

RESOLUTION NO. 2016054

RE: ESTABLISHING PART COUNTY SEWER DISTRICT NO. 10
IN THE TOWNS OF RHINEBECK AND HYDE PARK

Legislators FORMAN, SAGLIANO, BLACK, TRUITT, and WASHBURN offer the following and move its adoption:

WHEREAS, the New York State Legislature, by Chapter 592 of the Laws of 1991 (§1142, Public Authorities Law), created the Dutchess County Water & Wastewater Authority (WWA), and

WHEREAS, the WWA is entering into an Agreement, with the Vanderburgh Cove Sewer System regarding the WWA's acquisition of that system which is located in the Towns of Rhinebeck and Hyde Park; and

WHEREAS, the WWA's ability to close on this acquisition and provide sewer service to the customers of the Vanderburgh Cove Sewer System contingent on the creation of a Part County Sewer District encompassing all properties in the said sewer system which will include a total of forty (40) residential customers, consisting of twenty-seven (27) located in the Town of Rhinebeck and thirteen (13) located in the Town of Hyde Park, and

WHEREAS, the WWA has presented to this Legislature a notice of project pursuant to Section 1124 of the Public Authorities Law which outlines the WWA's plan to establish A Part County Sewer District #10 for the Vanderburgh Cove Sewer System, located in the Towns of Rhinebeck and Hyde Park, and

WHEREAS, this Legislature has before it a Map, Plan and Report entitled "Map, Plan and Report, Part County Sewer District No. 10" which was submitted to it by the WWA with the Notice of Project pursuant to Section 1124, and

WHEREAS, WWA proposes to enter into a service agreement with Dutchess County (County), on behalf of the proposed Part County Sewer District No. 10 (District) whereby the District will provide sewer service to customers within the District at rates established by WWA, and

WHEREAS, said Map, Plan and Report identifies the parcels to be included in the sewer district, describes the infrastructure to be constructed in order to provide sewer service, and provides the estimated annual cost for sewer service for the typical property in the proposed sewer district, and

WHEREAS, the first year cost to the typical one family home is estimated to be two thousand three hundred ninety three (\$2,393.00) dollars, and

WHEREAS, this Legislature must create Part County Sewer District No. 10 covering the area of Vanderburgh Cove Sewer System described in "Attachment A," and

WHEREAS, this Legislature will conduct a public hearing on this proposal on March 14, 2016, at 7pm and hear all persons interested, and

WHEREAS, the establishment of said Part County Sewer District No. 10 will ensure an efficient sewer system for all properties within the service area, now, therefore, be it

RESOLVED, that this Legislature hereby waives the notice provisions of Section 1124 of the Public Authorities Law and by this Resolution consents to this project, and be it further

RESOLVED, that it is hereby determined that all the property and property owners within the proposed Part County Sewer District No. 10 are benefited thereby and all the property and property owners benefited are included within the proposed Part County Sewer District No. 10 and it is in the public interest to create the Part County Sewer District No. 10, and be it further

RESOLVED, that a Part County Sewer District, to be known as Part County Sewer District No. 10 in the Towns of Rhinebeck and Hyde Park, more particularly described in "Attachment A" attached hereto, is hereby established, and be it further

RESOLVED, that this resolution is subject to permissive referendum.

CA-035-16

CRC/kvh/G-1217-O

2/17/16

Fiscal Impact: See attached statement

STATE OF NEW YORK

ss:

COUNTY OF DUTCHESS

This is to certify that I, the undersigned Clerk of the Legislature of the County of Dutchess have compared the foregoing resolution with the original resolution now on file in the office of said clerk, and which was adopted by said Legislature on the 14th day of March 2016, and that the same is a true and correct transcript of said original resolution and of the whole thereof.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of said Legislature this 14th day of March 2016.

CAROLYN MORRIS, CLERK OF THE LEGISLATURE

FISCAL IMPACT STATEMENT

NO FISCAL IMPACT PROJECTED

APPROPRIATION RESOLUTIONS

(To be completed by requesting department)

Total Current Year Cost \$ _____

Total Current Year Revenue \$ _____
and Source

Source of County Funds *(check one)*:
 Existing Appropriations, Contingency,
 Transfer of Existing Appropriations, Additional Appropriations, Other *(explain)*.

Identify Line Items(s):

Related Expenses: Amount \$ _____
Nature/Reason:

Anticipated Savings to County: _____

Net County Cost (this year): _____
Over Five Years: _____

Additional Comments/Explanation:

Prepared by: Bridget Barclay

Prepared On: February 11, 2016

DUTCHESS COUNTY

**Proposed Part County
Sewer District #10**

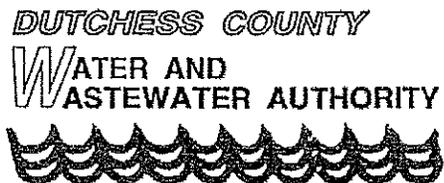
(Vanderburgh Cove Sewer System)

Towns of Rhinebeck and Hyde Park, NY

MAP, PLAN AND REPORT

January 2016

Dutchess County Water and Wastewater Authority
Poughkeepsie, NY



January 2016

**PROPOSED PART COUNTY SEWER DISTRICT #10
(VANDERBURGH COVE SEWER SYSTEM)**

MAP, PLAN AND REPORT

INTRODUCTION

This Map, Plan and Report provides the information required for the formation of the proposed Part County Sewer District #10. Part County Sewer District #10 is located in the northwest quadrant of the Town of Hyde Park and the southwest quadrant of the Town of Rhinebeck. The District has 50 individual properties; two (2) properties contain the treatment facilities, eight (8) vacant parcels and forty (40) connected customers. The development has reached full buildout.

Upon successful formation of proposed Part County Sewer District #10 (“the District”) by the Dutchess County Legislature, ownership and operation of the Vanderburgh Cove Sewer System will transfer to the Dutchess County Water and Wastewater Authority (“DCWWA”, “Authority”) in accordance with the terms and conditions set forth in an agreement between the Authority and the Towns of Hyde Park and Rhinebeck (Towns.) Information provided herein includes the proposed District boundaries and a list of the tax parcels that will comprise the future District, as well as a description of the current and proposed infrastructure by which sewer service will be provided to customers.

In addition, budgetary estimates for the first year operation and maintenance costs, and capital costs, as well as a cost allocation formula, have been included with this report.

DCWWA will enter into a contract (the “Service Agreement”) with Dutchess County on behalf of the District for the purpose of administering the provision of sewer services to all properties within the proposed District, with such service to be provided through the sewer system facilities as described below. The Authority will administer the District pursuant to guidelines established by the Service Agreement and collect sewer revenues. Sewer service rates will be set annually by the Authority.

HISTORY

The Vanderburgh Cove Subdivision was approved by the Towns of Rhinebeck and Hyde Park, NY in September of 1967. Prior to the Towns’ final approval, the Dutchess County Department of Health (DC DOH) approved the wastewater treatment facility design to incorporate 2 collection and treatment systems with each system to be rated at 8,000 gpd.

At the completion of construction of the collection and treatment systems and the subdivision, operation of the systems was the responsibility of a private sewage works corporation known as Fisherman’s Road, Inc. In 1989, the Towns were requested by Fisherman’s Road, Inc. to take over the ownership, operation and maintenance of the collection and treatment systems as of

January 1, 1990. In 2010 the Towns entered into an Intermunicipal Agreement granting the Town of Rhinebeck the operational and administrative control of the sewer system.

In August of 2014 the Rhinebeck Town Supervisor requested the Authority to consider acquiring the Vanderburgh Cove Sewer System from the Towns. DCWWA prepared a draft Evaluation Report, which was reviewed with Town Board members and residents, and finalized on November 20, 2015 (see Evaluation Report Appendix D.) On November 23, 2015 the Rhinebeck Town Board passed a resolution of intent to transfer ownership of the System to the DCWWA. In January of 2016 the Towns and the DCWWA entered into a Transfer Agreement to transfer ownership of the System to DCWWA.

PART COUNTY SEWER DISTRICT #10

Part County Sewer District #10 is located along the northwest quadrant of the Town of Hyde Park and the southwest quadrant of the Town of Rhinebeck. The District has 50 individual properties; two (2) properties contain the treatment works, eight (8) vacant parcels and forty (40) connected customers. The development has reached full build out. (See Sewer District Map and Tax Parcel List – Appendix A.)

PHYSICAL FACILITIES

General

The Vanderburgh Cove Sewer System consists of two separate wastewater collection and treatment facilities.

The North system is connected to 20 properties in the Town of Rhinebeck. The entire collection and treatment facility are located within the Town of Rhinebeck.

The South system is connected to 20 properties, 7 which lie in the Town of Rhinebeck and 13 which lie in Town of Hyde Park. The treatment facility lies within the Town of Rhinebeck while the collection system lies within both the Town of Rhinebeck and the Town of Hyde Park.

Wastewater Treatment Facilities

Each of the two Vanderburgh Cove Treatment facilities is similar in design and of the same capacity, 8,000 gpd.

