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Review of Apple Valley Water Measure

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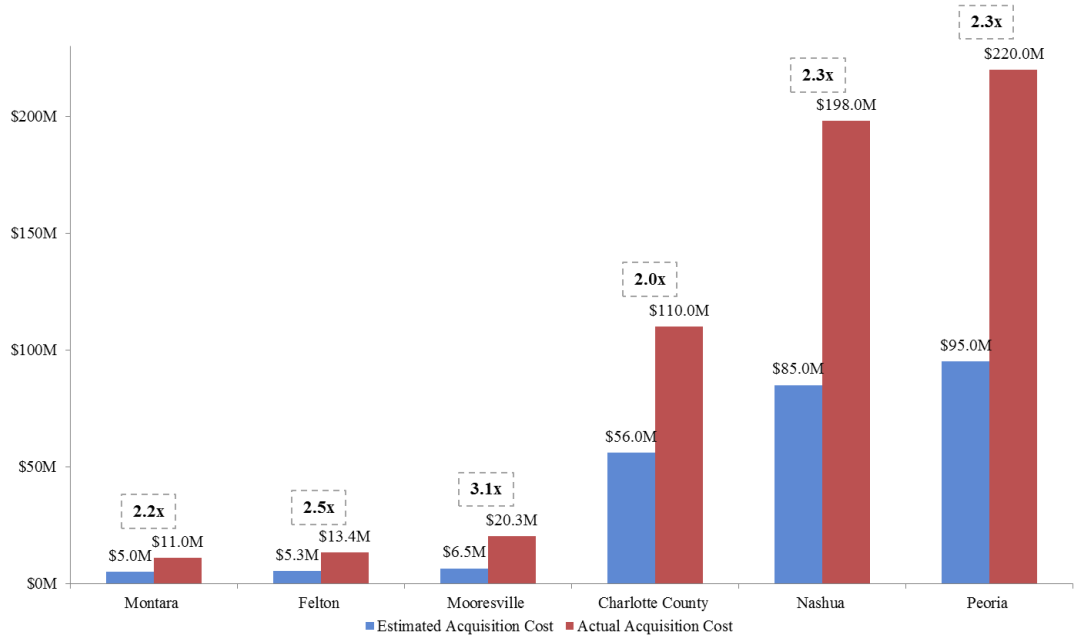
In June, Town of Apple Valley voters will consider ballot Measure F, which would authorize a $150 million revenue bond, with a maximum of 12% interest, to finance the attempted eminent domain acquisition of the water system owned by Liberty Utilities, Apple Valley (*Liberty Apple Valley*) formerly known as Apple Valley Ranchos Water Company. For residents, an issue that arises is the downside risk that forecasts of the cost of the takeover will be so high as to cause water rates to rise significantly rather than fall. This concern comes from a 2017 study by the national Analysis Group, which looked at data on six recent acquisitions in California, Montana, Illinois, Indiana and Florida. They found that *"in each of these cases, the final valuations were two to three times the initial valuations*."[1] (*Exhibit 1*)

Exhibit 1.-Forecasted versus actual Acquisition Cost, Six Water Districts



Notes:
[1] Nashua's valuation by court was $203 million, the final purchase price was $198 million in stock.
[2] Peoria City Council voted to end the takeover attempt due to high cost.

Sources:
Chicago Metro Water Facts, available at http://www.chicagometrowaterfacts.com/; The Indy Channel, "Mooresville drops water utility takeover plans," October 22, 2014; Indianapolis Business Journal, "Indiana town takes unusual step to gain control of utility," February 16, 2013.

Urban Futures Study & Warnings. In assessing the cost of condemning the Liberty Apple Valley system, the Town's consultant, Urban Futures, looked at four different measures: Stock Price (*$45.4 million*); Reproduction Cost New Less Depreciation (*$127.2 million*); Capitalization of Net Income (*$40.3 million*); and Sale of Comparable Water Systems

[1] The Economic Consequences of Contested Government Takeovers of Investor-Owned Water Utilities, Analysis Group, 2017, p.28

(*no estimate*).[2] They then proceeded to, among others, estimate the full cost of a revenue bond in each case. Using the Reproduction Cost New Less Depreciation (*$127.2 million*), they estimate the size of a 30-year revenue bond issued at $143.8 million at 5.25% with annual payments of $9.6 million.[3] Unless offset, that payment would equal $480 for each of the system's 20,000 customers or an $80 increase over the current average bi-monthly bills for most customers (*up 62.2%*).

