

**VILLAGE OF TIVOLI**  
**WATER AND SEWER SYSTEMS**  
**TRANSFER FEASIBILITY STUDY REPORT**

*April 27, 2017*

By

**Dutchess County Water and Wastewater Authority**



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# INTRODUCTION

## Purpose and Goals

The challenges of maintaining aging infrastructure and growing complexities in the regulation of water and sewer systems, coupled with the current economic climate and pressures to reduce the costs of providing municipal services, have prompted the Village of Tivoli (the Village) to partner with the Dutchess County Water and Wastewater Authority (DCWWA) to evaluate a transfer of ownership as an alternative means to providing water supply and sewage treatment services to the residents of the Village. To advance this effort, the Village and DCWWA collaborated in 2015 to secure funding through the Dutchess County Municipal Consolidation and Shared Services Grant Program for an evaluation of the feasibility of an ownership transfer. The central goal of the project was to identify what alternative will provide the most value to the Village users and residents now and in the future.

The evaluation was designed to include several components:

- Completion of an Engineering Report that assesses the physical condition of all key system components for both the Water and the Sewer Systems, and their performance as compared to current permits, regulatory requirements and relevant industry standards.
- Completion of a Five Year Capital Improvement Plan for the Village's Water and Sewer Systems, including prioritization and order of magnitude cost estimates.
- Completion of a financial analysis including a review of actual revenues, expenses and system fund balance, and a preparation of projected revenue requirements over the next five years.
- Analysis of any legal issues that may impact a transfer of ownership, including any outstanding debt obligations, existing permits and approvals, and adequacy of easements and other property ownership issues.
- Completion of a plan outlining the steps and timelines for actions required by both the Village and the DCWWA should the Village decide to transfer ownership of the Water and Sewer Systems.
- Completion of a report that integrates information from these assessments and analyses, along with a discussion of the managerial capabilities of the Village and DCWWA, that enables all parties to make a sound assessment of the potential benefits of a transfer of ownership.

To achieve the project objectives, grant funding has been utilized to retain the services of an engineering and financial consulting team to fully analyze the physical and financial conditions of the Water and Sewer Systems, and to fund the services of the Village legal counsel to assess any legal issues that may arise related to a transfer of ownership. DCWWA, in addition to assisting in the oversight of the consultant services, was tasked with developing an operations plan, projected budgets and rates, and capital improvement plan for management of the systems under DCWWA ownership.

The engineering and financial evaluations of the systems have been completed by Tighe & Bond Engineers, PC (T&B) and presented in two reports; Water System Evaluation (April 2017) and Sewer System Evaluation (April 2017.) The results of the legal analysis, as completed by Rodenhausen Chale LLP on behalf of the Village, is provided as Appendix A to this report.<sup>1</sup>

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<sup>1</sup> Rodenhausen Chale LLP Water and Sewer System Evaluation; Legal Considerations, April 19, 2017 is included without Exhibits. A full copy of the memorandum is available by request from the Village or DCWWA.

The purpose of this System Transfer Feasibility Study Report is to integrate the information from the engineering and financial evaluation; the legal analysis, and the financial projections and operational plan prepared by DCWWA. Additionally, it provides a discussion of managerial capabilities of the Village and DCWWA, and consideration of related implications of a transfer of ownership. It identifies the processes and steps to accomplish a transfer of ownership, should the Village choose to move in that direction, and develops a series of conclusions and recommendations to be further considered by the Village Mayor and Board of Trustees, and the DCWWA Board of Directors.

## **The Water and Sewer Systems**

The Water System services 443 residential customers, 24 commercial customers, and 9 other properties that are located outside of the Village. The water treatment system consists of eight wells located at five different sites, developed between 1940 and 2005. The distribution system, including the 150,000 gallon storage tank, was constructed primarily in the 1930's.

The Sewer System services 372 residential customers (3 of which are outside Village boundaries) and 24 commercial customers. The original wastewater treatment facility and collection systems were constructed in the late 1930's, with several improvement projects completed over the years.

More detailed descriptions of the Water and Sewer Systems can be found in the Water System Evaluation and Sewer System Evaluation Reports.

## **The Village of Tivoli**

The Village of Tivoli (Village) encompasses 1.8 square miles, located in the northwestern part of the Town of Red Hook. Tivoli has a population of about 1,100 people, and about 460 households. The median household income of the Village is \$40,357 (American Community Survey 5 Year Estimates; 2010-2015 data.) The Village is governed by a Mayor and a four member Board of Trustees, all of whom serve two year terms. Village staffing includes a Village Clerk (who is appointed to a two year term corresponding to the term of the Mayor) a Deputy Clerk (with a one year term) and Treasurer (also with a one year term.) The Village's Department of Public Works has a staff of three with responsibility for the Water and Sewer Systems; curbside solid waste and recyclable collection; parks, trails and grounds maintenance; oversight of municipal buildings and lands; and streets, sidewalks and drainage structures.

The Village Mayor and Board of Trustees provide management and oversight of the Water and Sewer Systems, including adoption of annual system budgets and rate setting. Accounts payable and receivable functions, and related administrative duties, are the responsibility of the Village Clerk. System operation and maintenance is provided by the Village's three person Department of Public Works. The Superintendent of Public Works holds the necessary New York State Department of Health and Department of Environmental Conservation certifications required to operate the facilities.

## **Dutchess County Water and Wastewater Authority**

The Dutchess County Water and Wastewater Authority (DCWWA) is a public benefit corporation that was established in 1991 by an act of the State, at the request of Dutchess County. The DCWWA is empowered to supply water; to accept and treat wastewater; fix rates and collect charges for its

services; to acquire real property; and to issue debt, among other powers. The DCWWA is governed by a five member Board of Directors appointed by the County Executive and the County Legislature. The DCWWA has a full time professional staff of twenty three, including management, project and administrative staff, a staff engineer and licensed water and sewer operators. The DCWWA currently owns and operates eighteen water systems and six sewer systems, located within ten different municipalities. Collectively these systems serve just over 5,400 residential and commercial customer connections. The DCWWA operates its systems with a combination of staff operators and contract operators.

## ENGINEERING EVALUATION REPORTS

### System Assessments

The scope of the Water and Sewer System evaluations was to assess each component of the systems in terms of its capacity relative to current and projected future demand; operational performance compared to regulatory requirements; component design versus current standards; and facilities condition. Based on this evaluation, the consulting engineer provided recommendations for improvements and/or replacements. Capital improvement items were characterized in terms of the timeframe in which they are recommended to be accomplished, as follows:

- Immediate – Items are critical assets in imminent danger of failure, or have safety, security or other regulatory compliance issues.
- Category A – Items have an expected remaining service life of 5 years or fewer.
- Category B – Items have an expected remaining service life of between 6 and 10 years.
- Category C – Items have an expected remaining service life of between 11 and 20 years.

Conceptual opinions of probable costs were prepared for each recommended improvement, taking into account construction, engineering, legal, project management and contingency expenses, resulting in an overall project cost estimate. The reader is directed to the Water and Sewer System Evaluation Reports for details on the facility conditions and recommended improvements.