At the North Treatment Facility, solids are settled and anaerobically digested in two (2) 6,000 gallon precast concrete septic tanks that are connected in series to the influent sewer. The effluent from the second septic tank then flows to the 6,000 gallon equalization (EQ) tank. The EQ Tank has combined mixer and aerator. (The EQ tank is also connected by an overflow line to the secondary EQ tank.) The wastewater is then pumped from the EQ tank to the Bioclere unit for further treatment. Sludge collected in the Bioclere unit is returned to the head of the plant. The effluent from the Bioclere unit has a primary path to the disinfectant injection manhole controlled by a manual 3-way valve and then to the 2,000 gallon disinfectant contact tank followed by passing through the effluent metering chamber and discharge to a stream. The secondary path of the Bioclere unit effluent is controlled by a manual 3-way control valve and

sends the effluent to a 6,000 gallon, Secondary EQ Tank. Over flow from the EQ tank also flows to the Secondary EQ Tank. The contents of the secondary EQ tank can be pumped into the sand filter system or overflowed into the sand filter. The effluent from the sand filter connects to the disinfectant injection manhole where it then enters the remainder of the primary treatment path

At the South Treatment Facility, solids are settled and anaerobically digested in two (2) 6,000 gallon precast concrete septic tanks that are connected in series to the influent sewer. The effluent from the second septic tank then flows to the 6,000 gallon equalization (EQ) tank. The EQ Tank has combined mixer and aerator. The wastewater is then pumped from the EQ tank to the Bioclere unit for further treatment. Sludge collected in the Bioclere unit is returned to the head of the plant. The effluent from the Bioclere unit has a primary path to the disinfectant injection manhole controlled by a manual 3-way valve and then to the 2,000 gallon disinfectant contact tank followed by passing through the effluent metering chamber and discharge to a stream. The secondary path of the Bioclere unit effluent is controlled by a manual 3-way control valve and sends the effluent to the EQ tank. The contents of the EQ tank can be pumped into the sand filter system or overflowed into the sand filter. The effluent from the sand filter connects to the disinfectant injection manhole where it then enters the remainder of the primary treatment path. Sludge is removed periodically from all septic and EQ tanks and disposed legally off site.

Both the North and South Treatment Facilities have LP Gas Fired Standby Generators to provide power to the treatment equipment in the case of loss of utility power.

Sewer Collection System

The North Collection System is a network of gravity mains and manholes with a single trunk line connecting to the North Treatment Facility wastewater treatment plant and a lateral trunk main on Cove Road (south). The majority of the collection system is located in a drainage valley in easements. The initial section is located in Cove Road (North).

The South Collection System is a network of gravity mains and manholes with a single trunk line connecting to the South Treatment Facility wastewater treatment plant. The majority of the collection system is located in Cove Road. Two lateral mains are located in easements that serve customers on the south side of Clay Court.

SYSTEM CAPACITY EVALUATION

Treatment Facilities

The North and South Treatment Facilities are each permitted for 8,000 gallons per day. During the period of November 2014 through October 2015, flows measured at the discharge of the South Treatment Facility ranged from a monthly average of 3,000 gpd to 19,000 gpd. During the period of November 2014 through October 2015, flows measured at the discharge of the North Treatment Facility ranged from a monthly average of 5,000 gpd to 19,000 gpd.

Collection Systems

The NYS DEC SPDES Permit requires that an Inflow and Infiltration (I&I) Analysis be

completed on an annual basis. The latest I&I Analysis available for the calendar year 2014 indicates that each system should have a baseline flow of 4,000 gpd. Each of the treatment systems has the capacity to exceed this baseline flow by 4,000 gpd. Each of the collection systems is constructed of 8" mains which have sufficient capacity to handle the flows to the treatment facilities.

FUTURE DEMAND

All parcels within the Vanderburgh Cove Sewer System have been developed. There are no current or anticipated plans to expand the sewer system service area.

FUTURE CAPITAL ISSUES

At the time of this report, the Town was in the process of completing known I&I repairs. The following items have been identified to be addressed during the first year of DCWWA ownership:

- Address site access issues
- Address site safety issues
- Fix damage to building and improve heating and ventilation at Metering and Chlorination Building at both Treatment Facilities
- Insert manhole ring inflow protectors in all manholes to reduce inflow
- Evaluate existing effluent metering systems at North and South Treatment Facilities
- Investigate effect of Hudson River storm surge on North Treatment Facility outlet and performance (Hurricane Sandy Storm Surge of 4' inundated outlet by 3' backing up flow in the treatment system.)
- Modify EQ tank pump system to allow a more uniform flow through the downstream treatment system components to allow manually adjusted return)
- Modify EQ tank pump system to allow a more uniform flow through the downstream treatment system components (options to include manually adjusted return and pump speed controlled by level and VFD)
- Install permanent precipitation monitoring station at one of the two treatment facilities
- Install hour meters in EQ Pumps and Sand Filter control panels for all pumps and blowers not currently having hour meters
- Require contract operator to develop written standard, wet weather, and emergency operation and maintenance procedures to perform and document activities; document training of all operators, and maintain documents on site for reference
- Require contract operator to maintain NYS DEC required and other pertinent documentation (work orders, tank cleaning records, sludge removal records, etc.) on site for the immediate past 3 years
- Require contract operator to maintain at least one each of all pumps and other items not readily obtainable on site for replacement

DCWWA Staff recommends the following items be addressed during years 2 through 5:

- Install influent flow metering at North and South Treatment Facilities
- Replace existing effluent metering systems at North and South Treatment Facilities with more robust and reliable system
- Modify North Treatment Facility as required to mitigate the effect of Hudson River Storm Surge
- Take corrective action to reduce infiltration into sand filters or eliminate sand filters.

PROJECTED CAPITAL COSTS AND ALLOCATIONS

The estimated cost to complete the known I&I repairs is \$43,100. The estimated cost to complete the first year improvements, as described above, is \$39,400. The estimated cost to complete the additional improvements in years two through five, as described above, is \$116,200. Assuming the availability of approximately \$30,000 in system operational fund balance to offset improvement expenses, DCWWA intends to fund the remaining improvement items through a twenty year borrowing of approximately \$170,000. Assuming an interest rate of 4%, annual debt service would be approximately \$13,200 per year.

The Vanderburgh Cove Sewer District currently has outstanding bonded indebtedness, relating to major treatment plant and minor collection system improvements made circa 2005 to present. As of August 16, 2015 the amount of bonds outstanding was \$466,293.00. The maturity date of the bond is August 15, 2043. The annual debt service expense is approximately \$16,700.

The projected total annual debt service expense will be allocated equitably among all parcels within the District through the assignment of benefit units to each parcel. The methodology for the assignment of benefit units is attached (see Appendix C.) All benefit units will be charged the same rate. The annual benefit assessment would appear on the respective property owner's yearly property tax bill.

Assuming a total of 400 benefit units in the District, and a total annual debt service of approximately \$29,900 per year, the rate per benefit unit will be approximately \$74.75 for Year One under Authority ownership. In accordance with the attached Benefit Assessment Methodology, a single family residence on less than 6 whole acres (the "typical property") will be assigned ten (10) benefit units, and would expect to pay an annual benefit assessment charge of \$748 for the first year under Authority ownership.

OPERATION AND MAINTENANCE (O&M) COSTS

The O&M Budget Projection is the total cost to the DCWWA to operate the Vanderburgh Cove Sewer System; chemicals, electricity, alarms, laboratory fees, labor, insurance, typical repairs and other ongoing costs. DCWWA has developed an O&M budget projection to illustrate estimated First Year costs of the Vanderburgh Cove Sewer System under DCWWA ownership, based on the DCWWA's prior operating expenses and history for comparable size sewer

systems, and possible anticipated repairs to the system. A copy of the O&M budget projection, using 2015 as a base year for demonstration purposes of those First Year costs, has been included as Appendix "B". The first year operational cost (2015 dollars) is estimated at \$65,784. With 40 connected customers, and assuming collection of late fees at historical levels, the cost per a typical single family residential customer would be one thousand, six hundred and forty-five dollars (\$1,645) per year.

Should the system ownership be transferred mid-year, the budget would be pro-rated for the portion of the year DCWWA would own the system. All future O&M system budgets, rates, fees and other charges are reviewed annually and subject to change by the DCWWA Board of Directors.

CONNECTION CHARGES

As the all properties within the Vanderburgh Cove Sewer District are completely built out, no connection charges are anticipated.

Annual Cost per a Typical Property

The total annual cost for a typical property in a district is generally a combination of the long-term capital charges (debt service) and sewer usage charges. Given the assumptions and estimates described above, the projected First Year total cost for a typical single family dwelling in Part County Sewer District #10 will be \$2,393.

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APPENDICES

Appendix A -- Description of Part County Sewer District 10 -
(Tax Parcel List and Map)

Appendix B -- Proposed Operation & Maintenance Budget

Appendix C -- Proposed Benefit Assessment Methodology

Appendix D - Vanderburgh Cove Sewer Evaluation Report

APPENDIX "A"

