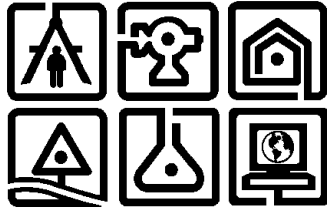


May 8, 2017
Last Revised April 29, 2021



2021 Amended Map, Plan & Report Village of Red Hook Sewer System Dutchess County, New York

Prepared for:

Village of Red Hook
7467 South Broadway
Red Hook, New York 12571



Prepared by:

C.T. MALE ASSOCIATES
50 Century Hill Drive
Latham, New York 12110
(518) 786-7400
FAX (518) 786-7299

C.T. Male Project No: 16.6606

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**2021 Amended Map, Plan & Report
Village of Red Hook Sewer**

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FIGURES

Figure 1 Sewer Service Area Map

APPENDIX

Appendix A List of Parcels in Sewer Service Area
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1.0 INTRODUCTION

The April 2021 revisions to this Map, Plan and Report are to reflect the actual bid price for the sewer project. All aspects of this revised Map, Plan and report are the same as the 2017 Map, Plan and Report, except for the costs presented in Sections 1.0, 3.1 and 4.1. Sections that have been updated are italicized.

For the purpose of establishing a new sewer service area that is located in the Village of Red Hook, a Map, Plan and Report is being prepared to present the boundaries, the general plan, method of financing, and first year operation costs of the proposed Village of Red Hook Sewer Area, at the time of adoption.

An Engineering Report was prepared in June 2015 by C.T. Male Associates for the proposed project. This report documents the need for the project, the alternatives considered, the costs, and the recommended sewer and treatment options to serve the proposed district. This Map, Plan and Report documents the following Sewer Area creation facts:

- Identifies the selected alternative
- Finalizes the properties in the service area
- Presents the method for assessing sewer rates to the properties served
- Documents the estimated capital and operational cost

Based on the existing occupancy and water use in 2016 of the 127 developed properties (150 hook-ups) and 15 undeveloped properties in the service area, 293.9 equivalent dwelling units (EDU) were determined. See Appendix A for water use and EDU determination. *Based on the actual capital cost of \$6,311,118.00 and 293.9 EDU, the anticipated first year costs per EDU is \$1,027 (\$716 capital cost and \$311 O&M).*

The project cost based upon bids is \$8,447,118.00 with a \$925,000 grant from NYSEFC through the WIIA (Water Infrastructure Improvement Act) and a \$1.2 million grant from USDA Rural Water. The capital cost after the grants are applied is \$6,311,118.00 to be financed at zero percent for 30 years through a loan from NYSEFC.

1.1 Project Need

Nearly fifty years of adopted planning documents, including Village of Red Hook Comprehensive Plan (1969) and the Intermunicipal Task Force's Proposed Centers and Greenspaces Plan (2009); have recommended establishing a sewer area for portions of the Village of Red Hook. The need for the project is to protect the public water supply and water quality that is currently being impacted by substandard septic systems installed within the Village.

Additional benefits include, providing opportunities for economic growth by allowing existing businesses to expand and enabling greater variety of new businesses. These benefits are in conformance with the planning documents for the area including the Town of Red Hook Open Space Plan and the Town of Red Hook Master Plan.

The Village of Red Hook has identified that most of the buildings within the core business district are served by substandard on-site wastewater systems. In general, the buildings have seepage pits with and without septic tanks. The soils in the study area are fast-draining coarse sand and gravel. The existing situation is alarming to the community because the Village's water supply is located on the same aquifer without any confining layer and the raw or partially-treated sewage is a direct threat to the drinking water supply.

Water supply for the Village of Red Hook comes from two sources; a shallow unconfined gravel aquifer and a deeper bedrock aquifer underlying the unconfined system. As discussed in the June 2015 Engineering Report, nitrates and fecal coliform bacteria were found in shallow unconfined aquifer within the theoretical radius of influence of the water supply wells for the Village. The proposed sewer project would reduce the impact to the drinking water supply by removing the source of contamination from 150 businesses, homes and multi-use buildings.

2.0 DESCRIPTION OF SEWER AREA

2.1 Entire Village

There are no public sewers in the Village with the exception of a private wastewater treatment plant (WWTP) that services the senior housing units and commercial uses at Red Hook Commons. Public water service is available to all of properties in the sewer area.

The 2007 Feasibility Study for Sanitary Sewer Service evaluated the requirements for providing municipal sewer to all the properties in the Village. Figure 1 shows the proposed collections system needed.

The evaluation showed that a providing gravity sewer with large municipally owned pump stations was too expensive and not feasible.

However, it was identified that providing sewer service to the densest developed area of the Village (Route 9 and Route 199) with alternative collection systems is achievable.

Since the sewer area does not contain all parcels within the Village, the proposed WWTP and sewer collection system will be designed to allow expansion in the future.

2.2 Sewer Area

The sewer service area includes properties on South Broadway (Route 9) from the intersection with Market Street south to Morgan's Way, North Broadway from the intersection with Market Street north to 7592 North Broadway, West Market Street from the intersection with Broadway west to Linden Avenue and East Market Street from the intersection with Broadway east to Cherry Street. Figure 2 delineates the service area.

