

APPENDIX D – COMPARISON OF COSTS, RATES AND ACHIEVABLE DUES REDUCTION

Comparing the historic and or projected MKL Water System monthly cost per household to the projected rate our members might see if we sell to Aqua NJ is not as simple as it may seem. The bills from Aqua NJ, like those from PSE&G, depend on usage (as read remotely each month from their meters installed at each connection point or household). This means they will vary considerably from household to household and from month to month. Our own Water System historic costs are known and we have reasonable confidence in our cost projections for the next 5 years or so. But as shown in Appendix A, our expenditures, past and future, vary considerably year by year. So the result of attempting to express them as a monthly cost per household varies considerably depending on what timeframe one looks across. In the body of this report we have netted all this complexity out into two numbers: \$573/year/household for MKL dues reduction and \$605/year/household¹ for Aqua NJ average cost. Here we show the broader range of that complexity and the possibilities.

Aqua NJ's Projected Monthly Bills

Aqua NJ's rates include a flat monthly charge of \$12.95 (characterized as a charge for the hookup and metering) plus a charge for gallons of water used that month (currently \$4.93/1000 gal). To get a good estimate of what our members may see as a monthly bill, we had to project what the monthly usage per household might be. We searched through multiple sources to get a grip on that projection:

Searching through online resources made available by NJDEP, NYDEP and Federal EPA yields a range of numbers, calculated and expressed a variety of different ways. Note that some of the numbers

¹ Includes a calculation to account for one-time payment of \$97,000

below are per person and some are per household. There are efficiencies when several people share resources in a single household and most people do not spend a full day at home. Still here is a list of typical data from such sites:

- 60 - 100 gals/person/day
- 300 - 400 gals/4 person household/day
- National Average: 240 – 280 gals/household/day

Asking both of the utilities that tendered bids for our system yielded:

- 180 gal/household/day – on average for all Aqua NJ New Jersey
- 114 gal/household/day – for lowest in Aqua NJ New Jersey (Warren County System)
- 290 gal/household/day – for highest in Aqua NJ New Jersey (Gloucester County System)
- 100 gal/household/day – for a low use MWC system (Pinelands NJ Water, a retirement community; homes are smaller and on small lots. Generally, the homes have 1-2 persons living in them.)
- 170 gal/household/day – for a medium use MWC system (Tidewater DE Utilities, a mixed community of houses, businesses, commercial, etc. However, a large portion of customers are in Sussex County, DE near Rehoboth Beach. Many of these homes only get weekend usage during the summer.)
- 391 gal/connection/day – statewide average for all of MWC (excluding wholesale) MWC has approximately 60,000 customers including homes, commercial and industry. Some very large industrial users skew the average water usage upward.

We know what our own system pumps in an average year. But we also know that we have some stretches of steel pipe that are in bad condition and leaking. How much water is lost to these leaks is unknown. Making a range of assumptions about that leakage yields:

- 250/gal/household/day – assuming 10% leakage and 97 hookups. **NOTE: this is the base assumption we used for the body of this report.**
- 175 gal/household/day – making more aggressive assumptions about leakage, based on readings taken during the Hurricane Sandy power outage²
- Clearly, the range of possibilities is wide. Here are two websites that you can use to estimate your household's water use:
<http://www.swfwmd.state.fl.us/conservation/thepowerof10/>
<http://www.csgnetwork.com/waterusagecalc.html>

² See Appendix J

Aqua NJ Billings as a Function of Usage			
Consumption Scenario	Usage³	Annual Cost	Monthly Bill
Empty house	0	\$155	\$13
Single resident	100	\$335	\$28
Reported statewide average	180	\$479	\$40
Our conservative average	250	\$605⁴	\$50
High use	300	\$695	\$58
Higher use	400	\$875	\$73

One-Time Payment for Purchase

If we sell our system, Aqua NJ will make a one-time payment to the Lakeshore Company in the amount of \$97,000. The Water Committee has not examined all the possible dispositions for this cash. Still, any comparison of costs should make some effort to account for its impact. We assume there will be some legal expenses associated with negotiating and executing a contract, we've assumed

³ Usage in gallons/household/day

⁴ Assumption used for body of this report

about \$10,000 for these expenses and have netted them out of the \$97,000. We have also reviewed Lakeshore’s tax situation and are confident, because we are carrying a Net Operating Loss of over \$100,000, that there will be no tax impact.

