Exhibit 8-5.1 Discharge Rates of Circular Orifice in cfs and Minimum Inlet Dimensions

Inlet Diameter	Min. Length* (ft)	Orifice Dia. (in.)	Head - (feet)												
			3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.4	4.6	4.8	5.0	5.5	6.0
6 inch	1.5	1.50	.103	.106	.109	.113	.116	.119	.122	.125	.127	.130	.133	.139	.146
		1.75	.140	.144	.149	.153	.158	.162	.166	.170	.174	.177	.181	.190	.198
		2.00	.182	.188	.194	.200	.205	.210	.215	.220	.225	.230	.235	.247	.258
		2.25	.231	.238	.245	.253	.259	.266	.273	.279	.286	.292	.298	.312	.326
		2.50	.284	.293	.302	.311	.320	.328	.336	.344	.352	.359	.367	.385	.402
		2.75	.344	.355	.366	.376	.387	.397	.407	.416	.426	.435	.444	.466	.486
	2.0	3.00	.408	.421	.435	.447	.460	.472	.483	.494	.506	.516	.527	.553	.578
		3.25	.479	.495	.510	.525	.540	.554	.567	.580	.594	.606	.619	.649	.678
		3.50	.556	.574	.591	.608	.626	.642	.658	.673	.688	.703	.718	.753	.786
8 inch	2.0	3.75	.638	.659	.679	.699	.718	.737	.755	.773	.790	.807	.824	.864	.903
		4.00	.725	.749	.772	.794	.816	.837	.858	.878	.898	.917	.936	.982	1.03
	2.5	4.25	.818	.845	.871	.897	.921	.945	.968	.991	1.01	1.04	1.06	1.11	1.16
		4.50	.917	.947	.976	1.00	1.03	1.06	1.08	1.11	1.13	1.16	1.18	1.24	1.30
	3.0	4.75	1.02	1.05	1.09	1.12	1.15	1.18	1.21	1.24	1.26	1.29	1.32	1.38	1.45
		5.00	1.13	1.17	1.20	1.24	1.28	1.31	1.34	1.37	1.40	1.43	1.46	1.53	1.60
	3.5	5.25	1.24	1.29	1.33	1.37	1.40	1.44	1.48	1.51	1.55	1.58	1.61	1.69	1.77
		5.50	1.37	1.41	1.46	1.50	1.54	1.58	1.62	1.66	1.70	1.73	1.77	1.85	1.94
10 inch	3.5	5.75	1.50	1.55	1.60	1.64	1.68	1.72	1.77	1.81	1.85	1.89	1.93	2.02	2.11
		6.00	1.63	1.68	1.73	1.78	1.83	1.88	1.93	1.97	2.02	2.06	2.10	2.20	2.30

Inlet Dia (in)	Rows of Slots	Slot Area** (ft^2/ft)	Holes per (ft)	Hole Area 3/4" Dia (ft^2/ft)	Hole Area 1" Dia (ft^2/ft)
6	4	.167	30	0.092	0.164
8	6	.250	40	0.123	0.218
10	8	.333	50	0.153	0.273

*Minimum length of inlet required to keep velocity less than 2.0 feet per second through slots.

**Slots are 1 inch by 4 inches spaced vertically 8 inches center to center.

PEAK CAPACITY OF TERRACE INTAKES
(cfs)

INTAKE HEIGHT (FEET)	Number of 1-inch diameter holes per foot of intake								
	12	16	24	30	36	40	44	56	72
1.0	0.11	0.15	0.22	0.28	0.33	0.37	0.41	0.52	0.67
1.5	0.21	0.27	0.41	0.51	0.62	0.68	0.75	0.96	1.23
2.0	0.32	0.42	0.63	0.79	0.95	1.05	1.16	1.47	1.89
2.5	0.44	0.59	0.88	1.10	1.32	1.47	1.62	2.06	2.65
3.0	0.58	0.77	1.16	1.45	1.74	1.93	2.13	2.71	3.48
4.0	0.89	1.19	1.79	2.23	2.68	2.98	3.27	4.17	5.36
5.0	1.25	1.66	2.50	3.12	3.74	4.16	4.57	5.82	7.49

Capacity based on 1/2 holes plugged.

For other hole sizes, multiply the cfs in the table by the following factor:

Size Opening	1/2"	3/4"	7/8"	1-1/8"	1-1/4"	1x4" slots
Factor	0.25	0.56	0.77	1.27	1.56	5.09

Normally, the intake should be as large or larger in diameter than the offset line. The offset should be checked for adequate capacity. Maximum offset capacity, assuming no pressure in the line is:

Offset Diameter	cfs
3"	0.21
4"	0.42
5"	0.84
6"	1.26
8"	2.10
10"	3.36