The sewer service area is organized into seven zones as follows:

- BU-1 Developed Properties (147 Hook-Ups)
- BU-2 Undeveloped Properties (9 properties)
- BU-3 Red Hook Commons Phase 1 and 2 (2 Hook-Ups)

- BU-4 Red Hook Commons Phase 3 Developed (1 Hook-Up)
- BU-5 Red Hook Commons Phase 3 Undeveloped (6 properties)
- BU-6 WWTP Property (1 property)

The sewer area contains commercial, mixed-use and residential properties. Many of the developed tax parcels contain multiple buildings or uses.

Appendix A lists the properties in the sewer service area and Figure 1 provides a map of the properties.

For the properties in the service area, connection to the sewer system is mandatory to conform to the 2015 NYS Plumbing Code (IPC Chapter 7, Sanitary Drainage 701.2). The mandatory connection will be enforceable through the Village's sewer use law.

2.3 Sewer Collection System

The sewer area will be served by septic tank effluent pump (STEP) sanitary sewers, which are a variation of low-pressure sanitary sewers. With STEP sewers, each property or building will utilize a septic tank, with a pump added to discharge the effluent from the tanks into the low-pressure effluent sewer system. Small-diameter HDPE sewer force mains will be installed along the back or side yards or in the highway right-of-way along Routes 9 and 199.

The STEP will be sized based on the Ten States Standards for forcemain sizing. The sizing criteria sizes the STEP system based upon a number of factors, including number/size of pumps, anticipated flow rate and the percentage of pumps on. Based upon this criteria, the Red Hook STEP system will contain 2-inch, 3-inch, and 4-inch pipes.

The Red Hook Commons Area, which was developed with gravity sewers will not receive new sewer infrastructure.

The Village proposes to furnish and own the septic tank, grease trap (for restaurants), the effluent pumps, and sewer lateral. The property owners will be responsible for paying for electrical power to the pump. In most cases, the Village will utilize the existing pipe from the building so that no plumbing work will be necessary in the

building. The Village will need an easement from each property owner to provide this service and maintain the installed tanks, pumps, and pipes.

Each property owner will be consulted to locate the septic tank/effluent pump, but in most cases, the new tank and pump will be located near the existing septic system. The new septic tank will be located at least 10 feet off of the existing building to meet code.

There are no direct costs anticipated for a typical property owner to connect to the sewer system, if they connect as part of the capital improvement project.

No hook up fee is proposed, if they connect as part of the capital improvement project.

The Village will be responsible for maintaining the septic tank, grease trap, and effluent pumps once they are placed in operation. When necessary, the Village will be responsible for replacing the effluent pumps. The Village will maintain the sewer lateral from the septic tank to the forcemain in the street.

The property owner will maintain the sewer lateral from the face of the building to the septic tank. The property owner will be responsible for paying the electricity for the effluent pump, which is estimated at \$12 per year.

2.4 Wastewater Treatment Plant

To provide wastewater treatment for the sewer area, the privately owned 25,000 gallons per day (gpd) Red Hook Commons wastewater treatment plant (WWTP) would be obtained by the Village. A new 50,000 gpd WWTP will be installed next to the existing WWTP to serve the Village sewer district. The existing WWTP will remain operated by the Village to serve Red Hook Commons.

The new WWTP will have the following components:

- Flow equalization
- Activated sludge package plant
- Sand filter building
- Ultra-Violate disinfection
- Discharge to the tributary to the Saw Kill
- Sludge Holding Tank

- Odor control

Headworks, primary treatment, and flow equalization will be addressed by using the septic tanks and the effluent pump control panel. The septic tanks will address the needs for headworks and primary treatment.

The current owner of the Red Hook Commons WWTP has agreed to transfer the ownership of the property, sewers, pump station and WWTP to the Village at a nominal cost.

The lot where the WWTP is located has been studied and it was found suitable for building the needed improvements. Additionally, the site can be expanded to treat up to 260,000 gpd (200,000 future capacity) if needed. The lot where the WWTP would be constructed has been previously surveyed for wetlands, endangered species, and archeological significance and has a New York State wastewater discharge permit. These factors make the site ideal for the Village's WWTP. The Village would operate and maintain the WWTP with a part-time licensed wastewater treatment plant operator(s).

2.5 Properties and Benefit Units

The basis for the assessment 1.0 Equivalent Dwelling Units (EDU) = 150 gpd of water use. Properties listed in the Dutchess County Real Property Tax Rolls as single-family parcels are equal to 1.0 Equivalent Dwelling Unit (EDU).

Each developed parcel that will have a sewer hookup has an existing water meter. The water consumption for 2016 was used to determine the EDU value for each hook up.

The following criterion was used to determine the Benefit Unit (BU) for each parcel or hook up.

- BU-1 Developed Properties – One BU for each EDU (150 gpd)
- BU-2 Undeveloped Properties – 10% of one BU
- BU-3 Red Hook Commons Phase 1 and 2 – Fixed rate based on sale agreement

- BU-4 Red Hook Commons Phase 3 Developed – per sales agreement properties pay annual O&M cost per BU assessment.
- BU-5 Red Hook Commons Phase 3 Undeveloped – will be assessed zero BU.
- BU-6 WWTP Property (1 property) – property owned by the Village where the WWTP is located will be assessed zero BU.

Once the sewer area is built and the sanitary sewer system is in use, the EDUs assessed for each parcel will be re-visited on an annual basis. Changes in parcel use, water use or new construction could affect the EDU count and will be adjusted accordingly. Twelve months of metered water use will be used as a basis for estimating wastewater flow.

