U.S. Department of the Interior
Fish and Wildlife Service
Water Resources Division

FAXFORM

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FAX No.: _____ Date: May 18, 1996 Time: _____

TO: Gene

FROM: Jana

SUBJECT: Yesterday's great field work

Sending FAX cover sheet + _____ pages of text = _____ pages total.

— Sorry it took me all day to work up the data

The values below 1 foot are all estimated by me. Because the linear regression used to develop the straight lines represented any flow below 1 foot as a negative number. We should use a curve fitting program. But r^2's are 96% + 90% so the results are good.

5-21-96 MacFarlane

Evans

staff gage @ 1.5'

(looking d/s)

distance (tenths of feet)	depth (tenths of feet)	velocity (ft/sec)
right edge of H2O 1.4		
3.0	1.0	.65
3.5	1.0	.9
4.0	1.2	1.15
4.5	1.4	1.15
5.0	1.5	1.25
5.5	1.5	1.2
6.0	1.6	1.20
6.5	1.65	1.15
7.0	1.7	1.15
7.5	1.7	1.2
8.0	1.7	1.13
8.5	1.7	1.28
9.0	1.6	1.28
9.5	1.5	1.20
10.0	1.3	.35
11.3 (left edge of H2O)		
		12.753

Blaine had turned gate 18 turns
we turned an additional 18

staff gage @ 1.7'

right edge of bank 1.15

distance	depth	velocity
2.0	.6	.34
3.0	1.1	1.5
4.0	1.4	1.8
5.0	1.2	1.9
6.0	1.7	1.9
7.0	1.9	2.15
8.0	2.0	2.0
9.0	1.8	2.10
10.0	1.5	.7
11.6 (left bank)		21.49

Top of Dam outlet structure 6.10
invert of Dam outlet 11.30

Bottom of new structure floor 13.15

FWS Invert 14.70
Rancher invert 13.75

1.7
1.8

Evans

staff gage @ 2.15

distance	depth	velocity
2.7 (left edge)		
4.0	.8	.7
5.0	1.5	1.2
6.0	2.2	1.3
7.0	2.3	1.35
8.0	2.2	1.65
9.0	2.0	1.2
10.0	2.0	.95
11.0	1.95	1.25
12.0	1.8	1.05
13.0	1.4	.75
14.0	.8	.10
15.0	.6	.05
16.4 (right edge)		

25.56 CFS

staff gage @ 1.28

distance	depth	velocity
4.8 (left edge)		
6.0	1.4	.35
7.0	1.4	.5
8.0	1.4	.4
9.0	1.3	.4
10.0	1.2	.25
11.0	1.1	.5
12.0	.9	.3
13.0	.6	.2
13.5 (right edge)		

3.20

staff gage @ .95

distance	depth	velocity
5.5 (left edge)		
6.0	1.0	.2
7.0	1.1	.15
8.0	1.0	.2
9.0	.85	.05
10.0	.8	.05
11.0	.6	.05
12.0	.6	0
13.0	.3	0
13.2 (right edge)		

~~1.81~~

1.143

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS
AMPAD

FWS

Staff gage @ 1.87

distance	depth	velocity
12.3 (right edge)		
11.0	1.3	.15
10.0	1.9	.75
9.0	1.3	.7
8.0	1.2	1.0
7.0	1.0	.35
6.0	1.0	.1
5.0	1.0	0
4.0	1.0	.06
3.7 (left edge)		

3.86

Staff gage @ 1.1

distance	depth	velocity
11.2 (right edge)		
10.0	.8	.02
9.0	.6	.05
8.0	.35	.4
7.0	.20	1.78
6.0	.20	1.70
5.0		0
4.0 (left edge)		

.882 cfs

Staff gage @ 2.3

distance	depth	velocity
12.5 (right edge)		
11.0	1.8	.4
10.0	1.9	1.3
9.0	1.7	1.3
8.0	1.4	1.15
7.0	1.4	1.15
6.0	1.2	.5
5.0	.5	0
2.7 (left edge)		

9.610

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS
AMPAD

FWS

staff gage @ 1.7'

distance	depth	velocity
12.6 (right edge)		
11.0	1.3	.15
10.0	1.3	.85
9.0	1.4	.70
8.0	1.1	.47
7.0	.95	.45
6.0	.95	.07
5.0	.90	0
3.7 (leftedge)		

3.25

staff gage @ 3.22

distance	depth	velocity
13.5 (right edge)		
12.0	1.0	.1
11.0	2.7	.8
10.0	3.2	1.2
9.0	2.75	1.5
8.0	2.5	1.4
7.0	2.3	1.1
6.0	2.3	.7
5.0	2.3	.18
4.0	2.0	0
3.0	.9	.02
.8 (left edge)		