The resultant cost estimates for the recommended capital improvements for both the Water and Sewer Systems are as follows:

Table 1 –Recommended Capital Improvements

|            | WATER SYSTEM | SEWER SYSTEM |
|------------|--------------|--------------|
| IMMEDIATE  | \$49,000     | \$39,400     |
| CATEGORY A | \$3,064,200  | \$2,147,700  |
| CATEGORY B | \$613,800    | \$655,000    |
| CATEGORY C | \$773,600    | \$815,300    |
| TOTAL      | \$4,500,600  | \$3,657,500  |

*Note – Costs are presented in 2016 dollars.*

### Financial Analysis

Projections of the operational expenses, capital debt expenses to fund identified capital improvements, revenue needs, and resultant rates under continued Village ownership are presented in the Water

System and Sewer System Evaluation Reports. Using the Village's 2016 fiscal year as the base, the analysis included the following key assumptions:

- The number of system customers and customer demand will remain constant.
- Forecasted expenses have been escalated at a rate of 2% per year.
- Identified capital improvements are assumed to be funded by the Drinking Water State Revolving Fund (for water system improvements) and the Clean Water State Revolving Fund (for sewer system improvements), both administered by the New York State Environmental Facilities Corporation, in each case for a term of 30 years at an interest rate of 2% per year. In all cases, capital improvements are assumed to be commenced and funded in the first year of the recommended improvement period; Immediate Improvements are funded in 2017, Category A Improvements are funded in 2018, Category B Improvements are funded in 2022, and Category C Improvements are funded in 2027.
- Detailed presentations of projected operating expenses, capital expenses, revenue requirements, unit costs, and annual costs for a median customer are included in the Water Facilities and Sewer System Evaluation Reports.

## **DISCUSSION OF DCWWA OWNERSHIP**

### **DCWWA Management and Operations**

Through strong operational oversight and sound fiscal management, DCWWA is committed to providing reliable service to its water and sewer system customers at a reasonable cost, commensurate with the cost of proper operations and maintenance, and with a commitment to accountability and transparency.

The DCWWA is governed by a Board of Directors with responsibility for establishment of the rules, policies and practices by which DCWWA conducts its business, approval of contracts and expenditures, and for oversight of the staff. The Board is responsible for annually approving budgets and establishing rates for each of the systems owned by DCWWA.

DCWWA staff includes a licensed engineer and experienced water and sewer operators that hold the highest levels of licenses and certifications. This strong and knowledgeable management provides the opportunity to monitor and address issues in a timely manner, to ensure regulatory compliance and continuity of service, to ensure routine maintenance is completed thereby prolonging equipment lifecycles and avoiding unnecessary repairs, and to avoid unintended consequences with serious negative outcomes.

DCWWA operates its water and sewer systems with a combination of staff and contract operators. Should ownership of the Tivoli Water and Sewer Systems be transferred to DCWWA, a contract operations firm would be retained to provide the manpower for daily operation and maintenance functions. DCWWA staff would be responsible for meter reading, sample collection, and non-routine maintenance and repairs. Oversight of the contract operator would be provided by DCWWA's Director of Operations with assistance from the System Operations and Maintenance Specialist. DCWWA solicits proposals for contract operations on a three year cycle. As with all its systems, DCWWA would periodically analyze whether it is more cost effective to continue to use a contract operator for the Tivoli

systems, or to assign DCWWA staff to operate the systems. As the owner of twenty-four public water and sewer systems, the DCWWA's significant purchasing power and strong emphasis on competitive procurement leads to more economical pricing for goods and services ranging from contract operations to sludge hauling and chemical purchases.

DCWWA annually develops and adopts a five year capital improvement plan for each of its water and sewer systems. The project management capabilities of a full-time professional staff enable DCWWA to complete major capital improvement and expansion projects on-time and on-budget. DCWWA enjoys a "AA" rating from Standard & Poor's, allowing it to bond for capital improvement projects at low interest rates. In addition, the DCWWA has often been successful in obtaining grants and low-interest loans to keep project costs as low as possible.

## **DCWWA Financial Projections**

### **Operational Expenses**

In preparing financial projections under DCWWA ownership, DCWWA utilized the same assumptions as were used in the System Evaluation Reports. DCWWA prepared a 2016 year budget based on an evaluation of the Village's historical expenditures for third party expenses (e.g., electricity, chemicals, laboratory sampling, equipment repair expenses, etc.) Costs associated with functions to be provided by DCWWA staff (accounts payable and receivable, administration, meter reading, etc.) were developed in accordance with DCWWA policies and past expense history. It was assumed that staffing for day to day operations of both the Water and Sewer System would be provided by a contract operations firm, supported and supervised by DCWWA operations staff. Costs were then escalated to create a five year projection (Years 2017 through 2021.)

### **Capital Improvement Expense**

Having participated in the development and review of the Recommended System Improvements presented in the Engineering Evaluations, DCWWA endorses those recommendations and cost estimates, and would adopt the same as the basis of its Capital Improvement Plan for the Systems. DCWWA has determined that the Immediate Improvements identified for both the Water and Sewer Systems (at \$49,000 and \$39,400 respectively) would be best accomplished as operational improvement items versus capital projects. An assessment was made of the portion of current system fund balance that could be used, along with current revenues, to offset the cost of these operational improvement items, while still maintaining appropriate system cash reserves. Remaining capital improvement items were assumed to be funded by Clean Water/Drinking Water Revolving Fund loans at 2% interest for 30 years. As noted in the Engineering Evaluations, should funding through these programs not be available, debt service costs may be higher than presented. Borrowings would be completed in 2018 (Category A), 2022 (Category B) and 2027 (Category C.) Accordingly, additional debt services expenses will be incurred beginning in the sixth and eleventh years (2022 and 2027 respectively.)

### **Five Year Expense Projections**

Annual financial projections for the Village Water and Village Sewer System are presented below, demonstrating the Village's 2016 revenues and expenses, and DCWWA revenues and expenses for 2016 through 2021, inclusive of operating and capital debt expenses.

Table 2- DCWWA Water System Revenue and Expense Projections

|                               | FY 2016<br>VILLAGE | FY 2016<br>DCWWA | FY 2017<br>YEAR 1 | FY 2018<br>YEAR 2 | FY 2019<br>YEAR 3 | FY 2020<br>YEAR 4 | FY 2021<br>YEAR 5 |
|-------------------------------|--------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Beginning Fund Balance</b> | <b>139,172</b>     | <b>139,172</b>   | <b>139,172</b>    | <b>90,172</b>     | <b>79,713</b>     | <b>69,255</b>     | <b>58,796</b>     |
| <b>Annual Expenses</b>        | <b>207,525</b>     | <b>184,393</b>   | <b>241,340</b>    | <b>340,856</b>    | <b>344,280</b>    | <b>347,773</b>    | <b>351,335</b>    |
| Utilities/Fuel                | 16,264             | 20,302           | 20,708            | 21,122            | 21,545            | 21,976            | 22,415            |
| Operations (*)                | -                  | 71,804           | 73,240            | 74,705            | 76,199            | 77,723            | 79,277            |
| Equip. Repair/Maint.          | 10,771             | 16,700           | 17,030            | 17,367            | 17,710            | 18,060            | 18,417            |
| Purification/Monitoring       | 3,406              | 8,337            | 8,500             | 8,667             | 8,836             | 9,010             | 9,187             |
| Administration(*)             | 117,760            | 38,145           | 43,527            | 52,610            | 53,366            | 54,137            | 54,923            |
| Legal/Engineering             | -                  | 750              | 750               | 750               | 750               | 750               | 750               |
| Insurance                     | 7,347              | 7,350            | 7,497             | 7,647             | 7,800             | 7,956             | 8,115             |
| Contingency                   | 35,178             | 4,206            | 4,288             | 4,372             | 4,458             | 4,545             | 4,635             |
| Property Lease                | 16,800             | 16,800           | 16,800            | 16,800            | 16,800            | 16,800            | 16,800            |
| Capital Repair/Imprmnt        | -                  | -                | 49,000            | -                 | -                 | -                 | -                 |
| Annual Debt Service           | -                  | -                | -                 | 136,816           | 136,816           | 136,816           | 136,816           |
| <b>Annual Revenues</b>        | <b>207,525</b>     | <b>184,393</b>   | <b>241,340</b>    | <b>340,856</b>    | <b>344,280</b>    | <b>347,773</b>    | <b>351,335</b>    |
| Water Sales                   | 207,525            | 183,893          | 191,830           | 193,061           | 196,475           | 199,957           | 203,509           |
| Penalties & Other             | -                  | 500              | 510               | 520               | 531               | 541               | 552               |
| Property Tax                  | -                  | -                | -                 | 136,816           | 136,816           | 136,816           | 136,816           |
| Transfer from Fund Balance    | -                  | -                | 49,000            | 10,459            | 10,459            | 10,459            | 10,459            |
| <b>Ending Fund Balance</b>    | <b>139,172</b>     | <b>139,172</b>   | <b>90,172</b>     | <b>79,713</b>     | <b>69,255</b>     | <b>58,796</b>     | <b>48,337</b>     |