Given the history of municipalities underestimating the cost of acquiring water districts, a review of several warnings contained in the Urban Futures report are in order. First:

> *"The total acquisition cost of the AVR system is still unknown. This feasibility analysis presents cost estimates including transactions cost, but the ultimate cost will depend on the condemnation judgment.* ***The time required and the costs of the condemnation process itself are unknown, and total transactions cost may exceed the estimates provided in this report****."*[4] [emphasis added]

On this warning, a key fact is that the 2014 report was silent on the question of valuation from Sale of Comparable Water Systems. Here, Urban Futures found none to report. However their 2014 analysis was written before the widely reported sale to Liberty Utilities of three systems including Liberty Apple Valley for a price of $327 million plus assumption of $77 million in debt or a full valuation of $404 million. That transaction raises the valuation issues referenced by Urban Futures.

A second warning concerns capital investment expenses:

> *"****The Town will be responsible for future water system replacements, additions and improvements.*** *AVR [*Liberty Apple Valley*] has maintained an active capital improvement program in the past, and has added substantial system improvements in recent years."*[5] [emphasis added]

In fact, CA Public Utilities Commission filings show that capital investments in Liberty Apple Valley averaged $6,362,808 during the past five years under various owners (*Exhibit 2*).

Exhibit 2.-Investment in Water, Liberty Apple Valley

Year	Investment
2012	$5,661,866
2013	$7,518,580
2014	$8,166,239
2015	$7,875,308
2016	$2,592,048
Average	$6,362,808

Source: California Public Utilities Commission Filings

[2] Financial Feasibility Analysis for the Acquisition of the Apple Valley Ranchos Water System, Urban Futures, 2014 p. 16-21