17.5

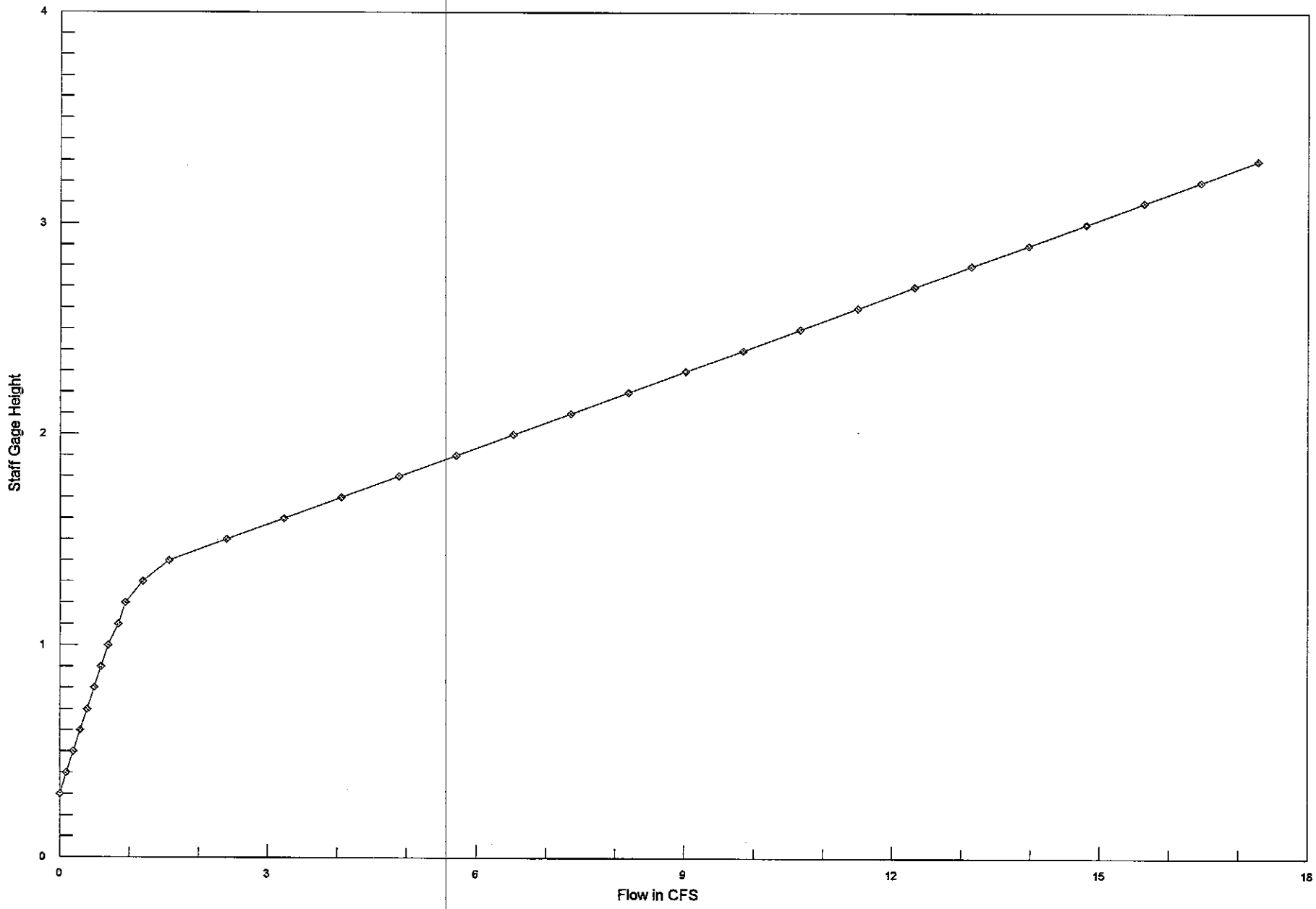
Staffgage @ 2.66

distance	depth	velocity
13.0 (right edg)		
11.0	1.2	.10
10.0	2.7	1.10
9.0	2.2	1.3
8.0	2.0	1.3
7.0	1.8	1.05
6.0	1.8	.40
5.0	1.8	.30
4.0	1.4	0
1.3 (left edge)		

12.04

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS
AMPAD

FWS CANAL FROM MACFARLANE RES.