3.0 PROJECT COSTS

The project costs consist of two main components, capital cost and operation and maintenance cost. The capital cost is the projected cost to build the proposed sewer service area. The operation and maintenance cost is the annual cost to keep the sewer district functional.

3.1 Capital Cost

The actual capital cost for the project is \$6,311,118.00 after the WIIA and USDA Rural Water grants are deducted. Appendix B details the capital cost breakdown utilizing the NYSEFC budget form.

Based on the current funding package as described in Section 1, the capital cost per EDU is \$716 per year.

3.2 Operation and Maintenance Cost

The projected first year annual operating costs for the sewer service area is \$91,500. Appendix C details the operation and maintenance (O&M) cost, which include electricity for the WWTP, labor to operate the WWTP, septic tank sludge/WWTP sludge removal, laboratory analyses and other administrative costs.

Based on the properties served, the first year O&M cost is \$311 per EDU.

3.3 Hook-up Cost

The hook up cost for each property is part of the overall capital project.

3.4 Future Connections

Future individual connections would be allowed to connect if sufficient capacity is available at the WWTP and approved by the Village Board. The new connections would pay a tapping fee in accordance with the Village's sewer use law.

The tapping fee would cover the cost for the Village to connect to the building sewer and install the new septic tank, effluent pump, and sewer lateral. The property owner

would need to provide the Village the necessary easements. Cost to connect the pump control panel to the building power supply would be the property owner's responsibility.

If existing developed property changes occupancy to a restaurant, which requires a grease trap, a tapping fee would be assessed in accordance with the Village's sewer use law and would cover the cost to connect the building sewer and install the new grease trap and required piping. The property owner would need to provide the Village the necessary easements to install the grease trap.

Larger users (over 1,000 gpd) will be approved on a case by case basis by the Village Board.

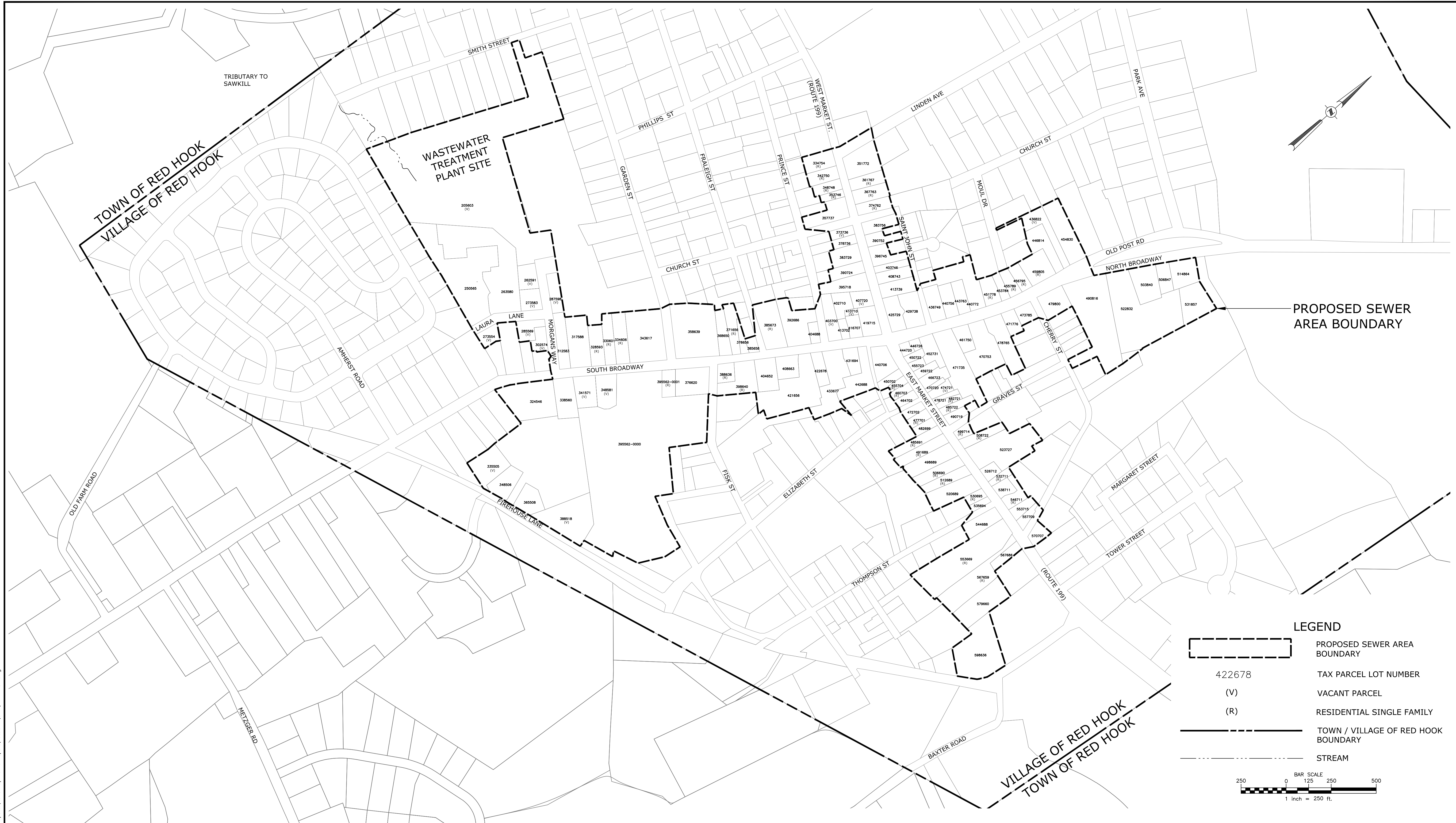
4.0 PROJECT FINANCING

The actual capital cost for the project is \$6,311,118.00 after the grants are deducted. In addition to the \$925,000 WIIA and \$1.2 million USDA Rural Water grants received, the project has also obtained zero percent financing on the project from NYSEFC.

