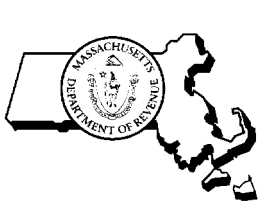
Massachusetts Department of Revenue *Division of Local Services*
Navjeet K. Bal, Commissioner *Robert G. Nunes, Deputy Commissioner & Director of Municipal Affairs*



Town of Plainville

Sewer Financial Analysis

Division of Local Services / Technical Assistance Section

June 2011

Division of Local Services, Post Office Box 9569, Boston, MA 02114-9569, Tel: 617-626-2300; Fax: 617-626-2330
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Massachusetts Department of Revenue *Division of Local Services*
Navjeet K. Bal, Commissioner Robert G. Nunes, Deputy Commissioner & Director of Municipal Affairs

June 30, 2011

Board of Selectmen
Town of Plainville
142 South Street
Plainville, MA 02762

Board of Water and Sewer Commissioners
P.O. Box 1565
Plainville, MA 02762

Dear Members of the Board and Water and Sewer Commissioners:

It is with pleasure that I transmit to you the enclosed Sewer Financial Analysis completed by the Division of Local Services for the Town of Plainville. It is our hope that the information presented in this report will assist the town in deciding among the various alternatives to raise revenue to cover upcoming sewer capital costs and to develop a long-term financing plan for these system improvements.

As a routine practice, we will post the completed report on-line at the DLS website within a week or two. Also, we will forward a copy of the report to the town's state senator and representatives.

If you have any questions or comments regarding our findings and recommendations, please feel free to contact Rick Kingsley, Bureau Chief of the DLS Municipal Data Management and Technical Assistance Bureau at 617-626-2376 or at kingsleyf@dor.state.ma.us.

Sincerely,

Robert G. Nunes
Deputy Commissioner &
Director of Municipal Affairs

cc: State Senator Richard J. Ross
State Representative Daniel B. Winslow

Introduction

At the joint request of the Plainville Board of Selectmen and Sewer Commissioners, the Division of Local Services has reviewed the potential fiscal impacts of the upcoming North Attleborough sewer facility improvements on the town. Based on the town's binding inter-municipal agreement with neighboring North Attleborough, Plainville is contractually obligated to pay for 23.5 percent of the cost of improvements to North Attleborough's wastewater treatment facility. These improvements have been ordered by the federal Environmental Protection Agency. Since approximately half of Plainville does not currently receive sewer service, issues arise as to whether or not this financial burden should be borne entirely by the users or whether the town's taxpayers should share some of this burden.

In the report that follows, we examine the various options for financing these costs and provide discussion about the potential advantages and disadvantages of each financing method. Though there were initial concerns on the part of town officials about the reliability of the data contained in the sewer system usage and billing software, after we spent some time understanding the different reports, we became comfortable that the underlying data was both reliable and relatively consistent. In fact, we were able to use the underlying data to re-create annual commitments with a high degree of accuracy when compared to the actual commitments issued for fiscal years (FY2009-FY2011).

It appears that longstanding issues relating to the classification of users as residential or commercial accounts, the method where 85 percent of water consumption is used to generate residential sewer bills and assessment of the capital fee among users contributed to some of the confusion. Other issues seem to arise due to the lack of flexibility to generate specific reports that contain desired data elements. However, we were generally able to overcome these issues by using several different reports together to produce a model that projects revenues accurately based on potential user fee options.

Overview of Sewer Service

The Town of Plainville has a population of approximately 8,300 people living within a total land area of about 11 square miles. The town's sewer system serves neighborhoods adjacent to Route 1A, including the downtown area, as well as neighborhoods to the south of Route 1 near the North Attleborough border. Areas to the north along the town's borders with Wrentham and the western portion of town bordering Cumberland, Rhode Island are not connected to the sewer system and rely on on-site septic systems. The town's master plan for the sewer system includes future expansion to the West Side or West Bacon Street neighborhoods, areas south of the Plainridge Race Track in the Mirimichi Street area and the neighborhoods west of Route 1A or the North End area (See Figure 1 showing existing system (in yellow) with proposed sewer expansion in dark colors).

The town's wastewater is collected in local sewer lines and delivered to North Attleborough's wastewater treatment facility. Plainville's flow into North Attleborough sewer interceptors is measured at two locations on the town border: the Kelley Boulevard and Moran Street metering stations. Once the wastewater is treated at the North Attleborough facility, it is discharged into the Ten Mile River, which flows into the Narragansett Bay. The Ten Mile River serves as a source of public water supply in Rhode Island.

