

U.S. DEPARTMENT OF THE INTERIOR  
U.S. Geological Survey  
WATER RESOURCES DIVISION  
DISCHARGE MEASUREMENT AND  
GAGE INSPECTION NOTES

Meas. No. 23  
Comp. by Pflume  
Checked by \_\_\_\_\_

Sta. No. \_\_\_\_\_  
Sta. Name F8 Crescent  
Date Jan 9, 2003 Party PAS, JDB, KDC  
Width \_\_\_\_\_ Area \_\_\_\_\_ Vel. \_\_\_\_\_ G.H. \_\_\_\_\_ Disch. 0.169 - Pflume  
Method \_\_\_\_\_ No. secs. \_\_\_\_\_ G.H. change \_\_\_\_\_ in \_\_\_\_\_ hrs. cfs  
Method coef. \_\_\_\_\_ Horiz. angle coef. \_\_\_\_\_ Susp. \_\_\_\_\_ Tags checked \_\_\_\_\_  
Meter Type \_\_\_\_\_ Meter No. \_\_\_\_\_ Meter \_\_\_\_\_ ft. above bottom of wt.  
Rating used \_\_\_\_\_ Spin test before meas. \_\_\_\_\_ ; after \_\_\_\_\_  
Meas. plots \_\_\_\_\_ % diff. from rating no. \_\_\_\_\_ Indicated shift \_\_\_\_\_

GAGE READINGS					
Time	Tdown	Pflume	Pflume	Inside	Outside
	ft	ft	cfs		
① 16:10	1.34			3.02	2.908
	Start				
② 17:00	1.35	0.20	0.169	3.00	2.898
③ 17:09	1.35			3.01	2.898
17:20	Finish			3.04	
Weighted MGH					
GH correction					
Correct MGH					

Samples collected: water quality, sediment, biological, other \_\_\_\_\_ @ 17:20

Measurements documented on separate sheets: water quality, aux./base gage, other \_\_\_\_\_

Rain gage serviced/calibrated \_\_\_\_\_

Weather: 5<sup>th</sup> cumulus, 95<sup>th</sup> cirrus, wind 10 mph OG of east

Air Temp. \_\_\_\_\_ °C at \_\_\_\_\_

Water Temp. 10.3 °C at 17:20 OG

Check bar/chain found \_\_\_\_\_

Changed to \_\_\_\_\_ at \_\_\_\_\_

Correct \_\_\_\_\_

Wading, cable, ice, boat, upstr., downstr., side bridge, \_\_\_\_\_ ft., mi. upstr., downstr. of gage.

Measurement rated excellent (2%), good (5%), fair (8%), poor (>8%); based on following

conditions: Flow: \_\_\_\_\_

Cross section: \_\_\_\_\_

Gage operating: yes Record Removed \_\_\_\_\_

Battery voltage: 13.96 Intake/Orifice cleaned/purged: \_\_\_\_\_

Bubble-gage pressure, psi: Tank 2000, Line 11; Bubble-rate 44 /min.

Extreme-GH indicators: max \_\_\_\_\_, min \_\_\_\_\_

CSG checked: \_\_\_\_\_ HWM height on stick \_\_\_\_\_ Ref. elev. \_\_\_\_\_ HWM elev. \_\_\_\_\_

HWM inside/outside: \_\_\_\_\_

Control: conductivity probe slightly buried in sediment

Remarks: LEVELS run

GH of zero flow = GH \_\_\_\_\_ - depth at control \_\_\_\_\_ = \_\_\_\_\_ ft., rated \_\_\_\_\_

Elevation of top of rebar = <sup>4.25</sup> 4.248 ft from today's levels Sheet No. \_\_\_\_\_ of \_\_\_\_\_ sheets

① Tape down @ 16:10 = 1.34 ft → (<sup>4.25</sup> 4.248 - 1.34) = 2.908 ft 2.91 ft

