



OHIO AUDITOR OF STATE
KEITH FABER



**MAHONING VALLEY SANITARY DISTRICT
TRUMBULL COUNTY
DECEMBER 31, 2019**

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**INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER
FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS
REQUIRED BY GOVERNMENT AUDITING STANDARDS**

Mahoning Valley Sanitary District
Trumbull County
P.O. Box 4119
Youngstown, Ohio 44515

To the Board of Directors:

We have audited, in accordance with auditing standards generally accepted in the United States and the Comptroller General of the United States' *Government Auditing Standards*, the financial statements of the Mahoning Valley Sanitary District, Trumbull County (the District) as of and for the year ended December 31, 2019, and the related notes to the financial statements, which collectively comprise the District's basic financial statements and have issued our report thereon dated June 23, 2020, wherein we referred to the financial impact of COVID-19 and the ensuing emergency measures that will impact subsequent periods.

Internal Control Over Financial Reporting

As part of our financial statement audit, we considered the District's internal control over financial reporting (internal control) to determine the audit procedures appropriate in the circumstances to the extent necessary to support our opinion on the financial statements, but not to the extent necessary to opine on the effectiveness of the District's internal control. Accordingly, we have not opined on it.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, when performing their assigned functions, to prevent, or detect and timely correct misstatements. *A material weakness* is a deficiency, or combination of internal control deficiencies resulting in a reasonable possibility that internal control will not prevent or detect and timely correct a material misstatement of the District's financial statements. *A significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all internal control deficiencies that might be material weaknesses or significant deficiencies. Given these limitations, we did not identify any deficiencies in internal control that we consider material weaknesses. However, unidentified material weaknesses may exist.

Compliance and Other Matters

As part of reasonably assuring whether the District's financial statements are free of material misstatement, we tested its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could directly and materially affect the determination of financial statement amounts. However, opining on compliance with those provisions was not an objective of our audit and accordingly, we do not express an opinion. The results of our tests disclosed no instances of noncompliance or other matters we must report under *Government Auditing Standards*.

Purpose of this Report

This report only describes the scope of our internal control and compliance testing and our testing results, and does not opine on the effectiveness of the District's internal control or on compliance. This report is an integral part of an audit performed under *Government Auditing Standards* in considering the District's internal control and compliance. Accordingly, this report is not suitable for any other purpose.



Keith Faber
Auditor of State

Columbus, Ohio

June 23, 2020

Mahoning Valley Sanitary District, Ohio

**For the Year Ended December 31, 2019
Comprehensive Annual Financial Report**



Our Mission Statement

The Mahoning Valley Sanitary District and its employees are committed to preserving the public health and the natural environment while providing a safe and reliable supply of potable water. The employees of the Mahoning Valley Sanitary District are well trained in order to serve the Mahoning Valley community in the most efficient, courteous way possible in providing quality service.

Rhonda Lucivjansky, CPA, MBA
Secretary/Treasurer

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Mahoning Valley Sanitary District, Ohio

Comprehensive Annual Financial Report

For the Year Ended December 31, 2019

Issued by:

Department of Finance and Administration

Rhonda Lucivjansky, CPA, MBA
Secretary/Treasurer

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Introductory Section

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Mahoning Valley Sanitary District, Ohio
Comprehensive Annual Financial Report
For the Year Ended December 31, 2019
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STATE OF OHIO
THE MAHONING VALLEY SANITARY DISTRICT

June 23, 2020

Member Cities of Youngstown and Niles,
Village of McDonald and Members of the Board of Directors:

We are pleased to submit to you the Comprehensive Annual Financial Report of the Mahoning Valley Sanitary District (the District) for the year ended December 31, 2019. This is the second year that the District has submitted its financial report within the broader framework of a comprehensive annual financial report (CAFR). The CAFR format provides the District with a better way to communicate its financial position with the public. In a CAFR, financial information is put within a larger context that provides the reader with the opportunity to understand how the District functions and the environment in which it operates. The District has changed its accounting year from a fiscal year basis to a calendar year basis.

Ohio Revised Code Section 117.38 requires that the District, as a public office, file a financial report for each year. The District's financial report conforms to generally accepted accounting principles (GAAP). The law requires that a financial report of this type be filed with the Auditor of State within 150 days after the close of the year. At the time the report is filed with Auditor of State, the District's Chief Fiscal Officer is required to publish a notice in the newspaper that the report has been completed and is available for public inspection.

The District's management assumes full responsibility for the contents of this report. The financial statements in the report are the work of District management, not the work of independent auditors. Management is responsible for maintaining appropriate internal control over financial reporting and for complying with applicable finance-related laws, regulations and provisions of grants and contracts.

