

# TECHNICAL REPORT



Sanitary Utility System Financial Analysis

Township of Vernon

December 2016

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## EXECUTIVE SUMMARY

Remington & Vernick Engineers (RVE) was hired as an independent consultant to review the current sanitary utility system that was purchased by the Township of Vernon (Township) in 2011. The review was completed from a financial perspective and not a technical perspective of the system. Accordingly, the information presented in the analysis does not address the technical deficiencies of the system and/or improvements necessary for the short and long term sustainment of the system. However, based upon our experience in evaluating similar systems, limited comment is provided regarding the anticipated expenditures required in the future to sustain the system.

During the analysis, historic agreements were reviewed to ascertain the history of the Township, the purchase from United Water, agreements with Mountain Creek Resort (Mountain Creek) and the formation of the Vernon Township Municipal Utilities Authority (VTMUA). Within the agreements were multiple financial obligations assigned to the various parties including revisions to these agreements. A summary of the agreements is provided in this report merely as a matter of record and as the basis for establishing the assignment of debt and obligations in this analysis.

Based upon our review of the records, the Township undertook the expansion of the Sussex County Municipal Utilities Authority (SCMUA) in anticipation of the development and growth of the Vernon Town Center. The flows anticipated from Town Center were projected as an *additional* 99,000 gpd. Included in the SCMUA expansion was additional allocation requested by Mountain Creek as part of their internal facility expansion; or an additional 166,000 gpd. The total increase in allocation required as part of the SCMUA expansion was determined as a total of 265,000 gpd. The expansion to support these additional flows required significant infrastructure improvements to both the Township infrastructure and the SCMUA Upper Walkkill Wastewater Treatment Facility.

The result was improvements to the infrastructure and approximately \$32.1 million debt to be borne by the MUA. In an interlocal agreement with the VTMUA, the repayment of this debt will be the responsibility of the VTMUA. However, any defaulted debt is ultimately the responsibility of the Township. An additional \$10 million debt was also borne by the Township as their fair share (approximately 24%) of the fees billed to SCMUA system users. **The debt for the Township/VTMUA for repayment of their obligations for expansion of the SCMUA facilities is approximately \$1.8 million and will continue until 2040.**

Post incurring this debt, the Township formed the VTMUA who then became responsible for the operation and maintenance of the sanitary system. VTMUA also undertook the bonds issued by the Township (Bond Ordinance 11-22 and 11-23) in the amount of \$6,249,000 to be repaid as part of the operational costs imposed to the Township sanitary users as part of the user rates. It should be noted that these costs are not included in the annual \$1.8 million to be repaid by the Township as noted above. **Instead, the debt incurred due to Bond Ordinance 11-22 and 11-23 will reach approximate \$403,000 annually by 2023.**

To date, the flows necessary to “breakeven” for the VTMUA have not been recognized. In fact, the population of the Township has declined and the subsequent sanitary flows have declined. Therefore, the Township is at a cross roads with respect to the sustainable future of the sanitary system.

Our work under this report examined the past certified audits of the VTMUA as available on their website. Our analysis outlined past revenue (operating and non-operating) as well as expenses (administrative, debt service, etc.). The analysis was conducted for a 10 year period beginning in

2017 and ending in 2027. Several different scenarios were examined to assist the Township determine the viable future of the VTMUA. Each scenario projected the financial status of the VTMUA and subsequent contribution from the Township and Mountain Creek to compensate for the VTMUA annual shortfalls; per the 2012 Vernon Township and Mountain Creek agreement. The scenarios examined were as follows:

1. Analysis #1 - projected financial status of the VTMUA with **No Sewer Service Area Expansion and No Rate Increase**. The analysis indicates the VTMUA shortfalls at the end of each year should the utility continue operating under the current rate structure and service area;
2. Analysis #2 – projected financial status of the VTMUA with **No Sewer Service Area Expansion and a Project Rate Increase**. The analysis indicates that a tiered *annual* rate increase of 30% (2017 & 2018) and annual rate increase of 6% (2019 thru 2020) and an annual rate increase of 5% (2021-2027) is necessary for the VTMUA to have no shortfalls at the end of the year. **For a 3 bedroom resident, this equates to a \$980 annual fee in 2016 to an increased annual fee of \$2,618 in 2027.**
3. Analysis #3 – projected financial status of the VTMUA with an **Expansion of the Sewer Service Area and No Rate Increase**. This analysis depicts the annual revenue to be collected due to additional annual user fees as well one time connection fees should a mandatory tie in be required. This analysis estimated an aggressive schedule for new connections on an annual basis should the SSA be expanded. **Despite the increase in users and additional collection of user fees and connection fees, an expanded SSA does not alleviate the shortfalls of the VTMUA over the analysis period.**

As is detailed in the body of the report, only the increase in user rates with no Sewer Service Expansion provides a predictive long term scenario where the VTMUA can operate without contributions from the Township and Mountain Creek.

It should be noted that the user rates predicted over the study period (FY 2017 to 2027) to compensate for the VTMUA shortfalls is a tiered rate **annual** increase of 30% (2017 & 2018) and annual increase of 6% (2019 & 2020) and subsequent annual 5% increase (2021 thru 2027). For a 3 bedroom home, this equates to an annual sewer bill of \$980 (in 2016) to an annual sewer bill of \$2,618 (in 2027). **Accordingly, to sustain the VTMUA with no additional improvements to the infrastructure, the residents of Vernon will be paying almost triple the sewer fees over a 10 year period.**

Based upon our review of the system information, it is our opinion that investment in additional infrastructure (expansion of the Sewer Service Area) to enforce mandatory connections for the benefit of sustaining a utility may not be in the long term financial interest of the Township. Raising the local sewer rates may be inevitable for both the short term and long term financial stability of the utility.

Considering the debt to be paid until 2040 by the Township for the SCMUA expansion, future increases in SCMUA user rates / connection fees, and increase in VTMUA user rates / connection fees, it is our opinion that maintaining the sewer system by the Township as a public utility may not be economically viable for the Township.

Township of Vernon  
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**I. INTRODUCTION**

The Township of Vernon (Township) is located in Sussex County, New Jersey and has approximately 23,943 residents based upon the 2010 census. This reflects a decline of about 3% (743 residents) from the 2000 census. Vernon is home to the Mountain Creek ski resort and Water Park as well as the Great Gorge Playboy club located in McAfee. The playboy club was turned into a hotel now known as Legends Resort and Country Club.

The Township has a convoluted history regarding the ownership and operation of the sanitary sewer system. Over the past decade, the Township has entered into several agreements with Mountain Creek Resort (Mountain Creek), the Sussex County Municipal Utilities Authority (SCMUA), and has developed a regional authority to oversee the operations of the Township's sanitary system; known as the Vernon Township Municipal Utilities Authority (VTMUA).