② Tape down @ 17:00 = 1.35 ft → (<sup>4.25</sup> 4.248 - 1.35) = 2.898 ft 2.9 ft

③ Tape down @ 17:20 = 1.35 ft → (<sup>4.25</sup> 4.248 - 1.35) = 2.898 ft 2.9 ft

	Time	IG	OG
Sp Cond	17:20		160.0 μS
Wtr Temp	17:20		10.3 °C

Year 2002 ✓  
Julian day 10 ← **WRONG**  
Time 16:29 ✓

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DISCHARGE MEASUREMENT AND  
GAGE INSPECTION NOTES

Meas. No. \_\_\_\_\_  
Comp. by Portable Flume  
Checked by \_\_\_\_\_

$4.249$   
 $- 1.34$   
 $2.909$

Sta. No. \_\_\_\_\_  
Sta. Name Crescent  
Date Jan 9, 2003 Party PAS, JDG, KAC  
Width \_\_\_\_\_ Area \_\_\_\_\_ Vel. \_\_\_\_\_ G.H. 2.90 Disch. 0.23  
Method \_\_\_\_\_ No. secs. \_\_\_\_\_ G.H. change \_\_\_\_\_ in \_\_\_\_\_ hrs.  
Method coef. \_\_\_\_\_ Horiz. angle coef. \_\_\_\_\_ Susp. \_\_\_\_\_ Tags checked \_\_\_\_\_  
Meter Type \_\_\_\_\_ Meter No. \_\_\_\_\_ Meter \_\_\_\_\_ ft. above bottom of wt.  
Rating used \_\_\_\_\_ Spin test before meas. \_\_\_\_\_ ; after \_\_\_\_\_  
Meas. plots \_\_\_\_\_ % diff. from rating no. \_\_\_\_\_ Indicated shift \_\_\_\_\_

Converted to F8  
not F10

GAGE READINGS					
Time				Inside	Outside
1610				3.02	2.91
	Start				
		Flume stage = 0.20			
1700		From Flume rating = 0.227			
	Finish			3.01	
1709				2.99	2.89
Weighted MGH					2.90
GH correction					
Correct MGH					

Samples collected: water quality,  
sediment, biological, other \_\_\_\_\_

Measurements documented on  
separate sheets: water quality,  
aux./base gage, other \_\_\_\_\_

Rain gage serviced/calibrated \_\_\_\_\_

Weather: Partly Cloudy, breezy

Air Temp. \_\_\_\_\_ °C at \_\_\_\_\_

Water Temp. \_\_\_\_\_ °C at \_\_\_\_\_

Check bar/chain found \_\_\_\_\_

Changed to \_\_\_\_\_ at \_\_\_\_\_

Correct \_\_\_\_\_

wrong  
ratings  
in manual

Wading, cable, ice, boat, upstr., downstr., side bridge, \_\_\_\_\_ ft., mi. upstr., downstr. of gage.

Measurement rated excellent (2%), good (5%), fair (8%), poor (> 8%); based on following  
conditions: Flow: \_\_\_\_\_

Cross section: \_\_\_\_\_

Gage operating: yes Record Removed \_\_\_\_\_

Battery voltage: \_\_\_\_\_ Intake/Orifice cleaned/purged: \_\_\_\_\_

Bubble-gage pressure, psi: Tank 2000, Line 11; Bubble-rate 44 /min.

Extreme-GH indicators: max \_\_\_\_\_, min \_\_\_\_\_

CSG checked: \_\_\_\_\_ HWM height on stick \_\_\_\_\_ Ref. elev. \_\_\_\_\_ HWM elev. \_\_\_\_\_

HWM inside/outside: \_\_\_\_\_

Control: \_\_\_\_\_

Remarks: TPD = 1.34' from top of rebar @ 1610 = 4.249 Given  
from today's levels) - 1.34 = 2.91 G.H.

GH of zero flow = GH 2.91 - depth at control 0.10 = 2.81 ft., rated \_\_\_\_\_

0 .10 .20 .30 .40 .50 .60 .70 .75

.80  
.85  
.90  
.92  
.94  
.96  
.97  
.98  
.99  
1.00  
.99  
.98  
.97  
.96  
.94  
.92  
.90  
.85

@ 1709 TAD from top of rebar =  
4.249 (Given)  
- 1.35  
G. H. = 2.89

ANGLE COEFF. FROM INITIAL POINT  
DIST. FROM INITIAL POINT  
WIDTH  
DEPTH  
OBSERVATION DEPTH  
REVLUTIONS  
TIME IN SECONDS  
VELOCITY AT POINT  
MEAN INVERTICAL  
ADJUSTED FOR HOR. ANGLE OR AREA  
DISCHARGE .80

0 .10 .20 .30 .40 .50 .60 .70 .75

River at -

Gauge.