\*Note – A detailed break-out of Village staffing expenses between administrative and operational functions was not available, so all staff costs were included under Administration.

Table 3 –DCWWA Sewer System Revenue and Expense Projections

|                               | FY 2016<br>VILLAGE | FY 2016<br>DCWWA | FY 2017<br>YEAR 1 | FY 2018<br>YEAR 2 | FY 2019<br>YEAR 3 | FY 2020<br>YEAR 4 | FY 2021<br>YEAR 5 |
|-------------------------------|--------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| <b>Beginning Fund Balance</b> | <b>117,525</b>     | <b>117,525</b>   | <b>117,525</b>    | <b>72,525</b>     | <b>63,250</b>     | <b>53,975</b>     | <b>44,700</b>     |
| <b>Annual Expenses</b>        | <b>111,019</b>     | <b>119,025</b>   | <b>164,513</b>    | <b>228,741</b>    | <b>231,181</b>    | <b>233,669</b>    | <b>236,207</b>    |
| Utilities/Fuel                | 23,116             | 24,876           | 25,373            | 25,881            | 26,398            | 26,926            | 27,465            |
| Operations                    | -                  | 39,727           | 40,521            | 41,332            | 42,158            | 43,001            | 43,861            |
| Equip. Repair/Maint.          | 8,388              | 13,000           | 13,258            | 13,521            | 13,790            | 14,063            | 14,343            |
| Treatment/Disposal            | 4,147              | 3,660            | 3,718             | 3,777             | 3,837             | 3,899             | 3,962             |
| Administration                | 58,785             | 27,042           | 31,323            | 37,236            | 37,796            | 38,366            | 38,948            |
| Legal/Engineering             | -                  | 750              | 750               | 750               | 750               | 750               | 750               |
| Insurance                     | 9,037              | 8,000            | 8,160             | 8,323             | 8,490             | 8,659             | 8,833             |
| Contingency                   | 7,547              | 1,971            | 2,010             | 2,049             | 2,090             | 2,131             | 2,173             |
| Capital Repair/Imprmnt        | -                  | -                | 39,400            | -                 | -                 | -                 | -                 |
| Annual Debt Service           | -                  | -                | -                 | 95,872            | 95,872            | 95,872            | 95,872            |
| <b>Annual Revenues</b>        | <b>111,019</b>     | <b>119,025</b>   | <b>164,513</b>    | <b>228,741</b>    | <b>231,181</b>    | <b>233,669</b>    | <b>236,207</b>    |
| Water Sales                   | 111,019            | 118,525          | 119,003           | 123,074           | 125,503           | 127,980           | 130,508           |
| Penalties & Other             | 0                  | 500              | 510               | 520               | 531               | 541               | 552               |
| Property Tax                  | -                  | -                | -                 | 95,872            | 95,872            | 95,872            | 95,872            |
| Transfer from Fund Balance    | -                  | -                | 45,000            | 9,275             | 9,275             | 9,275             | 9,275             |
| <b>Ending Fund Balance</b>    | <b>117,525</b>     | <b>117,525</b>   | <b>72,525</b>     | <b>63,250</b>     | <b>53,975</b>     | <b>44,700</b>     | <b>35,425</b>     |

Expense projections beyond the initial five years, including additional debt service expenses that would be incurred for the Category B and C Improvements, are provided in Appendix B. It should be noted that



the accuracy of financial projections will decrease as the timeframe is extended further out. All projections are based on the condition of the facilities and financial status of the systems as of the time of the evaluation. Any substantive changes prior to a transfer of ownership would impact future expense and rate projections.

## Cost Allocation and Rate Structure

### Operational Expenses

It has been assumed that DCWWA would continue the Village’s current policy of billing customers for both water and sewer system operational expenses based on metered water usage. Further, the existing tiered rate structure would also be maintained. Customers would be billed quarterly, in increments of 1,000 gallons, with a minimum quarterly billing for up to 10,000 gallons of usage. The Village’s current rates and DCWWA projected rates for the forecasted years for both the Water and Sewer Systems are shown below.

Table 4 – DCWWA Projected Water Rates

| Water Usage Tier<br>Usage per Quarter | FY 2016<br>VILLAGE | FY 2016<br>DCWWA | FY 2017<br>YEAR 1 | FY 2018<br>YEAR 2 | FY 2019<br>YEAR 3 | FY 2020<br>YEAR 4 | FY 2021<br>YEAR 5 |
|---------------------------------------|--------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 0 to 10,000                           | \$7.442            | \$6.537          | \$6.820           | \$6.865           | \$6.914           | \$7.108           | \$7.237           |
| 10,000 to 20,000                      | \$8.202            | \$7.205          | \$7.516           | \$7.566           | \$7.620           | \$7.834           | \$7.976           |
| 20,000 to 30,000                      | \$8.544            | \$7.505          | \$7.830           | \$7.882           | \$7.938           | \$8.161           | \$8.309           |
| 30,000 to 40,000                      | \$9.303            | \$8.172          | \$8.525           | \$8.582           | \$8.643           | \$8.885           | \$9.047           |
| 40,000 and Up                         | \$9.964            | \$8.752          | \$9.131           | \$9.191           | \$9.257           | \$9.517           | \$9.690           |

Rates are per 1,000 gallons used, with a minimum charge of 10,000 gallons per quarter.