During the generation of these agreements, the Township has undertaken significant debt in anticipation of an expanded Town Center. While this debt has been transferred as an obligation to the VTMUA and Mountain Creek, the Township still maintains the responsibility of the debt should default occur. In addition, the Town Center has not brought the anticipated businesses (sanitary revenue) required to offset the debt. As such, based upon historic agreements, the Township and Mountain Creek are both financially obligated to contribute to the VTMUA to compensate for any financial shortfalls at the end of each year.

Due to the lack of growth associated with the Town Center and the inability of the VTMUA to achieve flows and user fees which not only allow the VTMUA to "break even" but to prosper, there has been discussions regarding the expansion of the NJDEP approved Sewer Service Area (SSA) by the VTMUA. The purpose of the proposed SSA, as we understand, is to generate additional revenue by the VTMUA by allowing and/or requiring additional users to connect to the system thereby paying annual user fees and more importantly, pay one time connection fees. However, the SSA expansion has also been met with opposition due to anticipated connection fees and unresolved impact on the user rates necessary to fund the construction of the infrastructure to the expanded SSA.

It is the intent of this report to complete the following:

1. Historic Agreement Analysis – Provide a brief overview of the historic agreements which were entered into by the Township. A large amount of information has been provided in various forums regarding the history of the Township and formation of the MUA. This overview will provide information directly from the provided agreements and will be used as a basis for completing the financial analysis;

2. VTMUA Financial Analysis - Provide an overview of the VTMUA operational and maintenance costs including debt service. This analysis will be completed for several different scenarios to indicate the financial impact of a potential SSA expansion and/or rate increase on the Vernon Township rate payers. In addition, since the Township and Mountain Creek have an agreement to compensate for any annual financial shortfalls of the VTMUA, the decisions enacted by the MUA also impact these entities. Accordingly, should the MUA have an end of the year loss before contributions, the Township and Mountain Creek would make the contributions to compensate for the loss. This may have a negative impact on the Township budget and cause an increase in taxes for all Vernon residents; regardless of their use of the sanitary system.

While it is desired to maintain the current rate structure, preventive maintenance, repairs and capital improvements are needed to protect the infrastructure and maximize its useful life. Since public health, safety and environmental protection are at stake, continuous operation of the public sanitary systems are essential. It is important for revenues to equal or exceed expenditures and create a small excess to add to a surplus account for emergency events. A surplus or reserve should be maintained to fund unplanned events that disrupt sanitary services. The recommended reserve with a minimum balance of \$1,000,000.00 should be maintained.

It should be noted that during our review, one concern reflected in our analysis is the historic investment and future planning of capital improvement projects by the VTMUA. Over the past five years, RVE has assisted multiple municipalities examine their infrastructure and develop short term and long term planning strategies and budgets for the operation and maintenance of their utility system. It has been our experience that a utility of this size with a similar number of pump stations / lift stations should be dedicating more than \$40,000 annually for system improvements. The VTMUA has budgeted this amount over the next few years for system improvements. While we have utilized this allocation in our study, it is our opinion that additional funding should be allocated. Therefore, the costs for the VTMUA will increase on an annual basis beyond which we have presented in our analysis.

## II. HISTORIC AGREEMENTS

The following is a summary of the historic agreements provided for review as part of this study. While much information

### A. August 2004 – SCMUA and Vernon Township Agreement for Design Phase Financing for Town Center Connection Project

- Agreement provides for an additional treatment capacity at SCMUA Upper Walkkill Wastewater Treatment Plant in the amount of 265,000 gpd of additional flow in addition to the current reserved capacity of 380,000 gpd. Of the additional 265,000 gpd, 99,000 gpd to be allocated to the Township while the remaining 166,000 gpd will be allocated to Mountain Creek.
- The ceiling on expenditures was outlined as follows:
  - Preliminary Engineering Design - \$65,000
  - Final Engineering Design - \$575,000
- While SCMUA agreed to finance the above costs, the Township was to reimburse SCMUA for said costs.
- SCMUA was in the process of implementing improvements to the Hamburg By Pass Force Main to facilitate the projected wastewater flows from Hamburg, Hardyston and Vernon. The Township's share in the costs to make these improvements total an estimated \$470,000.

**Summary:** While SCMUA would finance the design and permitting for the expansion, the Township would reimburse SCMUA for these costs including the Townships fair share of the Hamburg By-Pass Force Main. Total estimated costs for the Township = \$1,110,000.

### B. October 2005 - Mountain Creek Resort Agreement with Vernon Township

- United Water (UW) owned the sanitary system at the time of the agreement.
- The Township is allocated 380,000 gpd at SCMUA. However, the development project is projected to exceed this current allocation.
- The development project is Town Center construction as well as expansion on the Mountain Creek property.
- The Township requires as additional 99,000 gpd for the Town Center and Mountain Creek requires 166,000 gpd for their expansion. Total additional capacity at SCMUA is 265,000 gpd.
- The Township and Mountain Creek previously entered into an agreement in July 2004 (detailed above) regarding financing design and permitting activated to be completed by the Township and SCMUA. This agreement outlined that SCMUA and the Township would initiate the design and permitting for the project such that the work may be completed by December 31, 2007. However, the agreement was clear that the Township would not sign the agreement with SCMUA to initiate the project unless Mountain Creek agreed to take on a portion of the design and permitting obligation. Mountain Creek would be responsible for 62.6% of the costs to be reimbursed to SCMUA for the preliminary design and permitting or \$40,960.
- SCMUA to issue bonds to design, permit and construct plant expansion in amount of \$9.5 million. The Township to issue bonds to design, permit and construct sanitary infrastructure for Town Center in amount of \$4.0 million. Total project costs to be \$15.2 million.

- Mountain Creek is not obligated to pay for any of the upgrades to the SCMUA plant or for the conveyance system to the plant including from the plant to dispose of treated sewage. SCMUA and the Township shall be responsible for costs associated with these improvements.
- Mountain Creek is only obligated to pay for the sanitary improvements on his own property. However, Vernon Township shall own these facilities after construction. This work to include upgrades to the Sand Hill Road pump station.
- Mountain Creek paid a total of \$1,795,000 via the Township to SCMUA for Hardyston sewer line.
- Mountain Creek also to pay \$300,000 to be used by the Township to pay for design and permitting. This is known as the Vernon Advance.
- In accordance with this agreement, total costs for SCMUA and Township including all debt service and shortfalls are the responsibility of Mountain Creek.

**Summary:** The initial agreement between Mountain Creek and the Township outlined the anticipated costs associated with expansion of the SCMUA treatment plant and construction of the conveyance system to the plant. The Township was allocated an additional 99,000 gpd for the Town Center while Mountain Creek was allocated an additional 166,000 gpd for the expansion of their facility. SCMUA and the Township would bond for the anticipated improvements with Mountain Creek responsible for payment of the debt service.