**Dutchess County Sewer District #10
Vanderburgh Cove Sewer System**

DESCRIPTION OF ZONE

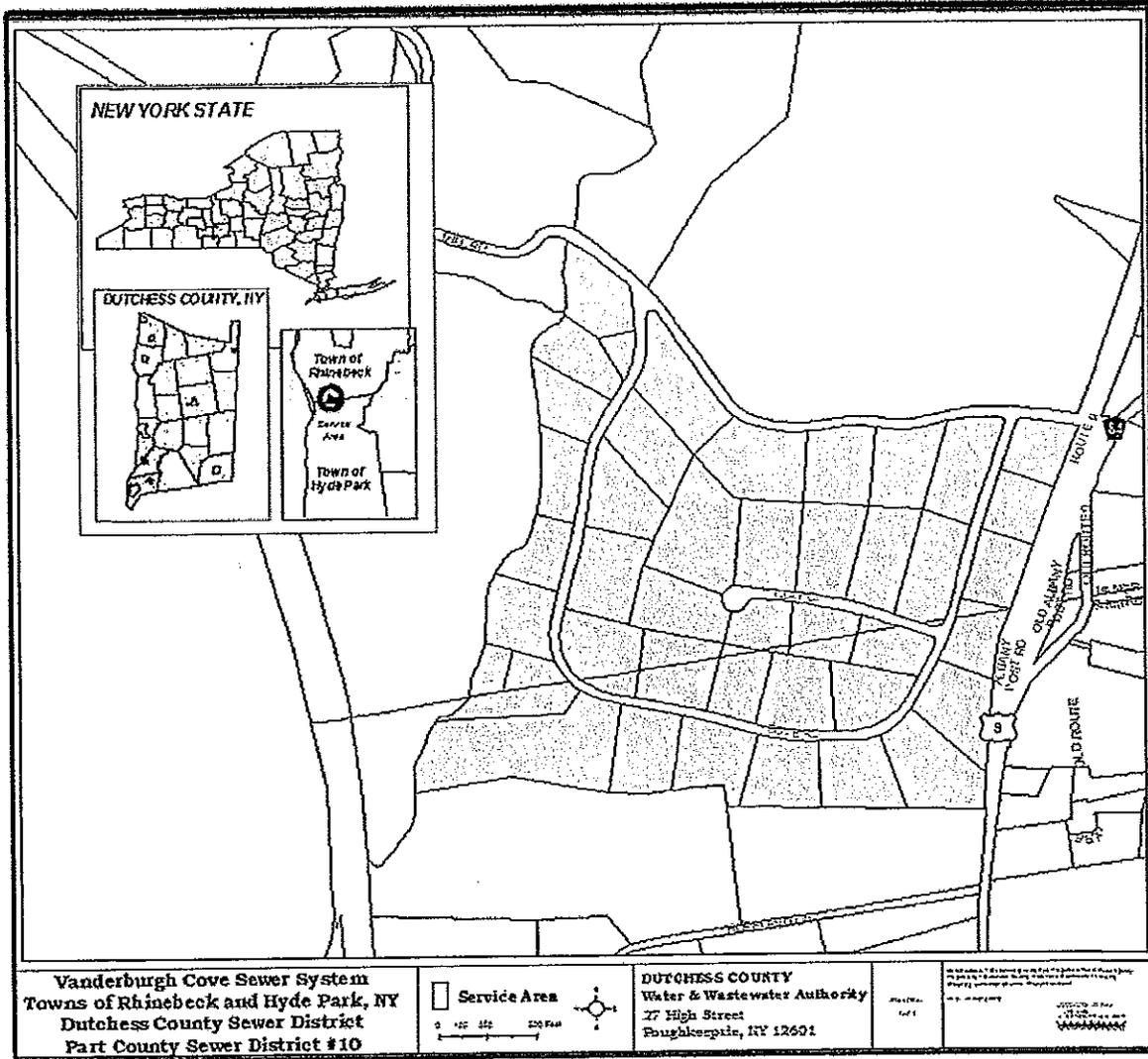
(map and parcel listing)

The Dutchess County Sewer District #10 shall include all those tax parcels presently indicated on the attached boundary map. These parcels are further described by the following list of tax parcel grid numbers:

Tax Parcels

133200-6168-03-341265-0000	135089-6168-00-142379-0000
133200-6168-03-292271-0000	135089-6168-00-134342-0000
133200-6168-03-214242-0000	135089-6168-00-200419-0000
133200-6168-03-325236-0000	135089-6168-00-210349-0000
133200-6168-03-251233-0000	135089-6168-00-200314-0000
133200-6168-03-286232-0000	135089-6168-00-275342-0000
133200-6168-03-180247-0000	135089-6168-00-384390-0000
133200-6168-03-273294-0000	135089-6168-00-170441-0000
133200-6168-03-248291-0000	135089-6168-00-240386-0000
133200-6168-03-123249-0000	135089-6168-00-281383-0000
133200-6168-03-308294-0000	135089-6168-00-163330-0000
133200-6168-03-348297-0000	135089-6168-00-245345-0000
133200-6168-03-258272-0000	135089-6168-00-345382-0000
133200-6168-03-166277-0000	135089-6168-00-295305-0000
133200-6168-03-228278-0000	135089-6168-00-198292-0000
133200-6168-03-120269-0000	135089-6168-00-104282-0000
133200-6168-03-197278-0000	135089-6168-00-225293-0000
135089-6168-00-304337-0000	135089-6168-00-348312-0000
135089-6168-00-145414-0000	135089-6168-00-118311-0000
135089-6168-00-149440-0000	135089-6168-00-272304-0000
135089-6168-00-171367-0000	135089-6168-00-330331-0000
135089-6168-00-158469-0000	135089-6168-00-363332-0000
135089-6168-00-374363-0000	135089-6168-00-242305-0000
135089-6168-00-315382-0000	135089-6168-00-124283-0000
135089-6168-00-185394-0000	135089-6168-00-160295-0000

Map



APPENDIX "B"

**Vanderburgh Cove Sewer System
Proposed Operation & Maintenance Budget**

DCWWA 2016 BUDGET PROJECTION
Vanderburgh Cove Sewer District

Item No.	Item Description	Budget
1	Accounting	\$ 100.00
2	Billing	\$ 904.00
3	Bookkeeping	\$ 1,812.50
4	Buildings and grounds	\$ 1,000.00
5	Chemicals	\$ 2,200.00
6	Computer Equip't./Tech. support	\$ 100.00
7	Electricity	\$ 4,300.00
8	Engineering	\$ 6,000.00
9	ERM (Treatment)	\$ 11,200.00
10	ERM (Collection)	\$ 2,000.00
11	Generator Fuel & Maintenance	\$ 2,025.00
12	Insurance	\$ 2,000.00
13	Laboratory Costs	\$ 3,500.00
14	Legal	\$ 250.00
15	Meter/Collection	\$ 500.00
16	Operation	\$ 12,300.00
17	Operation Support	\$ 2,500.00
18	Permit Fees	\$ 375.00
19	Postage	\$ 160.00
20	Sanitation	\$ -
21	Sludge Disposal	\$ 3,000.00
22	Supplies (Buildings)	\$ 100.00
23	Supplies (Office)	\$ 50.00
24	Telephone	\$ -
25	Testing Chemicals	\$ 250.00
Subtotal		\$ 56,627.50
26	Operational Contingency	\$ 663.83
27	ADS 1 and 2	\$ 29,826.00
28	Administration	\$ 8,493.84
29	Capital Contingency	\$ -
Operational Totals		\$ 65,785.17
Per Customer		\$ 1,645

APPENDIX "C"

**PART COUNTY SEWER DISTRICT # 10
BENEFIT ASSESSMENT METHODOLOGY**

**PART COUNTY SEWER DISTRICT # 10
BENEFIT ASSESSMENT METHODOLOGY**

DEVELOPED LAND (Use the higher of either LAND USE/WATER USE or ACREAGE)

LAND USE/WATER USE

RESIDENTIAL

FIRST DWELLING UNIT	10
EACH ADDITIONAL DWELLING UNIT	8

COMMERCIAL/INSTITUTIONAL:

FIRST 500 GPD WATER USAGE	20
EACH ADDITIONAL 100 GPD	4

ACREAGE

FIRST 6 ACRES	10
EACH ADDITIONAL WHOLE ACRE	2

UNDEVELOPED LAND

FIRST 6 ACRES	8
EACH ADDITIONAL WHOLE ACRE	2

Subdivision real property lots, as shown on the original file map but bisected by a municipal line for taxation purposes, will be treated as a single tax parcel.

APPENDIX "D"

**Vanderburgh Cove Sewer
Evaluation Report**

**Vanderburgh Cove Sewer Districts No. 1 & 2
Towns of Rhinebeck and Hyde Park, NY**

**Collection and Treatment Systems
Evaluation**

November 2015

**Dutchess County Water and Wastewater Authority
27 High Street
Poughkeepsie, NY**

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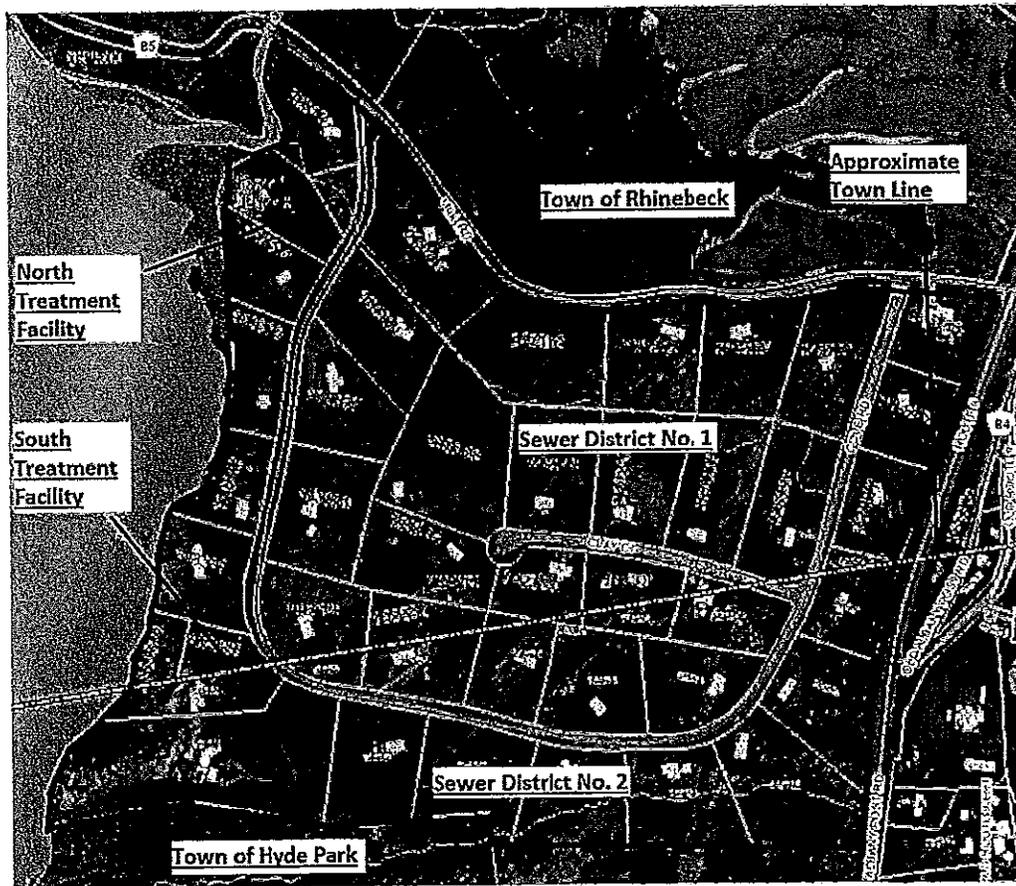
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Vanderburgh Cove Sewer Districts Evaluation

I. INTRODUCTION

During August of 2014, the Authority Board Chairperson Thomas LeGrand and Executive Director Bridget Barclay met with Elizabeth Spinza, the Town of Rhinebeck Supervisor. At this meeting, the Supervisor, as operator of the Vanderburgh Cove Sewer Districts, asked the Authority to consider acquiring the Vanderburgh Cove Sewer Districts 1 (Rhinebeck) and 2 (Hyde Park) (See Figure 1.) from the respective Towns.