To compile the information for the financial statements in conformity with GAAP, the District has a comprehensive framework of internal control in place. Because the cost of internal control should not outweigh the benefit, the framework has been designed to provide reasonable—not absolute—assurance that the financial statements are free from material misstatement.

Ohio law requires independent audits to be performed on all financial operations of the District either by the Ohio Auditor of State or an independent public accounting firm, if permitted by the Auditor of State. The Auditor of State has rendered an opinion on the District's financial statements, which includes an unmodified ("clean") opinion for the year ended December 31, 2019. The Independent Auditor's Report on the basic financial statements is included in the financial section of this report.

Immediately following the independent auditor's report is a narrative introduction, overview and analysis of the basic financial statements, entitled Management's Discussion & Analysis (MD&A). This letter of transmittal is meant to complement the MD&A, and is best read in conjunction with it.

Profile of the District

The Mahoning Valley Sanitary District is a political subdivision of the State of Ohio established in 1926 under the authority of the Sanitary District Act of Ohio (Revised Code Section 6115.01 to 6115.99) for the purpose of providing a public water supply to the member cities of Youngstown and Niles and by special contract to the Village of McDonald beginning in 1932. The members serve surrounding areas such as Girard, Canfield, Mineral Ridge, Lordstown and portions of 10 other townships to approximately 225,000 residents.

The organization consists of a Court of Jurisdiction composed of one Common Pleas Judge from Mahoning County and one from Trumbull County and a Board of Directors appointed by the member cities to oversee the District. The two judges are the Honorable Lou A. D’Apolito and the Honorable Ronald J. Rice, respectively. The District’s Board of Directors consists of four members, two from the City of Youngstown and two from the City of Niles. Richard K. Hale, Niles City Council appointment served as President of the Board for the first part of 2019 and James A. Gibbs, the City of Youngstown mayoral appointment served as President of the Board for the second half of 2019. Other Board members included: Vernard Richberg, the Youngstown City Council appointment and Dr. Michael Neopolitan, as the City of Niles mayoral appointment.



Richard K. Hale



Dr. Michael Neopolitan



Vernard Richberg



James A. Gibbs

At the end of the year, the District staff consisted of 54 employees; 1 part time; 11 salaried employees; 42 hourly and/or non-supervisory personnel which are represented by the American Federation of State, County and Municipal Employees Local 1649.

Employees with Ohio EPA water licenses:

- 1 Certified Class IV (Water Supply Operators)
- 11 Certified Class III (Water Supply Operators)
- 10 Certified Class I (Water Supply Operators)
- 1 OIT (Water Supply Operator in Training)

The Mahoning Valley Sanitary District and its employees are committed to preserving the public health and the natural environment while providing a safe and reliable supply of potable water. The employees of the Mahoning Valley Sanitary District are well trained in order to serve the Mahoning Valley community in the most efficient, courteous way possible in providing quality service.

A new Chief Engineer was hired in March of 2019 and the retired Chief Engineer returned to the District in March of 2019 to be the Ohio EPA Class IV water supply licensee for the facility. The Union and the Board of Directors came to agreement on the collective bargaining agreement in August 2016 and this agreement was in place through June 30, 2019. The Union and the District negotiated a new collective bargaining unit agreement which is in effect July 1, 2019 – December 31, 2021.

District Facilities

The Mahoning Valley Sanitary District owns 5,570 acres of property. Meander Reservoir is seven miles long with 40 miles of shoreline and covers 2,167 acres. The property is enclosed by 35 miles of fence and the land forested with one million evergreen trees.

The dam and spillway, water intake and treatment works are located in Trumbull County, west of Mineral Ridge. Treatment facilities consist of coarse screening, coagulation, lime settling aids softening, mechanical settling, rapid sand filtration, taste and odor control, fluoridation, and chlorine and ammonia disinfection.

Electric motor-driven centrifugal pumps deliver water to Youngstown and Niles. Since 1944, the District, acting as agent for the two member cities, has supplied water directly from the plant to the Village of McDonald through a village owned pipeline.

Twin 36" District mains, each five miles long, carry water to the thirty million gallon District distributing reservoir in Youngstown and twin 42" feeder mains continue to the center of the city. A 2.8 mile 48" water main was laid in 1973 from the District plant to the City of Youngstown's Webb Road Pumping Station. Two 20" mains and a 24" main supply Niles and a 1.5 million gallon District owned standpipe. Each city owns and operates its own distribution system. The Village of McDonald is served off the Youngstown transmission lines, with one connection at the water plant and the other off County Line Road.

Berlin facilities include a water intake and pumping station located at Berlin Dam and a nine mile pipeline to carry the water to upper Meander Creek.