C. November 2005 – Service Contract between SCMUA and Vernon Township

- Outlines the agreement between SCMUA and the Township for acceptance of the additional 265,000 gpd of flow from the proposed expansion.
- Annual charge = payable by the Township to include an *operating charge* and a *general charge*. The operating charge shall pay for expenses associated with operating, repair and maintenance of the Upper Walkkill System. The general charge shall pay for the principal of and interest on any and all bonds, loans or obligations that SCMUA issued to fund the expansion of the Upper Walkkill System.
- The *general charge* shall be based upon the Township's assigned minimum flow of 265,000 gpd. Accordingly, the Township is paying fees to SCMUA on an annual basis based upon 265,000 gpd. If this additional flow from Town Center and Mountain Creek has not reached 265,000 gpd, the Township must still pay charges based this minimum flow.
- The *operating charge* is also based upon a minimum flow of 265,000 gpd. Accordingly, until the Township reaches full flow for Town Center and Mountain Creek, the fees paid to SCMUA are for unused capacity reserved at the treatment plant.
- The annual charge is to be paid by the Township to SCMUA in four equal payments each year; February 15<sup>th</sup>, May 15<sup>th</sup>, August 15<sup>th</sup> and November 15<sup>th</sup>.
- The Township agreed to make a Capital Contribution to the SCMUA for implementing the project. The agreement defined the Capital Contribution owed by the Township for the additions to the Upper Walkkill System in the amount of \$1,746,000. These fees include design fees not to exceed \$640,000, reimbursement of costs incurred by SMUA during the preconstruction phase, costs for acquisition of the VSTC Pump Station, costs associated with construction contracts, construction phase engineering, etc.

- While the Township agreed to pay a Capital Contribution in the amount of \$1,746,000, this did not cover the total capital costs associated with the project. In addition, the amount of Revenue Bonds which could be supported by the net revenues to be received by the Township were not sufficient. Therefore, "Additional Bonds" were required to finance the project. SCMUA was to obtain the "Additional Bonds" via Revenue Bonds and the Township was to pay the debt service for the Additional Bonds known as Additional Bond Debt Service (ABDS) which is to be included in the General Charge to the Township.

**Summary:** The agreement obligates the Township to be responsible for an initial Capital Contribution to the SCMUA for improvements associated with the expansion. In addition, SCMUA will issue Revenue Bonds to fund the remainder of the improvements with the Township responsible for the debt service of these Revenue Bonds.

D. December 2009 Agreement between United Water and the Township of Vernon

- United Water acknowledged they would be responsible for BPU approval of the expanded service area for the Township and Mountain Creek.
- The Township requested the immediate connection of 20,000 gpd of their 99,000 gpd expansion. United Water agreed but connection of the Township's remaining 79,000 gpd and Mountain Creeks 166,000 gpd would be contingent upon the relocation and replacement of Pump Station No. 1. All costs to be borne by the Township.
- Agreement indemnifies United Water from all lawsuits regarding allocations rights (i.e. Hole in the Pipe Gang Claims).

E. Ordinance 11-12 Establishing the Vernon Township Municipal Utilities Authority

- Establishes the VTMUA, Powers, Duties and Appointment of Members.

F. November 2011 Agreement with Vernon Township and Vernon Township MUA

- Endorses the purchase of the sanitary system from United Water in the amount of \$3,675,000.
- Endorses Vernon Bond Ordinance 11-22 in the amount of \$4 million and Ordinance 11-23 in the amount of \$2.8 million.
- Bond Ordinance 11-22 in the amount of \$4 million will be used to purchase the sanitary system and the remaining funds from this ordinance to be used by VTMUA at their sole discretion (\$325,000). VTMUA to be responsible for the debt service associated with Ordinance 11-22.
- Bond Ordinance 11-23 to be used to reimburse the Township of SCMUA debt as follows:
  - 2010 SCMUA Debt = \$120,866.75
  - 2011 SCMUA Debt = 697,052
 Any remaining funds from Ordinance 11-23 to be held in escrow by the Township to pay for any shortcomings of the VTMUA. VTMUA to be responsible for the debt service on Ordinance 11-23 as well.

- The balance in the Vernon Ordinance 00-33 is \$449,930. This can be used as down payment on Ordinance 11-22 and 11-23 with the remaining balance of \$325,000 to VTMUA.
- The Township had balances remaining in special legislative grants in the amount of \$142,772 and \$214,767. These amounts shall be paid to VTMUA for sewer related capital expenditures.
- The Township will remain responsible for payments under the Vernon Bond under the October 2005 agreement with Mountain Creek and reference in the 2011 agreement. Both agreements provide that Mountain Creek will make payment on the Vernon Bonds.

G. July 2012 – Re-examination of Vernon Township Agreement with Mountain Creek Resort

- The original October 2005 (outlined in B above) was re-examined to be more equitable between both parties.
- Mountain Creek owes the Township \$636,626 as of December 31, 2011.
- Mountain Creek is responsible for the debt service on the Vernon Bonds;
- Mountain Creek is responsible for 63% of yearly budget deficit of the VT MUA;
- Mountain Creek does not have to make payment on either the December 2011 debt or VTMUA shortfalls until 2017. Beginning in 2017, Mountain Creek is to make payment to VTMUA in amount of 10% Mountain Creek Accumulated Debt (from 2011) plus the Townships borrowing costs for carrying the debt from 1/1/12 to 12/31/16.
- Allocation Permit Fee – the Township is to establish an annual charge for the reservation of 99,000 gpd of allocation in the system. The allocation permit fee to be set and collected by VMUA. However, Mountain Creek shall not be required to pay a connection fee or Allocation Permit fee for the 166,000 gallons of allocation set forth in this agreement.

**Summary:** The July 2012 agreement suspended payment by Mountain Creek on accumulated Township debt until 2017. In addition, the agreement waives any connection fees or Allocation Permit fees on the 166,000 gpd reserved for Mountain Creek.

H. Amended December 9, 2013 - Service Contract Between The Sussex County Municipal Utilities Authority and the Township of Vernon

- The amended agreement between the Township and SCMUA increases the Township's volume at the treatment plant to 645,000 gpd (monthly average). The minimum flow assigned to the Township was designated as 461,000 gpd (annual average).
- Vernon Township made a Capital Contribution to the Authority in the amount of \$1,746,000.00 for the purpose of defraying the costs to be incurred by the Authority in implementing Phase III Project.
- The Township may not issue a Certificate of Occupancy or a sewer connection permit to any proposed new connection to the Township's local sewer system until the Township receives a certificate issued by the Authority confirming that the Authority's connection fee has been paid.
- Rate stabilization was issued for 60% of the connection fees paid to the Authority on the first 1,060 EDU's from within Vernon Township.