Plainville pays for this wastewater treatment and its proportionate share of use of North Attleborough's sewer interceptors based on the terms and conditions stipulated in the towns' inter-municipal agreement. As per the agreement, North Attleborough has agreed to provide Plainville with 23.5 percent of the treatment capacity of its facility. This percentage is calculated based on Plainville's allocated share of the treatment facility's design capacity or 1.06 million gallons per day as a percent of total facility capacity of 4.54 million gallons per day. Plainville currently uses only about half of this capacity, with the remainder reserved to service the neighborhoods that will eventually be connected to the system as described in the master plan.

Plainville is also required by the agreement to pay for its proportionate share of any necessary capital improvements including those directed by the Environmental Protection Agency, the Department of Environmental Protection or court order to provide a higher degree of treatment. In June of 2008, the federal Environmental Protection Agency issued an order to North Attleborough to attain compliance with the more stringent limits on total phosphorus and total nitrogen contained in the wastewater facility's National Pollution Discharge Elimination System operating permit (NPDES Permit No. MA0101036). The required upgrades to the system will be costly and must be completed within the next 18 months. The wastewater facility must be in compliance with the stricter total phosphorus and nitrogen limits in its permit within 24 months.

North Attleborough recently opened the bids to complete the necessary improvements and it looks like the project will cost approximately $26.2 million. The town is working with the Water Pollution Abatement Trust (WPAT) to secure subsidized financing for this construction. WPAT offers subsidized low interest loans and interim financing for qualifying projects. Plainville's 23.5 percent share of these costs totals slightly less than $6.2 million. However, when interest costs on the borrowing, WPAT loan origination fees and administrative fees and other issuance costs are included, Plainville's costs rise to a projected $8.86 million, assuming the project is financed over 30 years using a level debt service schedule.

The Plainville sewer system currently serves about 1,300 residential customers and 107 commercial customers. The commercial customers include a combination of commercial and industrial properties, apartment buildings and two mobile home parks. The sewer user rates for FY2011 were $5 per thousand gallons of water used, with residential usage discounted to 85 percent of metered water usage. For commercial customers, sewer usage is assumed to be 100 percent of water usage. A capital charge of $48 per year is assessed to each residential user. For commercial users, capital charges are assigned based on the number of living units. For example, an apartment building with 24 units is charged $1,152 (24 units x $48 = $1,152), while a commercial establishment such as a restaurant or industrial facility is charged one unit or $48.

The Plainville water distribution system is more extensive than the sewer service area and includes all the neighborhoods that are sewered, or will eventually be sewered, plus a few additional streets. The town meters water usage using meters of varying age and capability. Less than 10 percent of the meters are very old manual read meters, a second group is about 15 years old and can be visually read outside the home and then keyed into the billing software. A third group is about five years old and can be read remotely, but data has to be manually keyed into the billing software rather than uploaded. This occurs because the radio read system is not presently compatible with the software used for billing, the Continental Utility Solutions, Inc., (CUSI).

The process for reading meters and data entering readings into the billing software is labor intensive. It currently takes about 4 weeks each quarter to read all of the meters in town for billing and can take long as six weeks during the winter months. Commercial users are billed monthly and it generally takes about two days to complete these readings each month. Office staff then must spend a significant amount of time entering readings into the CUSI system.

The town measures its annual water withdrawals at the various wellheads to maintain compliance with Department of Environmental Protection annual withdrawal limits. Comparing the amount of water entering the distribution system with the amounts as measured at customers' meters yields the amount of "unaccounted for" water. Water industry standards for this unaccounted for water are that this lost water should not exceed 10 percent of the amount entering the system.

In Plainville's case, unaccounted for water approaches 25 to 30 percent of the total amount measured at the wellheads. The department monitors for leakage in the distribution system and the superintendent felt that leakage didn't contribute much to this discrepancy. Municipal usage accounts for some of this discrepancy, as municipal usage is not billed. A significant amount of water is lost during the filtration and "backwash" procedures when the filtration system is flushed. The remaining potential source of unaccounted for water is meters that are under-recording usage. Generally, water meters have a useful life of about ten years, after which they tend to under-record usage.

Options for Financing Required Sewer Improvements

The Plainville sewer system serves close to 1,300 residential customers and 107 commercial customers. The town has more than 2,400 residential parcels so roughly 1,100 residential parcels, or slightly less than 50 percent, are not tied-in to the system. As contemplated in the town's sewer master plan, another 700 or so of these parcels will eventually have access to sewer service, but full expansion may be many years away. The fact that only about half of the town currently receives sewer service creates some difficult issues with regard to who should pay for the improvements and through what means.