[3] Urban Futures, p. 33

[4] Urban Futures, p. 41

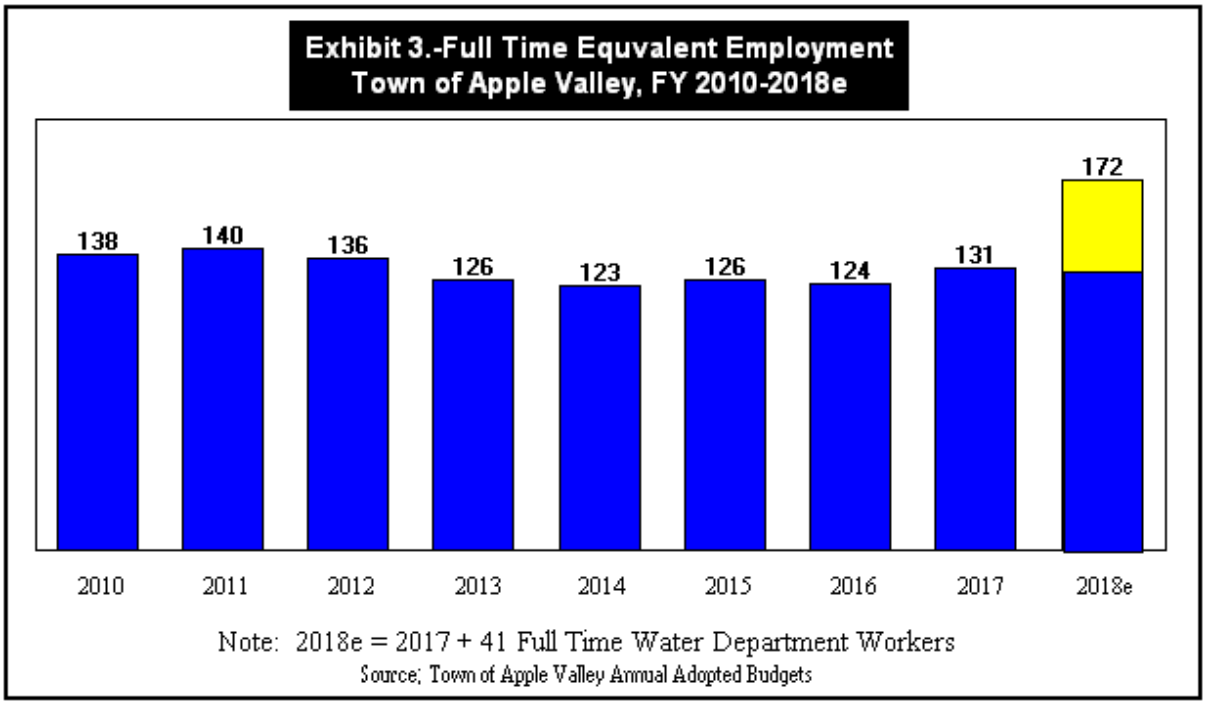
[5] Urban Futures, p. 41

As Apple Valley would not have a financial reserve for this level of investment the year the Town would absorb the system, a capital improvement reserve of $6.4 million would be needed in any bond issue to provide for this year 1 work. In fact, Liberty Apple Valley is planning a 2017 investment of $6,351,728 in the system.

A third warning concerns the concept that a Town with no water agency knowledge would be able to efficiently operate such a complex system:

> *"The Town would begin a new relatively complicated enterprise involving employees and a large customer base, but* ***the Town has no actual experience operating a water system.*** *While the Town currently owns a wastewater enterprise, acquisition of the water system would add numerous new responsibilities including supplying water, maintaining facilities, and billing and accounting for customers.* ***Future operating costs may be higher than anticipated under this analysis because of the Town's lack of experience in running the system. Also, operations costs could increase due to rising electricity, chemical, or commodity costs over which the Town has no control."***[6] [emphasis added]

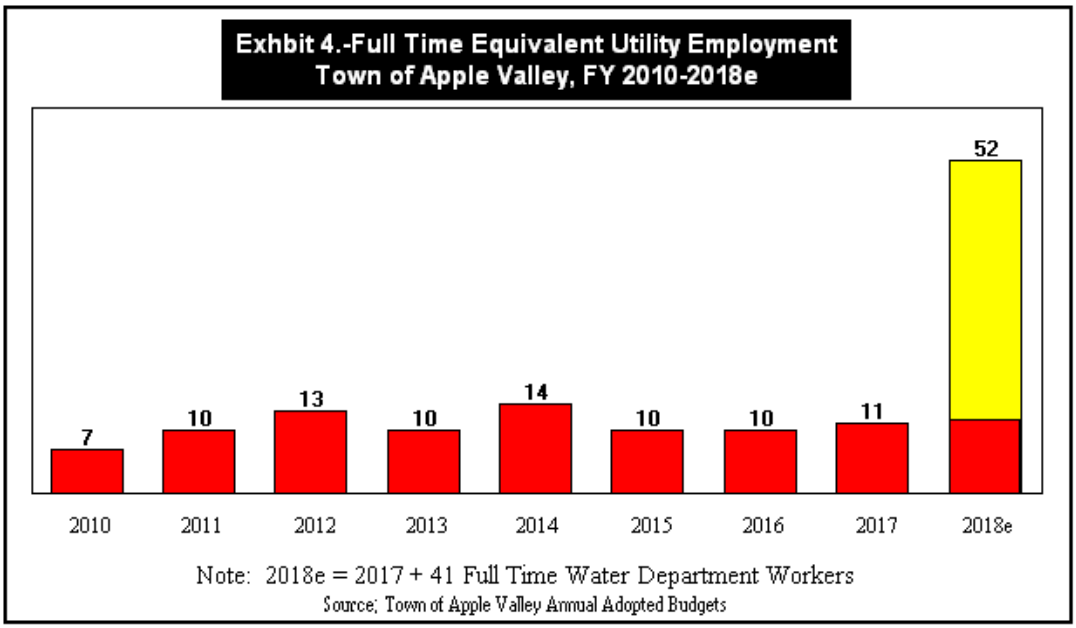
On this question, the impact of the acquisition of Liberty Apple Valley on the size of the Town of Apple Valley's operations is relevant. From Fiscal Year 2010-2017, the Town has had 123 to 140 full time equivalent employees. If the 2017 budgeted level is maintained in 2018, but the 41 full time employees needed to currently operate Liberty Apple Valley are added, the Town's staffing would jump to 172, highest in history and up 31% over 2017 (*Exhibit 3*).