F8 Crescent ✓

Date	9 - Jan - 2003		
time of visit (start & finish)	15:30		
party	JG, PS, KL		
cloud cover (% type)	5% <sup>cumulus</sup> <del>stratus</del> , 95% cirrus		
wind (spd, dir)	10 mph E		
air temp			
surveying?	Yes		
photo? (#, which camera)	JG		
to do items? (y/n)			
which field notebook?	KL		
<b>Flow measurements</b> (times)	1710		
condition of control, probes	cond. probe slightly buried in sediment		
method (meter, flume, visual)	portul flume		
discharge (units)	0.2" $\approx$ 0.227 cfs		
outside stage (staff <del>on</del> top down)	1.35"		
CR10 stage reading	3.00 $\pm$ 0.04		
<b>Inside Box</b>			
CR10 Channels (times)	16:10	1710	1720
Ch. 1 stage	3.033	2.99 $\pm$ 0.04	3.04
Ch. 2 water temp	9.681		10.58
Ch. 3 conductivity	165.03		163.9
Ch. 4 battery voltage	13.96		13.7
air temp	—		
Year, Day, Time	03 ✓, 0010 ✓, 16:25 ✓		
settings o.k?	✓		
*0?	✓		
N2 tank pressure (psi)	2000		
N2 feed pressure (psi)	11		
purge?	— o.k.		
bubble rate (per min) on conoflow	44		
<b>Stream Chemistry</b> (times)	17:20 1720		
water temp. (units)	10.3		
sp. cond. (units)	160.0 $\mu$ S (flashign); 115.2 $\mu$ S (hot flash)		
pH and temp of probe	in lab		
instrument notes (i.e. cal. time)			
water samples collected?	Yes		

$4.749'' - 1.35'' = 2.89 \approx 3.01$   
 top of rebar tapedown stage OG IG

## LEVEL NOTES

Stream F8-CRESCENT STR

Locality \_\_\_\_\_

Party JG, KDCDate Jan 9, ~~19~~ 2003

STATION	B. S.	HT. INST.	F. S.	ELEVA-TION	REMARKS
RM3	2.530	8.070		5.540	Bolt 55 ft DS on left; ELEV GIVEN
RM4			3.519	4.551	Bolt 5 ft from orifice
RPI			3.821	4.249	top of rebar
orifice			5.403	2.667	top of nut
water surface			5.149	2.921	
RM3	2.530		2.530	5.540	∅✓
PZF			5.322	2.748	overflow
Turning point					
RM3	2.792	8.332		5.540	
RM4			3.782	4.550	0.001 avg = 4.550
RPI			4.085	4.247	0.002 avg = 4.248
orifice			5.668	2.664	0.003 avg = 2.667
water surface			5.412	2.920	0.001 avg = 2.921
PZF			5.581	2.751	0.003 avg = 2.749
RM3	2.792		2.795	5.537	0.003✓

No. \_\_\_\_\_ of \_\_\_\_\_ sheets Comp. by \_\_\_\_\_ Chk. by \_\_\_\_\_

Cozzetto  $\pi$ Gartner  $\phi$ 

9 Jan, 2003

15:45

LEVELS

LWR V6 PERMAFROST

1/8/03

FB

Crescent Street

Start/Stop Time: 18:25/19:20

14 edge DS

as noted inside gage

BS	HI	FS	Elev	Remarks				
<sup>2.530</sup> RM3	8.071		5.541	Given Bolt 55' DS on D	0	4 $\pm$ 1, 6 $\pm$ 1		✓
					1.5	23 $\pm$ 2, 22 $\pm$ 2		✓
RM4		3.519	4.552	Bolt 5' from orifice	3	25 $\pm$ 2, 24 $\pm$ 2		✓
RP1		3.821	4.250	top of rebar	4.5	17 $\pm$ 2		✓
Orifice		5.405	2.666	top of nil	6	20 $\pm$ 2		✓
Water line		5.149	2.922		7.5	21 $\pm$ 1		✓
<sup>2.530</sup> RM3	8.071			±.000	9	23		✓
PZF		5.322	2.749		10.5	21		✓
turning pt <sup>2.772</sup> RM3	8.333		5.541		12	24.5		✓
RM4		3.782	4.551	±.001	13.5	26		✓
RP1		4.085	4.248	±.002	15	24 $\pm$ 1		✓
Orifice		5.668	2.665	±.001	16.5	25 $\pm$ 1		✓
Water line		5.412	2.923	±.001	18	22 $\pm$ 2		✓
PZF		5.581	2.752	±.003	19.5	17 $\pm$ 2, 20 $\pm$ 1		✓
<sup>2.795</sup> RM3	8.336			±.003	(21)	21 $\pm$ 2, 20.5 $\pm$ 2	at 19:29	
					(22.5)	20 $\pm$ 2, 17 $\pm$ 2, 16.5 $\pm$ 2	at 19:25	
					(24)	16 $\pm$ 2, 14 $\pm$ 2, 14 $\pm$ 2, 15 $\pm$ 2, 16 $\pm$ 2	at 19:30	
					19			

Gartner  $\pi$ Cozzetto  $\phi$