Among the possible financing options are:

- sewer user or capital fees;
- sewer special assessments (often called betterments) or permanent privilege fees for users that tie-in after the improvements, or
- Proposition 2 ½ debt exclusion.

Sewer User or Capital Fees

The town charges sewer user and capital fees based on the authority of MGL c. 83, Section 16. This section states that the sewer commissioners may set just and equitable annual charges for the use of the sewer system. These user and capital fees may cover "the cost of maintenance and repairs of such sewers or of any debt contracted for sewer purposes." The town's current sewer user fee is $5 per 1,000 gallons of water used, with residential customers' water usage discounted to 85 percent and commercial customers' billed at 100 percent of water usage. The town also charges a capital fee set at $48 per year per residential unit. The capital fee for apartments and mobile home parks are based on the number of living units multiplied by $48. Non-residential commercial and industrial users are assigned one unit for the purposes of the capital fee.

Advantages/Disadvantages

The primary advantage to covering the upcoming project debt through sewer user fees is that this approach is a relatively simple, straightforward method to raise revenue that can be implemented quickly. These additional charges would be a function of the amount of sewerage (as measured by water usage) treated so there is at least some equity among the charges assessed to existing users based on their proportionate usage.

However, the primary disadvantages to using user fees to cover these costs are also equity issues. For example, a single family homeowner with ten acres of land and a small household size will likely pay very little if sewer improvements are financed through user fees. With a special assessment, this parcel might be assigned several residential equivalents and charged considerably more if the parcel may be subdivided into several lots that can be built upon under the town's current zoning. Special assessments allow the town to calculate the charge to be more proportionate to the benefit, or increase in property value, realized by the property. Alternatively, a large family that is a substantial user in a modest house with minimum lot size is likely to pay a larger share through the rates than they would under a capital fee or special assessment.

Another issue relates to equity between current and future users of the system. Future users included as part of the town's master sewer plan may reap the benefits of the sewer improvements without paying their proportionate share of the costs. This problem may be exacerbated if the length of time to connect these neighborhoods is very long-term, say in ten to fifteen years. For example, a user that connects fifteen years from now will pay less for these improvements than existing users who paid during this entire period, even though the benefit to the property as measured by the increase in fair market value is arguably the same. The expected useful life of the improvements will also have some bearing on this equation.

Sewer Special Assessments and Permanent Privilege Fees

A betterment or special assessment is a special property tax that is permitted where real property within a limited and determinable area receives a particular benefit or advantage, other than the general advantage to the community, from the construction of a public improvement. MGL c. 83 §15 allows cities and towns to assess all or a portion of the costs of improving or constructing sewer system plant and facilities. This includes the cost of general benefit facilities, such as treatment facilities, pumping stations, trunk and force mains, and special benefit facilities, such as mains serving adjacent properties.

Assessments of the project costs must be reasonable and proportional and not substantially in excess of the special benefits received from the improvement. A special benefit is defined as an enhancement of the value or use of property due to the construction of the improvement. A special benefit is measured by how much the particular improvement has increased the fair market value of the property, as between a willing buyer and seller considering all present and future uses to which the property is or may be reasonably adapted in the hands of any owner (emphasis added). Driscoll v. Northbridge, 210 Mass. 151, 155 (1911); Union Street Ry. v. Mayor of New Bedford, 253 Mass. 304 (1925).

Once the sewer project is complete, the Plainville Sewer Commissioners must determine the actual benefits to and assess the cost of the project among the properties. For sewer projects, MGL c.83, §15 limits the method of assessment to two approaches: the fixed uniform rate method and the uniform unit method. The fixed uniform rate method is based on the property's frontage, or the area within a fixed depth of way or both frontage and area.

The uniform unit method requires a determination of the number of existing and potential residential equivalent sewer units based on existing zoning and is the more frequently used option in Massachusetts for projects of this type. For example, a large parcel that may be subdivided into several lots should be assigned a number of residential units based on the existing zoning. Current, as well as potential, multi-family dwellings, apartments, commercial and industrial uses must be converted into residential equivalent sewer users. The total project cost, or a lesser amount to be funded by special assessment, is then divided by the total number of residential equivalents to determine the special assessment to each user.

Estimated special assessments for sewer projects can be issued prior to the completion of construction under MGL c. 83 §15B, but the amount may not exceed half of the cost of all project contracts. The method of assessment must be the same as used for the allocation of the actual permanent assessments on completion of the work.

