

Town of Levinton Case

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ACCT 5143: Topics in Accounting

[Date]

Abstract

This paper discusses the issues surrounding the proposed expansion of a water and sewerage system at the town of Levinton. The residents are opposed to the construction of the system, owing to its huge capital outlay of \$3m, which is to be financed through a 5% bond issue. The goal of the paper is to propose a solution to the members of the town, considering their many concerns such as the low initiation fees, use of sinking fund earnings to finance the town's general budget, and the use of a constant charge for both water and sewerage usage.

Town of Levinton Case

- 1) Cross-subsidization in the water and sewerage system

Town of Levinton Case

The above case study presents a complex web of stakeholders and their varying interests, which must be addressed if the new system is to be a success. The proponents of the new system argue that it shall be paid for, by the new users, which means that such new users must significantly subsidize the existing users in order to cover up the cost of the new system. As shown in the excel workings below, an increase in the charges for initiation fees (new users) will play a key role in reducing the budget deficits occasioned by the payments for the new bond issue. Additionally, there is the need for the use of water meters to accurately determine usage of water, so that people with pools and large lawns can pay more than those without such facilities. This will allow users to only pay for the quantities used, as opposed to using the blanket amounts charged per unit. Lastly, those using both water and sewerage treatment should subsidize the costs, by paying an additional fee above those that use water only. Charging a fixed amount for both water and sewerage ignores some of the issues raised by some town residents, who complained about paying for both water and sewerage charges yet they some of their units were not connected to the sewerage treatment system.

2) Developing the budget for 2012

In developing the 2012 budget, a number of assumptions were made. Starting from the *given* usage and initiation units, we assumed that that the trend in usage and initiation fees, tax support, direct and indirect costs among others continues over the period and that the tax rate remains the same at \$0.5. Assuming the approval of the bond issue, 2012 would witness a significant shift in the debt service from the initial \$180,000 to \$480,000, which, despite the increase in the revenues would dent the county budget by \$264,018 as detailed below.

Town of Levinton Case

Revenue and Expense Item				2010	Budget 2011	Budget 2012
Revenues						
Initiation fees				52,200	55,000	58,500
Usage fees				301,705	323,610	346,163
Tax support				33,238	34,568	35,950
Total revenues				387,143	413,178	440,613
Operating costs						
Direct				180,611	187,835	195,348
Indirect				27,073	28,156	29,282
Debt Service						
Principal				100,000	100,000	250,000
Interest				80,000	80,000	230,000
Total operating costs				\$387,684	\$395,991	\$704,631
Surplus(Deficit)				(\$541)	\$17,186	(\$264,018)
Tax base (assessed valuations)			\$	66,475,994	\$ 69,135,034	\$ 71,900,435
Tax rate/\$1000				\$16.24	\$16.56	\$16.88
Water consumption (gallons)				67,681,152	76,479,702	91,775,642
Initiation fee				\$120	\$125	\$130
Usage fee				\$41.50	\$42	\$42.50
Actual and forecast units						
Initiation units				435	440	450
Usage units				7,270	7,705	8,145

3) Eliminating the deficit in the 2012 budget

Holding all factors in question two constant, we attempt to eliminate the budget deficit in 2012, given the additional loan obligations. As identified in the case study, residents of Levinton town feel that any deficits as a result of the additional bond arrangements should be borne by the new users. To this extend, the figure that varies is the initiation fees as shown in the spreadsheet below, in addition to utilizing the sinking fund earnings as part of the departments revenue to offset the deficit.

Revenue and Expense Item		Budget 2012	Budget 2012 without deficit
Revenues			
Initiation fees		58,500	264,020
Usage fees		346,163	346,163
Tax support		35,950	35,950
Earnings of sinking fund			58,500
Total revenues		440,613	704,632
Operating costs			
Direct		195,348	195,348
Indirect		29,282	29,282
Debt Service			
Principal		250,000	250,000
Interstet		230,000	230,000
Total operating costs		\$704,631	\$704,631
Surplus(Deficit)		(\$264,018)	\$1.58
Tax base (assessed valuations)		\$ 71,900,435	\$ 71,900,435
Tax rate/\$1000		\$16.88	\$16.88
Water consumption (gallons)		91,775,642	91,775,642
Initiation fee		\$130	\$587
Usage fee		\$42.50	\$42.50
Actual and forecast units			
Initiation units		450	450

Usage units	8,145	8,145
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4) Forecast for 2012/13/14

As noted above, increase in the initiation fees is the most logical method of eliminating the budget deficit. Starting with the surplus budget of 2012 (after eliminating the initial deficit), sustained variation of the initiation fees in tandem with the other budget items as shown below will ensure that the budget runs at a surplus. It's important to note that the initial bond matures in 2014 and therefore, starting 2015, the sinking debt service reduces from the initial \$480,000 to \$300,000, which will in turn lead to a healthy surplus for the department in the subsequent years.

Revenue and Expense Item	Budget 2012	Budget 2013	Budget 2014
Revenues			
Initiation fees	264,020	271,400	279,650
Usage fees	346,163	369,585	393,893
Tax support	35,950	37,388	38,884
Earnings of sinking fund	58,500	66,000	73500
Total revenues	704,632	744,373	785,926
Operating costs			
Direct	195,348	203,162	211288.8294
Indirect	29,282	30,454	31671.67078
Debt Service			
Principal	250,000	250,000	250,000
Interest	230,000	230,000	230,000
Total operating costs	\$704,631	\$713,616	\$722,961
Surplus(Deficit)	\$1.58	\$30,757.36	\$62,965.76
Tax base (assessed valuations)	\$ 71,900,435	\$ 74,776,452	\$ 77,767,510.50
Tax rate/\$1000	\$16.88		
Water consumption (gallons)	85657266.24	95,936,138	107448474.8

Town of Levinton Case

Initiation fee	\$587	\$590	595
Usage fee	\$42.50	\$43	43.5
Actual and forecast units			
Initiation units	450	460	470
Usage units	8,145	8,595	9055

5) Proposed solution

From the foregoing discussion, the following solution can be derived. First, the new sewerage system should be constructed, since the costs can be recouped through an increase in the initiation fees, while maintaining the trend in the usage fees. In order to increase the department's revenue, initiation fees should be a stand-alone charge, thus any usage during the year of initiation should be surcharged accordingly. Water meters should be put in every household so as to ensure that water charges are made done on actual consumption as opposed to the existing system where charges are done per unit. Charges should be done in such a way that there is a separate fee for water and sewerage treatment so that those units that do not use sewerage such as swimming pools and lawns are charged differently as opposed to the current system where all charges are lumped up together. Lastly, sinking fund earnings should be used to fund the department's budget deficit as opposed to funding the general budget support as is the case currently.