



**CITY OF LAKE ELMO, MN
COST OF SERVICE STUDY FOR
WATER, SANITARY SEWER, AND
STORM WATER FUNDS**

2016 REPORT

JUNE 10, 2016

PREPARED BY:



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June 10, 2016

Kristina Handt
City Administrator

Cathy Bendel
Finance Director

Lake Elmo City Hall
3800 Laverne Ave N.
Lake Elmo, MN 55042

Re: Cost of Service Study for City Utility Funds
TKDA Project No. 16102.000

Dear Kristina and Cathy:

TKDA is pleased to present the City of Lake Elmo with a cost of service study for the City's Utility Funds to be part of an overall Financial Management Plan for said funds. TKDA was hired to analyze and present a 10 year cost of service projection for the three utility funds. The analysis and report includes a cost analysis of past costs and a projection for each, added staffing, and some capital investments for the existing system. Also included were a recommendation for a work order system, a change in some depreciation schedules, and a recommendation to use a higher projected rate of inflation for the utilities rather than 2%.

We appreciate the opportunity to provide service to the City of Lake Elmo.

Sincerely,

Bernie Bullert
Senior Water/Wastewater Engineer

Lake Elmo Cost of Service Study

TKDA was tasked with doing a cost of service study for the water, sanitary sewer, and storm sewer utilities. The projected 10 year costs of operations will be used to project utility rates going forward for the next 10 year period with adjustments annually based on actual costs over time. A three year actual cost history was used, although the sanitary and storm system are small and changing in size rapidly, therefore the cost history was not as relevant.

This report highlights all the assumptions put into the model in order to bring the cost of operations forward over the next 10 year period. The assumptions are as follows:

1. a) Expenses are coded in two different ways. Supplies and other charges are directly coded to the appropriate utility fund. Labor charges are prorated by staff as the percentage of their time spent working on each utility and are subject to change.
b) Some of the citywide overhead is not charged to the utilities but is paid through general tax revenue. These include city clerk time, city council costs, attorney costs, building costs, and equipment cost. This may be noticeable to the customers who have well and septic systems as they are funding some utility costs through the general tax revenue.
c) In order to charge costs accurately, a work order system should be implemented and an overhead rate could be determined and charged as a percentage of the budget to each utility in order to reimburse the general tax revenue.
d) Depreciation schedules looked appropriate except for water distribution pipe which was scheduled at 30 to 33 years. The normal industry practices depreciate water distribution pipe over 75 years.
2. a) The inflation rate generally used by Lake Elmo is 2%. It was not revised for this study. However, utilities usually experience inflation in the range of 3 to 3.5%. We would recommend the City use a higher inflation rate for this utility rate study.
b) The water system growth in system miles over the next 10 years is projected at 5% per year.
c) The sanitary system growth in system miles over the next 10 years is projected at 50% per year.
d) The storm system growth in system miles over the next 10 years is projected at 7% per year.
e) Maintenance costs are generally related to pipe length and volume but greater emphases is placed on the length of pipe. Therefore costs for a new system are expected to increase as the length of the new system expands.
f) For purposes of future expenses, we used 5% for water plus inflation, 30% for sanitary plus inflation, and 7% for storm plus inflation. The sanitary number was reduced from 50% to 30% to maintain a more proper balance in the budget numbers for water and sanitary operational costs.
3. a) Staff does not code labor time or equipment time to jobs however, materials are charged directly to the correct utility. A work order system will help correctly track all costs to the correct utility.
b) Not all preventative maintenance on the utility systems is currently being done. For example, the hydrant flushing program is incomplete and there is no valve operating program on the water system.

c) The utility staffing level of three staff members for 2016 is low when compared to other utilities and we have increased it to 3.5 for 2017. This should allow for additional preventative maintenance.

d) Staffing added over the next 10 years is as follows:

