4	1.45	1.45	3.00
5	1.45	1.45	4.00
6	1.35	1.35	5.00
7	1.35	1.35	6.00
8	0.85	0.85	7.00
9	0.00	0.00	8.00

The area for this cross section is 8.60 square feet
and the wetted perimeter is 8.91 feet.