4.1 Estimated First Year Annual Cost for a Typical Property




The typical property in the sewer area is a single-family residential property. The estimated first year cost per property is based on debt service plus operating and maintenance cost.

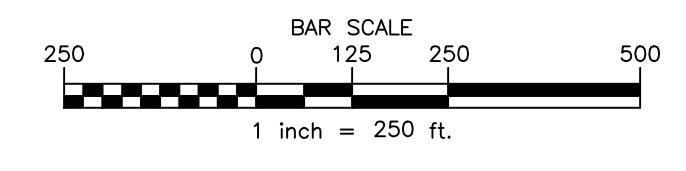
Thus, the projected first year total cost is (\$716 + \$311) or \$1,027 for a single-family home or property that uses 150 gpd.



PROPOSED SEWER AREA BOUNDARY

LEGEND

-  PROPOSED SEWER AREA BOUNDARY
- 422678 TAX PARCEL LOT NUMBER
- (V) VACANT PARCEL
- (R) RESIDENTIAL SINGLE FAMILY
-  TOWN / VILLAGE OF RED HOOK BOUNDARY
-  STREAM



CAD DWG FILE NAME: K:\Projects\144156\Civil\Reports\2016 Map Plan & Report\AutoCAD\Civil\NEW FIG2.dwg

DATE	REVISIONS RECORD/DESCRIPTION	DRAFTER	CHECK	APPR.	UNAUTHORIZED ALTERATION OR ADDITION TO THIS DOCUMENT IS A VIOLATION OF THE NEW YORK STATE EDUCATION LAW.
					© 2015 C.T. MALE ASSOCIATES DESIGNED: RF DRAFTED : DLP CHECKED : RF PROJ. NO : 14.4156 SCALE : 1"=250' DATE : JANUARY 2017

PROPOSED SEWER AREA BOUNDARY

RED HOOK SEWER AREA

VILLAGE OF RED HOOK DUTCHESS COUNTY, NY

C.T. MALE ASSOCIATES
 Engineering, Surveying, Architecture & Landscape Architecture, D.P.C.

50 CENTURY HILL DRIVE, LATHAM, NY 12110
 518.786.7400 * FAX 518.786.7299

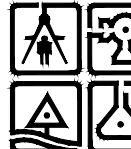






FIG2

SHEET 1 OF 1
 DWG. NO: 17-

Appendix A

**List of Parcels in Sewer Area and
Assessment**

Subtotals

			3	23	
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North Broadway - Between St. John St. and Market

25 Baright Realty **7514 N. Broadway** **10-452731**
 26 Rhtel LLC **7509 N. Broadway** **10-429738**
 27 Baright Realty **7506-7508 N. Broadway** **10-446726**

Subtotals

West Market - Between Broadway and Church St.

28 Baright Realty **19 W. Market St.** **10-425729**
 29 Dillon, John **21-29 W. Market St.** **10-413739**
 30 Key Bank **28 W. Market St.** **10-395718**
 31 Avel Realty LLC **31-35 W. Market St.** **10-408743**
 32 Electric Ave Holdings, LLC **37 W. Market St.** **10-403746**
 33 Taste Budd's, LLC **40 W. Market St.** **10-390724**
 34 Red Hook Holdings LLC **39 W. Market St.** **10-396745**
 35 Red Hook Holdings LLC **41-43 W. Market St.** **10-396745**
 36 Nic Enterprises, LLC **42 W. Market St.** **10-383729**
 37 Nic Enterprises, LLC **44 W. Market St.** **10-383729**
 38 Borchetti Catering, Inc. **46 W. Market St.** **10-378736**
 39 Borenstein, David **45-47 W. Market St.** **06-390752**
 40 Trezza, Gloria **49 W. Market St.** **06-383756**

Subtotals

482	0.31	360		2	\$ 2,054.00
465	0.53	952		6	\$ 6,162.00
482	0.07	0		1	\$ 1,027.00
				9	
481	0.4	427		3	\$ 3,081.00
481	0.343	129		1	\$ 1,027.00
462	0.53	34		1	\$ 1,027.00
481	0.3	45		1	\$ 1,027.00
283	0.16	78		1	\$ 1,027.00
483	0.29	788		5	\$ 5,135.00
280	0.34	179		1	\$ 1,027.00
280	0.34	461		3	\$ 3,081.00
480	0.1	200		1	\$ 1,027.00
480	0.1	312		2	\$ 2,054.00
483	0.1	334		2	\$ 2,054.00
220	0.26	354		2	\$ 2,054.00
283	0.26	71		1	\$ 1,027.00
				0	24

West Market - Between Church St. and Linden Ave.