### III. FINANCIAL ANALYSIS

It is our understanding that there has been much discussion regarding Sewer Service Area (SSA) expansion, mandatory connections and rate increases to generate adequate income to sustain the VTMUA. Much of the issue has been predicated on the fact that the Township / MUA is obligated to SCMUA to pay for a minimum average daily flow of 461,000 gpd; regardless that the current sanitary flows are less than that amount. Not only has the population of the Township decreased over the past five years but the sanitary flows generated by users have decreased (2005 = 208,083 gpd vs. 2015 = 190,583 gpd) by approximately 6.5 million gallons per year over the past decade. In addition, the Town Center has not been as profitable as anticipated with respect to attracting additional users and commercial entities.

Accordingly, an analysis was conducted on the sanitary system under several different scenarios (i.e. no SSA expansion/no rate increase, rate increase, SSA expansion, etc.). These analysis were conducted using the VTMUA accounting items as outlined in their certified audits available on the VTMUA website. All scenarios were projected for a 10 year period from FY 2017 to FY 2027 with each scenario described below.

It should be noted that while the VTMUA financial information was utilized, the Township has an agreement to be partially responsible for the annual shortfalls of the VTMUA. Specifically, the Township is responsible for compensation to the VTMUA for 37% of their financial shortfalls while Mountain Creek is responsible for 63%.

*In addition, the Township/VTMUA has incurred significant debt related to the SCMUA expansion. A portion of this debt is borne solely by the Township amounting to \$32,125,000. An additional portion of the plant expansion debt is borne by all contributors to the SCMUA system. Vernon's portion of this debt is approximately 24% or an additional \$10,086,000. TA debt service schedule is provided for this debt in **Attachment A**. Accordingly, the operations of the VTMUA have a direct impact not only on the Township but all tax payers in the Township.*

#### A. Analysis #1 – No SSA Expansion & No Rate Increase

Under this scenario, no sanitary sewer area (SSA) expansion is proposed and no rate increases are proposed. The analysis including all assumptions and projections are included in **Attachment B**.

As noted in the analysis, utilizing current costs and revenues, the VTMUA will have an accumulating deficit over the next 10 years and beyond. **The projected deficit, with no action, will be over \$15,000,000 by FY 2021.** As noted previously, this deficit or shortcoming will be the responsibility of both the Township and Mountain Creek.

**Based upon the above analysis, it is our opinion that neither the VTMUA nor the Township can be solvent without action. Therefore, a no action approach is not viable.**

B. Analysis #2 – No SSA Expansion with an annual 30% (2017-2108) & annual 6% (2019-2020) & annual 5% (2021-2027) Rate Increase

Under this scenario, no sanitary sewer area (SSA) expansion is proposed. However, a rate increase was projected to maintain a positive sewer fund balance at the end of each year without being too excessive (no shortfalls). A system of this size with the number of pump stations should target a fund balance of a minimum of \$1,000,000. However, it should be noted that, in our opinion, the VTMUA has not allocated significant funds since its inception to improve the utility infrastructure. It is our opinion that \$40,000 per year for improvements is insufficient for a utility the size of Vernon. Accordingly, it was necessary to maintain a higher balance in the utility fund to allow for emergencies and/or necessary infrastructure improvements.

As indicated in **Attachment C**, an annual tiered rate increase would be required to sustain the utility. Also included in **Attachment C** are the annual fees, in dollars, that the utility customers will experience due to the rate increase. **Due to the requirement to raise rates on an annual basis as noted above, the average customer that has a 3 bedroom home will pay \$980 annually in 2016 for sewer fees but will pay \$2,618 annually by 2027.**

**Based upon the above analysis, the rates for a 3 bedroom residence are projected to almost triple over a 10 year period. This increase is just for sanitary fees and does not account for an increase in taxes or water use fees. In addition, the analysis does not include any commercial based rate analysis. This analysis was difficult due to the EDU rate basis and the subsequent determination of fees for commercial establishments on a case by case basis. Based upon the decline in the Vernon Township population over the past few years, it is our opinion that an increase if fees may provide a lack of incentive for gaining additional users / commercial rate base and may hinder any continued efforts in growth. Therefore, the significant increase in fees to sustain the system may not be a viable option.**

C. Analysis #3 –SSA Expansion with No Rate Increase

Under this analysis scenario, the sanitary sewer area (SSA) expansion is incorporated into the analysis however, no rate increase is considered. The expanded SSA will need to be presented to the NJDEP and approved prior to initiating any type of utility expansion. This process is often time consuming from a review and public notice perspective. During this period, the VTMUA, based upon projected revenue, will not be operating without a shortfall. Accordingly, the Township and Mountain Creek will need to continue making contributions in accordance with the enacted agreements.

Once the expanded SSA is approved, it is our understanding that considerable construction of infrastructure is required to allow for the expansion of the SSA. The infrastructure will be required to be designed, permitted, constructed and connections made before an increase in revenue can be recognized by the VTMUA. Therefore, an expenditure of money/debt will be required prior to any recognition in additional flow. In addition, based upon our understanding of the expanded SSA, most of the additional revenue will be generated by mandatory connection of existing septic systems. Revenue will be collected by not only annual sewer fees but also from connection fees.

The mandatory connection of septic systems is something to be considered by the Township. Based upon available information, there may / may not be an accurate accounting of septic failures. Accordingly, the undue connection of septic system which is not failing may present an undue financial burden to the Township residents. Particularly when considering that in addition to the new quarterly services fees that the new connections will be required to pay, there are connections fees from both the VTMUA (\$4,665) and SCMUA (\$6,366 per EDU); totaling approximately \$11,031 for a 3 bedroom home.

The VTMUA has provide comment that the expansion would need to generate sufficient connections for total flows to be approximately 465,000 gpd. That would be the VTMUA breakeven point. Otherwise, the rate payers would face significant rate increases. Based upon this break even flow project of 465,000 gpd and the 2015 flows of 190,853 gpd, the SSA would need to generate approximately 900 new connections (utilizing approximately 300 gpd per new connection). It should be noted that 300 gpd is the flows that the NJDEP utilizes for computing projected flows. However, the **actual** flows for a 3 bedroom dwelling unit are typically less; therefore, requiring more connections to “breakeven”. In addition, this does not take into account the additional debt that will be incurred by the VTMUA to construct the necessary infrastructure for the new service connections and conveyance system.

As shown in *Attachment C*, the analysis assumed an approved SSA expansion area was approved and constructed by 2021. While we believe this is aggressive, we selected a 5 year time frame for the analysis. During this time, it is estimated that the VTMUA will incur approximately \$16 million in debt to construct the conveyance system in portions of the newly expanded SSA to allow mandatory connections. Without a time frame for connection detailed, we have assumed that 6 new connections will be conducted each month for a total of 72 new connections per year. All connections were assumed to be 3 bedroom and that each new connection was capable of paying the full connection fee. Utilizing this information, the revenue generated from the new annual user fees (operating revenue) and connection fees (non-operating revenue) were incorporated into the analysis.