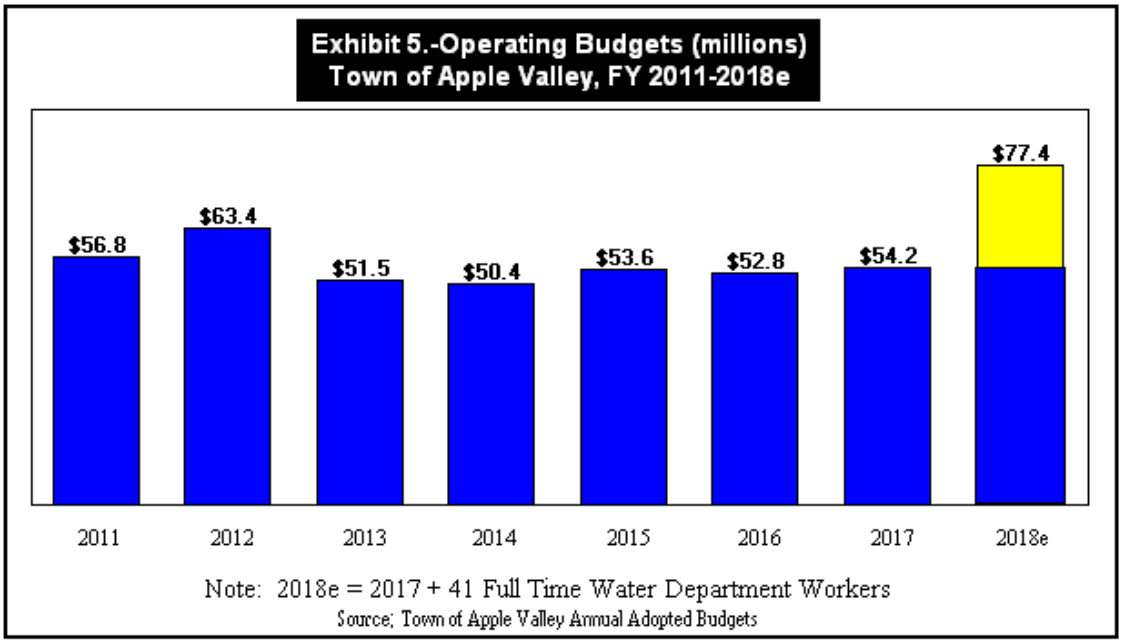
Meanwhile, though the Town does have some utility experience, it is minor compared to what it would be taking on. Its wastewater and solid waste operations have involved only 7 to 11 full

[6] Urban Futures, p. 41

time equivalent workers since 2000. The jump from 2017 to 2018 would add the 41 workers needed to operate the system, taking that number to 52, up by almost five times (*Exhibit 4*).



In addition, the Town's operating budget would jump $23.2 million from an approved $54.2 million in 2017 to $77.4 million, up 43%. That increase would come along with having monthly or bi-monthly collection from 20,000 customers as well as dealing with the issues they raise plus the technical problems of obtaining water, keeping water safe, recycling water, maintaining the water system and managing approximately $6.4 million a year in system upgrades (*Exhibit 5*).