1. ½ laborer added in 2017, .2FTE water, .2FTE sanitary, .1FTE storm
2. ½ laborer added in 2019, .2FTE water, .2FTE sanitary, .1FTE storm
3. ½ laborer added in 2022, .2FTE water, .2FTE sanitary, .1FTE storm
4. ½ laborer added in 2025, .2 FTE water, .2 FTE sanitary, .1FTE storm
5. ½ billing clerk added in 2018; 40% water, 25% sanitary, 35% storm
6. ½ billing clerk added in 2022; 40% water, 25% sanitary, 35% storm
7. ½ billing clerk added in 2025; 40% water, 25% sanitary, 35% storm

e) Another ½ FTE laborer should to be added to streets based on increased street miles. That is a suggestion but was not part of this study. A new billing system is needed and the efficiencies gained with a new system will affect the hiring of clerical staff. The billing clerk was re-proportioned for 2017 and going forward to the three utilities based on staff recommendations. Postage and software support were also re-proportioned to the three utilities based on staff experience. Based on a previous staffing study of east metro suburbs completed for White Bear Township by TKDA, the average staffing level for four similar cities was 13 staff in Public Works based on your 2025 projected population. The additions recommended here bring utility staffing to 12. It should be able to be slightly smaller as Lake Elmo's systems will be new relative to other suburbs.

4. Other operational expense adjustments were made as follows:

- a) \$25,000 in meters was added for 2017 and 2018 to replace old water meters that should be replaced. The balance of water meter costs is for meters for new buildings and other maintenance replacements.
- b) Water purchased from Oakdale is discontinued from the projections as Lake Elmo will end the purchase in 2017.
- c) Software support was increased across the three utilities to implement a new billing system shown in the capital projects.
- d) Insurance costs were increased for the three utilities as they expand. This insurance would be purchased from the League of Cities.
- e) The Metropolitan Council Wastewater Treatment expenses are based on projected flows. The numbers were shifted two years because MCES uses actual flows from the last complete year to project their next year's bill. Therefore the 2017 charges are based on the 2015 flows.

The new operating cost projections for the next 10 year period should be a reasonable estimate of costs. Each year after the annual accounting is complete, the costs should be compared to the projection and the next budget cycle adjusted accordingly to align with actual costs.