41 Methodist Church of Red Hook	52 W. Market St.	10-357737
42 Dominy, Michele	51 W. Market St.	06-374762
43 Morgan, Kate	53 W. Market St.	06-367763
44 Pelosi, John	54 W. Market St.	10-353746
45 Agrest, Sara	56 W. Market St.	10-348748
46 Steerman, James	57 W. Market St.	06-361767
47 Cirincion, John and Cubba	58 W. Market St.	06-342750
48 Weir, David	59 W. Market St.	06-351772
49 Acker, Charles	60 W. Market St.	06-334754

Subtotals

East Market - Between Broadway and Elizabeth St.

50 Baright Realty	1-7 E. Market St.	10-444720
51 Scism LLc	2 E. Market St.	10-440706
Scism LLc	3 E. Market St.	10-440706
Scism LLc	3 AUC E. Market St.	10-440706
Scism LLc	10 E. Market St.	10-440706
52 Baright Realty	15-21 E. Market St.	10-459722 & 10-45
53 Baright Realty	9 E. Market St.	10-450722
54 Baright Realty	16 E. Market St.	10-450702
55 Rifenberg, Mrs. Vernon S.	20 E. Market St.	10-455704
56 Lown, Donna	22 E. Market St.	10-460703
57 Lueck, Michael -Charlie O's Bar and Grill	23 E. Market St.	10-466723
58 Dockstader Properties LLC	24 E. Market St.	10-464702

Subtotals

620	0.62	285		2	\$	2,054.00
210	0.31	42	1		\$	1,027.00
210	0.1	44	1		\$	1,027.00
210	0.1	63	1		\$	1,027.00
210	0.237	0	1		\$	1,027.00
210	0.31	239	1		\$	1,027.00
210	0.284	229	1		\$	1,027.00
280	0.674	130		1	\$	1,027.00
210	0.39	151	1		\$	1,027.00
			7	3		
481	0.11	1000		7	\$	7,189.00
482	0.516	160		1	\$	1,027.00
482	0.516	49		1	\$	1,027.00
482	0.516	1301		9	\$	9,243.00
482	0.516	207		1	\$	1,027.00
482	0.152	822		5	\$	5,135.00
482	0.11	736		5	\$	5,135.00
457	0.18	96		1	\$	1,027.00
210	0.1	16	1		\$	1,027.00
210	0.13	60	1		\$	1,027.00
482	0.25	824		5	\$	5,135.00
283	0.14	83		1	\$	1,027.00
			2	36		

East Market - Between Elizabeth St. and Graves St.

59 Lueck, Michael	25 E. Market St.	10-470720
60 Chan, Chau Ping	28 E. Market St.	10-472702
61 Henke, Edwin -Henke Insurance Agency	29 E. Market St.	10-478721
62 Blue Lake House, LLC	30 E. Market St.	10-477701
63 Howe, Bruce	31 E. Market St.	10-482721
64 Ripley, Scott	32 E. Market St.	10-482699
65 Reetz, Theresa	33 E. Market St.	10-485722
66 Coon, Arvine Jr.	34 E. Market St.	10-485691
67 35 East Market Street LLC	35 E. Market St.	10-490719
68 Meyer, Nancy J.	36 E. Market St.	10-491689
69 Friberg, Karl	37 E. Market St.	10-499714
69-1 Ozon LLC	6-8 Graves St.	10-492727
	Subtotals	

East Market - Between Graves St. and Thompson St.

70 Benson, Alice	38 E. Market St.	10-498689
71 Lekstrom, Arvid	39 E. Market St.	11-508722
72 Borenstine, David	40 E. Market St.	11-506690
73 Castle, Alison	42 E. Market St.	11-512689
74 Baright Realty	43 E. Market St.	11-523727
75 Dut. Co. Comm. Action Agency	44 E. Market St.	11-520689
76 Jack DiPietro	45-47 E. Market St.	11-526712
77 Reilingh, Maarten	48 E. Market St.	11-530695
78 Jui-hung, Ou-Yang	49 E. Market St.	11-532711
79 Ozon LLC	50 E. Market St.	11-535694
80 Perazzo, Albino	51 E. Market St.	11-538711
81 Kudla, Phillip	52 E. Market St.	11-544688
	Subtotals	

482	0.07	31		1	\$	1,027.00
421	0.16	332		2	\$	2,054.00
283	0.09	66		1	\$	1,027.00
210	0.14	212	1	0	\$	1,027.00
210	0.11	125	1	0	\$	1,027.00
283	0.14	85		1	\$	1,027.00
210	0.18	223	1		\$	1,027.00
210	0.362	164	1		\$	1,027.00
283	0.16	31		1	\$	1,027.00
210	0.355	19	1		\$	1,027.00
210	0.12	101	1		\$	1,027.00
220	0.06	100		1	\$	1,027.00
			6	7		
411	0.58	234		2	\$	2,054.00
210	0.31	32	1		\$	1,027.00
210	0.42	143	1		\$	1,027.00
210	0.38	70	1		\$	1,027.00
230	1.427	613		4	\$	4,108.00
230	0.672	259		2	\$	2,054.00
220	0.154	164		1	\$	1,027.00
210	0.14	49	1		\$	1,027.00
210	0.13	71	1		\$	1,027.00
280	0.14	166		1	\$	1,027.00
220	0.23	83		1	\$	1,027.00
220	0.39	34		1	\$	1,027.00
			5	12		

East Market - After Thompson St.