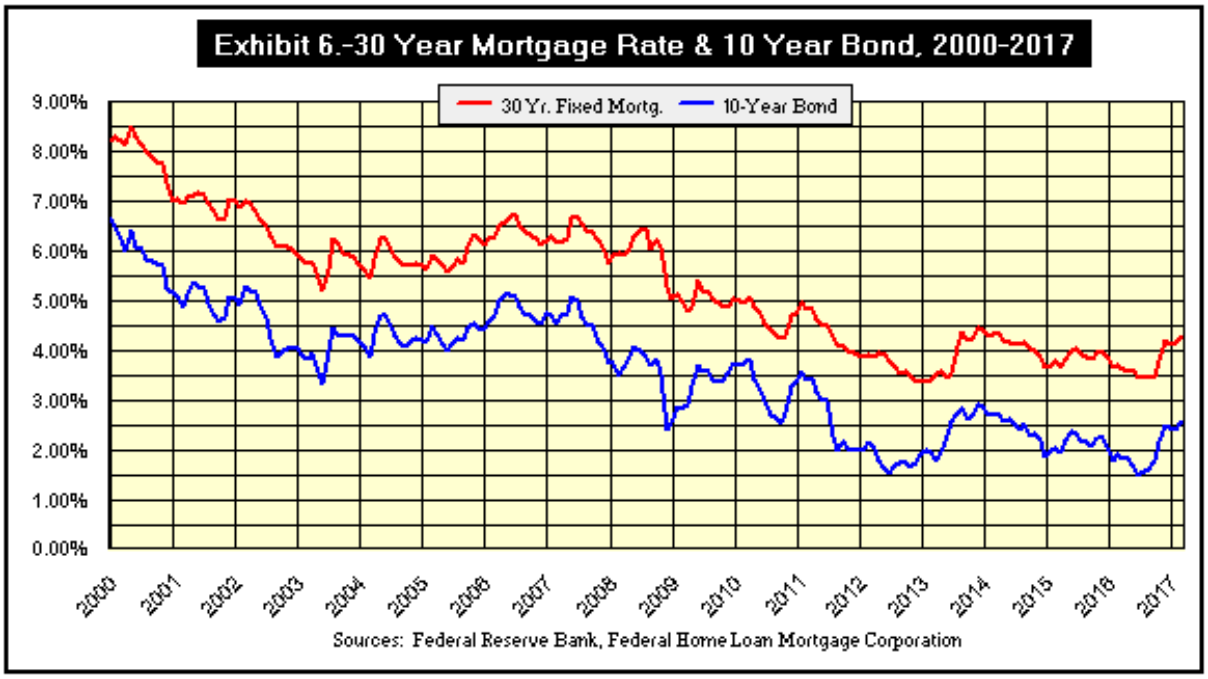


Taken together, these facts show that Urban Futures' warning about the Town of Apple Valley's ability to efficiently manage a complex new water system should be taken very seriously. This is especially true since staff will have to service a growing city while learning to manage a complex

water system better than a professional water company. Otherwise, the town will not find the operational savings to offset the annual costs of an expensive revenue bond issue.

A fourth warning from Urban Futures involves the question of interest rates for a municipal bonds:

> *"There can be uncertainty with regard to accessing the municipal bond market. Interest rates are at historic long term lows but there is the potential for rates to rise before the condemnation process is concluded …* ***If revenue bonds or installment sale COPs are used, higher interest rates will cut into the system's bonding capacity, cause increases in water rates, or <u>even make the acquisition not feasible</u>.***"[7] [emphasis added]



Municipal bond rate increases are very likely to occur between now and when any condemnation proceeding ended. With the U.S. economy running at nearly full employment in 2017, interest rates have already begun to rise (*Exhibit 6*). The Federal Reserve Bank (*Fed*) has indicated it will raise rates two to three times more in 2017 and three times more in 2018. That is likely to occur, even if the Trump Administration does not drive the economy faster. If it does, the Fed has indicated the likelihood of even more aggressive rate increases.

Altogether, each of the concerns that Urban Futures raised about the Town of Apple Valley's condemnation of Liberty Apple Valley appears to be valid:

- The valuation of the assets to be obtained by eminent domain could very well be higher than their estimates.

[7] Urban Futures, p. 41

- There must be $6.4 million included in any bond issue to cover the cost of investments in maintaining and upgrading the system for year 1 since the town does not have an existing reserve fund to cover that average annual capital outlay.
- Absorption of Liberty Apple Valley will very likely strain the management of the Town of Apple Valley which will see its staff driven to record levels, while its management would have to handle both the normal services for growing a town while accepting the burden of learning to run a very complex utility.
- Interest rates on any bond issue would very likely be much higher by the time any condemnation proceeding has moved through the courts and been completed.

These facts underscore why the Analysis Group has found that the use of eminent domain by municipalities to obtain independent water companies has dramatically underestimated the acquisition costs of such undertakings while failing to anticipate that such takeovers generally lead to rising, not falling customer water rates.