The property owner has the option to pay the assessment in full within 30 days after the assessments are committed to the collector without interest. Alternatively, the property owner can pay some or none of the assessment and request an apportionment of the unpaid amount into a maximum of 20 equal portions. The request for an apportionment is made to the assessors (MGL c. 80, §13). Both estimated and permanent special assessments may be apportioned and paid over a twenty year period. Interest charges on apportioned assessments must, by statute, be five percent or, if the town meeting elects, two percent more than the interest on the sewer construction bonds. These are the only two options on interest rates and special legislation is required if a community wants to use a different interest rate.

For parts of town that are scheduled to receive new sewer lines in the distant future as part of the master plan, a permanent privilege fee (MGL c.83, §17) may be appropriate. This could be the case with the neighborhoods south of the Plainridge Race Track in the Mirimichi Street area and the neighborhoods west of Route 1A or the North End area. Because sewer lines will not be extended to these areas and properties will not be able to tie-in for ten or fifteen years, they will arguably receive less benefit from the treatment facility improvements. Consequently, they should pay a permanent privilege fee when they are able to connect which could be a reduced or pro-rated amount of the special assessment paid by others. These potential users however should

be included in the calculation of the number of residential equivalent users. The permanent privilege fee can also be apportioned over twenty years.

Before a community decides to use this financing method, it should carefully define the sewer system service area to be subject to assessment. Consideration should be given to which streets should be included and the means to assess parcels that might not be able to connect for several years as intended by the sewer master plan. Special assessments must be adopted through a vote of town meeting or enacted as a town bylaw. Town meeting should specify the method of determining the assessment, how the residential equivalents are to be calculated and specify the interest rate for apportionments. The vote should also establish the method for determining any permanent privilege fee to be assessed to users that may tie-in several years after the facility improvements are complete.

Advantages/ Disadvantages

The most compelling advantage to the special assessment method for recovering the cost of the treatment facility improvements is that it allows the town to assign costs to users, and potential users, based on the proportionate benefit to their property. This appears to be a fair, reasonable way to allocate these costs. Another advantage is that it gives the town a means to assess the approximately 700 future users identified by the sewer master plan for the benefit that accrues to their property. This can be done by either special assessment or permanent privilege fee once these parcels are able to connect.

Among the potential disadvantages of the special assessment for financing the treatment facility improvements is that determining the number of residential equivalents for these assessments is complex and must be done in a defensible manner. While the town's current method of assigning residential units for the purposes of its capital fee may have been appropriate for a minimal capital charge, the allocation of special assessments requires strict adherence to the statutory methodology. This requires a review of zoning currently in place and analysis of current and potential future uses of properties based on this zoning.

Another issue is that the revenue stream from special assessments may not match the debt schedule exactly, creating cash flow issues in either the beginning or end of the debt schedule. For example, the special assessments may be apportioned for 20 years, however, the sewer debt issue will be for 30 years. Since the permanent assessments cannot be issued until construction is complete, there will be a period (most likely FY2012 and FY2013) where these revenues will not be available to fund WPAT debt obligations. Estimated assessments are a means to address cash flow issues in the first couple of years.

Toward the end of the debt schedule, without a mechanism to reserve the special assessment payments for the last ten years of the 30 year bond, the town may be short of funds as well. This is the case because the town accounts for the sewer operation in the general fund and actual special assessment collections are considered general fund revenues. If the town were to adopt enterprise fund accounting for the sewer operation, the special assessments will be considered revenue of the enterprise and can be reserved for future use and appropriated as necessary in these out years. Another option is to pursue special legislation to reserve these payments in a special revenue fund so that they can be appropriated as needed to pay debt service.

The statutory interest rates on apportioned special assessments also raise the price of this financing option to sewer users. With the statutory limits of five percent or two percent above the interest rate on the bonds, the interest will likely be in the 4.5 to 5 percent range. This means that in the initial years of the assessment, the interest will be comparable to the apportioned assessment itself which will be based on five percent of the amount outstanding at the time of apportionment. Several communities have successfully pursued special legislation to charge a lesser interest rate on apportioned betterments.