Figure 1



The two districts serve the Vanderburgh Cove Subdivision which lies south of Mill Road, west of NYS Rte. 9 and east of the Hudson River. District No. 1 contains both the north and south treatment facilities. The North Treatment Facility is connected to 20 properties in the Town of Rhinebeck. The South Treatment facility is connected to 20 properties, 7 which lie in Rhinebeck and 13 which lie in Hyde Park.

Vanderburgh Cove Sewer Districts Evaluation

The Vanderburgh Cove Districts are currently operated by the Town of Rhinebeck under the intermunicipal agreement established in 2010 between the Towns.

II. HISTORY

The Vanderburgh Cove Subdivision was approved by the Towns of Rhinebeck and Hyde Park, NY in September of 1967. Prior to the Towns' final approval, the Dutchess County Department of Health (DC DOH) approved the wastewater treatment facility design to incorporate 2 collection and treatment systems with each system to be rated at 8,000 gpd.

At the completion of construction of the collection and treatment systems and the subdivision, operation of the systems was the responsibility of a private sewage works corporation known as Fisherman's Road, Inc.

The original treatment facility design consisted of septic tanks and relied upon constructed sand filters for final treatment prior to chlorination and stream discharge. Issues with initial construction of the sand filters are documented in the DC DOH files. Since the original construction, the sand filters were problematic resulting in non-compliance reports for septage flowing out of the sand filters onto the ground surface at both facilities.

During November of 1989, the Towns were advised by legal counsel for Fisherman's Road, Inc. that Fisherman's Road, Inc. was requesting the Towns to take over the ownership, operation and maintenance of the collection and treatment systems as of January 1, 1990.

Because of the split of the collection and treatment facilities between the two Towns, each of the Towns took action to form Sewer Districts with District 1 (Rhinebeck) and District 2 (Hyde Park) during 1990. In June 1990 deeds were executed to transfer the respective portions of the collection and treatment systems from Fisherman's Road, Inc. to the Towns. (Deeds for the systems were recorded during February 1991 in the Dutchess County Clerk's office.)

In January 1991, the Town Engineer issued a report on the Operation, Maintenance Repairs and Financing for work on the collection and treatment facilities. In February 1991, the Towns jointly agreed to expenditures of \$57,613 to address issues with the collection systems and north and south filter fields and to reimburse Rhinebeck for previous emergency repairs

The Town Engineer in November 2002 reported the results of investigating the condition of the collection system during June 2001. Findings varied from inability

Vanderburgh Cove Sewer Districts Evaluation

to locate the manholes to complete replacement of manholes. The tanks and pump pits at the treatment facilities were found to have top slab structural deterioration, collapsed pipe, lack of sampling locations, inadequate chlorination and flow measurement. The report made 8 recommendations for the south collection system and 13 recommendations for the south treatment facility. For the north collection system, 7 recommendations were made. Eight recommendations were made for the north treatment facility. A probable cost estimate of \$1.76 M was presented to accomplish the recommendations.

The NYS Department of Environmental Conservation (NYS DEC) in July 2004 called for the replacement of the North Treatment System sand filter field.

During March of 2005, the Town Engineer issued an engineering report on the conditions of the existing collection and treatment systems. Both the north and south sand filters were noted as being in almost complete failure and in need of replacement. Significant inflow and infiltration in the collection system is cited as one significant issue in the failure of the sand filters. At this time, it was estimated to cost \$4.2 million to replace completely the collection and treatment systems.

On July 23, 2008, DC DOH issued approval letter for proposed sewage treatment system modifications. These improvements consist of:

- a. 2- 6,000 gallon septic tanks in series
- b. 1-6,000 gallon primary equalization tank with mixer
- c. 1-6,000 gallon secondary equalization tank with mixer (North facility only)
- d. Duplex pumps feeding the Bioclere Unit from the primary equalization tank
- e. Bioclere unit with sludge return to first septic tank and discharge to chlorine injection and contact chamber
- f. Duplex pumps feeding the remainder of the sand filter bed with discharge to chlorine injection and contact chamber. (from Primary Equalization Tank for South facility and secondary equalization tank for North facility)
- g. Emergency overflow from primary equalization tank to the sand filter bed for South facility
- h. Emergency overflow from secondary equalization tank to the sand filter bed for the North facility
- i. Discharge after chlorine contact chamber to stream
- j. New power distribution with Standby LP Gas Fired Generator.
- k. New instrumentation and controls

On July 16, 2009, NYS DEC issued a DEC initiated SPDES permit modification with compliance schedule for replacement of the treatment systems and implementation of a program for reduction in infiltration and inflow.

Vanderburgh Cove Sewer Districts Evaluation

On August 10, 2009, a Notice to Bidders was issued by the Town of Rhinebeck for Vanderburgh Cove Sewage Treatment System Replacement with quotations due on August 31, 2009. Electrical Contract Bid \$89,100.00. General Contract Bid \$779,450.00. This contract was for the North and South Treatment facilities which were completed.

On October 30, 2009, a Notice to Bidders was issued by the Town of Rhinebeck for Vanderburgh Cove Collection System – Phase 1 improvements with quotations due November 19, 2009. Contract Bid \$57,569.00. This contract addressed installation of new manholes number 31, 5, 6, 7, 8 and 32 and 23, 24, 25, 26, 27 & 28 to the North and South collection mains respectively and the work was completed.

In November 2009, the Town Engineer issued the “Vanderburgh Cove Sewer District Inflow and Infiltration Report” which provided a probable project cost of \$625,000 total. This report recommended the lining of 7,200 lf of sewer main, replacement of 12 manholes and the rehabilitation of 20 manholes. It recommended that Phase 1, the installation of 12 new manholes, be done initially to determine if any further infiltration and inflow work needed to be done. There is no evidence that the recommended lining was ever initiated. (Since 2014, the Town has been working on a list of other infiltration and inflow related repairs.)

During 2010, NYS EFC agreed to provide up to \$1,750,000.00 of financing for the collection and treatment system improvement project.

Town of Rhinebeck received a Water Quality Program Improvement Program State Assistance Contract No. C304417 from NYS DEC that was approved by the NYS Comptroller’s Office Department of Audit and Control on 8/27/2012. The project not to exceed cost of \$1,900,000.00 is to be shared on an 85%/15% DEC/Local matching share (\$1,550,000/\$350,000). This agreement indicates that the local matching amount will come from a NYS EFC 0% interest loan.

The Town of Rhinebeck Board authorized by resolution at its August 30, 2010 the execution of an Intermunicipal Agreement granting the Town of Rhinebeck operational and administrative control and defining each Town’s responsibilities under the agreement relative to Vanderburgh Cove Sewer District 2.

The Town of Hyde Park Board authorized by Resolution 8:23-3 of 2010 the execution of an Intermunicipal Agreement granting the Town of Rhinebeck operational administrative control and defining each Town’s responsibilities under the agreement relative to Vanderburgh Cove Sewer District 2.

During September 2010 the Intermunicipal Agreement for the operation of the Towns’ sewer districts was executed.

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The Town of Rhinebeck Board authorized by Resolution 2013-243 at its November 12, 2013 meeting the execution of Amendment No. 1 to the Intermunicipal Agreement establishing how sewer rents are to be determined.

The Town of Hyde Park Board authorized by Resolution 10:4-9 of 2013 the execution of Amendment No. 1 to the Intermunicipal Agreement establishing how sewer rents are to be determined.

The Hyde Park – Rhinebeck Intermunicipal Agreement Amendment No. 1 was executed during November, 2013.

The Town of Rhinebeck entered into agreement with NYS EFC for project funding in the amount of \$499,613.00 at 0% interest for a term of 40 years with bonds issued December 13, 2013. Annual payments are due on August 15, beginning in 2014 in the amount of \$16,660, through maturity in 2043.

On January 1, 2014 the Town of Rhinebeck assumed all budgeting, billing and accounting activities for Vanderburgh Cove Sewer Districts 1 and 2.

The Town received a NYS DEC Notice of Violation dated July 7, 2014 for failure to submit the annual Infiltration Management Program Report for 2013. (It is noted that though this notice of violation is the first official notice to the Town, the report was not submitted in previous years since the report became a SPDES Permit requirement.)