Table 5- DCWWA Projected Sewer Rates

| Water Usage Tier<br>Usage per Quarter | FY 2016<br>VILLAGE | FY 2016<br>DCWWA | FY 2017<br>YEAR 1 | FY 2018<br>YEAR 2 | FY 2019<br>YEAR 3 | FY 2020<br>YEAR 4 | FY 2021<br>YEAR 5 |
|---------------------------------------|--------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| 0 to 10,000                           | \$4.676            | \$4.948          | \$4.970           | \$5.136           | \$5.238           | \$5.341           | \$5.471           |
| 10,000 to 20,000                      | \$5.339            | \$5.650          | \$5.675           | \$5.864           | \$5.981           | \$6.098           | \$6.247           |
| 20,000 to 30,000                      | \$5.639            | \$5.967          | \$5.994           | \$6.194           | \$6.317           | \$6.441           | \$6.441           |
| 30,000 to 40,000                      | \$6.302            | \$6.669          | \$6.698           | \$6.922           | \$7.059           | \$7.198           | \$7.198           |
| 40,000 and Up                         | \$6.880            | \$7.280          | \$7.313           | \$7.557           | \$7.707           | \$7.858           | \$7.858           |

Rates are per 1,000 gallons used, with a minimum charge of 10,000 gallons per quarter.

### Capital Expenses

As discussed above, DCWWA would intend to fund the Immediate Improvements for the Water and Sewer Systems using existing system fund balances. Category A, B and C improvements would be funded through long-term bonds. The annual debt services expense would be apportioned between all parcels within the Water and Sewer service areas and collected through an assessment included on annual property tax bills. The apportionment between properties would be accomplished by the assignment of “benefit units” to each parcel, based on average annual demand from each parcel, such that a single family residential parcel is assessed at one benefit unit, and parcels with a higher demand are assigned a proportionally larger number of benefit units.

A borrowing of \$3.06 million in 2018 for the Category A Water System Improvements, assuming a 30 year bond at 2% interest, would result in an Annual Debt Service Expense of about \$136,800. Allocated across a total of 557 Water System Benefit Units, the annual rate per Benefit Unit would be approximately \$246. Accordingly, a single family residence or small commercial user assigned one benefit unit would have an annual capital assessment of \$246.

A borrowing of \$2.15 million in 2018 for the Category A Sewer System Improvements, assuming a 30 year bond at 2% interest, would result in an Annual Debt Service Expense of about \$95,900. Allocated across a total of 464 Sewer System Benefit Units, the annual rate per Benefit Unit would be approximately \$207. Accordingly, a single family residence or small commercial user assigned one benefit unit would have an annual capital assessment of \$207. As with the Water System, capital assessments would be billed once per year, appearing on the annual property tax bill.

***Total Annual Cost per Typical Customer***

The typical water and sewer customer in the Village is a single family residence or a small commercial user, with a water demand of approximately 7,500 gallons per billing quarter. The total annual water cost for such a customer, including quarterly usage bills and the annual capital assessment, is shown below for each of the forecasted years.

Table 6 – Total Annual Water Cost for a Typical Customer

|                     | <u>FY 2016</u><br><u>VILLAGE</u> | <u>FY 2016</u><br><u>DCWWA</u> | <u>FY 2017</u><br><u>YEAR 1</u> | <u>FY 2018</u><br><u>YEAR 2</u> | <u>FY 2019</u><br><u>YEAR 3</u> | <u>FY 2020</u><br><u>YEAR 4</u> | <u>FY 2021</u><br><u>YEAR 5</u> |
|---------------------|----------------------------------|--------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Operations</b>   | \$312                            | \$261                          | \$273                           | \$275                           | \$277                           | \$284                           | \$289                           |
| <b>Capital Debt</b> | \$0                              | \$0                            | \$0                             | \$246                           | \$246                           | \$246                           | \$246                           |
| <b>TOTAL</b>        | \$312                            | \$261                          | \$273                           | \$520                           | \$522                           | \$530                           | \$535                           |

The total annual sewer cost for such a customer, including quarterly usage bills and the annual capital assessment, is shown below for each of the forecasted years.

Table 7 – Total Annual Sewer Cost for a Typical Customer

|                     | <u>FY 2016</u><br><u>VILLAGE</u> | <u>FY 2016</u><br><u>DCWWA</u> | <u>FY 2017</u><br><u>YEAR 1</u> | <u>FY 2018</u><br><u>YEAR 2</u> | <u>FY 2019</u><br><u>YEAR 3</u> | <u>FY 2020</u><br><u>YEAR 4</u> | <u>FY 2021</u><br><u>YEAR 5</u> |
|---------------------|----------------------------------|--------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| <b>Operations</b>   | \$167                            | \$198                          | \$199                           | \$205                           | \$210                           | \$214                           | \$219                           |
| <b>Capital Debt</b> | \$0                              | \$0                            | \$0                             | \$207                           | \$207                           | \$207                           | \$207                           |
| <b>TOTAL</b>        | \$167                            | \$198                          | \$199                           | \$412                           | \$416                           | \$420                           | \$425                           |

**SYSTEM TRANSFER PROCESS**

Upon final completion of this Transfer Feasibility Study, and after the Village has held public information meetings as it deems appropriate, it is anticipated that the Village would then make a final determination on whether to proceed with a transfer of ownership of the Water and Sewer Systems to DCWWA.

Should the Village opt to proceed with a transfer to DCWWA, the first step would be satisfaction of the environmental review requirements pursuant to the State Environmental Quality Review Act (SEQR) and related regulations. As noted in the Rodenhause Chale legal memorandum, this would be a Type I

SEQR review, requiring a coordinated review among all involved parties, with the Village Board of Trustees acting as the Lead Agency. In addition, a Coastal Assessment Form would be needed to determine consistency of the action with the Village's Local Waterfront Revitalization Plan.

A Transfer Agreement between the Village and DCWWA would be developed and executed, to lay out a plan for the steps and actions necessary to transfer ownership of all system assets, including transfer of all real and personal property, accounts payable/receivable, and current funds on hand. The Agreement would also address transfers of permits and approvals, as well as the assignment of any current lease, service and or outside user agreements. The Rodenhausen Chale Legal Memorandum noted several issues related to deeds and easements for both the Water and the Sewer Systems, and noted further legal review may be required upon completion of survey and title search work. Consultation with the New York State Office of Parks, Recreation and Historic Preservation will be necessary to determine whether transfer of the Water Tower Lot and adjacent well property would give rise to any "alienation of parkland" issues, due to the use of surrounding lands as a playground. These issues are discussed in further detail in both the legal memorandum and Water System Evaluation Report.

It has been noted that the Village has no outstanding indebtedness related to the Water or Sewer Systems.

## **Establishment of County Water District Zone of Assessment and Sewer District**

DCWWA's ability to accept ownership of the Tivoli Water and Sewer Systems is predicated on the creation of a County Water District Zone of Assessment and a Part County Sewer District, both by resolutions of the County Legislature, as discussed below.

As the first step in this process, the DCWWA would request that the County form a new Zone of Assessment within the County Water District, and a new Part County Sewer District. The purpose of the Zone of Assessment and the District is to delineate those properties that are provided services by the Tivoli Water and Sewer Systems respectively, and to enable Dutchess County to levy assessments on the DCWWA's behalf to fund debt service on any bonds issued for capital improvements to the systems.

The creation of a Zone of Assessment (Zone) within the County Water District, and of a Part-County Sewer District (District) would be accomplished in accordance with Article 5-A of New York State County Law. The DCWWA would prepare and submit to the Legislature a Map, Plan and Report (MPR) containing the information required for the formation of the proposed Zone and District, including; the properties to be included; a description of the current and proposed infrastructure by which water/sewer services will be provided; the estimated capital expenditure for the acquisition, construction or improvement of the facilities; and an estimate of the total annual cost (capital and operation and maintenance) for a typical property included in the proposed Zone and District, respectively.