City of Lake Elmo
Budget 2016

Account Number	Description	2013 Actual	2014 Actual	2015 Budget	2015 Projected Actual	2016 Budget	2015 to 2016 Change	2017 Projected	2018 Projected	2019 Projected	2020 Projected	2021 Projected	2022 Projected	2023 Projected	2024 Projected	2025 Projected	2026 Projected
	Inflation								2%	2%	2%	2%	2%	2%	2%	2%	2%
	Growth Percent								7%	7%	7%	7%	7%	7%	7%	7%	7%
SURFACE WATER	Total Increase (percent)								9%	9%	9%	9%	9%	9%	9%	9%	9%
	Operating Revenues																
603-000-0000-36100	Special Assessment Revenue	\$20,168	\$837	\$5,000	\$0	\$5,000	100.0%										
603-000-0000-36200	Miscellaneous Revenue	\$0	\$0	\$0	\$10,125	\$0	0.0%										
603-000-0000-37100	Surface Water Utility Sales	\$191,087	\$214,915	\$215,000	\$220,956	\$221,500	0.2%										
	Total Operating Revenues	\$211,255	\$215,752	\$220,000	\$231,081	\$226,500	2.0%										
	Operating Expenses																
	Personnel Services																
603-496-9500-41010	Full-time Salaries	\$34,681	\$31,708	\$34,879	\$23,522	\$25,874	-10.0%	\$36,630	\$45,738	\$51,109	\$52,132	\$53,174	\$68,034	\$69,394	\$70,782	\$86,837	\$88,574
603-496-9500-41210	PERA Contributions	\$2,514	\$2,290	\$2,519	\$1,697	\$1,867	-10.0%	\$2,656	\$3,316	\$3,705	\$3,780	\$3,855	\$4,932	\$5,031	\$5,132	\$6,296	\$6,422
603-496-9500-41220	FICA Contributions	\$2,028	\$1,857	\$2,042	\$1,378	\$1,515	-10.0%	\$2,271	\$2,836	\$3,169	\$3,232	\$3,297	\$4,218	\$4,302	\$4,388	\$5,384	\$5,492
603-496-9500-41230	Medicare Contributions	\$474	\$436	\$479	\$322	\$355	-10.0%	\$531	\$663	\$741	\$756	\$771	\$986	\$1,006	\$1,026	\$1,259	\$1,284
603-496-9500-41300	Health/Dental Insurance	\$6,942	\$7,641	\$8,405	\$7,165	\$7,882	-10.0%	\$7,326	\$9,148	\$10,222	\$10,426	\$10,635	\$13,607	\$13,879	\$14,156	\$17,367	\$17,715
603-496-9500-41420	Unemployment Benefits	\$0	\$0	\$0	\$0	\$0	0.0%	\$0	\$1	\$2	\$3	\$4	\$5	\$6	\$7	\$8	\$9
603-496-9500-41510	Workers' Compensation	\$848	\$1,312	\$1,443	\$221	\$243	-10.0%	\$1,465	\$1,830	\$2,044	\$2,085	\$2,127	\$2,721	\$2,776	\$2,831	\$3,473	\$3,543
	Total Personnel Services	\$47,486	\$45,243	\$49,767	\$34,304	\$37,735	-10.0%	\$50,879	\$63,531	\$70,993	\$72,414	\$73,863	\$94,504	\$96,395	\$98,323	\$120,624	\$123,038
	Supplies																
603-496-9500-42000	Office Supplies	\$238	\$375	\$200	\$2,172	\$375	82.7%	\$500	\$545	\$594	\$648	\$706	\$769	\$839	\$914	\$996	\$1,086
603-496-9500-42270	Utility System Maint Supplies	\$0	\$411	\$500	\$551	\$500	9.3%	\$1,000	\$1,090	\$1,188	\$1,295	\$1,412	\$1,539	\$1,677	\$1,828	\$1,993	\$2,172
603-496-9500-42400	Small Tools & Minor Equipment	\$452	\$299	\$1,000	\$200	\$1,000	-400.0%	\$1,000	\$1,090	\$1,188	\$1,295	\$1,412	\$1,539	\$1,677	\$1,828	\$1,993	\$2,172
603-496-9500-42400	Other Equipment	\$0	\$8,422	\$0	\$0	\$0	0.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Supplies	\$690	\$9,507	\$1,700	\$2,924	\$1,875	35.9%	\$2,500	\$2,725	\$2,970	\$3,238	\$3,529	\$3,847	\$4,193	\$4,570	\$4,981	\$5,430
	Other Services and Charges																
603-496-9500-43020	Comprehensive Planning	\$0	\$0	\$3,000	\$0	\$3,000	100.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