Estimated Customer Costs of a Revenue Bond Issue. For this reason, it is perhaps useful to re-look at how a revenue bond issue used to acquire Liberty Apple Valley could impact water rates over the amount to consumers are now paying. In such an analysis, it is important to remember that such a revenue bond must cover all costs of the acquisition. Below, three levels of bond issues are reviewed:

- $150 million as per Measure F being placed on the Apple Valley ballot.
- $175 million given the fact that the acquisition and other costs could well exceed those covered by Urban Futures.
- $200 million, the figure the Town's 2011 Blue Ribbon Committee worried that a bond might have to reach.

Interest rates for any bond issue will be reviewed at six levels.

- 4.50% current rate
- 5.25% likely in a year
- 6.25% possible in two years
- 7.25% that could be the level depending on the length of condemnation procedures and the status of the U.S. economy
- 8.25% would be an unusually high rate historically
- 12.0%, the outside rate to which a bond issue would be limited by the ballot measure

Cost of a $150 million Bond for 30 Years. This is the bond amount in the ballot measure. It would appear to be the least likely to cover the full cost of acquiring Liberty Apple Valley. This is the case as the size of the bond must include an amount to cover the suspect costs of acquiring Liberty Apple Valley, as well as one year's annual bond payment, a $6.4 million capital investment fund to cover year 1's maintenance and upgrading of the system, at least 3% for the cost of the issue and at least 3% for reimbursement for the process of undertaking the eminent domain (*conservatively $4.0 million*) plus 6-months of operational reserve for the costs of running the system (*$5.9 million based upon the 2016 operational budget*).

- This bond's annual payments would be $9.2 million at 4.5% to $18.6 million at 12.0%.
- More likely payments would range from $10.0 million at 5.25% to $12.4 million at 7.25% as rates rise over the next two or three years during which any condemnation proceeding would be occurring. At those two levels, the average increase in water cost to each of 20,000 customers would be:
    - $502 or $620 per year equal to $84 or $103 per bi-monthly bill (*Exhibit 7*).
    - For the 92% of customers whose average bi-monthly bill is $129 (*weighted average cost of those using 17,952 gallons or less per month*), this would increase their average bi-monthly water bill to $212 or $232, amounting to increases of 65.1% or 80.4%.
    - The full average water cost increase per customer for 30 years at those rates would be $15,056 to $18,589.
- Those water costs increases would be incurred by customers unless the Town could run the system far more efficiently than an experienced water operator, a difficult challenge given the operational facts discussed above (*see pages 2-4*).

Exhibit 7.-Cost of a $150 million Bond for 30 Years

Bond	**$150,000,000**	**$150,000,000**	**$150,000,000**	**$150,000,000**	**$150,000,000**	**$150,000,000**
Rate	**4.50%**	**5.25%**	**6.25%**	**7.25%**	**8.25%**	**12.00%**
Annual Payment	**$9,208,731**	**$10,037,540**	**$11,190,426**	**$12,392,943**	**$13,639,636**	**$18,621,549**
Customers	20,000	20,000	20,000	20,000	20,000	20,000
Annual Customer Cost Increase	$460	$502	$560	$620	$682	$931
Bi Monthly Bill Increase	**$77**	**$84**	**$93**	**$103**	**$114**	**$155**
Current Avg. (*92% of Customers*)	$129	$129	$129	$129	$129	$129
Possible New Bi-Monthly Bill	**$205**	**$212**	**$222**	**$232**	**$242**	**$284**
Percent Increase	59.7%	65.1%	72.6%	80.4%	88.4%	120.7%
Years	30	30	30	30	30	30
Total Payment	$276,261,943	$301,126,201	$335,712,766	$371,788,286	$409,189,089	$558,646,459
Customers	20,000	20,000	20,000	20,000	20,000	20,000
30 Year Customer Cost Increase	**$13,813**	**$15,056**	**$16,786**	**$18,589**	**$20,459**	**$27,932**

Cost of a $175 million Bond for 30 Years. This is a more intermediate bond amount for eminent domain to cover the full cost of acquiring Liberty Apple Valley. This is the case as the bond size might have to be larger if a court ruled on a higher cost of acquiring Liberty Apple

Valley, plus one year's annual bond payment, a $6.4 million capital investment fund to cover year 1 of maintaining and upgrading the system, at least 3% for the cost of the issue and at least 3% for reimbursement for the process of undertaking the eminent domain (*conservatively $5.25 million*) plus 6-months of operational reserve for the costs of running the system (*$5.9 million based upon the 2016 operational budget*).

