

Table 4-1
Horizontal Hydraulic Gradients at Shallow, Intermediate, and Deep Wells
Metropolitan Former MGP, Brooklyn, New York

Location	Well ID	Distance Between Wells	Groundwater Elevations		Horizontal Gradient ft/ft	Well ID	Distance Between Wells	Groundwater Elevations		Horizontal Gradient ft/ft	Average Horizontal Gradient Low and High Tide ft/ft				
			Elevation (ft NAVD88)	Difference (ft)				Elevation (ft NAVD88)	Difference (ft)						
		(ft)	29-Sep-10				(ft)	14-Mar-12							
		High Tide													
Shallow Groundwater	MW-1S	498.00	7.48	2.00	5.98E-03	MW-1S	498.00	6.62	1.68	5.56E-03	5.77E-03				
	MW-3S		5.48			MW-3S		4.94							
	MW-3S	490.00	5.48	3.91		MW-3S	490.00	4.94	3.81						
	MW-4S		1.57			MW-4S		1.13							
Intermediate Groundwater	MW-1I	502.00	4.23	0.55	2.72E-03	MW-1I	542.00	4.34	1.84	3.59E-03	3.16E-03				
	MW-3I		3.68			Con 2.5		2.50							
	MW-3S	490.00	3.68	2.15		Con 2.5	260.00	2.50	1.04						
	MW-4S		1.53			MW-4I		1.46							
Deep Groundwater	MW-1D	496.00	3.58	0.83	1.90E-03	MW-1D	710.00	3.77	1.77	2.14E-03	2.02E-03				
	Con 2.75		2.75			Con 2.00		2.00							
	Con 2.75	4.16	2.75	0.12		Con 2.75	234.00	2.00	0.25						
	MW-5D		2.63			MW-5D		1.75							

Notes:

bgs - below ground surface

ft - feet

NAVD88 - North American Vertical Datum of 1988

Con - Contour.

Distance measured at right angle to contours.

Table 4-2
Vertical Hydraulic Gradients at Shallow, Intermediate, and Deep Wells
Metropolitan Former MGP, Brooklyn, New York

Location	Well ID	Screen Interval (ft bgs)	Average Depth to Water (ft bgs)	Screen Midpoint* (ft bgs)	Distance Between Midpoints (ft)	Groundwater Elevations						Vertical Gradients			
						Elevation (ft NAVD88)	Difference (ft)	Elevation (ft NAVD88)	Difference (ft)	Elevation (ft NAVD88)	Difference (ft)	Per Pair (ft/ft)	Per Pair (ft/ft)	Per Pair (ft/ft)	
						29-Sep-10		22-Oct-10		14-Mar-12		29-Sep-10	22-Oct-10	14-Mar-12	
Water Table to Intermediate															
MW-1	MW-1S	3-13	5.53	11.265	23.735	7.48	-3.25	7.66	-3.92	6.62	-2.28	-1.37E-01	-1.65E-01	-9.61E-02	
	MW-1I	30-40		35		4.23		3.74		4.34					
MW-3	MW-3S	3-13	3.42	10.21	27.79	5.48	-1.80	5.52	-1.89	4.94	-1.63	-6.48E-02	-6.80E-02	-5.87E-02	
	MW-3I	25-50		38		3.68		3.63		3.31					
MW-4	MW-4S	3-13	4.46	8.28	26.72	1.57	-0.04	1.38	0.54	1.13	0.33	-1.50E-03	2.02E-02	1.24E-02	
	MW-4I	30-40		35		1.53		1.92		1.46					
MW-5	MW-5S	3-13	7.18	12.09	22.91	2.14	0.45	1.94	0.06	1.44	0.29	1.96E-02	2.62E-03	1.27E-02	
	MW-5I	30-40		35		2.59		2		1.73					
MW-6	MW-6S	3-13	6.20	11.60	23.40	3.80	-1.25	4	-1.93	3.46	-1.58	-5.34E-02	-8.25E-02	-6.75E-02	
	MW-6I	30-40		35		2.55		2.07		1.88					
MW-7	MW-7S	3-13	6.17	11.59	23.42	4.43	-1.69	5.02	-2.69	3.99	-1.84	-7.22E-02	-1.15E-01	-7.86E-02	
	MW-7I	30-40		35		2.74		2.33		2.15					
MW-8	MW-8S	3-13	4.51	10.76	24.25	2.60	0.00	2.55	-0.47	2.11	-0.11	0.00E+00	-1.94E-02	-4.54E-03	
	MW-8I	30-40		35		2.60		2.08		2.00					
MW-9	MW-9S	5-15	7.63	11.32	23.69	2.36	-0.77	-1.95	4.00	-0.67	2.58	-3.25E-02	1.69E-01	1.09E-01	
	MW-9I	30-40		35		1.59		2.05		1.91					
Intermediate to Deep															
MW-1	MW-1I	30-40	7.39	35	30.00	4.23	-0.65	3.74	0.61	4.34	-0.57	-2.17E-02	2.03E-02	-1.90E-02	
	MW-1D	60-70		65		3.58		4.35		3.77					
MW-5	MW-5I	30-40	7.02	35	30.00	2.59	0.04	2	0.01	1.73	0.02	1.33E-03	3.33E-04	6.67E-04	
	MW-5D	60-70		65		2.63		2.01		1.75					
MW-9	MW-9I	30-40	6.51	35	70.00	1.59	1.03	2.09	0.00	1.91	0.03	1.47E-02	0.00E+00	4.29E-04	
	MW-9D	60-70		-35		2.62		2.09		1.94					
Water Table to Deep															
MW-1	MW-1S	3-13	5.75	35	30	7.48	-3.90	7.66	-3.31	6.62	-2.85	-1.30E-01	-1.10E-01	-9.50E-02	
	MW-1D	60-70		65		3.58		4.35		3.77					
MW-5	MW-5S	3-13	7.14	11.07	53.93	2.14	0.49	1.94	0.07	1.44	0.31	9.09E-03	1.30E-03	5.75E-03	
	MW-5D	60-70		65		2.63		2.01		1.75					
MW-9	MW-9S	5-15	7.46	12.48	52.52	2.36	0.26	-1.95	4.04	-0.67	2.61	4.95E-03	7.69E-02	4.97E-02	
	MW-9D	60-70		65		2.62		2.09		1.94					

Notes:

bgs - below ground surface

ft - feet

NAVD88 - North American Vertical Datum of 1988

Negative numbers indicate downward vertical gradients.

* - For water tables wells, screen midpoint has been replaced by well water column midpoint.

- denotes an upward vertical gradient

- denotes a downward vertical gradient