The Legislature must hold a public hearing before acting, by resolution, to create the Zone or District. The resolution of the Legislature is then subject to a forty-five (45) day permissive referendum period. A referendum on the County Legislature's action may be triggered by a petition signed by 5% or 100, whichever is lesser, of the owners of taxable real property within the proposed Zone/District. Eligibility to vote in a referendum under County law is limited to "resident electors," being individuals who are registered to vote and reside within the proposed district. Eligible voters do not need to be property owners. The action of the County Legislature is upheld if approved by majority of those voting in the

referendum. Should a majority vote against the District or Zone of Assessment, the action of the Legislature is over-turned and the transfer of ownership process halted. In the event no referendum is triggered, the actions of the Legislature stand.

## DISCUSSION

The central goal of this project is to identify what ownership alternative will provide the most value to the Village users and residents now and in the future. In assessing the advantages or disadvantages of a transfer of ownership, the Village Board and residents may be concerned with; affordability of services; reliability of service; and protection and maintenance of system assets. Over the long term, this requires a level of managerial capacity and consistent attention to system management. Responsiveness and accountability of the system owner to the needs of the customers and community are also important.

Comparisons of projected total annual costs for a typical customer under either Village or DCWWA ownership are presented below, for the Water System, Sewer System, and the total combined Systems costs.

Table 8 – Village versus DCWWA Typical Customer Costs

|                              | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> | <u>FY 2020</u> | <u>FY 2021</u> |
|------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>WATER SYTEM COSTS</b>     |                |                |                |                |                |                |
| <b>VILLAGE</b>               | \$312          | \$321          | \$536          | \$542          | \$549          | \$556          |
| <b>DCWWA</b>                 | \$261          | \$273          | \$520          | \$522          | \$530          | \$535          |
| <b>SEWER SYSTEM COSTS</b>    |                |                |                |                |                |                |
| <b>VILLAGE</b>               | \$195          | \$202          | \$377          | \$381          | \$385          | \$389          |
| <b>DCWWA</b>                 | \$198          | \$199          | \$412          | \$416          | \$420          | \$425          |
| <b>COMBINED SYSTEM COSTS</b> |                |                |                |                |                |                |
| <b>VILLAGE</b>               | \$507          | \$524          | \$912          | \$923          | \$934          | \$945          |
| <b>DCWWA</b>                 | \$459          | \$472          | \$932          | \$938          | \$950          | \$961          |

The cost comparison shows a difference in the manner in which DCWWA would propose to allocate system operations and administration costs between the Water and Sewer Systems, resulting in lower costs for the Water System, but higher costs for the Sewer System. Projections demonstrate that, in future years, DCWWA costs for the two systems combined would be about 2% higher than those projected for continued Village ownership. Budget details indicate that the cost differential is attributable to DCWWA's increased budget lines for equipment repair and maintenance, and for administrative costs to support more pro-active management and oversight of system operations.

The Engineering Evaluations established that, regardless of ownership, both the water and sewer systems are in need of significant capital repairs and improvements, particularly over the next five years. As maintenance is deferred, water and sewer infrastructure deteriorates more rapidly, reducing the

service life and greatly increasing the cost of repairs, especially expensive emergency repairs. The ability to move the improvement projects forward in a timely manner, and to manage those projects effectively, will be critical both to the long term viability of the systems and service reliability, as well as cost impact on the customers.

Should the Village retain ownership of the Water and Wastewater Systems, it will need to assess and harness the necessary resources to address over \$5.3 million in system repairs, upgrades and capital improvements over the next five years; including application for grant and loan financing; procurement and oversight of engineering design professionals, coordination of permitting and approvals, and management of multiple construction contracts. As with many municipalities, the Village faces inherent obstacles in meeting the challenges of maintaining and upgrading its aging infrastructure. Challenges include the competing demands on the time and resources of local government officials and the lack of full time staff with the necessary technical knowledge and experience to manage large capital projects. With a typical life cycle of capital improvement projects having a two to four year timeframe, management of such projects is particularly challenging in light of the two-year terms for key elected and appointed Village officials.

Village water and sewer customers are familiar with, and likely comfortable with, the level of service they receive from Village officials and staff. Particularly in a small, close knit community such as Tivoli, customers feel confident in their access to Village officials, and the responsiveness of those officials to their needs. Clearly an issue to be considered is the level of transparency, accountability and responsiveness that customers could expect from the DCWWA.

As a public entity, all meetings of the DCWWA Board of Directors are open to the public. Through the website [www.DCWWA.org](http://www.DCWWA.org) the public has access to annual drinking water quality reports; approved system rates; board meeting schedules, agendas and minutes; and emergency contact information. Via this website, customers and interested parties may receive timely advisories and alerts. Customer newsletters mailed with every utility billing statement contain 24/7 emergency contact information, updates on improvement projects, and reminders regarding the basic rights and responsibilities between the customer and service provider.

Annual draft system budgets and rates are prepared in early November, and made available to customer advisory committees, local elected officials and interested customers. Proposed rates are posted on the DCWWA website. A public hearing on the draft budgets and rates is held in mid-November. Budgets and rates are approved by the Board at its December meeting. Final rates are distributed to all customers in the next bill mailing and posted on the DCWWA website.

DCWWA maintains sound fiscal management practices and controls in accordance with government accounting and other applicable standards and guidelines. Policies addressing Procurement, Accounting, Investment and Banking, and Property Disposal are annually reviewed and adopted by the DCWWA Board, and are available to the public. DCWWA is subject to an annual audit by an independent, certified accounting firm as well as audits by the Dutchess County and NYS Comptrollers.

## **Additional Considerations for the Village**

A transfer of system ownership could provide Village wide benefits as Village officials are relieved of the increasing complexities of operating and managing water and sewer systems and are thereby able to commit greater time and attention to core municipal functions.

In addition to the cost impacts on Water and Sewer System customer charges, the Village should consider potential financial implications on the Village as a whole. Per the Rodenhausen Chale legal memorandum, the Village's debt limit (based on full valuation reported for years 2011 through 2015) is \$8.58 million. Projected debt for water and sewer system improvements over the next five years (at \$5.2 million) equates to approximately 60% of the debt limit, while projected capital project debt over the next 10 years (\$6.5 million) equates to about 76% of the debt limit. This leaves little room for other Village capital debt for other infrastructure.

Currently, revenues from the Water and Sewer Systems support a portion of the staffing costs for the Village, including positions in both the Village Clerk's office and Department of Public Works. A change in ownership of the Water and Sewer System would require that the Village reassess staffing needs and revenue sources to cover staff expenses.

## **CONCLUSION AND RECOMMENDATIONS**

The Water System Evaluation and Sewer System Evaluation completed by Tighe & Bond have afforded the Village a clear, comprehensive picture of the current condition of its water and sewer infrastructure. The reports note that, collectively, an expenditure of just under \$90,000 is necessary to address critical assets in imminent danger of failure, or safety, security or other regulatory compliance issues. An investment of about \$5.2 million should be anticipated within a five year time frame to replace assets nearing the end of their useful life, with another \$2.9 million to be invested within the next twenty years to protect the long-term viability of the systems.

The legal analysis prepared for the Village by Rodenhausen Chale LLP identified property boundary and ownership issues that should be resolved, as well as procedural requirements and approvals needed to accomplish a transfer of ownership. Importantly, the legal analysis identified no prohibition of, or significant impediment to, such a transfer of ownership.