Here are three ways of thinking about the impact of the remainder of the \$97000:

- We invest it. \$87000 at long term average of 5% would yield \$4350 annually. We could indefinitely reduce our dues by \$45/house/year annually.
- We distribute it to our members and they use it to “subsidize” their water bills for the next 20 years. The subsidy would be about the same \$45 annually.
- Lakeshore uses it to repay our NJDEP loan (for dam reconstruction). This would reduce our revenue requirements for the duration of the loan (29 remaining payments from April 2014 through April 2028). Although the cash would be gone at the end of this cycle, so would the cost it was subsidizing, so there would be no need for any increase at that time. We could reduce our dues by \$63/member/year.

Mount Kemble Lake’s “Monthly” Water System Cost

Our Water System expenditures vary from year to year based on what long term investments we make and what system failures we need to repair. Looking backward across historical costs and looking forward across projected costs, we can come up with an average monthly cost per household. But those values vary dramatically based on what period of time backward or forward we choose.

However, we do know what we have planned to spend over the near future. The 2013 Operating Budget approved at our Annual Meeting (January 2013) is \$27,000, or about \$285/member/year, and the Capital Spending Plan presented the following planned project expenditures:

2013	2014	2015	2016	2017	2018	2019	2020	2021
\$35,000	\$ -	\$16,000	\$10,000	\$10,000	\$80,000	\$30,000	\$ -	\$ -

which amounts to \$181,000 or about \$212/member/year, giving us a total of \$497/member/year for our current annual cost to provide water service.

Mount Kemble Lake's Achievable Dues Reduction

In the event of sale, we would eliminate our annual Operating Budget for Water System (\$27,000) and our LCRF Water System Projects in 2014 and beyond (\$181,000 less \$35,000). Additionally we would have a one-time net payment of \$87,000 and a repayment (\$35,000) for Water System generator, both of which the Committee recommends using to pay down NJDEP loan through 2028. We would then have a new expense: paying for water service at three community sites (Clubhouse, garden and tennis courts). These should be relatively low usage sites; we've estimated usage somewhat less than a single resident house that was occupied year round.