Proposition 2 ½ Debt Exclusion

Two types of debt exclusions are possible in this case. The first is a regular debt exclusion based on MGL c 59, Section 21C(k) and requires voter approval at a regular or special election to assess taxes in excess of the limits of Proposition 2 ½ to cover the principal and interest on the sewer improvements. The second exclusion is authorized by MGL c. 59, Section 21C (n) and allows the selectmen to decide whether to cover all or a portion of water and sewer debt service through a debt exclusion. The distinction with clause (n) water/sewer debt shift exclusion is that the selectmen implement this option unilaterally, without bringing the question before the town's voters. Both types, along with the advantages and disadvantages of each, are explained in detail below.

Regular Debt Exclusion – Under the authority of MGL c 59, Section 21C(k), the selectmen by a two-thirds vote may place a ballot question before the town's voters at a regular or special election to exclude the principal and interest of a debt issue. In this instance, based on an inter-municipal agreement that legally binds Plainville to pay an agreed upon share of North Attleborough's sewer debt, the town's portion would be eligible for this debt exclusion option.

This choice is the typical Proposition 2 ½ debt exclusion and is the same process Plainville has used in the past to finance improvements to both its local and regional schools. A debt exclusion allows the community to levy additional taxes, over and above the limits of Proposition 2 ½, for

the duration of the bond issue only. Once the bond is paid in full, the temporary authority to levy taxes in excess of the levy limit or levy ceiling expires. Unlike overrides, exclusions do not become part of the base upon which the levy limit is calculated for future years. The specific question language must conform to the language spelled out in statute and passage requires approval of a majority of those voting.

Advantages/Disadvantages

The primary advantage with this option is that it is consistent with the regular Proposition 2 ½ ballot process. In other words, the decision as to whether town taxpayers should cover some or all of the cost of the required sewer improvements will be placed directly before the town's voters. Another advantage is that no additional property tax exemption is created due to this type of debt exclusion. As explained later, with the water/sewer debt shift, certain seniors will become eligible for a new property tax exemption.

Among the potential disadvantages of this option are that once the project is complete, close to half of the town will still be without sewer service. These taxpayers may perceive a general benefit of improved sewer treatment for municipal facilities and a healthier overall environment, but this may not be enough to get the voters to approve taxing themselves more if they perceive little or no direct benefit from the project. Conversely, support for this option might come from taxpayers living in areas scheduled for sewer expansion if they decide that financing some of project costs through the town-wide tax levy could save them money compared to alternatives such as user fees, special assessments or permanent privilege fees.

A second issue arises due to the fact that the ballot question must conform exactly to the statutory language and cannot be varied legally. This language requires reference to "the amounts required to pay for the bond issued in order to (stated purpose of debt issue)." This makes it awkward to place only a portion of the debt service before the voters since the vote itself may not be used to limit the exclusion to only a portion of this debt service. The town could employ this option though if it were to clearly state its intention to only cover a percentage of the sewer costs to the taxpayers. If the town's taxpayers have a clear understanding of the financial plan and believe that town government will follow through and levy additional taxes only to the extent promised, then the regular debt exclusion becomes a more feasible financing vehicle. The town could take the additional step of structuring the annual approval of the sewer budget in a manner that clearly identifies the revenues to be used to meet these capital costs.

Water/sewer debt shift exclusion – Under MGL c. 59, Section 21C (n) a community may, by acceptance of the local appropriating authority, assess taxes outside the limits of Proposition 2 ½ to pay for all or a portion of water or sewer debt service. In other words, rather than cover the

new sewer debt service by raising sewer user fees, the town can shift some or all of these costs to the tax levy. Essentially, this transfer of the recovery of water and sewer debt from user fees to the property tax levy operates as a form of debt exclusion.

Although the town of North Attleboro is the actual issuer of the sewer debt in question, Plainville has entered into an inter-municipal agreement with North Attleboro for wastewater treatment under MGL c 40, Sec. 4A. The inter-municipal agreement creates a legally binding financial commitment for Plainville. As in the case of a regular debt exclusion, Plainville's allocated share of North Attleboro's sewer debt per the agreement is tantamount to debt issued by Plainville and should be considered the town's debt for the purposes of this section.

This section must be accepted by the town's "local appropriating authority" which in the context of this section refers to the board of selectmen. This is a very unique, and infrequently used, provision of Proposition 2 ½ in that it does not require voter approval of a referendum. The vote to adopt must specify whether the exclusion will apply to residential users and taxpayers or to all. The vote should also specify the amount of debt that will be shifted, expressed either as a percentage or specific dollar amount of the total debt service. Once adopted, the amount of the exclusion remains constant unless changed by a new vote of the selectmen.

A property tax exemption for qualifying, elderly taxpayers becomes available automatically when a community adopts this debt shift exclusion. The exemption amount is based on the difference between the increase in the property tax bill with the new exclusion compared to the potential increase had the debt service been recovered entirely through user fees, up to a maximum exemption of $200.