Through this Report, DCWWA has detailed its plan of management and operations of the system should ownership be transferred. A comparison has been provided of customer costs anticipated under either DCWWA or Village ownership, projected over a five year time period.

Collectively, these three documents provide Village officials and residents key information to enable them to make a sound assessment of the potential implications of a decision to either retain or transfer ownership of the Water and Sewer Systems.

A recommended final step in the Tivoli Water and Sewer Transfer Feasibility Study project will be to present these reports in a public forum, so that Village officials will have the benefit of public comment as they develop their plan to move forward.

## **APPENDICES**

Appendix A – Water and Sewer System Evaluation; Legal Considerations prepared by Rodenhausen Chale LLP, April 19, 2017

Appendix B – DCWWA Extended System Financial Projections

## **APPENDIX A**

**Rodenhausen Chale LLP**

### **Water and Sewer System Evaluation: Legal Considerations**

**April 19, 2017<sup>1</sup>**

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<sup>1</sup> The memorandum is included without Exhibits. A full copy of the memorandum is available by request from the Village or DCWWA.



TO: Mayor Joel Griffith and Board of Trustees of the Village of Tivoli

FROM: Christine M. Chale

DATE: April 19, 2017

RE: Water and Sewer System Evaluation; Legal Considerations

CC: Bridget Barclay, DCWWA

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You have asked us to review certain legal matters relating to the ongoing study of the Village's Water and Sewer System. We have reviewed a draft Water Facility Evaluation dated February 2017 prepared by T&B Engineering, P.C., and a draft Wastewater Facility Evaluation dated February 2017 prepared by T&B Engineering, P.C. We note that further review will be required following completion of survey and title work.

**A. Outstanding Bonds and Financing Plans**

The Village has no outstanding Bonds relating to its water or sewer system.

The Village previously approved a bond resolution dated April 13, 2013 for a water tower improvement project in the principal amount of \$93,000, but no obligations have been issued pursuant to such resolution as yet. A copy of the bond resolution is attached at **Exhibit A-1**.

A summary of outstanding debt provided by the Village Treasurer is attached for reference at **Exhibit A-2**.

The Village previously submitted a preliminary application for assistance from NYS Environmental Facilities Corporation with respect to the water system. NYC EFC's DWSRF Intended Use Plan for FY 2016-17 (October 2016) lists the following project for Tivoli on the Annual List: \$4,733,280 Upgrade Water Treatment Plant, New Ground Water Source, New Storage, Upgrade Pump Station, Upgrade Distribution System. A copy of such listing is attached at **Exhibit A-3**. The Village has not yet issued a bond resolution for the project(s) described in the DWSRF application.

The Village has submitted a preliminary application for assistance from NYS Environmental Facilities Corporation with respect to the sewer system. NYS EFC's CWSRF

Intended Use Plan for FY 2017 list the following project for Tivoli on the Multi-Year List: \$1,861,000 I/I Correction, Pump Station Rehab, Sewer Rehab, Sewer Treatment Plant Rehab. A copy of such listing is attached at Exhibit A-3. The Village has not yet issued a bond resolution for the project(s) described in the CWSRF application.

The Village's debt limit is seven percent of average full valuation. According to the information filed with the NYS Comptroller, the full value reported for 2015 was \$120,861,569, \$121,391,438 for 2014, \$121,613,436 for 2013, \$122,289,295 for 2012, and \$126,989,251 for 2011, for an average of \$122,628,997, producing a debt limit of \$8,584,029.

The Village should engage an MSRB registered financial advisor to assist it in preparing and reviewing financial plans for either upgrading the existing water and sewer systems or conveying the systems to DCWWA.

## **B. Well Deeds and Easements**

A title search will be required to identify all interests of record held by the Village and to confirm title in the Village. We are aware of the following deeds and easements on file with respect to the water system. Copies of the instruments are attached except as indicated:

1. Potts Well Site West; Deed from Claude Potts and Jennie Potts to the Village of Tivoli dated May 24, 1948, including a parcel 583 feet by 538 feet and 10 foot right of way from Route 9G, subject to concurrent use of the right of way. No buildings are permitted on the lot except for pump or well house.

Regarding the Potts Well Site West, we have had recent discussions with the Stickles and Potts family, owners of the area adjacent to the Potts Well Site West. The site was conveyed to the Village in fee by the Potts family, who owned the adjacent parcel surrounding the well site. The Village agreed in a separate unrecorded agreement dated May 24, 1948 that it would provide two water taps for the residents of the Potts Farm on adjacent parcel on the west side of 9G, one at the barn and one at the residence. The agreement provides that the owners of the adjacent parcel have the right to farm outside of a 150 foot perimeter of any well, provided that no manure or fertilizer may be used on the Village property and such farm use does not pollute or contaminate the wells and such farm use is allowed by health authorities. Copies of the Potts deeds and agreements are attached at **Exhibit B-1**.

A recent survey conducted by the Stickles family in connection with consideration of a Conservation Easement confirms that a farm improvement (storage barn) made by the Potts family on their farm and certain fencing is located within the boundary of the Village's well site area.

Potts Well Site East: Deed from Claude W. and Margaret Potts to the Village of Tivoli dated July 18, 1983, recorded September 19, 1983 at Book 1612 of Deeds at Page 221. The deed includes a right of access over existing farm roads and drives, permits the Potts family to

continue to farm provided that the farm operations in no way interfere with the use of the wells and do not violate health codes or laws relating to public water supplies. Herbicides are prohibited within 200 feet of wells and insecticides are prohibited within 100 feet of the wells. Copies of the Potts East deeds are attached at **Exhibit B-2**. See also the KB Lands Easement referred to in item B.6. below. A recent survey conducted by the Stickles family in connection with consideration of a Conservation Easement shows that a fence has been erected across a portion of the Village's property.

2. McNight Well Site: [Liber 572 p. 168; Liber 654 p. 614; deeds to be retrieved.]

3. "Ballfield" Well Site: According to T&B's review of the tax map, the location of this well site appears to be on the Village's baseball field lot.

The Village obtained a deed from Tivoli Acres, Inc. to Village of Tivoli dated November 29, 1957, recorded December 6, 1957 in Liber 960 of Deeds at Page 122. This is adjacent to both the Tower Lot and the Village's baseball field lot ("Ball Lot"). The well site deed includes the following language "the foregoing parcel of land having a radius of 100 feet is intended for a well site, the center point being the said well." (The Village later entered into a boundary line agreement with respect to this parcel dated November 14, 2005 between the Village and David Mountan, recorded November 23, 2005 as Document No. 02 2005 1058). According to the Village's LWRP, the "Ballfield" well was drilled in 1957 adjacent to the elevated water tank to serve the Tivoli Acres subdivision.

This 0.43 acre Well site parcel is separate and distinct from the "Ball Lot" conveyed to the Village by Deed from The Leake and Watts Children's Home Incorporated dated January 10, 1952, filed March 4, 1952 in Liber 706 a page 594, for recreational purposes. A survey should be conducted to confirm the exact location of the actual well site as drilled and whether it is on the 0.43 acre well site lot as intended or whether it is wholly or partially on the "Ball Lot" parcel. If the location is on the Ball Lot parcel, we will need to further evaluate feasible conveyance options. If the location is on the 0.43 acre well site, the same considerations apply to this site as to the water tower site. Copies of the Well parcel deed and the Ball Lot deed are attached at **Exhibit B-3**.