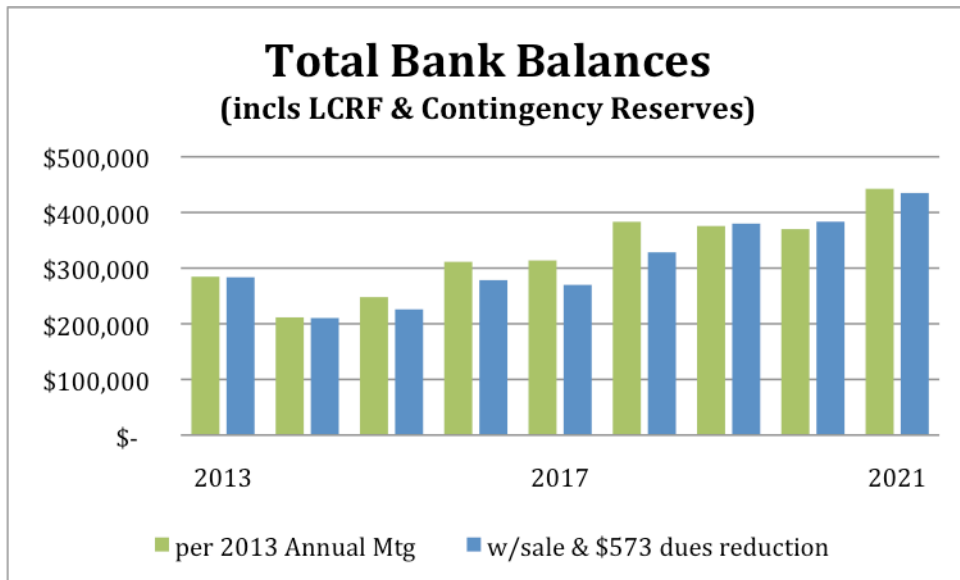
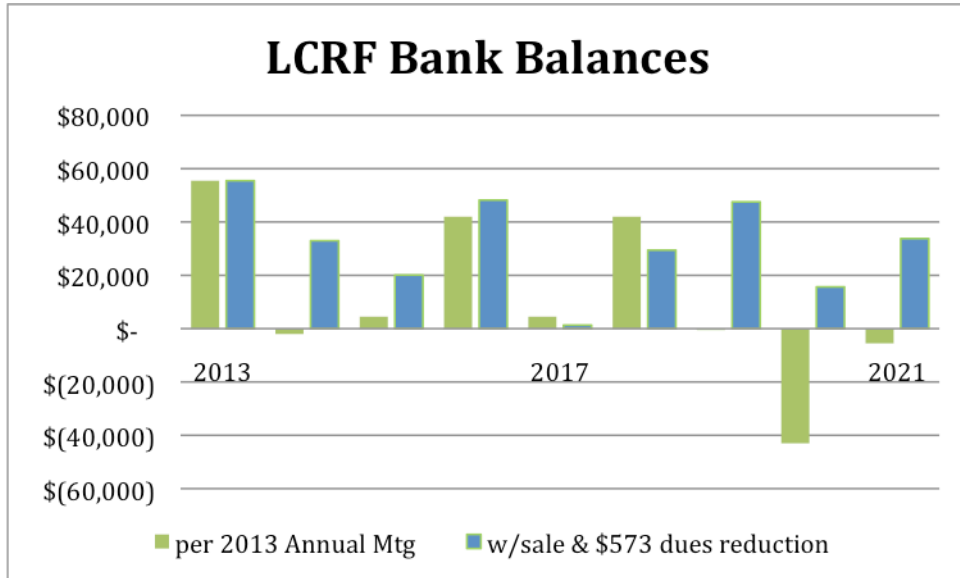
Putting all of this together and assuming dues reduction was actualized at the beginning of 2014 calendar year yields the following:

Source of savings	Amount of savings	Savings per member per year
Annual Operating Budget	\$27,000 per year	\$284
Long Term Capital Fund (LCRF) 2014 - 2021	\$146,000 over 8 years = \$18,250 ⁵ per year	\$192
Dam Loan Subsidy from one-time payment	\$97,000 less \$10,000 closing costs, over 29 semi-annual payments	\$63
Dam Loan Subsidy from generator repayment	\$35,000 over 29 semi-annual payments	\$25
Cost of 3 Community Water Hookups	(\$750 per year)	(\$8)
Total Funds available for Dues Reduction		\$573

Each year at the Annual Meetings of both MKLA and Lakeshore, the Treasurer shows a Spending Plan that lists several years of past and future operating budgets, one time projects, Large Capital Reserve Fund (LCRF) projects and projects what our bank balances will be in each of the next 9 years. Using those same numbers and models, the charts below show what we would expect our beginning of year Bank Balances and our Large Capital Reserve Fund (LCRF) Balances to be for that same planning period in both the base case (i.e. retain ownership of the Water System – these are the exact numbers shown in January 2013) and the recommended case (i.e.

⁵ Our average annual investment in the Water System looking across 2004 through 2021, i.e. all years for which the Treasurer has any data, has been between \$17,000 and \$19,000. The range depends on how one treats some large expenditures in early years that were expensed, but probably should have been capitalized. It is reasonable to assume that the average revenue requirement in years beyond 2021 would continue at \$18,000 or higher.

sell the Water System, eliminate future operating costs & investments, and reduce dues by \$573 per member per year).



Summary

Several factors create a broad range of possibilities regarding future costs to any given household. It's reasonable to consider bills in the event of sale to Aqua NJ as ranging from roughly \$335 annually (for single residence household) to \$875, with a typical "average household" bill of \$605 annually, versus \$573 annual dues reduction per household, foregone if we retain ownership.