

**CITY OF ROCHESTER HILLS
WATER STORAGE ANALYSIS w/ '09-10 DWSD DEMAND PROXIES
COST ANALYSIS**

TABLE 1

City of Rochester Hills
System Storage Analysis

Volume 445,000 MCF

	<u>MD (mgd)</u>	<u>PH (mgd)</u>	<u>09-10 Rate with 28 contracts signed (2)</u>	<u>Difference Used in Analysis (3)</u>	<u>Estimated Storage Needed (MG) (4)</u>	<u>Storage Used in Analysis (MG) (5)</u>	<u>Number of Locations/Facilities (6)</u>
Current Contract Limits	27.46	55.22	\$ 24.77	\$ -	0.0	0.0	0
75% Peak Hour (1)	27.46	48.28	\$ 22.33	\$ 2.44	2.0	2.0	1
50% Peak Hour (1)	27.46	41.34	\$ 19.90	\$ 4.87	3.5	4.0	2
25% Peak Hour (1)	27.46	34.40	\$ 17.47	\$ 7.30	4.5	5.0	2
MD (1)	27.46	27.46	\$ 15.04	\$ 9.73	5.5	6.0*	3*

Notes:

- (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) HRC used the rates provided against the actual RH rates for 2009/10.
 - (4) Estimated storage is based on RH diurnal demand curve with PH increment reduced as indicated and includes limited fire flow storage component because DWSD can provide additional fire flows above contractual limits without penalties.
 - (5) For the purposes of the analysis, HRC added storage volume to provide some fire demand volume and to account for weather and use patterns not demonstrated in the years for flow data reviewed.
 - (6) This analysis included a preliminary review of where to site two storage reservoirs based on City recommendation of available land, capacities, demand allocation and system hydraulics.
- * HRC estimated the number of facilities and amount of storage needed for cost estimating purposes only.