The Town Engineer issued on August 25, 2014 the “Vanderburgh Cove Infiltration and Inflow Investigation Report”. Highlighted in this report is the requirement of the SPDES Permit that an Inflow and Infiltration Management Program be implemented by the Town. As part of the Management Program, the Town is required to submit on the first day of each calendar year a report summarizing plant flows, and any inflow and infiltration investigations or repairs completed during the prior year. This report summarizes previous inflow and infiltration reports, new inspections of manholes, new smoke testing of collection system and analyzes rainfall for 2013 and the first half of 2014. Analysis of the effects of precipitation was conducted for the north treatment facility. A flow violation citation was issued by NYS DEC for July of 2012. Though an unusually high precipitation rate occurred during this period, the Town Engineer’s investigation indicated that there were issues with the flow meter as well as possible inundation of the outlet due to blockage of the tributary to the Hudson River to which the facility discharges. In analyzing the effects of rainfall on the south treatment facility, exceeding flow violation citations for June 2013 and March and April 2014 were correlated to rainfall, indicating that there continue to exist inflow and infiltration issues at the south treatment facility. The report recommends that other potential infiltration and inflow sources be investigated

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including the connection of residential sump pumps to the sewer system and the effect of the sand filters acting as “French drains” and contributing to the discharge volumes. Specific repairs to the collection system are also recommended including 8 spot pipe repairs, 3 lateral connection repairs, 7 cleanout repairs and 20 manhole repairs. The report notes that the Town intends to complete those repairs that can be done with its own forces by the end of 2014. The report indicates that the balance of the repairs will be completed in 2014. (By the date and context of the report it is assumed that this date should be 2015.)

The Town Supervisor submitted to NYS DEC a schedule for accomplishing the repairs addressed in the Town Engineer’s August 25, 2014 Report. (From the context of the letter, it is assumed that the failure to complete Phase 2 and 3 of the Infiltration and Inflow Repairs refers to those identified in the 2009 report.) Six (6) cleanout repairs were scheduled to be complete by December 20, 2014. One minor collection system cleanout repair and a chamber at 30 Cove Road were scheduled to be completed by January 20, 2015. One manhole repair is scheduled to be completed by March 20, 2015, with the balance of 8 manhole repairs completed by July 20, 2015. As of April 29, 2015, the Town has indicated that it has hired Tom Mannix to supervise the work.

The Town Engineer, on behalf of the Town, submitted on December 31, 2014 the first Annual Infiltration and Inflow Evaluation Report. It reports the status of its investigations and the efforts that occurred during 2014 to address identified issues.

In an e-mail communication between Jim Baker of the Vanderburgh Cove Sewer District Homeowners Association (VCSD HOA) to Bruce Washburn, Rhinebeck Town Board member dated January 22, 2015, it is indicated that all cleanout and chamber repairs had been completed with the manhole repairs pending. In addition, the e-mail indicates that the VCSD HOA survey in regards to connection of sump pumps to the collection system has had 28 out of 40 responses. On April 4, 2015, communication from Jim Baker of the VCSD HOA indicates that only 4 homes reported having sump pumps.

On January 29, 2015, DCWWA staff met with Bruce Washburn and Jim Baker to discuss the status of the collection system repairs and discuss briefly the activities that would be taking place to evaluate the Sewer District aspects.

On February 4, 2015 DCWWA staff met with the Town’s operations contractor, VRI, Inc. and Jim Baker to visually review the observable conditions of the north and south treatment systems and discuss current operation procedures and issues. The findings of that investigation included 11 recommendations that addresses site access issues; safety issues; prevention of freezing in disinfection and flow meter building; addition

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of hour meters on sand filter and EQ pump control panels; a detailed evaluation of the flow metering systems; preparation of written standard, wet weather and emergency operation procedures; maintenance of copies of all records at the site for the current 3 years; maintaining a spare parts inventory; modification of EQ pumps control and/or piping to provide a more uniform flow through the facilities.

III. Contract Operations Agreement

Terms of the current operations agreement between the Town and VRI, Inc. is summarized as follows:

- 5 year duration of agreement commencing on January 1, 2012 (Terminates December 31, 2017.)
- 90 day notification for termination clause
- Scope of services provided is very typical to contract operations agreements prepared by the contract operator
- Initial Annual Cost is \$11,196.96, payable in 12 equal monthly installments of \$933.33
- Additional services or emergency callouts are billed separately at stated rates
- All pricing subject to annual adjustment based upon US Department of Labor Consumer Price Index for the Northeast Section of the United States (The current Town financials do not indicate that VRI has requested increased compensation.)
- General Liability Insurance - \$1M per occurrence, \$2M aggregate with a \$4M umbrella
- Worker's Compensation Insurance – Not less than \$1M per incident
- Automobile Liability Insurance – \$0.5M
- No pollution or professional liability insurance provided
- Owner is named as additional insured
- Indemnification, Third Party Claim and Force Majeure clauses favorable to contract operator are included
- Assignment of contract requires agreement of both parties
- No reference to NYS Department of Labor Prevailing Wage Rates is included in the document

If the systems are acquired, it is recommended that the current contract operator be retained by DCWWA during the transition period by execution of DCWWA's standard operator agreement. DCWWA should then obtain proposals during its next cycle of obtaining proposals for contract operators.

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IV. Property

Investigation into the ownership status of the Towns to the collection and treatment facility properties was conducted via a search of Dutchess County, NY, Clerk Records.

The collection system located within the Town of Hyde Park, NY was transferred by Fisherman's Road, Inc. to the Town of Hyde Park, NY on June 27, 1990 as recorded by Deed located at Liber 1845, page 845 by the Dutchess County Clerk. Reference within the Deed is made to the original subdivision map, Map No. 3531, filed with the Dutchess County Clerk's office. This map indicates certain easements over private lands for the collection system.

The collection systems and treatment facility properties (Sewage Disposal Site No. 1 and 2) located within the Town of Rhinebeck, NY were transferred by Fisherman's Road, Inc. to the Town of Rhinebeck, NY on June 27, 1990 as recorded by Deed located at Liber 1886, page 225 by the Dutchess County Clerk. Reference within the Deed is made to the original subdivision map, Map No. 3531, filed with the Dutchess County Clerk's office. This map indicates certain easements over private lands for the collection system.

During review of DC DOH records by DCWWA staff, reference was found to the need for an easement for the North Treatment Facility due to encroachment of the treatment system on the property immediately to the south identified by the Town Engineer during the treatment facility redesign circa 2009. Search by the DCWWA staff could find no evidence of the filing of the easement document in the Dutchess County Clerk's records. DCWWA staff contacted the Town Clerk's office, whom was not able to locate an executed easement in the Town's records. The Town, working with the property Owner's attorney, has received and executed easement. The easement has been filed at the Dutchess County Clerk's office.

It is recommend if DCWWA acquires the treatment systems, that, as a condition of acquisition, plats be prepared for the two treatment properties by a Licensed Land Surveyor in NY State, permanent markers be set for the property and easement corners, and the plats be filed in the Dutchess County Clerk's office.

Based upon plans developed in 2009 for Collection System repairs, there are sections of the collection system that do not lie within the shown easements of the original file map. The north collection main was planned to run primarily through an easement

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located along property lines with small sections located within the public highway lines. Approximately 40% of the north collection main line lies on private property outside of the file map easements. The south collection main runs primarily within the public highway lines. A minor encroachment of the south collection main is indicated on lot 30 between MH#20 & 21 by the drawings. This needs to be verified in the field. Two branch mains are located within easements along property lines. There is no evidence on the drawings of encroachment by the branch mains.

V. Financial Information

Financial statements for the years ending December 31, 2011, 2012, 2013 and 2014 were provided by the Town. Table 1 shows the Total Expenditures; Total Revenues; Surplus or Deficit; and cumulative fund balance for the most current four (4) years.

Table 1

<u>Category</u>	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Expenditures	\$29,392.72	\$69,646.77	\$69,248.64	\$63,853.26
Revenues	\$59,305.00	\$40,741.54	\$48,542.12	\$127,058.70*
Surplus (Deficit)	\$29,912.28	(\$28,905.23)	\$(20,706.52)	\$63,205.44
Cumulative Fund Balance	\$0.00#	\$1,007.05	\$(19,669.47)	\$43,505.97

Prior to 2014, Hyde Park was billed by Rhinebeck for Hyde Park customers, and Hyde Park billed and collected from its customers.

*\$78,195.33 was transferred from the capital construction fund to the operating fund.

It appears that debt service is collected as part of the sewer rents, rather than through special district assessment via the Town and County annual property tax bill. Table 2 is a summary of the Town's Approved budget for the Districts for 2015.

Table 2

<u>Category</u>	<u>Amount</u>
Town Administration	\$13,465.00
Collection System	\$13,300.00
<u>Treatment/Disposal System</u>	<u>\$28,575.00</u>
Total Operating	\$55,340.00
<u>Debt Service</u>	<u>\$16,660.00</u>
Total Annual Cost	\$72,000.00

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The majority of the Town's Administration costs are set aside for Town Engineer and Attorney Services. Collection system costs are budgeted at \$13,300.00 which is attributed primarily to operator costs for both the collection and treatment systems. Treatment and Disposal System cost allocates \$11,200 for repairs with the balance being for normal operation costs. Principal debt service is allocated at \$16,660.00. Based upon a total budget of \$72,000 and 40 customers, total operational and debt repayment costs will be \$1,800 per customer (\$450 per quarter) for 2015.

Review of the NYS EFC/Town of Rhinebeck Bond Note indicates that the note is assignable based upon NYS EFC approval. As of January 1, 2015, 39 years remain on the Bond and indebtedness is \$482,953.00. It does not appear that EFC requires the Town to have a Debt Service Reserve Fund. It has yet to be determined whether EFC would require DCWWA to establish a Debt Service Reserve Fund as a condition of transfer of the loan agreement; should this be required, it will increase the total annual debt service expense.