82 Urbin, Lori	53 E. Market St.	11-546711
83 Fier, Jennifer	56 E. Market St.	11-553669
84 Borenstine, David	57 E. Market St.	11-553715
85 Borenstine, David	59-61 E. Market St.	11-557709
86 Stehing, Christopher	60 E. Market St.	11-567659
87 Watertight Plumbing & Heating	62 E. Market St.	11-567686
88 Borenstine, David	63 E. Market St.	11-570707
89 Zitz, Vincent	64-66 E. Market St.	11-579660
90 Red Hook Community Center	59 Fisk St.	11-598636
	Subtotals	

South Broadway - Between Market and Prince St.

91 Matwey, Michael - Tobaco Lane	7484 S. Broadway	10-442688
Baright Realty	3 S. Broadway	
92 Mid-Valley Oil Company Inc - Extra-Mart	2 W. Market St.	10-419715
93 Eckelman, Stephen and Mary Anne	7485 S. Broadway	10-402710
94 Kittner & Fredricks	7481-7483 S. Broadway	10-416707
95 Kittner and Fredricks	7483 S. Broadway	10-416707
96 Cheng, Kan Kuen	7479 S. Broadway	10-413702
97 Tinman & the Scarecrow LLC	7478 S. Broadway	10-431694
98 Mid Hudson Valley Federal Credit Union	7472 S. Broadway	10-433677
	Subtotals	

South Broadway - Between Prince St. and Fraleigh St.

99 Village of Red Hook, Village Hall	7467 S. Broadway	10-404688
100 7466 S. Broadway, LLC	7466 S. Broadway	10-422678
101 ECP Holdings LLC	7461 S. Broadway	10-392686
102 Roasted Garlic LLC	7460 S. Broadway	10-421656
103 C & C Realty of Red Hook LLC	7452 S. Broadway	10-408663
104 Eccles, Thomas and Jennifer	7449 S. Broadway	10-385673
	Subtotals	

South Broadway - Between Fraleigh St. and Garden St.

105 Red Hook Public Library	7444 S. Broadway	10-404652
106 Phillips, Velma	7441 S. Broadway	10-385658
107 Saifer, Steffen	7437 S. Broadway	10-378656
108 Walsh, Jeff and Melkorka Kjarval	7436 S. Broadway	10-398640
109 Stokum, Jeff and Jenny	7435 S. Broadway	10-371656
110 Diamond, Jane K.	7432 S. Broadway	10-388636
111 Odom, Ronald	7431 S. Broadway	10-368650
112 Christ Church	7423-7429 S. Broadway	10-358639
	Subtotals	

210	0.309	172	1		\$ 1,027.00
210	2.1	217	1		\$ 1,027.00
220	0.201	372		2	\$ 2,054.00
425	0.17	634		4	\$ 4,108.00
210	1	150	1		\$ 1,027.00
283	0.25	42		1	\$ 1,027.00
230	0.212	191		1	\$ 1,027.00
280	0.96	300		2	\$ 2,054.00
612	1.58	41		1	\$ 1,027.00
			3	11	
482	0.67	824		5	\$ 5,135.00
		58		1	\$ 1,027.00
486	0.386	185		1	\$ 1,027.00
411	0.28	251		2	\$ 2,054.00
482	0.23	27		1	\$ 1,027.00
482	0.23	168		1	\$ 1,027.00
421	0.13	1034		7	\$ 7,189.00
452	0.23	57		1	\$ 1,027.00
482	1.011	420		3	\$ 3,081.00
			0	22	
652	0	720		5	\$ 5,135.00
483	0.28	518		3	\$ 3,081.00
471	0.89	160		1	\$ 1,027.00
418	1.618	549		4	\$ 4,108.00
464	0.35	244		2	\$ 2,054.00
210	0.785	377	1		\$ 1,027.00
			1	15	
611	0.49	79		1	\$ 1,027.00
418	0.13	277		2	\$ 2,054.00
220	0.13	273		2	\$ 2,054.00
210	0.63	18	1		\$ 1,027.00
210	0.36	155	1		\$ 1,027.00
210	0.23	91	1		\$ 1,027.00
230	0.36	184		1	\$ 1,027.00
620	1.6	212		1	\$ 1,027.00
			3	7	

South Broadway - Between Garden St. and Laura Lane/Morgan Dr.

113 St. Pauls Lutheran Church (Church)	7404-7426 S. Broadway	10-395562
114 St. Pauls Lutheran Church (Rectory)	7420 S. Broadway	10-395562-0001
115 Church of St. Christopher	2 Garden St.	10-343617
116 Church of St. Christopher	7411 S. Broadway	10-334606
117 Gianakis, Robert	7407 S. Broadway	10-330601
118 ARKKC Holdings, LLC	7405 S. Broadway	10-328593
119 Red Hook Central School	7401 S. Broadway	10-317588
120 Wilms, Martin & Elizabeth Trustee	7396-7398 S. Broadway	10-338560
121 Red Hook Soap Factory, LLC	7392 S. Broadway	10-324546
122 St. Paul's School	7412 S. Broadway	10-376620
	Subtotals	