As indicated, the expansion of the SSA and the addition of an estimated 72 new connections per year does not relieve the VTMUA from its shortfalls (without raising rates). **It should also be noted that the expansion of the SSA does not eliminate the VTMUA shortfalls by generating more flow or annual user fees (operating revenue).** Instead, the shortfalls are only eliminated by the one-time connection fees that will be collected for the new connections. Therefore, should a user not be able to afford the connection fee, the waiver of a connection fee would not provide any benefit to the VTMUA and would not justify the additional debt incurred to construct the new infrastructure. **Accordingly, the expansion of the SSA to allow the utility system to remain solvent is not a viable option.**

#### IV. CONCLUSION

In the past, the Township has made significant investment in the sanitary utility system and its expansion so that growth and the associated additional flow could be accepted into the municipality. Unfortunately, the flow has not materialized. In fact, the population of Vernon is decreasing contributing to a decrease in flows. It has also been our experience with other municipalities that the newer, water saving appliances being used in residential and commercial establishments has reduced the amount of sanitary flows; despite an increase in connections. Customer education has also reduced water consumption / waste. Therefore, an anticipated connection of new users may not result in the flows anticipated from planning documents.

Without the addition of users after the SCMUA expansion, the Township is now faced with the obligation to pay this debt without the benefit of new sources of taxable resources. The Townships debt for the utility expansion will not be defeased until 2040. Until this time, the tax payers of the Township will face the burden for re-payment of the debt. It should be stressed that this is only the utility debt and does not account for the additional \$29.8 million of serial bonds and bond anticipation notes authorized by the Township for past capital improvements within the municipality.

The VTMUA is also struggling to achieve the flow which was committed in the expansion agreement with the SCMUA. Regardless, user fees assessed by SCMUA are based upon committed flows; not actual flows. Therefore, until the time that new development is brought into the Township, the VTMUA will continue to be charged for unused capacity.

While there has been a proposal to expand the existing Sewer Service Area (SSA) and enact mandatory connections, the additional flow and one time connection fees do not appear to eliminate the project shortfalls of the VTMUA until beyond 2027 (study period). Therefore, the Township will be responsible for approximately 37% of the annual shortfalls and Mountain Creek for the other 67%. This will be an additional annual expense to be included in the budget of the Township.

While RVE does not make a practice of recommending the sale of a utility, we do believe there may be certain situations where the consideration may be prudent. Considering the current debt in the Township sewer utility and lack of flow to achieve the allocation obligations with SCMUA, consideration of an RFP to see what a private entity may offer for the sewer utility may be an option for the Township. An RFP for sale does not obligated the Township into selling the system; it merely puts additional information on the table for consideration.

Should this not be an option for the Township, it is our recommendation that rates be increased to relieve the VTMUA of it shortfall without a SSA expansion at this time. However, the increase in user fees imposed on the residents of the Township to support the sanitary system must be weighed when considering the Township's desire to not only maintain the existing population but secure growth.

**ATTACHMENT A**

VERNON TOWNSHIP DEBT SERVICE SCHEDULE (SANITARY ONLY)  
2013-2040

**ATTACHMENT A**

**TOWNSHIP OF VERNON - UPPER WALKILL FACILITIES - DEBT SERVICE SCHEDULE**

Year	Debt Service - Vernon Township Only	Debt Service - All Sending Districts of SCMUA - See Note #1	Total Annual Debt Service
2013	\$150,000	\$415,196	\$565,196
2014	\$250,000	\$418,256	\$668,256
2015	\$400,000	\$369,723	\$769,723
2016	\$450,000	\$369,219	\$819,219
2017	\$600,000	\$371,067	\$971,067
2018	\$700,000	\$369,267	\$1,069,267
2019	\$750,000	\$369,831	\$1,119,831
2020	\$900,000	\$370,119	\$1,270,119
2021	\$1,000,000	\$371,511	\$1,371,511
2022	\$1,000,000	\$370,407	\$1,370,407
2023	\$1,525,000	\$370,372	\$1,895,372
2024	\$1,525,000	\$369,335	\$1,894,335
2025	\$1,525,000	\$369,423	\$1,894,423
2026	\$1,525,000	\$370,623	\$1,895,623
2027	\$1,525,000	\$370,310	\$1,895,310
2028	\$1,525,000	\$369,902	\$1,894,902
2029	\$1,525,000	\$369,399	\$1,894,399
2030	\$1,525,000	\$369,900	\$1,894,900
2031	\$1,525,000	\$370,249	\$1,895,249
2032	\$1,525,000	\$371,460	\$1,896,460
2033	\$1,525,000	\$369,360	\$1,894,360
2034	\$1,525,000	\$369,600	\$1,894,600
2035	\$1,525,000	\$370,920	\$1,895,920
2036	\$1,525,000	\$369,720	\$1,894,720
2037	\$1,525,000	\$370,800	\$1,895,800
2038	\$1,525,000	\$370,560	\$1,895,560
2039	\$1,525,000	\$370,140	\$1,895,140
<b>TOTAL DEBT</b>	<b>\$32,125,000</b>	<b>\$10,086,667</b>	<b>\$42,211,667</b>

**Note:**

1. Vernon's portion is 24%. This is the value reflected in the table.
2. The debt service shown in column 1 - "Debt Service - Vernon Township Only" is the debt borne by VTMUA and Mountain Creek Resort.