VI. Operational Concerns

The current contract operators indicated that approximately 1 hour per day is spent at each of the treatment facilities for standard operations. When monthly samples are required, the total time between the two facilities is from 3 to 4 hours. Based upon DCWWA operations experience, a minimum of 2 hours per day is required for normal operations. Due to the closeness of the two facilities, properly managed, the routine monthly sampling could still be accomplished in an additional 2 hours.

Interviews with the current operators indicate that no formal standard operation, maintenance, wet weather and emergency plans are written for the facility. Each operator depends upon their experience in performing daily activities. The need for these plans is obvious.

Examination of daily site log books indicates minimal data in regards to function of the treatment facilities are recorded. Such items as run time meters are not recorded daily to determine if equipment is functioning as expected. Sludge septic tank sludge levels are not periodically recorded, and sludge removal is not documented. Items such as these indicate that a thorough daily routine to maintain and operate the facility is not occurring.

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VII. Regulatory Compliance

Regulatory Compliance prior to the completion of repair and improvements to the North and South Treatment Systems, and Collection Systems – Phase 1 are excluded from this review.

The NYS DEC is the regulatory body that oversees the operation of the treatment facilities. The NYS DEC's SPDES Permit for the Facilities is its primary basis for enforcement. The NYS DEC receives monthly operations reports for each facility indicating flow and compliance/non-compliance with SPDES permit requirements. In addition, NYS DEC performs annual compliance inspections of the each system as well as random reconnaissance inspections of all or part of the treatment systems. NYS DEC issues Notice of Violations regarding non-compliance with SPDES permit requirements.

NYS DEC Region 3 Files were reviewed by staff on February 24, 2015. The following is a summary of documents obtained:

- NYS DEC to T/Rhinebeck dated May 19, 2009 – Plan Approval for repairs and improvements to North and South Treatment Facilities: Required completion of all work within 5 years of letter date (May 19, 2014.)
- NYS DEC to T/Rhinebeck dated November 29, 2010 – SPDES Permit Renewal Notification
- Results of July 31, 2013 annual inspection: Facility found to be operating in a satisfactory manner and no major deficiencies were noted at time of inspection. Report indicates that there is no sewer use ordinance by Towns known to NYS DEC. (The Town Intermunicipal agreement references sewer use ordinances are required.)
- NYS DEC to T/Rhinebeck dated July 3, 2014 – Notice of Violation: Town has failed to schedule/complete Infiltration and Inflow Work phases 2 and 3. Discharge Monitoring Reports for the period of January 31, 2012 through April 30, 2014 Indicate 3 instances of exceeding permitted discharge flow for the South Treatment Facility and 1 instance for the North Treatment Facility. This notice required Town attendance at a meeting with DEC on July 14, 2014.
- Results of October 30, 2014 annual inspection: Town has failed to submit inflow and infiltration work schedule per phase 2 and 3 per the Infiltration and Inflow report Dated November 2009. The treatment systems at the North and South sites have had 70 violations for percent of removal for BOD₅ and Total Suspended Solids during the period between 1/31/2012 and 9/30/2014.

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- NYS DEC to T/Rhinebeck dated November 25, 2014 – Notice of Violation: The attachment cites 92 instances of violation of permit requirements between January 31, 2013 and September 30, 2014. This notice required Town attendance at a meeting with DEC on December 16, 2014.

Additional documentation from the NYS DEC provided by the Town includes the following:

- NYS DEC to T/Rhinebeck dated December 28, 2011 – Final, Modified SPDES Permit: This permit expires November 30, 2015.
- NYS DEC to T/Rhinebeck dated January 8, 2015 – Infiltration and Inflow Management Program Evaluation Report – Accepts 2014 report and implementation plan and appends the report to the SPDES Permit.
- NYS DEC to T/Rhinebeck dated February 24, 2015 – Reconnaissance Inspection: Facility was found to be operating in a satisfactory manner and no major deficiencies were noted at the time of inspection.

Review of Monthly Operation Reports for the years 2012, 2013, 2014 and 2015 through March 2015 indicated 23 self-reported SPDES permit violations; 11 for the North Treatment Facility and 12 for the South Treatment Facility. Violations reported include the following:

- Permit removal limits not being met due to low influent solids loading (i.e., too high of a hydraulic loading) – 16 instances
- Permit discharge flow exceeding permit limit – 1 instance
- Equipment failure – pumps – 2 instances
- Equipment failure – effluent meters – 1 instance
- Improper sampling techniques – 3 instances

Based upon review of reports and documentation by DCWWA staff, it is our opinion that SPDES Permit compliance issues are related to four broad categories:

1. Lack of completion of inflow and infiltration repairs to the collection system and prevention of infiltration into the sand filters.
2. Operational hardware issues such as maintenance of flow metering equipment, disinfection equipment, aeration equipment, pumps, etc.
3. Additional hardware modifications to control process (primarily flow) such as EQ pump return lines, hour meters and influent flow metering.
4. Operational activity deficiencies such as lack of formal operation procedures for normal, wet weather and emergency operations and training in some of the operations staff.

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It will be necessary to implement actions in all four categories to improve operations to address SPDES Permit violation reductions.

VIII. Conditions to be Addressed

DCWWA staff recommends that the following actions, if not accomplished by the Town prior to acquisition, be addressed immediately upon acquisition:

- Complete all Inflow and Infiltration repairs currently identified to NYS DEC and obtain NYS DEC acknowledgement of completion of repairs.
- Complete Residential Sump Pump Connection Survey and implement disconnection of any found connections.

DCWWA staff recommends that the following conditions be corrected or initiated within the first year of DCWWA ownership:

- Address site access issues
- Address site safety issues
- Fix damage to building and improve heating and ventilation at Metering and Chlorination Building at both Treatment Facilities
- Insert manhole ring inflow protectors in all manholes to reduce inflow
- Evaluate existing effluent metering systems at North and South Treatment Facilities
- Investigate effect of Hudson River storm surge on North Treatment Facility outlet and performance (Hurricane Sandy Storm Surge of 4' inundated outlet by 3' backing up flow in the treatment system.)
- Modify EQ tank pump system to allow a more uniform flow through the downstream treatment system components to allow manually adjusted return)
- Modify EQ tank pump system to allow a more uniform flow through the downstream treatment system components (options to include manually adjusted return and pump speed controlled by level and VFD)
- Install permanent precipitation monitoring station at one of the two treatment facilities
- Install hour meters in EQ Pumps and Sand Filter control panels for all pumps and blowers not currently having hour meters
- Require contract operator to develop written standard, wet weather, and emergency operation and maintenance procedures to perform and document activities; document training of all operators, and maintain documents on site for reference

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- Require contract operator to maintain NYS DEC required and other pertinent documentation (work orders, tank cleaning records, sludge removal records, etc.) on site for the immediate past 3 years
- Require contract operator to maintain at least one each of all pumps and other items not readily obtainable on site for replacement

DCWWA Staff recommends the following items be addressed during years 2 through 5:

- Install influent flow metering at North and South Treatment Facilities
- Replace existing effluent metering systems at North and South Treatment Facilities with more robust and reliable system
- Modify North Treatment Facility as required to mitigate the effect of Hudson River Storm Surge
- Take corrective action to reduce infiltration into sand filters or eliminate sand filters.

DCWWA estimates the project cost to complete the known I&I repairs at \$43,100. Estimated expenditures to address identified concerns by DCWWA for year 1 corrective actions total \$39,400. Estimated expenditures for years 2 through 5 total \$116,200. See Appendices A & B for details.

IX. Capital Improvements

Capital improvements needed for bringing the system up to good operating condition are included in Section VIII above. Including known I&I repairs, the total expenditure is estimated at \$198,700. Assuming that the 2015 projected fund balance less 15% of the projected 2015 budget (\$10,800) is used to pay for known I&I repairs, a total estimated expenditure of \$166,000 is expected to complete the remaining improvements. It is proposed that the cost of these improvements be bonded over a twenty year period.

Modifications to the Treatment System beyond that cited in Section VIII above would not be expected in the near term. Routine replacements of pumps, metering pumps, meters and blowers would be part of the annual operation budgets.

Due to the age of the collection system, it is expected that future repairs will continue to be needed to minimize infiltration and inflow. The determination of the timing of such repairs is difficult to predict. Based upon a permitted discharge of 8,000 gpd at

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each treatment facility, with 20 residential customers per unit, dry weather flow into the treatment facility would be expected to be approximately 3,200 gpd. Generally accepted standards for infiltration and inflow on the longest collection system would be approximately 1,800 gpd. This indicates that if the collection system is in generally tight condition, then the treatment facility should see approximately 5,000 gpd of peak flow. This leaves approximately 3,000 gpd for any unusual flow condition before the permitted discharge is exceeded. Typically, flow into the treatment facilities is monitored and correlated to precipitation. As this subdivision is completely built out, no new flows are anticipated. When trend analysis of flows indicates that influent flows are consistently above a set limit, say 6,000 gpd, investigation of the causes of the increase should be performed and corrective action taken. One way to address the cost of these future infiltration and inflow prevention repairs is to create a fund balance from general operating revenues. If repairs become extensive, costs most likely will need to be covered by bonding, low or no interest loans, or grants.

X. First Year Costs

Table 3 below illustrates the estimated first year operational cost, inclusive of existing Town debt service plus the additional debt service for bonds to fund the remaining improvement items noted.

