



Project: Flow Rate Testing of Skimmers

Client: Rymar Waterworks

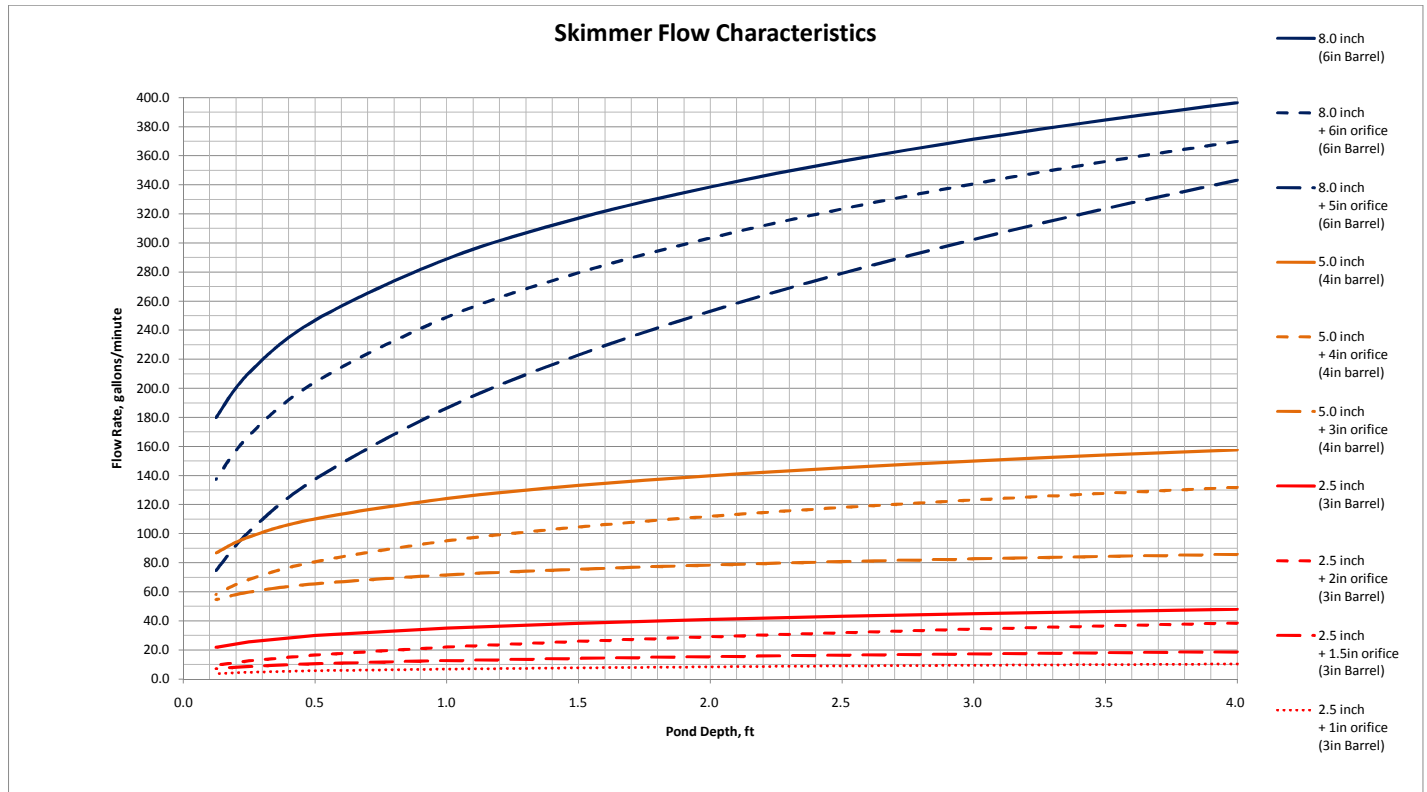
Test Date: 9/12/2013 & 11/13/13

Flow Range: 1 to 400 gpm

Test Pond Size: 6-ft x 39-ft x 4-ft deep

Events: Flow Rate vs. Depth Measurements

Water Depth, ft	Skimmer Flow Rate, gal/min									
	Skimmer									
	2.5 inch (3in Barrel)	2.5 inch + 2in orifice (3in Barrel)	2.5 inch + 1.5in orifice (3in Barrel)	2.5 inch + 1in orifice (3in Barrel)	5.0 inch (4in barrel)	5.0 inch + 4in orifice (4in barrel)	5.0 inch + 3in orifice (4in barrel)	8.0 inch (6in Barrel)	8.0 inch + 6in orifice (6in Barrel)	8.0 inch + 5in orifice (6in Barrel)
	$y = 34.945x^{0.2277}$	$y = 22.012x^{0.4051}$	$y = 12.677x^{0.284}$	$y = 6.9263x^{0.2847}$	$y = 124.16x^{0.1722}$	$y = 95.08x^{0.2361}$	$y = 71.594x^{0.1311}$	$y = 289.04x^{0.2282}$	$y = 248.96x^{0.2857}$	$y = 186.48x^{0.4401}$
4.0	47.9	38.6	18.8	10.3	157.6	131.9	85.9	396.6	369.9	343.2
3.5	46.5	36.6	18.1	9.9	154.1	127.8	84.4	384.7	356.1	323.7
3.0	44.9	34.4	17.3	9.5	150.0	123.2	82.7	371.4	340.8	302.4
2.5	43.1	31.9	16.4	9.0	145.4	118.0	80.7	356.3	323.5	279.1
2.0	40.9	29.1	15.4	8.4	139.9	112.0	78.4	338.6	303.5	253.0
1.5	38.3	25.9	14.2	7.8	133.1	104.6	75.5	317.1	279.5	222.9
1.0	34.9	22.0	12.7	6.9	124.2	95.1	71.6	289.0	249.0	186.5
0.5	29.8	16.6	10.4	5.7	110.2	80.7	65.4	246.8	204.2	137.5
0.3	25.5	12.6	8.6	4.7	97.8	68.5	59.7	210.7	167.5	101.3
0.1	21.8	9.5	7.0	3.8	86.8	58.2	54.5	179.8	137.4	74.7



Test Setup: The intent of this testing was to measure the flow rate at various pond depths of a range of skimmer sizes. The testing was performed in a calibrated concrete pool with a controlled (valved) outlet. The discharged pipe and associated valve was 8-inch diameter. The tested skimmers incorporated vent holes and trash guards and were visible above the water surface at all times. The skimmer inlets/orifices were submerged no more than 6-inches below the water surface.

The testing reported herein is based upon accepted industry practice as well as the test method listed. Test results do not apply to samples other than those tested. TRI neither accepts responsibility for nor makes claim as to the final use and purpose



View of Test Pool during Fill Test



Outlet is Controlled with 8-inch Valve



Outlet "Tee" Facilitates Draining Pool



Skimmer Connected to Outlet Pipe



Insertion of Orifice



Skimmer Floats to Top during Filling



Start of Test



Depth Recorded at Time Intervals During Test