**ATTACHMENT B**

SCHEDULE OF VTMUA FINANCIAL ANALYSIS -  
NO SEWER SERVICE AREA EXPANSION & NO RATE INCREASE

**ATTACHMENT B**

**TOWNSHIP OF VERNON - MUA ANALYSIS**

**PROJECTIONS BASED ON CURRENT RATES - NO SSA EXPANSION & NO RATE INCREASE**

	2012	2013	2014	2015	Estimated 2016	Projected 2017	Projected 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027
<b>Expenses</b>																
Operating Expenses																
Administration	161,569	225,548	258,429	263,890	269,168	274,551	280,042	285,643	291,356	297,183	303,127	309,189	316,919	324,842	332,963	341,287
SCMUA General Charge (P&I on bonds)	500,000	565,196	668,256	769,723	819,219	971,067	1,069,267	1,119,831	1,270,119	1,371,511	1,370,407	1,895,372	1,894,335	1,894,423	1,895,623	1,895,310
Operating & Maintenance Expense	857,484	752,980	906,916	1,133,533	925,054	943,555	962,427	981,675	1,001,309	1,021,335	1,041,761	1,062,597	1,083,849	1,105,526	1,127,636	1,150,189
Capital Improvements - See Note #3					52,000	50,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	41,000
Other Expenses																
Current Debt Service - Vernon Debt 11-22 & 11-23						120,422	132,105	137,792	143,401	142,601	141,800	403,295	403,295	403,295	403,295	403,295
SSA Expansion Capital Improvements																
<b>Total Expenses</b>	<b>1,519,053</b>	<b>1,543,724</b>	<b>1,833,601</b>	<b>2,167,146</b>	<b>2,065,441</b>	<b>2,359,596</b>	<b>2,483,841</b>	<b>2,564,941</b>	<b>2,746,184</b>	<b>2,872,630</b>	<b>2,897,095</b>	<b>3,710,453</b>	<b>3,738,397</b>	<b>3,768,085</b>	<b>3,799,517</b>	<b>3,831,081</b>
<b>Revenue</b>																
Total Operating Revenues	661,098	1,231,510	1,392,383	1,453,633	1,500,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000
Total Non-Operating Revenues	591,068	175,462	139,251	198,942	195,000	100,000	30,000	30,000	0	0	0	0	0	0	0	0
Mountain Creek Payment						154,994	154,994	154,994	154,994	154,994	154,994	154,994	154,994	154,994	154,994	154,994
<b>Total Revenue</b>	<b>1,252,166</b>	<b>1,406,972</b>	<b>1,531,634</b>	<b>1,652,575</b>	<b>2,172,400</b>	<b>1,804,994</b>	<b>1,734,994</b>	<b>1,734,994</b>	<b>1,704,994</b>	<b>1,704,994</b>	<b>1,704,994</b>	<b>1,704,994</b>	<b>1,704,994</b>	<b>1,704,994</b>	<b>1,704,994</b>	<b>1,550,000</b>
<b>Annual Surplus (Deficit)</b>	<b>-266,887</b>	<b>-136,752</b>	<b>-301,967</b>	<b>-514,571</b>	<b>106,959</b>	<b>-554,602</b>	<b>-748,847</b>	<b>-829,947</b>	<b>-1,041,190</b>	<b>-1,167,636</b>	<b>-1,192,101</b>	<b>-2,005,459</b>	<b>-2,033,403</b>	<b>-2,063,091</b>	<b>-2,094,523</b>	<b>-2,281,081</b>
<b>Contributions &amp; Prior Year Cancellations</b>	<b>876,782</b>	<b>160,781</b>	<b>109,525</b>	<b>373,170</b>												
<b>Beginning Fund Balance</b>	<b>--</b>	<b>609,895</b>	<b>633,924</b>	<b>441,482</b>	<b>300,081</b>	<b>407,040</b>	<b>-147,562</b>	<b>-896,408</b>	<b>-1,726,355</b>	<b>-2,767,546</b>	<b>-3,935,182</b>	<b>-5,127,283</b>	<b>-7,132,741</b>	<b>-9,166,145</b>	<b>-11,229,236</b>	<b>-13,323,759</b>
<b>End Fund Balance</b>	<b>609,895</b>	<b>633,924</b>	<b>441,482</b>	<b>300,081</b>	<b>407,040</b>	<b>-147,562</b>	<b>-896,408</b>	<b>-1,726,355</b>	<b>-2,767,546</b>	<b>-3,935,182</b>	<b>-5,127,283</b>	<b>-7,132,741</b>	<b>-9,166,145</b>	<b>-11,229,236</b>	<b>-13,323,759</b>	<b>-15,604,840</b>

All values were taken from the final Audits for each year as posted on the VTMUA website. Values were defined as follows:

**REVENUES**

Operating Revenues=sewer user charges

Nonoperating Revenues=connection fees, interest on investments, excess process of VT bond ordinances and other.

**EXPENSES**

Administration = Office Expense, Insurance, Engineering Fees, Professional & Legal Fees , Advertising, Shared Services

SCMUA General Charge = Principal & Interest on Bonds - Shown on Debt Service Table Attachment A

Operating & Maintenance Costs = Pumping Expenses, Operations Salary, SCMUA Treatment Charges, etc.

**NOTE:**

- Salaries and Wages - Assume 2.0% increase per year
- Operating & Maintenance Costs - Assume 2% increase per year
- The money planned for Capital Improvement costs is lacking based upon system size and age.

No contributions were included beyond the last available audit (2015). However, per the July 2012 agreement between Vernon Township and Mountain Creek Resort, the shortfalls of the MUA are to be borne by Mountain Creek (63%) and Township (37%)