4. Water Tower Site: Deed from The Trustees of the Leake and Watts Orphan House in the City of New York, dated August 21, 1946, and recorded on August 30, 1946 in the Dutchess County Clerk's Office in Book 646 of Deeds at Page 499, for the approximately 1.19-acre parcel on which the Water Tower is located. According the deed, this parcel was apparently originally conveyed in 1938, but the original deed was lost and a replacement deed delivered and recorded in 1946. According to the Village's LWRP, the original Village water system was installed in 1938 to 1940 as a WPA project.

The Water Tower Site was acquired for the purpose of installing the Village's water tower. In comparison, the adjacent "Ball Lot" was acquired for the purpose of recreation according to the express terms of the deed. The Village installed a ballfield, and later a pavilion,

restrooms and play equipment on the Ball Lot. No formal dedication has been made of the Water Tower site for park purposes and in fact it has been continuously in use as part of the Village's water system infrastructure since acquisition. The green space surrounding the water tower and well has been in recent years used concurrently for recreational purposes as part of the Village's Memorial Park, including a portion of the basketball court, a community garden and a skate ramp as well as informal areas for T-ball. While the Village should be able to convey an interest in the Water Tower in order to provide for continued public water supply and storage use, it may be in the Village's interest to convey a lease and/or easement rather than fee to the parcel. Given the current use of the surrounding greenspace, it would be prudent to consult with the Office of Parks regarding any potential disposition involving the Water Tower Lot and the adjacent well. A copy of the Water Tower Lot deed is attached at **Exhibit B-4**.

5. Woodmarc Well Site; Trezza Lease: Lease between Albert R. Trezza and Gloria A. Trezza dated March 20, 2002, recorded January 17, 2012 as Document No. 02 2012 197, as amended by an Amendment to Lease Agreement dated January 18, 2012, recorded January 23, 2012 as Document No. 02 2012 305, assigned by Albert R. Trezza and Gloria A. Trezza.

The Village entered into an easement dated May 14, 2004 with KB Lands, Inc. recorded July 22, 2004 as Document No. 02 2004 7407, pursuant to which KB Lands granted a 25 foot easement for ingress and egress and utility lines to the Woodmarc and Potts East well sites. The easement further included a 200 foot wellhead protection area.

Following the execution of the water lease, the Trezzas executed a Conservation Easement with US Department of the Interior, Dutchess Land Conservancy, and the Town of Red Hook, recorded January 25, 2012 as Document No. 02 2012 353. Among other things, this easement restricts certain use of the property surrounding the wellsite. Section 2.8 reserves the right to provide for existing and future wells in accordance with the Trezza lease.

Copies of the Woodmarc Well lease and easements are attached at **Exhibit B-5**.

### **C. Sewer Deeds and Easements**

According to the Village's comprehensive plan, the Village's central sewer system was built circa 1938 to 1940 with federal funding assistance, and the sewage treatment facility was replaced in 1971.

A title search will be required to identify all interests of record held by the Village and to confirm title in the Village. We are aware of the following deeds and easements on file with respect to its sewer system.

1. Sewer Treatment Plant Site [Liber 1721 page 556 and Liber 566 page 195 to be retrieved]. A title search should be conducted to identify relevant access easements.
2. Pump Station Site [Liber 956 page 162 to be retrieved]

3. Sewer Easements: Copies of sewer line easements along the rear properties on the east side of Montgomery are attached to the T&B study. Such easements should be surveyed and reviewed in connection with any proposed transfer.

#### **D. Intermunicipal Agreements for Water and Sewer Systems**

At this time the Village has no current intermunicipal agreements relating to its water and sewer systems, aside from the agreement with the County for the current study underway.

#### **E. Outside User Agreements**

1. The Village has approved outside user agreements for certain water services located outside the Village where such users are adjacent to existing Village water lines. A form of the standard outside use agreement is attached at **Exhibit E-1**, although we note that this form has only been in use since 2004 and is not on file for earlier service connections. The Village has indicated that there are currently 9 outside water users. There are no existing Town districts for such users.

2. As a condition to the Trezza lease (see **Exhibit B-5**), certain residential occupants of the Trezza property are entitled to water under certain circumstances. At this time, the water superintendent has advised that the Trezzas are still using the existing residence well and have not requested access to the Village water supply. Pursuant to the Conservation Easement January 25, 2012 as Document No. 02 2012 353, further development on the Trezza parcel is restricted. See **Exhibit B-5**.

3. As a condition to the Potts Well West deed, residential occupants of the adjacent parcel west of Rt. 9G are entitled to certain water use. See **Exhibit B-1**.

4. The Village has indicated that there are currently 8 outside sewer users. There are no existing Town districts for any such users.

#### **F. Rates and Charges**

1. Water Rates: The Village establishes water rates from time to time by resolution pursuant to Chapter 220, Section 220-12 of the Village Code. The current rate schedule attached at **Exhibit F-1** was approved by Resolution No. 3a of 2011 dated May 11, 2011.

2. Sewer Rates: The Village establishes sewer rates from time to time by resolution pursuant to Chapter 177, Article XII, Sections 177-144 to 177-157. The current rate schedule attached at **Exhibit F-1** was approved by Resolution No. 3a of 2011 dated May 11, 2011.

3. Pretreatment: The Village Code requires pretreatment and authorizes certain surcharges and additional charges for certain types of users. According to the Clerk's records there are no users currently being surcharged.

4. No Districts: Both the water and sewer system are operated as Village-wide systems, rather than on the basis of special assessments or benefit districts.

**G. Local Approvals**

The T&B study includes an investigation of the current condition of the water and sewer systems and a study of the possible conveyance of the systems to DCWWA. We understand that the Village is studying options at this time and has not determined whether to proceed with further investigation of conveyance or with further evaluation of required improvements to and potential financing for its water and sewer system. We note the following for information regarding review under SEQR.

SEQR review for the Village's approval of a transfer agreement would be classified as Type I, because substantially all of the area of the Village is located within an historic district. SEQR review would be required with respect to the construction of new improvements regardless of whether they are constructed by the Village or by DCWWA. Any such review must include findings as to consistency with the Village's Local Waterfront Revitalization Plan. In addition to preparing an Environmental Assessment Form, a Coastal Assessment Form is required.

Because approval for transfer of the existing systems would be required from NYS DEC, NYS DOH, and DCDOH, and because financing may be sought from NYSEFC, such parties should be included as involved agencies. In addition, if the plan for transfer is conditioned on construction of certain system improvements, consideration should be given to including those improvements in SEQR review. Such improvements could also require local site plan and applicable zoning approvals unless the Village determined to proceed under a Monroe review.

=====  
This memorandum has been prepared for the Village of Tivoli for the purpose of preliminary review of water and sewer conditions. This letter is not intended to create and does not create an attorney-client relationship with the DCWWA. No opinion is expressed regarding title to any lands or improvements.