- This bond's annual payments would be $10.7 million at 4.5% to $21.7 million at 12.0%.
- More likely payments would range from $11.7 million at 5.25% to $14.5 million at 7.25% as rates rise over the next two or three years during which any condemnation proceeding would be occurring. At those two levels, the average increase in water costs to each of 20,000 customers would be:
    - $586 or $723 per year equal to $98 or $120 per bi-monthly bill (*Exhibit 8*).
    - For the 92% of customers whose average bi-monthly bill is $129 (*weighted average cost of those using 17,952 gallons or less per month*), this would increase their average bi-monthly water bill to $226 or $249, up 75.9% or 93.7%.
    - The full average water cost increase per customer for 30 years at those rates would be $17,566 to $21,688
- Again, those water cost increases would be incurred by customers unless the Town could run the system significantly more efficiently than an experienced water operator, a strikingly difficult challenge given the size of such a bond and the operational facts discussed above (*see pages 2-4*).

Exhibit 8.-Cost of a $175 million Bond for 30 Years

Bond	**$175,000,000**	**$175,000,000**	**$175,000,000**	**$175,000,000**	**$175,000,000**	**$175,000,000**
Rate	**4.50%**	**5.25%**	**6.25%**	**7.25%**	**8.25%**	**12.00%**
Annual Payment	**$10,743,520**	**$11,710,463**	**$13,055,496**	**$14,458,433**	**$15,912,909**	**$21,725,140**
Customers	20,000	20,000	20,000	20,000	20,000	20,000
Annual Customer Cost Increase	$537	$586	$653	$723	$796	$1,086
Bi Monthly Bill Increase	**$90**	**$98**	**$109**	**$120**	**$133**	**$181**
Current Avg. (*92% of Customers*)	$129	$129	$129	$129	$129	$129
Possible New Bi-Monthly Bill	**$218**	**$226**	**$237**	**$249**	**$261**	**$310**
Percent Increase	69.7%	75.9%	84.7%	93.7%	103.2%	140.9%
Years	30	30	30	30	30	30
Total Payment	$322,305,600	$351,313,901	$391,664,894	$433,753,000	$477,387,270	$651,754,202
Customers	20,000	20,000	20,000	20,000	20,000	20,000
30 Year Customer Cost Increase	**$16,115**	**$17,566**	**$19,583**	**$21,688**	**$23,869**	**$32,588**

Cost of a $200 million Bond for 30 Years. This is a possible bond amount for a much higher cost of acquiring Liberty Apple Valley. This was the worry of the Town's 2011 Blue Ribbon Committee. It would have to cover a larger amount for the cost of acquiring Liberty Apple Valley should a court so rule, plus one year's annual bond payment, a $6.4 million capital investment fund to cover year 1 of maintaining and upgrading the system, at least 3% for the cost of the issue and at least 3% for reimbursement for the process of undertaking the eminent domain

(*conservatively $6.0 million*), plus 6-months of operational reserve for the costs of running the system (*$5.9 million based upon the 2016 operation*).

Note: The 2011 committee was studying a system with a rate base of $39.8 million when it expressed concern for needing as much as a $200 million bond issue. In 2016, the system's rate base was $59.6 million indicating that the system's value could need a bond 49.7% higher or $294 million by today.