Knollwood Commons

123 Knollwood Commons At Red Hook	27-33 Firehouse Lane	10-348506
124 Knollwood Commons At Red Hook	35-41 Firehouse Lane	10-365508
125 Knollwood Commons At Red Hook	11 Reilly Lane	10-348532
126 Knollwood Commons At Red Hook	12 Reilly Lane	10-348532
127 Knollwood Commons At Red Hook	13 Reilly Lane	10-348532
128 Knollwood Commons At Red Hook	14 Reilly Lane	10-348532
129 Knollwood Commons At Red Hook	15 Reilly Lane	10-348532
130 Knollwood Commons At Red Hook	16 Reilly Lane	10-348532
131 Knollwood Commons At Red Hook	17 Reilly Lane	10-348532
132 Knollwood Commons At Red Hook	18 Reilly Lane	10-348532
133 Knollwood Commons At Red Hook	22 Reilly Lane	10-348532
134 Knollwood Commons At Red Hook	23 Reilly Lane	10-348532
135 Knollwood Commons At Red Hook	24 Reilly Lane	10-348532
136 Knollwood Commons At Red Hook	25 Reilly Lane	10-348532
137 Knollwood Commons At Red Hook	26 Reilly Lane	10-348532
138 Knollwood Commons At Red Hook	27 Reilly Lane	10-348532
139 Knollwood Commons At Red Hook	28 Reilly Lane	10-348532
140 Knollwood Commons At Red Hook	Water Meter ID 74090	10-348532
141 Knollwood Commons At Red Hook	32 Reilly Lane	10-348532
142 Knollwood Commons At Red Hook	34 Reilly Lane	10-348532
143 Knollwood Commons At Red Hook	36 Reilly Lane	10-348532
144 Knollwood Commons At Red Hook	38 Reilly Lane	10-348532
	Subtotals	

620	11.48	199		1	\$	1,027.00
210		210	1		\$	1,027.00
620	1.3	234		2	\$	2,054.00
210	0.48	150	1		\$	1,027.00
210	0.4	150	1		\$	1,027.00
210	0.396	10	1		\$	1,027.00
465	0.794	241		1	\$	1,027.00
483	0.57	244		2	\$	2,054.00
485	1.27	104		1	\$	1,027.00
620	0.64	231		2	\$	2,054.00
			4	9		
480	0.488	150		1	\$	1,027.00
480	0.437	150		1	\$	1,027.00
411	4.09	128		1	\$	1,027.00
411	4.09	86		1	\$	1,027.00
411	4.09	109		1	\$	1,027.00
411	4.09	129		1	\$	1,027.00
411	4.09	124		1	\$	1,027.00
411	4.09	93		1	\$	1,027.00
411	4.09	129		1	\$	1,027.00
411	4.09	64		1	\$	1,027.00
411	4.09	81		1	\$	1,027.00
411	4.09	41		1	\$	1,027.00
411	4.09	108		1	\$	1,027.00
411	4.09	131		1	\$	1,027.00
411	4.09	78		1	\$	1,027.00
411	4.09	172		1	\$	1,027.00
411	4.09	64		1	\$	1,027.00
411	4.09	170		1	\$	1,027.00
411	4.09	72		1	\$	1,027.00
411	4.09	122		1	\$	1,027.00
411	4.09	191		1	\$	1,027.00
411	4.09	150		1	\$	1,027.00
			0	22		

BU - 2 Undeveloped Properties

10% of 1 EDU

1 Eckelman, Stephen and Marya	S Broadway Rear	10-410710
2 Staff, Christopher	N Broadway	06-436822
3 Key Bank	W. Market St.	10-407720
4 Methodist Church	Church Street	10-373736
5 Village of Red Hook	7475 S. Broadway	10-403700
6 St. Pauls Lutheran Church & Cemetary	7412 S. Broadway	10-341571
7 St. Pauls Lutheran Church & Cemetary	7412 S. Broadway	10-348581
8 St. Pauls Lutheran Church & Cemetary	Firehouse Lane	10-388518
9 Lueck, Michael	E. Market St	10-474721
11 Keil Reality LLC	7536 N. Broadway	
		Subtotal

BU - 3 Red Hook Commons Phase 1 and 2

\$6000 per year/Agreement

1 Red Hook Commons Apartments	11-15 Laura Lane	10-250565
2 Red Hook Commons Apartments	Laura Lane	10-263580
		Subtotal

BU - 4 Red Hook Commons Phase 3 Develop O&M Only

1 Morgan's Way LLC - Trustco Bank	4 Morgans Way	10-312583
		Subtotal

BU - 5 Red Hook Commons Phase 3 Undevelop No Charge

1 Kearney Development	Laura Lane/Morgan Dr	10-273554
2 Kearney Development	Laura Lane/Morgan Dr	10-302574
3 Kearney Development	Laura Lane/Morgan Dr	10-287598
4 Kearney Development	Laura Lane/Morgan Dr	10-285569
5 Kearney Development	Laura Lane/Morgan Dr	10-262591
6 Kearney Development	Laura Lane/Morgan Dr	10-273583
		Subtotal

BU - 6 WWTP

No Charge

1 Kearney Development (WWTP)	Laura Lane/Morgan Dr	09-205603
		Subtotal

311	0.08	0		0.1	\$ 102.70
311	0.574	150		0.1	\$ 102.70
330	0.25	150		0.1	\$ 102.70
311	0.1	0		0.1	\$ 102.70
438	0.42	0		0.1	\$ 102.70
311	0.48	150		0.1	\$ 102.70
311	0.48	150		0.1	\$ 102.70
311	1.25	150		0.1	\$ 102.70
311	0.16	0		0.1	\$ 102.70
					\$ -
			0	0.9	
311	2.55	5000		12	\$ 6,000.00
411	2.42	5000		12	\$ 6,000.00
			0	24	
462	0.44	100		1	\$ 311.00
			0	1	
311	0.24	150		0	\$ -
311	0.23	150		0	\$ -
311	0.33	150		0	\$ -
311	0.33	150		0	\$ -
311	0.33	150		0	\$ -
311	0.31	150		0	\$ -
			0	0	
311	12.4	0		0	0
			0	0	
		47,795	35	258.9	\$ 288,471.30