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Table 3
First Year Operational Budget

Item No.	Item Description	Budget
1	Accounting	\$ 100.00
2	Billing	\$ 904.00
3	Bookkeeping	\$ 1,812.50
4	Buildings and grounds	\$ 1,000.00
5	Chemicals	\$ 2,200.00
6	Computer Equip't./Tech. support	\$ 100.00
7	Electricity	\$ 4,300.00
8	Engineering	\$ 6,000.00
9	ERM (Treatment)	\$ 11,200.00
10	ERM (Collection)	\$ 2,000.00
11	Generator Fuel & Maintenance	\$ 2,025.00
12	Insurance	\$ 2,000.00
13	Laboratory Costs	\$ 3,500.00
14	Legal	\$ 250.00
15	Meter/Collection	\$ 500.00
16	Operation	\$ 12,300.00
17	Operation Support	\$ 2,500.00
18	Permit Fees	\$ 375.00
19	Postage	\$ 160.00
20	Sanitation	\$ -
21	Sludge Disposal	\$ 3,000.00
22	Supplies (Buildings)	\$ 100.00
23	Supplies (Office)	\$ 50.00
24	Telephone	\$ -
25	Testing Chemicals	\$ 250.00
Subtotal		\$ 56,626.50
26	Operational Contingency	\$ 663.83
27	ADS 1 and 2	\$ 29,826.00
28	Administration	\$ 8,493.84
29	Capital Contingency	\$ -
Operational Totals		\$ 65,784.17
Per Customer		\$ 1,644.60
Per Customer with Debt Services		\$ 2,390.25

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The costs indicated in Table 3 differ from the Sewer Districts' proposed 2015 budget in the following areas:

1. The most significant difference in the budgets is the inclusion of an additional \$13,166 for debt service on additional bonds included in the DCWWA budget.
2. The Town's budget does not include any cost of insurance for the facilities (\$2,400).
3. Operations Support, Item 17, does not exist in the Town's budget (\$2,500).
4. The Town's budget does not include any contingencies, Item 26 (\$675).
5. The Town's administrative costs include the cost of bookkeeping, billing and collection of customer charges.
6. The Town's budget does not include an administrative charge, Item 28 (\$11,080).

The 2015 Town budget for Operations is \$55,340 versus Table 3 total of \$65,784, a difference of \$10,444 or 20% greater.

Based upon the 40 customers, the annual per resident operational charge would be \$1,645 versus the Town's 2015 charge of \$1,384, an increase of \$261 (or 19%).

The Town is currently obligated to repay a zero interest loan to the NYS Environmental Facilities Corporation which has 29 years (\$482,953.00) remaining. Annual payments are due on or before August 15 of each year. Annual payment is \$16,660.00, or \$416.50 per customer. Debt service on additional bonds to be issued by DCWWA is estimated to be \$13,166 (assuming 20 year bonds at 4% interest.)

Total annual first year cost to each customer would be \$2,390 versus \$1,800.00 in 2015. This represents a total increase of \$590 or 33%. As noted above, should the NYS EFC require DCWWA to establish a Debt Service Reserve Fund as a condition of transferring the loan agreement, the annual debt service cost, and total cost per customer, would increase to provide the Debt Service Reserve Fund required.

XI. Summary

The Vanderburgh Cove Sewer Districts serve 40 single family residences located in the Towns of Rhinebeck and Hyde Park. There are two separate collection and treatment systems, (North and South) each servicing 20 homes.

The Town of Rhinebeck administers the two districts as one entity under an Intermunicipal Agreement between the Towns of Rhinebeck and Hyde Park. Since 2014, the Town of Rhinebeck has been responsible for billing and collection.

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The collection and treatment systems have a history of operational issues dating back to the initial construction in the late 1960's. In 2009, NYS DEC issued plan approval for improvements at the North and South Treatment facilities. These Improvements were completed and placed in service. However, issues related to infiltration and inflow (I&I) into the collection and treatment systems have resulted in continued notices of violations at the facilities. The Town had committed to complete all identified I&I repairs by July 20, 2015. Current schedule is to complete by September 4, 2015.

DCWWA staff has identified security, safety and operational items which it recommends to be completed as soon as possible. Approximately \$78,000 was available to complete these and I&I repairs from the original construction funding. However, the Town transferred this amount to the operating fund in 2014, negating operational deficits for 2013 and 2014, leaving a remaining fund balance of \$43,500 to complete required work.

The facility is currently being operated by a contract operator. Improvements in the operations related to procedures, training and documentation have been identified by staff. The existing operations contract expires in December 2017. This agreement is assignable. As during past acquisitions, DCWWA would seek to continue the current contract operator under a DCWWA standard agreement during the transition. DCWWA will coordinate timing of initiation of its operation contract with the Town so that the Town can cancel the existing operations contract without penalty.

The Town of Rhinebeck has an outstanding 0% interest loan from the NYS EFC with 29 years (\$482,953.00) remaining. This loan is transferable, subject to NYS EFC approval and acceptance of all existing terms.

The estimated first year operational costs after acquisition per customer is estimated to be \$1,645 versus the Town's 2015 charge of \$1,384, an increase of \$261 (or 19%).

The increase is due primarily to the need for capital expenditures with Insurance, Operations Contractor supervision and support, and Authority Administrative Charges contributing.

With debt service expenses included, total annual first year cost to each customer would be \$2,390 versus \$1,800 in 2015. This represents a total increase of \$590, or 33%. As noted above, should the NYS EFC require DCWWA to establish a Debt Service Reserve Fund as a condition of transferring the loan agreement, the annual debt service cost and total cost per customer would increase.

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The major uncertainty in acquisition of the system is the collection systems. Repairs and or replacements to the collection systems are not predictable and could lead to significant additional debt for the systems. Close monitoring of the collection systems is currently a requirement of the SPDES Permits for the two treatment facilities. Future operation budgets should work to build a fund balance for the collection system future repairs. An annual review of the inflow and infiltration (I & I) into the collection system is a requirement of the SPDES permit and an active role in reduction of I & I is expected by NYS DEC. The collection system is the greatest, unknown liability of the Vanderburgh Cove collection and treatment works.

The staff does not see any of the issues identified throughout this report as insurmountable. The Town has taken major strides to overcome system deficiencies and the next responsible step is to place the systems under DCWWA ownership so the additional observed deficiencies can be addressed and the systems can be operated and maintained efficiently for the customers.

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Appendix A Capital Cost Summary

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Infrastructure Modifications						
Item No.	Description	Unit	Quantity	Unit Cost	Total Cost	Initiate
1	Install stairs to access North WWTP Discharge Sampling point	LS	1	\$ 3,000.00	\$ 3,000.00	Year 1
2	Install stairs to access South WWTP Discharge Sampling point	LS	1	\$ 3,000.00	\$ 3,000.00	Year 1
3	Repair Damage to North WWTP Metering Building	LS	1	\$ 500.00	\$ 500.00	Year 1
4	Repair Damage to South WWTP Metering Building	LS	1	\$ 500.00	\$ 500.00	Year 1
5	Install adequate ventilation and heat at North WWTP Metering Building	LS	1	\$ 2,500.00	\$ 2,500.00	Year 1
6	Install adequate ventilation and heat at South WWTP Metering Building	LS	1	\$ 2,500.00	\$ 2,500.00	Year 1
7	Install Manhole ring inflow protectors on all manholes	EA	26	\$ 400.00	\$ 10,400.00	Year 1
8	Install Influent Flow Meter at North WWTP	LS	1	\$ 17,600.00	\$ 17,600.00	Year 2-5
9	Install Influent Flow Meter at South WWTP	LS	1	\$ 17,600.00	\$ 17,600.00	Year 2-5
10	Upgrade Effluent Flow Meters at North WWTP	LS	1	\$ 17,600.00	\$ 17,600.00	Year 2-5
11	Upgrade Effluent Flow Meters at South WWTP	LS	1	\$ 17,600.00	\$ 17,600.00	Year 2-5
12	Corrective Action to reduce Infiltration at North Sand Filter	LS	1	\$ 13,800.00	\$ 13,800.00	Year 2-5
13	Corrective Action to reduce Infiltration at South Sand Filter	LS	1	\$ 32,000.00	\$ 32,000.00	Year 2-5
14	Install Permanent Precipitation Monitoring station at one of the WWTP	LS	1	\$ 1,000.00	\$ 1,000.00	Year 1
15	Modify North WWTP EQ Pump system to allow for more uniform flow	LS	1	\$ 1,500.00	\$ 1,500.00	Year 1
16	Modify South WWTP EQ Pump system to allow for more uniform flow	LS	1	\$ 1,500.00	\$ 1,500.00	Year 1
17	Install Hour Meters on North WWTP EQ Pump and Sand Filter Control Panels	LS	1	\$ 1,500.00	\$ 1,500.00	Year 1
18	Install Hour Meters on South WWTP EQ Pump and Sand Filter Control Panels	LS	1	\$ 1,500.00	\$ 1,500.00	Year 1
Total					\$ 145,600.00	

Vanderburgh Cove Sewer Districts Evaluation

Appendix B Investigation Cost Summary

Vanderburgh Cove Sewer Districts Evaluation

Investigations			
Item No.	Description	Estimated Cost	Initiate
1	Evaluate existing effluent metering systems at North & South Treatment Facilities	\$ 5,000.00	Year 1
2	Investigate the effect of Hudson river storm surge on North treatment Facility	\$ 5,000.00	Year 1
Total		\$ 10,000.00	

McKinney's Consolidated Laws of New York Annotated
Public Authorities Law (Refs & Annos)
Chapter 43-a. Of the Consolidated Laws
Article 5. Public Utility Authorities
Title 6-C. Dutchess County Water and Wastewater Authority (Refs & Annos)

McKinney's Public Authorities Law § 1142

§ 1142. Dutchess county water district

Currentness

<[As added by L.1991, c. 592. See, also, Public Authorities Law § 1142, in another title 6-C, post.]>

There is hereby defined and established an area to be known as the "Dutchess county water district" which shall embrace all the territory located within the county. After the establishment of the Dutchess county water district, such district shall have such powers as are provided in and shall be governed in accordance with the provisions of article five-A of the county law, including, without limitation, the power to enter into contracts, and carry out the terms thereof, with the city of New York, the New York city municipal finance authority, New York city water board, or any agency or instrumentality thereof, for the purchase of water.

