

# Summary of Bonn AFF Measurements

CENWP-EC-HD

SJS

4/17/2013

## EXIT CHANEL u/s of Trashrack

Depth below WS (ft)	Test Date			% Reduction
	Original 10/31/2012	Test 2 3/21/2013	Test 5 4/16/2013	
0.5	2.8	2.5	0.5	83%
1.5	2.4	2.2	0.5	81%
2.5	1.6	1.3	1.0	35%
3.5	0.9	0.8	1.5	-60%
4.4	0.7	0.7	2.2	-241%

Depth below WS (ft)	Detailed Test Data on 4/16/13		
	Test Number: 5		
	Average	Max	Min
0.5	0.48	1.0	-0.5
1.5	0.47	1.2	-0.5
2.5	1.02	1.6	0.7
3.5	1.46	1.6	1.2
4.4	2.23	2.4	2.1

Average	1.69	1.50	1.08
% reduction *		11%	36%
Discharge**	66	60	43
% reduction		9%	35%

\* % reduction compared to Oct 2012 test

\*\* Discharge rate in Test 5 is uncertain due to variable angles of flow

Notes:

Max velocities on left (west) side of channel

Min Velocities on right (Brail) side of channel

Large Clockwise surface eddy between baffle and trashrack to about 2 feet depth

Surface Direction at Measurement Location (4- feet Upstream of Trashrack and 2.5 feet d/s of CL Brail Exit):

Distance across Channel from Brail pool (east) side (feet):	1.0	2.5	4.0	5.2	7.0
	↑	↖	←	↙	↓

(1) Clockwise surface eddy remains in spite of addition of side vertical plate between baffle and ledge; (2) Significant flow through vertical side trashrack between main sloping trashrack and brail pool; (3) Flow 2 - 2.5 feet and lower was in positive (downstream direction); (4) Surface flow d/s of baffle is stronger on west (concrete) side of channel.

## Exit Channel 2-foot depth Channel

	Test 2a 3/21/2013	Test 5a 4/16/2013
Max Velocity	4.3	4.3
Ave Velocity	2.7	3.0
Discharge***	43	47

\*\*\* Discharge rates in Test 1a & 5a are uncertain due to excessive movement of price meter and west side eddy