**ATTACHMENT C**

SCHEDULE OF VTMUA FINANCIAL ANALYSIS -  
NO SEWER SERVICE AREA EXPANSION WITH A PROJECTED RATE INCREASE

**ATTACHMENT C**

**TOWNSHIP OF VERNON - MUA ANALYSIS**

**PROJECTIONS BASED ON CURRENT RATES - NO SSA EXPANSION & ANNUAL 30% RATE INCREASE (2017-2018)**

**AND ANNUAL 6% INCREASE (2109-2020) ANNUAL 5% RATE INCREASE (2021-2027)**

	2012	2013	2014	2015	Estimated 2016	Projected 2017	Projected 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027
<b>Expenses</b>																
Operating Expenses																
Administration	161,569	225,548	258,429	263,890	269,168	274,551	280,042	285,643	291,356	297,183	303,127	309,189	316,919	324,842	332,963	341,287
SCMUA General Charge (P&I on bonds)	500,000	565,196	668,256	769,723	819,219	971,067	1,069,267	1,119,831	1,270,119	1,371,511	1,370,407	1,895,372	1,894,335	1,894,423	1,895,623	1,895,310
Operating & Maintenance Expense	857,484	752,980	906,916	1,133,533	925,054	943,555	962,427	981,675	1,001,309	1,021,335	1,041,761	1,062,597	1,083,849	1,105,526	1,127,636	1,150,189
Capital Improvements - See Note #3					52,000	50,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	41,000
Other Expenses																
Current Debt Service - Vernon Debt 11-22 & 11-23						120,422	132,105	137,792	143,401	142,601	141,800	403,295	403,295	403,295	403,295	403,295
SSA Expansion Capital Improvements																
<b>Total Expenses</b>	<b>1,519,053</b>	<b>1,543,724</b>	<b>1,833,601</b>	<b>2,167,146</b>	<b>2,065,441</b>	<b>2,359,596</b>	<b>2,483,841</b>	<b>2,564,941</b>	<b>2,746,184</b>	<b>2,872,630</b>	<b>2,897,095</b>	<b>3,710,453</b>	<b>3,738,397</b>	<b>3,768,085</b>	<b>3,799,517</b>	<b>3,831,081</b>
<b>Revenue</b>																
Total Operating Revenues	661,098	1,231,510	1,392,383	1,453,633	1,500,000	1,950,000	2,535,000	2,687,100	2,848,326	2,990,742	3,140,279	3,297,293	3,462,158	3,635,266	3,817,029	4,007,881
Total Non-Operating Revenues	591,068	175,462	139,251	198,942	195,000	100,000	30,000	30,000	0	0	0	0	0	0	0	0
Due from Vernon Township																
Consumer Accounts Receivable																
Mountain Creek Payment						154,994	154,994	154,994	154,994	154,994	154,994	154,994	154,994	154,994	154,994	154,994
<b>Total Revenue</b>	<b>1,252,166</b>	<b>1,406,972</b>	<b>1,531,634</b>	<b>1,652,575</b>	<b>1,695,000</b>	<b>2,204,994</b>	<b>2,719,994</b>	<b>2,872,094</b>	<b>3,003,320</b>	<b>3,145,736</b>	<b>3,295,273</b>	<b>3,452,287</b>	<b>3,617,152</b>	<b>3,790,260</b>	<b>3,972,023</b>	<b>4,007,881</b>
<b>Annual Surplus (Deficit)</b>	<b>-266,887</b>	<b>633,924</b>	<b>441,482</b>	<b>-514,571</b>	<b>-370,441</b>	<b>-154,602</b>	<b>236,153</b>	<b>307,153</b>	<b>257,136</b>	<b>273,107</b>	<b>398,178</b>	<b>-258,165</b>	<b>-121,245</b>	<b>22,175</b>	<b>172,506</b>	<b>176,800</b>
<b>Contributions &amp; Prior Year Cancellations</b>	<b>876,782</b>	<b>160,781</b>	<b>109,525</b>	<b>373,170</b>												
<b>Beginning Fund Balance</b>	<b>--</b>	<b>609,895</b>	<b>633,924</b>	<b>441,482</b>	<b>300,081</b>	<b>-70,360</b>	<b>-224,962</b>	<b>11,192</b>	<b>318,345</b>	<b>575,480</b>	<b>848,587</b>	<b>1,246,765</b>	<b>988,600</b>	<b>867,354</b>	<b>889,529</b>	<b>1,062,035</b>
<b>End Fund Balance</b>	<b>609,895</b>	<b>633,924</b>	<b>441,482</b>	<b>300,081</b>	<b>-70,360</b>	<b>-224,962</b>	<b>11,192</b>	<b>318,345</b>	<b>575,480</b>	<b>848,587</b>	<b>1,246,765</b>	<b>988,600</b>	<b>867,354</b>	<b>889,529</b>	<b>1,062,035</b>	<b>1,238,835</b>

All values were taken from the final Audits for each year as posted on the VTMUA website. Values were defined as follows:

**REVENUES**

Operating Revenues=sewer user charges

Nonoperating Revenues=connection fees, interest on investments, excess process of VT bond ordinances and other.

**EXPENSES**

Administration = Office Expense, Insurance, Engineering Fees, Professional & Legal Fees , Advertising, Shared Services

SCMUA General Charge = Principal & Interest on Bonds - Shown on Debt Service Table Attachment A

Operating & Maintenance Costs = Pumping Expenses, Operations Salary, SCMUA Treatment Charges, etc.

**NOTE:**

- Salaries and Wages - Assume 2.0% increase per year
- Operating & Maintenance Costs - Assume 2% increase per year
- The money planned for Capital Improvement costs is lacking based upon system size and age.

No contributions were included beyond the last available audit (2015). However, per the July 2012 agreement between Vernon Township and Mountain Creek Resort, the shortfalls of the MUA are to be borne by Mountain Creek (63%) and Township (37%)

**ATTACHMENT C**

**SEWER SERVICE FEES**

**PROJECTIONS BASED ON RATE INCREASE OF 30% ANNUALLY (2017 - 2018) AND 6%ANNUALLY (2019-2020)  
AND 5% ANNUALLY (2021-2027)**

	USER TYPE	EXISTING 2016	VERNON TOWNSHIP MUA RATES										
			2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
ANNUAL CHARGE	STUDIO & 1 BEDROOM UNITS	\$588.00	\$764.40	\$993.72	\$1,053.34	\$1,116.54	\$1,172.37	\$1,230.99	\$1,292.54	\$1,357.17	\$1,425.02	\$1,496.28	\$1,571.09
	2 BEDROOM UNITS	\$784.00	\$1,019.20	\$1,324.96	\$1,404.46	\$1,488.73	\$1,563.16	\$1,641.32	\$1,723.39	\$1,809.55	\$1,900.03	\$1,995.03	\$2,094.79
	3 BEDROOM & MORE	\$980.00	\$1,274.00	\$1,656.20	\$1,755.57	\$1,860.91	\$1,953.95	\$2,051.65	\$2,154.23	\$2,261.94	\$2,375.04	\$2,493.79	\$2,618.48