## **APPENDIX B**

**Dutchess County Water and Wastewater Authority**

**Extended System Financial Projections**

## DCWWA EXTENDED WATER SYSTEM FINANCIAL PROJECTIONS

|                               | FY 2016<br>VILLAGE | FY 2016<br>DCWWA | FY 2017<br>YEAR 1 | FY 2018<br>YEAR 2 | FY 2019<br>YEAR 3 | FY 2020<br>YEAR 4 | FY 2021<br>YEAR 5 | FY 2022<br>YEAR 6 | FY 2027<br>YEAR 11 |
|-------------------------------|--------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|
| <b>Beginning Fund Balance</b> | 139,172            | 139,172          | 139,172           | 90,172            | 79,713            | 69,255            | 58,796            | 48,400            | 48,400             |
| <b>Annual Expenses</b>        | <b>207,525</b>     | <b>184,393</b>   | <b>241,340</b>    | <b>340,856</b>    | <b>344,280</b>    | <b>347,773</b>    | <b>351,335</b>    | <b>382,392</b>    | <b>438,056</b>     |
| Utilities/Fuel                | 16,264             | 20,302           | 20,708            | 21,122            | 21,545            | 21,976            | 22,415            | 22,864            | 25,243             |
| Operations (*)                | -                  | 71,804           | 73,240            | 74,705            | 76,199            | 77,723            | 79,277            | 80,863            | 89,279             |
| Equip. Repair/Maint.          | 10,771             | 16,700           | 17,030            | 17,367            | 17,710            | 18,060            | 18,417            | 18,782            | 20,716             |
| Purification/Monitoring       | 3,406              | 8,337            | 8,500             | 8,667             | 8,836             | 9,010             | 9,187             | 9,367             | 10,324             |
| Administration(*)             | 117,760            | 38,145           | 43,527            | 52,610            | 53,366            | 54,137            | 54,923            | 58,105            | 65,518             |
| Legal/Engineering             | -                  | 750              | 750               | 750               | 750               | 750               | 750               | 750               | 750                |
| Insurance                     | 7,347              | 7,350            | 7,497             | 7,647             | 7,800             | 7,956             | 8,115             | 8,277             | 9,139              |
| Contingency                   | 35,178             | 4,206            | 4,288             | 4,372             | 4,458             | 4,545             | 4,635             | 2,363             | 2,604              |
| Property Lease                | 16,800             | 16,800           | 16,800            | 16,800            | 16,800            | 16,800            | 16,800            | 16,800            | 16,800             |
| Capital Repair/Imprvmt        | -                  | -                | 49,000            | -                 | -                 | -                 | -                 | -                 | -                  |
| Annual Debt Service           | -                  | -                | -                 | 136,816           | 136,816           | 136,816           | 136,816           | 164,222           | 197,683            |
| <b>Annual Revenues</b>        | <b>207,525</b>     | <b>184,393</b>   | <b>241,340</b>    | <b>340,856</b>    | <b>344,280</b>    | <b>347,773</b>    | <b>351,335</b>    | <b>382,392</b>    | <b>438,056</b>     |
| Water Sales                   | 207,525            | 183,893          | 191,830           | 193,061           | 196,475           | 199,957           | 203,509           | 217,607           | 239,752            |
| Penalties & Other             | -                  | 500              | 510               | 520               | 531               | 541               | 552               | 563               | 622                |
| Property Tax                  | -                  | -                | -                 | 136,816           | 136,816           | 136,816           | 136,816           | 164,222           | 197,683            |
| Transfer from Fund Balanc     | -                  | -                | 49,000            | 10,459            | 10,459            | 10,459            | 10,459            | 0                 | 0                  |
| <b>Ending Fund Balance</b>    | <b>139,172</b>     | <b>139,172</b>   | <b>90,172</b>     | <b>79,713</b>     | <b>69,255</b>     | <b>58,796</b>     | <b>48,337</b>     | <b>48,400</b>     | <b>48,400</b>      |



## DCWWA EXTENDED SEWER SYSTEM FINANCIAL PROJECTIONS

|                               | FY 2016<br>VILLAGE | FY 2016<br>DCWWA | FY 2017<br>YEAR 1 | FY 2018<br>YEAR 2 | FY 2019<br>YEAR 3 | FY 2020<br>YEAR 4 | FY 2021<br>YEAR 5 | FY 2022<br>YEAR 6 | FY 2027<br>YEAR 11 |
|-------------------------------|--------------------|------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------------|
| <b>Beginning Fund Balance</b> | <b>117,525</b>     | <b>117,525</b>   | <b>117,525</b>    | <b>72,525</b>     | <b>63,250</b>     | <b>53,975</b>     | <b>44,700</b>     | <b>35,425</b>     | <b>26,150</b>      |
| <b>Annual Expenses</b>        | <b>111,019</b>     | <b>119,025</b>   | <b>164,513</b>    | <b>228,741</b>    | <b>231,181</b>    | <b>233,669</b>    | <b>236,207</b>    | <b>270,820</b>    | <b>324,422</b>     |
| Utilities/Fuel                | 23,116             | 24,876           | 25,373            | 25,881            | 26,398            | 26,926            | 27,465            | 28,014            | 30,930             |
| Operations                    | -                  | 39,727           | 40,521            | 41,332            | 42,158            | 43,001            | 43,861            | 44,739            | 49,395             |
| Equip. Repair/Maint.          | 8,388              | 13,000           | 13,258            | 13,521            | 13,790            | 14,063            | 14,343            | 14,627            | 16,140             |
| Treatment/Disposal            | 4,147              | 3,660            | 3,718             | 3,777             | 3,837             | 3,899             | 3,962             | 4,026             | 4,365              |
| Administration                | 58,785             | 27,042           | 31,323            | 37,236            | 37,796            | 38,366            | 38,948            | 42,320            | 48,930             |
| Legal/Engineering             | -                  | 750              | 750               | 750               | 750               | 750               | 750               | 750               | 750                |
| Insurance                     | 9,037              | 8,000            | 8,160             | 8,323             | 8,490             | 8,659             | 8,833             | 9,009             | 9,947              |
| Contingency                   | 7,547              | 1,971            | 2,010             | 2,049             | 2,090             | 2,131             | 2,173             | 2,216             | 2,444              |
| Capital Repair/Imprvmt        | -                  | -                | 39,400            | -                 | -                 | -                 | -                 | -                 | -                  |
| Annual Debt Service           | -                  | -                | -                 | 95,872            | 95,872            | 95,872            | 95,872            | 125,118           | 161,521            |
| <b>Annual Revenues</b>        | <b>111,019</b>     | <b>119,025</b>   | <b>164,513</b>    | <b>228,741</b>    | <b>231,181</b>    | <b>233,669</b>    | <b>236,207</b>    | <b>270,820</b>    | <b>324,422</b>     |
| Water Sales                   | 111,019            | 118,525          | 119,003           | 123,074           | 125,503           | 127,980           | 130,508           | 135,864           | 162,280            |
| Penalties & Other             | 0                  | 500              | 510               | 520               | 531               | 541               | 552               | 563               | 622                |
| Property Tax                  | -                  | -                | -                 | 95,872            | 95,872            | 95,872            | 95,872            | 125,118           | 161,521            |
| Transfer from Fund Bala       | -                  | -                | 45,000            | 9,275             | 9,275             | 9,275             | 9,275             | 9,275             | -                  |
| <b>Ending Fund Balance</b>    | <b>117,525</b>     | <b>117,525</b>   | <b>72,525</b>     | <b>63,250</b>     | <b>53,975</b>     | <b>44,700</b>     | <b>35,425</b>     | <b>26,150</b>     | <b>26,150</b>      |