- A $200 million bond's annual payments would be $12.3 million at 4.5% to $24.8 million at 12.0%.
- More likely payments would range from $19.8 million at 5.25% to $22.9 million at 7.25% as rates rise over the next two or three years during which any condemnation proceeding would be occurring. At those two levels, the average increase in water cost to each of 20,000 customers would be (*Exhibit 9*):
  - $669 or $826 per year equal to $112 to $138 per bi-monthly bill
  - For the 92% of customers whose average bi-monthly bill is $129 (*weighted average cost of those using 17,952 gallons or less per month*), this would increase their average water bill to $240 or $266, increases of 86.8% or 107.1%.
  - The full average water cost increase per customer for 30 years at those rates would be $20,075 or $24,786
- Again, those water cost increases would be incurred by customers unless the Town could run the system at an extraordinarily more efficient level than an experienced water operator, potentially an impossible challenge given the very large size of such a bond and the operational facts discussed above (*see pages 2-4*).

Exhibit 9.-Cost of a $200 million Bond for 30 Years

Bond	**$200,000,000**	**$200,000,000**	**$200,000,000**	**$200,000,000**	**$200,000,000**	**$200,000,000**
Rate	**4.50%**	**5.25%**	**6.25%**	**7.25%**	**8.25%**	**12.00%**
Annual Payment	**$12,278,309**	**$13,383,387**	**$14,920,567**	**$16,523,924**	**$18,186,182**	**$24,828,732**
Customers	20,000	20,000	20,000	20,000	20,000	20,000
Annual Customer Cost Increase	$614	$669	$746	$826	$909	$1,241
Bi Monthly Bill Increase	**$102**	**$112**	**$124**	**$138**	**$152**	**$207**
Current Avg. Bill (*most*)	$129	$129	$129	$129	$129	$129
Possible New Bi-Monthly Bill	**$231**	**$240**	**$253**	**$266**	**$280**	**$335**
Percent Increase	79.6%	86.8%	96.7%	107.1%	117.9%	161.0%
Years	30	30	30	30	30	30
Total Payment	$368,349,257	$401,501,601	$447,617,021	$495,717,714	$545,585,451	$744,861,945
Customers	20,000	20,000	20,000	20,000	20,000	20,000
30 Year Customer Cost	**$18,417**	**$20,075**	**$22,381**	**$24,786**	**$27,279**	**$37,243**

Summary. A review of the issues underlying Measure F, the $150 million bond issue being placed on the ballot in June by the Town of Apple Valley, shows that the risks of a takeover and management of the Liberty Apple Valley are extremely high. The experience in other jurisdictions as researched by the national Analysis Group shows that rates have risen, not fallen

in every recent case because the cost of acquiring water systems has been much higher than forecasted by municipalities. Meanwhile, each of the risks raised by the Town's 2014 Urban Futures' analysis of such a takeover appear to be, in fact, occurring. As they warned, the value of the property could well be much higher than forecasted; there is the need for a multimillion dollar capital investment fund as part of any bond based on the lack of a Town fund for year 1's capital investment; the Town's ability to undertake a major expansion in its staffing, operations and budgets and run a complex water system significantly more efficiently than an experienced water company appears improbable; and interest rates are due to rise.

A look at the possible water costs for each customer from a revenue bond given these circumstances shows a high probability for significant rate increases. Even if the $150 million Measure F bond level is sufficient, it could cost customers an extra $502 or $620 per year equal to $84 or $103 per bi-monthly bill. Voters should be hesitant to take such a risk.

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Dr. John Husing is a research economist who has specialized in the study of the Inland Empire's growing economy since 1964. For decades, he has produced city and county specific economic development strategies for the region's local governments. His significant understanding of San Bernardino and Riverside counties as well as his willingness to let data driven analysis guide his views has caused him to be repeatedly asked to speak at economic conferences throughout the valley and desert areas of the region.

Dr. Husing's work has led to economic strategies that combine analytical work with extensive interviews with executives and entrepreneurs to understand the forces shaping Southern California. His firm, Economics & Politics, Inc., based in Redlands, has produced respected project specific economic impact studies for cities, counties, water and transportation, housing developers and environmental entities. In 2007, the Los Angeles Times named him as one of the "100 people wielding the most influence over Southern California." His economic commentary on the Inland Empire economy can be heard weekly on KVCR, 91.9 FM at 6:45 am and 8:45 am during All Things Considered.

Dr. Husing was born in Alameda, California. He received a B.S. degree *cum laude* at St. Mary's College in Moraga, California. His MA and Ph.D. degrees are from Claremont Graduate University. He has two children and three grandchildren.