Advantages/Disadvantages

The primary advantage to using the sewer debt shift in this case is that the town's board of selectmen can implement this unilaterally, without bringing the question to the town's voters. This creates certainty in the town's financing plans for what will be a substantial obligation. Another advantage is that the selectmen can decide to shift a constant percentage, usually expressed as a fixed amount of the new sewer debt, through this option.

Among the disadvantages are that the selectmen must decide whether or not to use this option without bringing the question to the residents for a vote. Another issue with the adoption of this exclusion is that certain residents will now qualify for a property tax exemption that arises automatically with this exclusion. Under MGL c. 59, Section 5(52), the exemption is for qualifying taxpayers over age 65 where the increase in property tax bills exceeds the reduction in water/sewer bills. These abatements cannot exceed $200 per year. With a significant number of

taxpayers not served by the sewer system, these exemptions will be more significant than if all taxpayers received sewer service. The state provides a 100 percent reimbursement for these locally granted exemptions, so the costs to the town are limited to the administrative workload created by this exemption.

Models to Project Sewer Revenues

We have developed several financial models to assist policy-makers in sorting through the difficult decisions the town needs to make concerning sewer project financing. First, we provide estimates of the costs to finance the improvements to the wastewater treatment facility. We then develop models to analyze how a potential increase in sewer user fees will impact the average residential user, how a special sewer assessment might increase costs for a sewer user and finally the impact a debt exclusion might have on the tax bill of an average single-family residential home. The debt exclusion model works for either the regular or water/sewer debt shift exclusion.

Projection of Facility Improvement Costs

We developed a projected debt schedule for the sewer facility improvements based on discussions with officials from WPAT and the municipal treasurer from North Attleborough (See Appendix 1). This schedule is based on estimates and, as such, may be subject to change based on future market conditions or other factors. We have assumed that the debt will be issued in two phases in FY2012 and FY2013, each with a 30 year term (MGL c. 44, §8(cl.15)) and a level debt service payment schedule. While using level debt service means slightly more interest will be incurred over the 30 term of the bond, it substantially lowers the debt service in the first couple of years when the WPAT loan origination fees and bond counsel/issuance costs are payable.

An advantage with relatively equal annual payments (level debt service) compared with a declining debt schedule (level principal) is that the fiscal impacts are more evenly distributed over the term of the bond. If these costs are to be covered by ratepayers, the more evenly distributed fiscal impacts allow the town to avoid rate spikes in the early years of the project. It may also promote more equity between current and future residents, so that a current resident does not bear an unfair portion of the burden in the first several years while a subsequent owner of the property pays lower amounts in future years. With a level principal debt schedule, total interest over the term of the borrowing will be slightly lower, but impacts on sewer users will be significantly higher in the first couple of years when the WPAT loan origination fees and other financing costs must be paid as well.

User Fee Model

The model to project user fees was developed using historical commitment data, the number of total bills issued, as well as a detailed review of the annual commercial usage (See Appendix 2). In the model, we assume that the number of commercial users and their associated usage translates into 40,764,895 gallons per year. This is based on actual commercial usage data during calendar 2010. Then using the total gallons billed for each fiscal year, we deducted the 40,764,895 used by commercial users, to yield the amount used by residential users. We then discounted residential usage to the 85 percent that is used to calculate their bills and multiplied this result by the $5 per thousand gallon charge. We tested this model and found it to be very accurate in replicating the actual sewer user fee commitments for FY2009-2011.

Special Assessment Model

In this model, we present the impact of assessing some or all of these sewer facility costs through the use of special assessments. The starting point for this model is based on Plainville's share of the total cost of financing the wastewater treatment facility improvements. By entering a percentage to be funded through special assessments, the model projects the costs to users assuming that there are 2,388 residential equivalent units and all users will elect to apportion their assessments over a twenty year period (See Appendix 3).

The number of residential equivalents is a critical variable in this calculation and we assumed that there will be 2,388 residential equivalent units based on the town's current assessment of capital fees. The specific allocation of these units will undoubtedly change when calculated based on current zoning and the proportionate benefit to each parcel. Given the potential for an additional 700 parcels connecting in the future, the 2,388 unit figure may be on the low side. If the town determines that this is the case, the model allows the town to adjust the number of equivalent residential units. To the extent that the town relies on assessing future users when they are able to connect, it may need to carefully monitor the revenue stream to be sure it can finance the annual project costs as they come due. The interest charged to users on apportioned special assessments will provide extra revenue that can be used to smooth some of the impacts of not assessing these potential users until they have the ability to connect.

