

**CITY OF ROCHESTER HILLS
WATER STORAGE COST ANALYSIS
SUMMARY**

Must add Tank Maint. & Land Cost & Financing Cost

TABLE 6

Analysis with '09-10 DWSD Demand Proxies

	MD (mgd)	PH (mgd)	09-10 Rate with 8 contracts signed (2)	Storage Used in Analysis (MG)	Number of Locations/Facilities	Conceptual Project Cost (3)	Basic Payback (yrs)
Current Contract Limits	27.46	55.22	\$ 24.77				
75% Peak Hour (1)	27.46	48.28	\$ 22.33	2.0	1	\$6,825,000	8.1
50% Peak Hour (1)	27.46	41.34	\$ 19.90	4.0	2	\$14,600,000	8.6
25% Peak Hour (1)	27.46	34.40	\$ 17.47	5.0	2	\$17,225,000	6.8
MD (1)	27.46	27.46	\$ 15.04	6.0*	3*	\$21,375,000	6.3

Analysis with Anticipated Negotiated Contractual Flow Limits

	MD (mgd)	PH (mgd)	09-10 Rate with 8 contracts signed (4)	Storage Used in Analysis (MG)	Number of Locations/Facilities	Conceptual Project Cost (3)	Basic Payback (yrs)
Potential Negotiated Contract Limits	26.09	52.46	\$ 23.67				
75% Peak Hour (1)	26.09	45.87	\$ 21.34	2.0	1	\$6,825,000	8.4
50% Peak Hour (1)	26.09	39.28	\$ 19.02	4.0	2	\$14,600,000	9.1
25% Peak Hour (1)	26.09	32.68	\$ 16.69	5.0	2	\$17,225,000	7.1
MD (1)	26.09	26.09	\$ 14.37	6.0*	3*	\$21,375,000	6.6

Analysis with Demand Management Strategies Considered

	MD (mgd)	PH (mgd)	09-10 Rate with 8 contracts signed (4)	Storage Used in Analysis (MG)	Number of Locations/Facilities	Conceptual Project Cost (3)	Basic Payback (yrs)
Estimated Future Contract Limits	23.42	45.18	\$ 20.50				
75% Peak Hour (1)	23.42	39.74	\$ 18.69	2.0	1	\$6,825,000	10.9
50% Peak Hour (1)	23.42	34.30	\$ 16.88	4.0	2	\$14,600,000	11.6
25% Peak Hour (1)	23.42	28.86	\$ 15.07	5.0	2	\$17,225,000	9.1
MD (1)	23.42	23.42	\$ 13.25	6.0*	3*	\$21,375,000	8.5

Notes:

Not to be used as a stand alone document, please refer to attached Letter Report.

(1) Current contract allows for the reduction in MD/PH factors that go into the rate model but a community no longer needs to become full MD customer (i.e.. PH flow = MD flow) to reduce rates. Thus, HRC evaluated several storage scenarios which could also represent a phased approach to implementation.

(2) Rates provided by DWSD staff based on current rate model unit costs with 8 contracts signed ('09-10 contract year).

(3) Costs for DWRP Program assumed.

(4) Rates were assumed. No water rate data exists for RH with contract flow limits as shown, current rate model unit costs with 8 contracts signed was interpreted based on rate reductions shown for storage alternatives. Rates were set conservatively to minimize annual water rate savings and maximize the pay back period.

* HRC estimated the number of facilities and amount of storage needed for cost estimating purposes only.