Credits

(Added L.1991, c. 592, § 1, eff. July 23, 1991.)

McKinney's Public Authorities Law § 1142, NY PUB AUTH § 1142
Current through L.2016, chapter 1.

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McKinney's Consolidated Laws of New York Annotated
Public Authorities Law (Refs & Annos)
Chapter 43-a. Of the Consolidated Laws
Article 5. Public Utility Authorities
Title 6-C. Dutchess County Water and Wastewater Authority (Refs & Annos)

McKinney's Public Authorities Law § 1124

§ 1124. Powers of the authority

Currentness

<[As added by L.1991, c. 592. See, also, Public Authorities Law § 1124, in another title 6-C, post.]>

The authority shall have the power:

1. To sue and be sued;
2. To have a seal and alter the same at pleasure;
3. To borrow money and issue bonds or other obligations and to provide for the rights of the holders thereof;
4. To enter into contracts and to execute all instruments necessary or convenient or desirable for the purposes of the authority to carry out any powers expressly given it in this title;
5. To acquire by purchase, gift, grant, transfer, contract or lease or by condemnation pursuant to the eminent domain procedure law, lease as lessee, hold, and use any real or personal property or any interest therein, as the authority may deem necessary, convenient or desirable to carry out the purpose of this title. In connection with the acquisition of such properties, the authority may assume any obligations of the owner of such properties and, to the extent required by the terms of any indentures or other instruments under which such obligations were issued, the authority may assume and agree to perform covenants and observe the restrictions contained in such instruments; and furthermore the owner or any properties which the authority is authorized to acquire, is hereby authorized to sell or otherwise transfer the same to the authority, whereupon the authority shall become charged with the performance of all public duties with respect to such properties with which such owner was charged and such owner shall become discharged from the performance thereof, and as a means of so acquiring for such purpose, the authority may purchase all of the stock of any existing privately owned water or sewage corporation or company and in the case of a sale or other transfer of properties of a public utility corporation pursuant to this provision, upon the purchase of the stock of such corporation or company it shall be lawful to dissolve such corporation within a reasonable time, and in the case of an acquisition of properties from a municipality pursuant to this provision, it may assume the primary responsibility for the payment of any bonds or notes issued by such municipality for such properties;
6. To develop, construct or maintain a project; provided, however, that the authority shall not enter into any contract for the construction of a project without having first submitted such project, following completion of compliance with the requirements of the state environmental quality review act and the regulations promulgated in connection therewith in connection with such project, to the county legislature for county legislative review, as herein described. For purposes of such county legislative

review, construction shall not include such engineering, architectural, legal, fiscal and economic investigations and studies, surveys, designs, plans, procedures and other actions necessary or reasonably required to develop a project or to present a project to the county legislature for county legislative review. County legislative review shall encompass a process by which the county legislature shall have the opportunity to review and deny a project proposed to be constructed by the authority. County legislative review shall commence with the authority's delivering, by mail or personally, to the clerk of the county legislature a notification that the authority proposes to construct a project. Such notification shall include a description of the project, the proposed cost and the proposed plan for the financing of such cost and such engineering, architectural, fiscal and economic investigations and studies, surveys, designs and plans prepared by the authority in connection with the project. Following receipt of such notification, the county legislature shall take such action as it may determine in its discretion to be appropriate in connection with its review of the project, which action may include adoption of a resolution, by the affirmative vote of at least two-thirds of the entire voting strength of the county legislature, to deny to the authority the right to construct the project, which vote, to be effective, shall be cast at a meeting held no later than the second consecutive regular meeting of the county legislature following delivery to the clerk of the county legislature of the notification herein described. The date of delivery of notification shall be the date on which such notification shall be actually received by the clerk of the county legislature. If the then current rules and regulations of the county legislature require the filing of a resolution with the clerk of the county legislature to be a specified number of days prior to a meeting of the county legislature for introduction of such resolution at such meeting, such notification shall be deemed to be a resolution and shall be subject to such filing requirement. If the county legislature shall so vote to deny to the authority the right to construct a project, the resolution to so deny shall be submitted to the county executive in such manner and at such time as is provided in the county charter for resolutions subject to approval or disapproval by the county executive. If the county executive shall, within the time permitted for such action, disapprove such resolution, such resolution shall be of no force and effect unless the county legislature shall override such disapproval in such manner and at such time as is provided in the county charter for such action. Nothing in this section shall prohibit the resubmission by the authority to the county legislature at any time of a proposed project which has been previously disapproved;

7. To operate and manage and to contract for the operation and management of properties of the authority;

8. To lease properties of the authority to the county or any other municipality in the county, or any instrumentality thereof, upon such terms and conditions as shall be determined by the authority, the county, the municipality or such instrumentality, as the case may be;

9. To apply to the appropriate agencies and officials of the federal, state and local governments for such licenses, permits or approvals of its plans or projects as it may deem necessary or advisable, and upon such terms and conditions as it may deem appropriate, and to accept, in its discretion, such licenses, permits or approvals as may be tendered to it by such agencies and officials;

10. To appoint such officers and employees as are required for the performance of its duties, to fix and determine their qualifications, duties and compensation, and to retain or employ counsel, auditors, engineers and private consultants on a contract basis or otherwise for rendering professional or technical services and advice;

11. To make plans and studies necessary, convenient or desirable for the effectuation of the purposes and powers of the authority and to prepare recommendations in regard thereto;

12. To enter upon such lands, waters or premises as in the judgment of the authority shall be necessary for the purpose of making surveys, soundings, borings and examinations to accomplish any purpose authorized by this title, the authority being liable only for actual damage done;

13. To apply for and to accept any gifts or grants or loans of funds or property or financial or other aid in any form from the federal government or any agency or instrumentality thereof, or from the state or any agency or instrumentality thereof or from any other source, for any or all of the purposes specified in this title, and to comply, subject to the provisions of this title, with the terms and conditions thereof;

14. To supply and sell water for domestic, commercial and public purposes at retail to individual consumers within the county or wholesale to municipalities, water districts or district corporations within the county and to collect, treat and discharge sewage produced for such purposes by such generators; provided, however, that the authority shall not sell water at retail to individual consumers or contract with individual consumers for the collection or treatment of sewage where such individual consumers are located in a municipality, water district, sewer district or district corporation which is empowered to provide water or sewer services, as the case may be, unless the authority shall have first notified, in writing, by certified mail, such municipality, water district, sewer district or district corporation that it intends to sell water at retail to individual consumers located therein or collect or treat sewage from individual consumers located therein, as the case may be, identified either by name or location or by the area to be served, and such municipality, water district, sewer district or district corporation does not notify the authority, within sixty days of receipt of such notice, that it objects to the authority selling water or collecting or treating sewage, as the case may be, to such individual consumers;

15. To purchase water in bulk from any person, private corporation or municipality when necessary or convenient for the operation of any water facility;

16. To enter into cooperative agreements with other authorities, municipalities, water districts, sewer districts, district corporations, utility companies, individuals, or corporations, within or without the county, for any lawful purposes necessary or desirable to effect the purposes of this title upon such terms and conditions as shall be determined to be reasonable;

17. To make by-laws for the management and regulation of its affairs and subject to agreements with bondholders, rules for the sale of water or the collection of sewage and the collection of rates, rents and charges therefor. A copy of such rules and by-laws, and all amendments thereto, duly certified by the secretary of the authority shall be filed in the office of the county clerk of the county and shall be published thereafter once in each of two newspapers having a general circulation in the county. Violations of such rules shall be punishable by fine, not exceeding fifty dollars, or by imprisonment for not longer than thirty days, or both;

18. To fix rates and collect charges for the use of the facilities of, any services rendered by or any commodities furnished by the authority such as to provide revenues sufficient at all times to pay, as the same shall become due, the principal and interest on the bonds or other obligations of the authority together with the maintenance of proper reserves therefor, in addition to paying as the same shall become due the expense of operating and maintaining the properties of the authority together with proper reserves for maintenance, contingencies and all other obligations and indebtedness of the authority; provided, however, that nothing contained in this subdivision, or in this title, shall empower the authority to collect rentals, charges, rates or fees from the owners of real estate, or the occupants of real estate (other than the occupants of premises owned or occupied by the authority or by the state or any civil division thereof) located in any city unless the electors of such city shall approve the granting to the authority of such powers by a majority vote at a general or special election in such city;

19. To utilize the service of officers and employees of the county and to pay a proper portion of compensation or costs for the services of such officers or employees with the consent of the county executive, and upon notice to the chair of the county legislature;

20. To provide for the discontinuance or disconnection of the supply of water or the provision of sewerage service, or both, as the case may be, for non-payment of fees, rates, rents or other charges therefor imposed by the authority, provided such discontinuance or disconnection of any supply of water or the provision of sewerage service, or both, as the case may be, shall not be carried out except in the manner and upon notice as is required of a waterworks corporation pursuant to subdivisions three-a, three-b and three-c of section eighty-nine-b and section one hundred sixteen of the public service law; and

21. To do all things necessary, convenient or desirable to carry out its purposes and for the exercise of the powers granted in this title.

Credits

(Added L.1991, c. 592, § 1, eff. July 23, 1991.)

McKinney's Public Authorities Law § 1124, NY PUB AUTH § 1124
Current through L.2016, chapter 1.

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