FWS CANAL AT MACFARLANE RESERVOIR
Staff Gauge Height =1.1
May 17, 1995

	Distance	Depth	Velocity	Area	CFS
LEW	4.000	0.000	0.000	0.000	0.000
	5.000	0	1.700	0.200	0.340
	6.000	0.200	1.780	0.200	0.356
	7.000	0.200	0.400	0.350	0.140
	8.000	0.350	0.050	0.600	0.030
	9.000	0.600	0.020	0.800	0.016
	10.000	0.800	0.000	0.000	0.000
	11.200	0.000	0.000	0.000	0.000
				CFS =	0.882

FWS CANAL AT MACFARLANE RESERVOIR
Staff Gauge Height =1.7
May 17, 1995

	Distance	Depth	Velocity	Area	CFS
LEW	3.700	0.000	0.000	0.000	0.000
	5.000	0.9	0.000	1.093	0.000
	6.000	0.950	0.070	0.950	0.067
	7.000	0.950	0.450	1.100	0.495
	8.000	1.100	0.470	1.400	0.658
	9.000	1.400	0.700	1.300	0.910
	10.000	1.300	0.850	1.300	1.105
	11.000	1.300	0.150	0.000	0.000
	12.600	0.000	0.000	0.000	0.000
				CFS =	3.235

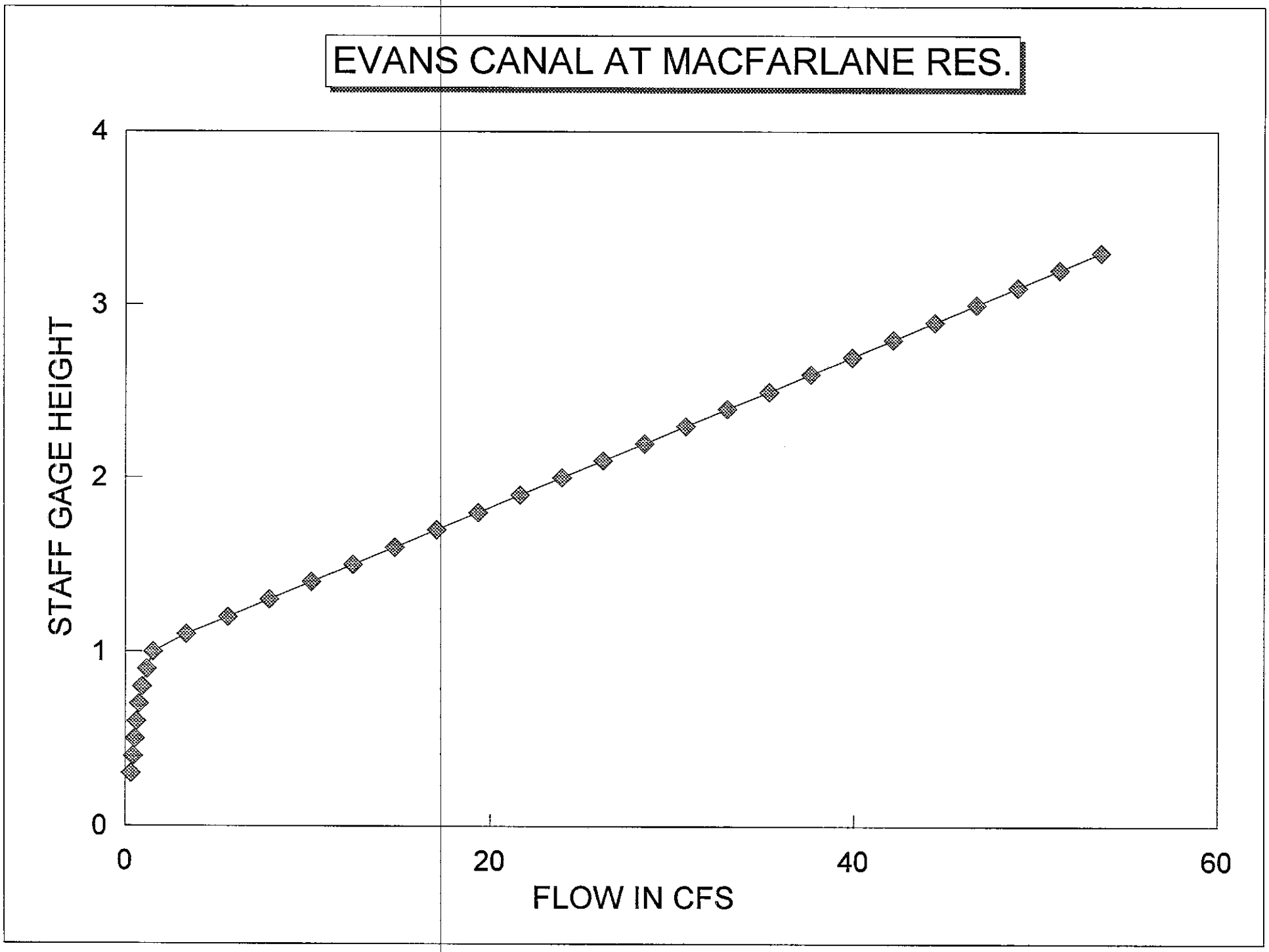
1.1	0.882
1.7	3.25
1.87	3.86
2.3	9.61
2.66	12.04
3.22	17.5