The model also allows the town to analyze the impact of various interest rates on the calculations by entering the interest rate into the yellow shaded cell. Since the interest rate has a substantial influence on the total fiscal impact on sewer users, the town may decide to pursue special legislation allowing the town to set the interest rate at an amount lower than the statutory five percent or two percent above the interest on the sewer bonds.

Proposition 2 ½ Debt Exclusion Model

With this model, town decision-makers enter the percentage of total sewer project financing costs to be borne by the taxpayers. The model then allocates the resulting costs over thirty years as a debt exclusion (See Appendix 4). It assumes that the debt will be issued for 30 years, with level debt service payments. The model then calculates the impact on the town's tax rate and the fiscal impact of the debt exclusion on the average single-family tax bill. We assume that the town's assessed valuations remain at the level as established for the FY2011 tax rate.

Other Recommendations

1. Upgrade/Install new water meters – The town has many water meters in operation that are beyond the 10-year expected useful life of a water meter. The town has approximately 900 5/8" meters and several 2" large capacity meters that have been purchased and are being stored at the water/sewer department. The department has had mixed success installing new meters due to the difficulty getting into residents' homes during regular work hours. Therefore, it makes sense for the town to consider putting the meter installation out to bid, with the stipulation that the work be completed evenings and weekends when more residents will be available. It is also advisable that the town prioritize the replacement of the oldest, largest meters as these likely represent the largest risk of significant under-recording.

With the upcoming wastewater facility improvements and expected fiscal impacts on sewer users, the importance of having accurate water meters is heightened. As mentioned earlier, the town has a considerable amount of unaccounted for water, the difference between what was pumped into the distribution system compared to what was measured at the users' meters. While municipal usage, backwash and leakage may account for a portion of this unaccounted for water, it is very likely that some of the oldest meters are not capturing the full amount of water used. If the town decides to pursue cost recovery through the sewer users, accurate and equitable usage data is important. Another reason to pursue meter replacement is that there is a potential revenue stream that is not being captured in the current billing process. Communities that install new meters usually see an increase in measured water consumption and corresponding increases to both water and sewer revenues.

2. Explore ways to upload usage data into CUSI – Currently, regardless of the type of meter and how it may be read (manual vs. radio read), all data from meter readings must be manually keyed into the CUSI system for billing purposes. The town's use of an older version of CUSI may have some bearing on this problem, however, the town should investigate ways to upload

the readings data directly into CUSI where it can be reviewed and checked. CUSI has the capability to upload reading data directly into the billing module and the town should contact CUSI to discuss what needs to be done to upload this data.

With new meters and modern reading capabilities, the water and sewer department should be able to save a considerable amount of staff time. It currently takes the department's meter reader about four weeks to read meters for each quarterly billing cycle and as many as six weeks in the winter. Monthly commercial reads may each take about two days. Office staff then spends about a week entering data for each quarterly reading in addition to the time spent entering the monthly commercial readings. With systemic, uniform use of modern reading technology and the upload of reading data into the billing system, the department could free up the equivalent of nearly half of a full-time position.

3. Analyze the costs/benefits of installing a more current version of CUSI to improve reporting capabilities – During the course of our interviews with sewer department staff, we learned that the town is using an older version of the CUSI software. The difficulty the department has in producing meaningful management reports from the current system may be related to the use of this older software. We recommend that the department contact CUSI about upgrading to more current versions of the software or to get assistance to build custom reports that will meet the department's needs.

4. Consider the establishment of enterprise fund accounting for sewer services - The town should consider adopting enterprise fund accounting for its sewer department. There are several advantages to accounting for sewer operations in an enterprise fund. First, if the town decides to use special assessments to fund part or all of the sewer capital improvements, enterprise fund accounting gives the town a vehicle to set aside special assessment collections until such time as they are needed to pay the debt service assessments from North Attleborough. This allows the town to better cope with the timing differences between when special assessment revenues are collected and when they are needed to pay debt service. By adopting enterprise fund accounting, the assessment revenues will be considered revenues of the enterprise rather than general fund revenues and, as such, can be reserved for future appropriation to pay debt service. In particular, this accounting treatment will allow the town to reserve assessment revenues that come in over twenty years to service the last ten years of the thirty year debt issue.