603-496-9500-43030	Engineering Services	\$27,893	\$21,009	\$30,000	\$20,332	\$30,000	-47.5%	\$20,000	\$21,800	\$23,762	\$25,901	\$28,232	\$30,772	\$33,542	\$36,561	\$39,851	\$43,438
603-496-9500-43030	Eng Svcs SW Master Planning	\$0	\$0	\$15,000	\$0	\$15,000	100.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
603-496-9500-43150	Contract Services	\$7,504	\$9,711	\$5,000	\$9,941	\$7,500	24.6%	\$10,000	\$10,900	\$11,881	\$12,950	\$14,116	\$15,386	\$16,771	\$18,280	\$19,926	\$21,719
603-496-9500-43180	Software Support	\$442	\$3,268	\$1,000	\$3,617	\$1,500	58.5%	\$8,400	\$8,568	\$8,739	\$8,914	\$9,092	\$9,274	\$9,460	\$9,649	\$9,842	\$10,039
603-496-9500-43220	Postage	\$1,973	\$1,700	\$1,700	\$1,500	\$1,700	-13.3%	\$1,645	\$1,793	\$1,954	\$2,130	\$2,322	\$2,531	\$2,759	\$3,007	\$3,278	\$3,573
603-496-9500-43320	Depreciation Expense	\$15,187	\$15,963	\$17,000	\$15,187	\$17,000	-11.9%	\$1,500	\$1,635	\$1,782	\$1,943	\$2,117	\$2,308	\$2,516	\$2,742	\$2,989	\$3,258
603-496-9500-44010	Street Sweeping	\$11,498	\$12,403	\$22,000	\$10,438	\$22,000	-110.8%	\$20,000	\$21,800	\$23,762	\$25,901	\$28,232	\$30,772	\$33,542	\$36,561	\$39,851	\$43,438
603-496-9500-44030	Repairs/Maint Not Bldg	\$0	\$5,304	\$1,500	\$0	\$1,500	100.0%	\$3,000	\$3,270	\$3,564	\$3,885	\$4,235	\$4,616	\$5,031	\$5,484	\$5,978	\$6,516
603-496-9500-44300	Miscellaneous Expenses	\$119	\$459	\$400	\$0	\$400	100.0%	\$400	\$436	\$475	\$518	\$565	\$615	\$671	\$731	\$797	\$869
603-496-9500-44370	Conferences & Training	\$3,483	\$2,225	\$1,800	\$2,265	\$1,800	20.5%	\$2,500	\$2,725	\$2,970	\$3,238	\$3,529	\$3,847	\$4,193	\$4,570	\$4,981	\$5,430
603-496-9500-45300	Improvements Other Than Bldgs	\$0	\$18,190	\$30,000	\$0	\$30,000	100.0%	\$20,000	\$21,800	\$23,762	\$25,901	\$28,232	\$30,772	\$33,542	\$36,561	\$39,851	\$43,438
603-496-9500-45500	Vehicles	\$0	\$5,743	\$0	\$0	\$0	0.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Total Other Services and Charges	\$68,100	\$95,974	\$128,400	\$63,281	\$131,400	-107.6%	\$87,445	\$94,727	\$102,653	\$111,280	\$120,671	\$130,895	\$142,026	\$154,146	\$167,344	\$181,716
	Operating Expenses	\$116,275	\$150,723	\$179,867	\$100,509	\$171,010	-70.1%	\$140,824	\$160,983	\$176,616	\$186,931	\$198,063	\$229,245	\$242,614	\$257,040	\$292,950	\$310,184
	Operating Income (Loss)	\$94,980	\$65,029	\$40,133	\$130,572	\$55,490	57.5%										
	Nonoperating Revenues																
603-000-0000-36205	Refunds and Reimbursements	\$0	\$0	\$0	\$0	\$0	0.0%										
603-000-0000-36210	Interest on Investment	\$1,098	\$1,239	\$1,100	\$2,844	\$5,000	0.0%										
603-000-0000-36231	Contrib. of Capital Assets	\$0	\$0	\$0	\$0	\$0	0.0%										
603-000-0000-36232	Developer Contributions	\$0	\$0	\$0	\$0	\$0	0.0%										
	Total Nonoperating Revenues	\$1,098	\$1,239	\$1,100	\$2,844	\$5,000	0.0%										
	Change in Net Assets	\$96,078	\$66,268	\$41,233	\$133,417	\$60,490	54.7%										

Actively bill all delinquencies each year
SW permit review fee (new 1/1/15)

Utility Bill paper; 2015 = new folder/stuffer (1x cost)

SW System Master Planning to be done by Focus

Eng

Due to use of contractor for Billing

Annual bills plus delinquency mailer cost (required to

assess)

Street sweeping soon to be mandated...

Excavator rental