Regression Output:

Constant		-10
Std Err of Y Est		1.359788
R Squared		0.96291
No. of Observations		6
Degrees of Freedom		4
X Coefficient(s)	8.265607	
Std Err of Coef.	0.811112	

FWS CANAL AT MA

gage heigh	flow cfs
0.3	0.0
0.4	0.1
0.5	0.2
0.6	0.3
0.7	0.4
0.8	0.5
0.9	0.6
1	0.7
1.1	0.9
1.2	1.0
1.3	1.2
1.4	1.6
1.5	2.4
1.6	3.2
1.7	4.1
1.8	4.9
1.9	5.7
2	6.5
2.1	7.4
2.2	8.2
2.3	9.0
2.4	9.8
2.5	10.7
2.6	11.5
2.7	12.3
2.8	13.1
2.9	14.0
3	14.8
3.1	15.6
3.2	16.4
3.3	17.3


EVANS CANAL AT MACFARLANE RES.
STAFF GAGE HEIGHT
0
1
2
3
4
0
20
40
60
FLOW IN CFS

Evans Canal **May 21, 1996**
Staff Gauge Height = 0.2.15

	Distance	Depth	Velocity	Area	CFS
LEW	2.700	0	0.000	0.000	0.000
	4.000	0.800	0.700	1.725	1.208
	5.000	1.500	1.200	2.200	2.640
	6.000	2.200	1.300	2.300	2.990
	7.000	2.300	1.350	2.200	2.970
	8.000	2.200	2.100	2.000	4.200
	9.000	2.000	1.900	2.000	3.800
	10.000	2.000	1.500	1.950	2.925
	11.000	1.950	1.480	1.800	2.664
	12	1.800	1.050	1.400	1.470
	13	1.400	0.750	0.800	0.600
	14	0.800	0.100	0.600	0.060
	15	0.600	0.100	0.420	0.042
REW	16.4	0.000	0.000	0.000	0.000
				CFS =	25.568

Evans Canal **May 21, 1996**
Staff Gauge Height =1.5

	Distance	Depth	Velocity	Area	CFS
LEW	1.400	0.000	0.000	0.000	0.000
	3.000	1.000	0.650	1.050	0.683
	3.500	1.000	0.900	0.500	0.450
	4.000	1.200	1.150	0.600	0.690
	4.500	1.400	1.150	0.700	0.805
	5.000	1.500	1.250	0.750	0.938
	5.500	1.500	1.200	0.750	0.900
	6.000	1.600	1.200	0.800	0.960
	6.500	1.650	1.150	0.825	0.949
	7.000	1.700	1.150	0.850	0.978
	7.500	1.700	1.200	0.850	1.020

0.950	1.140
1.280	3.200
1.500	12.750
1.700	21.490
2.150	25.560

Regression Output:

Constant		-21.8085
Std Err of Y Est		3.764814
R Squared		0.90884
No. of Observations		5
Degrees of Freedom		3
X Coefficient(s)	22.84731	
Std Err of Coef.	4.177663	

RELEASES FROM MACFARLANE RESERVOIR

EVANS CANAL gage height	flow cfs	FWS CANAL gage height	flow cfs
0.3	0.3	0.3	0.00
0.4	0.4	0.4	0.10
0.5	0.5	0.5	0.20
0.6	0.6	0.6	0.30
0.7	0.8	0.7	0.40
0.8	0.9	0.8	0.50
0.9	1.2	0.9	0.60
1	1.5	1	0.70
1.1	3.3	1.1	0.85
1.2	5.6	1.2	1.00
1.3	7.9	1.3	1.20
1.4	10.2	1.4	1.57
1.5	12.5	1.5	2.40
1.6	14.7	1.6	3.22
1.7	17.0	1.7	4.05
1.8	19.3	1.8	4.88
1.9	21.6	1.9	5.70
2	23.9	2	6.53
2.1	26.2	2.1	7.36
2.2	28.5	2.2	8.18
2.3	30.7	2.3	9.01
2.4	33.0	2.4	9.84
2.5	35.3	2.5	10.66
2.6	37.6	2.6	11.49
2.7	39.9	2.7	12.32
2.8	42.2	2.8	13.14
2.9	44.4	2.9	13.97
3	46.7	3	14.80
3.1	49.0	3.1	15.62
3.2	51.3	3.2	16.45
3.3	53.6	3.3	17.28