**ATTACHMENT D**

SCHEDULE OF VTMUA FINANCIAL ANALYSIS -  
SEWER SERVICE AREA EXPANSION WITH NO RATE INCREASE

**ATTACHMENT D**

**TOWNSHIP OF VERNON - MUA ANALYSIS**

**PROJECTIONS BASED ON CURRENT RATES - SSA EXPANSION & NO RATE INCREASE**

	2012	2013	2014	2015	Estimated 2016	Projected 2017	Projected 2018	Projected 2019	Projected 2020	Projected 2021	Projected 2022	Projected 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027
<b>Expenses</b>																
Operating Expenses																
Administration	161,569	225,548	258,429	263,890	269,168	274,551	280,042	285,643	291,356	297,183	303,127	309,189	316,919	324,842	332,963	341,287
SCMUA General Charge (P&I on bonds)	500,000	565,196	668,256	769,723	819,219	971,067	1,069,267	1,119,831	1,270,119	1,371,511	1,370,407	1,895,372	1,894,335	1,894,423	1,895,623	1,895,310
Operating & Maintenance Expense	857,484	752,980	906,916	1,133,533	925,054	943,555	962,427	981,675	1,001,309	1,021,335	1,041,761	1,062,597	1,083,849	1,105,526	1,127,636	1,150,189
Capital Improvements - See Note #3					52,000	50,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	41,000
Other Expenses																
Current Debt Service - Vernon Debt 11-22 & 11-23						120,422	132,105	137,792	143,401	142,601	141,800	403,295	403,295	403,295	403,295	403,295
SSA Expansion Capital Improvements - Estimated Debt Service - See Note #4	-	-	-	-	-	-	-	90,000	175,950	348,032	602,371	665,264	635,327	606,738	579,434	553,360
<b>Total Expenses</b>	<b>1,519,053</b>	<b>1,543,724</b>	<b>1,833,601</b>	<b>2,167,146</b>	<b>2,065,441</b>	<b>2,359,596</b>	<b>2,483,841</b>	<b>2,654,941</b>	<b>2,922,134</b>	<b>3,220,662</b>	<b>3,499,466</b>	<b>4,375,717</b>	<b>4,373,724</b>	<b>4,374,823</b>	<b>4,378,951</b>	<b>4,384,441</b>
<b>Revenue</b>																
Total Operating Revenues	661,098	1,231,510	1,392,383	1,453,633	1,500,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000	1,550,000
Total Non-Operating Revenues	591,068	175,462	139,251	198,942	195,000	100,000	30,000	30,000	0	0	0	0	0	0	0	0
Operating Revenue from SSA Expansion										70,560	70,560	70,560	70,560	70,560	70,560	70,560
Non-Operating Revenue from SSA Expansion										335,880	335,880	335,880	335,880	335,880	335,880	335,880
Mountain Creek Payment						154,994	154,994	154,994	154,994	154,994	154,994	154,994	154,994	154,994	154,994	154,994
<b>Total Revenue</b>	<b>1,252,166</b>	<b>1,406,972</b>	<b>1,531,634</b>	<b>1,652,575</b>	<b>2,172,400</b>	<b>1,804,994</b>	<b>1,734,994</b>	<b>1,734,994</b>	<b>1,704,994</b>	<b>2,111,434</b>	<b>2,111,434</b>	<b>2,111,434</b>	<b>2,111,434</b>	<b>2,111,434</b>	<b>2,111,434</b>	<b>1,956,440</b>
<b>Annual Surplus (Deficit)</b>	<b>-266,887</b>	<b>633,924</b>	<b>441,482</b>	<b>-514,571</b>	<b>106,959</b>	<b>-554,602</b>	<b>-748,847</b>	<b>-919,947</b>	<b>-1,217,140</b>	<b>-1,109,228</b>	<b>-1,388,032</b>	<b>-2,264,283</b>	<b>-2,262,290</b>	<b>-2,263,389</b>	<b>-2,267,517</b>	<b>-2,428,001</b>
<b>Contributions &amp; Prior Year Cancellations</b>	<b>876,782</b>	<b>160,781</b>	<b>109,525</b>													
<b>Beginning Fund Balance</b>	<b>--</b>	<b>609,895</b>	<b>633,924</b>	<b>441,482</b>	<b>-73,089</b>	<b>33,870</b>	<b>-520,732</b>	<b>-1,269,578</b>	<b>-2,189,525</b>	<b>-3,406,666</b>	<b>-4,515,894</b>	<b>-5,903,926</b>	<b>-8,168,208</b>	<b>-10,430,499</b>	<b>-12,693,888</b>	<b>-14,961,405</b>
<b>End Fund Balance</b>	<b>609,895</b>	<b>633,924</b>	<b>441,482</b>	<b>-73,089</b>	<b>33,870</b>	<b>-520,732</b>	<b>-1,269,578</b>	<b>-2,189,525</b>	<b>-3,406,666</b>	<b>-4,515,894</b>	<b>-5,903,926</b>	<b>-8,168,208</b>	<b>-10,430,499</b>	<b>-12,693,888</b>	<b>-14,961,405</b>	<b>-17,389,406</b>

All values were taken from the final Audits for each year as posted on the VTMUA website. Values were defined as follows:

**REVENUES**

Operating Revenues=sewer user charges

Nonoperating Revenues=connection fees, interest on investments, excess process of VT bond ordinances and other.

**EXPENSES**

Administration = Office Expense, Insurance, Engineering Fees, Professional & Legal Fees , Advertising, Shared Services

SCMUA General Charge = Principal & Interest on Bonds - Shown on Debt Service Table Attachment A

Operating & Maintenance Costs = Pumping Expenses, Operations Salary, SCMUA Treatment Charges, etc.

**NOTE:**

- Salaries and Wages - Assume 2.0% increase per year
- Operating & Maintenance Costs - Assume 2% increase per year
- The money planned for Capital Improvement costs is lacking based upon system size and age.
- SSA Expansion will require construction of infrastructure. Estimated \$12million during 2019 to 2023. Debt Service shown in Attachment E.

No contributions were included beyond the last available audit (2015). However, per the July 2012 agreement between Vernon Township and Mountain Creek Resort, the shortfalls of the MUA are to be borne by Mountain Creek (63%) and Township (37%)

**PROPOSED ANNUAL DEBT SERVICE - CAPTIAL IMPROVEMENTS NECESSARY FOR SSA EXPANSION**

Improvement Year	Improvement Construction Cost	2016 Debt Service	2017 Debt Service	2018 Debt Service	2019 Debt Service	2020 Debt Service	2021 Debt Service	2022 Debt Service	2023 Debt Service	2024 Debt Service	2025 Debt Service	2026 Debt Service	2027 Debt Service	Total Cost Debt Service
Year 1 (2016)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Year 2 (2017)	\$0		\$0		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Year 3 (2018)	\$0			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Year 4 (2019)	\$2,000,000				\$90,000	\$85,950	\$82,082	\$78,389	\$74,861	\$71,492	\$68,275	\$65,203	\$62,269	\$3,878,521
Year 5 (2020)	\$2,000,000					\$90,000	\$85,950	\$172,082	\$74,339	\$70,993	\$67,799	\$64,748	\$61,834	\$3,887,744
Year 6 (2021)	\$4,000,000						\$180,000	\$171,900	\$164,165	\$156,777	\$149,722	\$142,985	\$136,550	\$7,502,099
Year 7 (2022)	\$4,000,000							\$180,000	\$171,900	\$164,165	\$156,777	\$149,722	\$142,985	\$7,365,548
Year 8 (2023)	\$4,000,000								\$180,000	\$171,900	\$164,165	\$156,777	\$149,722	\$7,222,564
Year 9 (2024)														\$0
Year 10 (2025)														\$0
Year 11 (2026)														\$0
Year 12 (2027)														\$0
Year 13 (2028)														\$0
Year 14 (2029)														\$0
Year 15 (2030)														\$0
Year 16 (2031)														\$0
Year 17 (2032)														\$0
Year 18 (2033)														\$0
Year 19 (2034)														\$0
Year 20 (2025)														\$0
<b>Total Cost</b>	<b>\$16,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$90,000</b>	<b>\$175,950</b>	<b>\$348,032</b>	<b>\$602,371</b>	<b>\$665,264</b>	<b>\$635,327</b>	<b>\$606,738</b>	<b>\$579,434</b>	<b>\$553,360</b>	<b>\$29,856,476</b>

*\* Table reflects the anticipated annual debt service resulting from an estimated \$16,000,000 upgrades due to SSA Expansion. The Debt Service assumes payment of interest only at 4.5% beginning in 2019.*