Totals

EDU Totals	293.9
Flow Totals, gpd	47,795
Revenue Totals	\$ 288,471.30

Appendix B
Project Cost

EXHIBIT C

ESTIMATED PROJECT COSTS

**CWSRF Project No.: C3-5387-01-00
 Recipient: Village of Red Hook
 County: Dutchess**

ESTIMATED PROJECT COSTS

<u>Engineering - CT Male Associates, D.P.C., 01/16/17 (Including Amendments 1-4) (Lump Sum)</u>	
Preliminary Engineering	\$ 10,000.00
Planning	20,000.00
Design	440,000.00
Easement Related Work	78,025.50
<u>Local Counsel - McCabe & Mack LLP, 03/02/17 (Hourly)</u>	10,000.00
<u>Other Costs</u>	
Special Counsel - Rodenhausen Chale LLP, -03/24/17 (Not to Exceed)	82,000.00
Land Acquisition	21,255.00
Accountant - Michele Zagorski, 02/12/17 (Not to Exceed)	12,000.00
Miscellaneous (Estimate)	5,000.00
<u>DISBURSEMENT SUBJECT TO PENDING APPROVAL (S)</u>	
<u>Construction - TBD (Pending Contract, P&S, MWBE, Title) (1)</u>	
General (Estimate)	6,797,145.00
<u>Construction - TBD (Pending Contract, P&S, MWBE, Title) (1)</u>	
Electrical (Estimate)	441,947.00
<u>Engineering - CT Male Associates, D.P.C. 01/16/16 (Lump Sum)</u>	
Construction (Pending Title and P&S Approval)	100,000.00
Resident Project Representative (Pending Title and P&S Approval)	200,000.00
<u>Bond Counsel - Hawkins Delafield & Wood LLP (Pending Agreement)</u>	15,000.00
<u>Other Costs</u>	
Single Audit (Pending Agreement)	23,000.00
Special Counsel - Rodenhausen Chale LLP (Pending amendment)	16,745.00
<u>Contingency</u>	175,000.50
<u>TOTAL OF PROJECT COSTS</u>	\$ 8,447,118.00
Less: 2017 WIIA Grant disbursed	\$ (462,500.00)
Less: Principal Payments	\$ (11,000.00)
Less: USDA Rural Development Grant	\$ <u>(1,200,000.00)</u>
<u>TOTAL PROJECT COSTS FUNDED</u>	\$ <u>6,773,618.00</u>
<u>2017 WIIA GRANT - CARRY-OVER ⁽²⁾</u>	\$ 462,500.00
<u>SRF SHORT-TERM INTEREST-FREE HARDSHIP FINANCING</u>	\$ 6,311,118.00

(1) EFC may require other contract-specific documents that may need to be submitted prior to the disbursement of construction funds. Please refer to the EFC plan and specification approval/eligibility letter, once available, or contact the assigned EFC engineer for detailed information. After further review of the submittals, we may require additional information, but will assist you in identifying these items.

(2) Maximum 2017 WIIA Grant not to exceed the lesser of 25% of eligible project costs or \$925,000.

(3) This CWSRF financing will pre-finance a USDA Loan in the amount of \$2,775,000.

Appendix C
Operations and Maintenance Cost

Project Name: Red Hook Sewer District

Project#: 14.4156

Date: 4/15/2021

Prepared By: K. Serra

C.T. MALE ASSOCIATES, D.P.C.



Conceptual Cost Opinion Aerotor WWTP O&M							
ID	Description	Quantity	Units	Unit Cost		Total Unit Cost	Subtotals
1	Electric						
a	Influent Pumps	8212.5	kwh	\$0.14		\$1,149.75	
b	Blowers	54750	kwh	\$0.14		\$7,665.00	
c	Filters	12000	kwh	\$0.14		\$1,680.00	
d	UV Tanks	18250	kwh	\$0.14		\$2,555.00	
e	Buildings	3650	kwh	\$0.14		\$511.00	
							\$13,560.75
2	Labor						
a	Contract Operator	730	hr	\$30.00		\$21,900.00	
b	Admin	1	EA	\$2,000.00		\$2,000.00	
							\$23,900.00
3	Septic Tank & Sludge Removal						
a	Septic Tank Pumping (125 tanks @8-12 yr)	13	EA	\$300.00		\$3,900.00	
b	Grease Traps (15 at 4yrs)	60	EA	\$300.00		\$18,000.00	
c	WWTP Sludge Disposal	1	EA	\$5,000.00		\$5,000.00	
							\$26,900.00
4	Other						
a	Lab	1	LS	\$3,000.00		\$3,000.00	
b	Supplies	1	LS	\$5,000.00		\$5,000.00	
c	Maintenance	1	LS	\$5,000.00		\$5,000.00	
d	Phone	1	LS	\$720.00		\$720.00	
e	Short-lived Assets Replacement	1	LS	\$13,400.00		\$13,400.00	
							\$27,120.00
	Cost Summary						
						2021 Dollars Total	\$91,480.75