Another advantage of an enterprise fund is that the town can readily get a clear picture of the total costs of the service as well as the revenue available to meet those costs. Isolating sewer revenues and expenditures provides useful management information that can be used to guide future rate setting decisions. Annual surpluses are retained in the enterprise and can be accumulated year-to-year and appropriated when needed for capital or other purposes of the

enterprise. Though communities often use enterprise accounting to demonstrate that user fees fully cover costs, there is no requirement that enterprise revenues must fully cover all costs. Consequently, this form of accounting does not prohibit the town from providing the sewer department with a general fund subsidy or lock the town into covering all costs through sewer revenues.

5. Bond water/sewer department employees – It came to our attention during the course of our interviews with department employees that the office staff that commits and collects water and sewer receipts were not covered by a performance bond. While state statutes dictate that treasurers, collectors, and city/town clerks and their assistants be bonded, there is no requirement for other municipal employees. However, it is common business practice in the private and public sectors to purchase a general fidelity bond, a form of insurance protection that protects the employer against fraud or losses, to cover all other employees who handle smaller amounts of cash.

We also note that the department is responsible for meter reading, preparing the commitments and then collecting the fees. This does not reflect an adequate separation of duties and may increase the potential for fraud or other abuses. As a long-term recommendation, the town should consider moving the responsibility for collection of water and sewer bills to the town treasurer/collector. If it has not already done so, the town may need to adopt the town collector statute (MGL c.41, §38A) that gives the treasurer/collector the authority to collect user fees as well as taxes. Moving the collection responsibilities to the treasurer/collector may necessitate the staff transfers as well.

Conclusions

The Plainville Board of Selectmen and Sewer Commissioners have some difficult political and financial decisions to make concerning how to finance the town's share of mandated improvements to the North Attleborough wastewater treatment facility. Adding to the complexity of these policy choices is the fact that some areas of the town will never receive sewer service and other neighborhoods are not scheduled to receive service for many years. This makes it more difficult to craft a financing plan that treats all of these residents, with differing interests, fairly and equitably.

In the body of the report, we discuss the advantages and disadvantages of recovering these costs through user charges or capital fees, special assessments and permanent privilege fees and through two different options, both of which effectively operate as Proposition 2 ½ debt exclusions. While these are policy choices that ultimately must be made by town officials, we offer three hypothetical financing scenarios in Table 1 to frame the potential fiscal impacts on taxpayers and sewer users of the various options. The models we developed allow town officials the flexibility to easily explore other options as well.

If current and future sewer users cover 50 percent of these capital costs through special assessments and the number of residential equivalent units stays at about 2,388 (current units for capital assessment), the special assessment for one residential unit will be about $1,855. The annual cost for a sewer user that apportions this assessment over 20 years with an annual interest rate of 2 percent (requires special legislation), will be about $128 (or $92.75 with 0% interest) in the first full year and decline each year thereafter. Since the interest charged on apportioned assessments can increase annual costs significantly and essentially amounts to extra revenue, we recommend that the town pursue special legislation to assess interest at a rate lower than allowed by statute.

If the remaining 50 percent of project costs are provided for through one of the debt exclusion options, then the cost to the average single-family homeowner will be an additional $43.09 per year. This assumes that the debt exclusion reflects a level debt service schedule spread over a 30 year term and is based on the town's most recent FY2011 assessed valuations to calculate an annual tax rate impact. The average single-family home value in FY2011 was $328,313. As shown in Scenario 1 of Table 1, the maximum annual impact on the average residential sewer user would be $171.09. We use the term maximum annual impact because the annual payments for special assessments will decline over the 20 year apportionment period.

In Scenario 2 of Table 1, we examine the impact of covering 50 percent with a debt exclusion and the other 50 percent from sewer user fees (based on water consumption). The impact on the average single family home is $43.09 per year over 30 years and the increase in the average residential sewer bill will be approximately $80.31 for a total cost to an average residential sewer user of $123.40. The impact on the average residential sewer bill is calculated using a three-year average of actual average residential bills (including capital fees) compared to projected average bills for those years (with no capital fee) using the rate increases necessary to generate 50 percent of the annual funding needed to cover the new debt service (about $150,000 per year).

In Scenario 3, we show the impact of funding 25 percent with a debt exclusion, 25 percent with user fees and 50 percent through special assessments. The impact on the average single family tax bill is $21.55, with average residential sewer user fees increasing about $45.32. The cost of a special assessment for one residential equivalent, apportioned over 20 years at 2 percent interest is $128. The combined annual cost to an average sewer user totals $194.87, the highest of the three scenarios since sewer users bear 75 percent of the costs in this option.

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