The cost of duplicating present District Works at today's prices would exceed \$215 million. An insurance appraisal report on the buildings, fixtures, machinery and equipment was completed by Industrial Appraisal Company in November 2010.

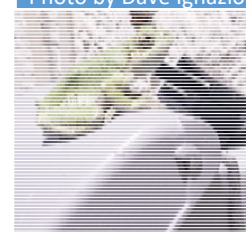
While the District serves as an unofficial refuge, the employees have opportunity to capture the beauty of the District and sometimes an opportunity to save our wildlife. (Pictured below)

HeadHouse at Sunrise
Photo by Carolyn Hrusovsky



Chief of Security, Ralph Miller and Director Dr. Neopolitan rescue an eagle that fell from the nest.

Filter Gallery
Photo by Dave Ignazio



A beautiful walk at the District! Photo by Carolyn Hrusovsky

Water Supply

Water supply for the District is obtained from Meander Creek Reservoir. Originally, at spillway elevation 905.00 feet above sea level, the reservoir had a capacity of ten billion gallons. Addition of a rubber dam to the original spillway now allows the District to store 11 billion gallons at spillway elevation 906.5 feet above sea level. The safe yield of Meander Creek Reservoir during drought periods is established at thirty-million gallons daily.

Berlin Facilities

An intake tower and pump station owned by the District is located at Berlin Reservoir to augment Meander Reservoir only if necessary. Water is obtained through a contract with the United States Army Corps of Engineers, who own Berlin Reservoir. The following table illustrates the District's historical water usage from Berlin Reservoir.

Year	MGD Reserved		Million	%	% of
	1 st Half	2 nd Half	Gallons Use	Allocation Use	Total Raw Water Use
1964-65	13	5	514.05	16	4
1965-66	5	8	1,111.44	47	9
1966-67	8	10	2,372.53	72	17
1967-68	10	13	2,230.17	53	15
1968-69	13	14	1,811.43	37	13
1969-70	14	15	2,582.35	49	17
1970-71	15	15	0.83	0	0
1971-72	15	15	2,736.75	50	20
1972-73	15	15	0.00	0	0
1973-74	15	15	0.00	0	0
1974-75	15	15	0.00	0	0
1975-76	15	15	310.88	6	2
1976-77	15	15	160.58	3	1
1977-78	15	15	0.00	0	0
1978-79	15	15	0.00	0	0
1979-80	15	15	0.00	0	0
1980-81	10	10	0.00	0	0
1981-82	7	7	203.43	7	1
1982-83	8	8	1,255.14	46	10
1983-84	5	5	728.04	31	6
1984-85	6	6	0.00	0	0
1985-86	6	6	114.00	5	1
1986-87	6	6	0.00	0	0
1987-88	6	6	0.00	0	0
1988-89	6	7	931.79	39	7
1989-90	7	5	0.00	0	0
1990-91	5	2	0.00	0	0
1991-92	2	3	803.92	88	7
1992-93	3	2	0.00	0	0
1993-94	2	2	0.00	0	0
1994-95	2	2	0.00	0	0
1995-96	2	2	0.00	0	0
1996-97	2	2	0.00	0	0
1997-98	2	2	0.00	0	0
1998-99	2	2	0.00	0	0
1999-00	2	2	0.00	0	0
2000-01	2	2	0.00	0	0
2001-02	2	2	0.00	0	0
2002-2019	0	0	0.00	0	0

Precipitation

Since 1927, a weather station measuring temperature and precipitation has been maintained at the District Works at Mineral Ridge. The Youngstown Warren Regional Airport annual average rainfall is 38.91. Maximum rainfall was 54.01 inches in the year 2011 and the minimum is 23.7 inches in 1963. Rainfall at the District amounted to 46 inches this calendar year. Maximum rainfall at the District was 48.9 inches in the 2003-2004 fiscal year, and the minimum of 23.5 inches was in the 1962-1963 fiscal year.

Reservoir Storage

At the end of the year, Tuesday, December 31, 2019 the reservoir elevation was 906.2 feet above sea level. This elevation corresponds to 11.0 billion gallons in storage.

The record low to date was 888.80 feet above sea level (FSL) and occurred on February 15, 1954. The record high to date was 909.25 on January 22, 1959.

Raw Water Use

Total water withdrawn from Meander Creek Reservoir during the year was 8,902.262 million gallons, or 24.390 million gallons daily.

Finished Water

Total water distributed from the Meander Water Treatment Plant during the year was 8,671.904 million gallons, or 23.759 million gallons daily. Total revenues from the sale of water were \$18,451,123.

Water Quality and Treatment

The District Works continued to produce a clear, sparkling, palatable water of uniform low hardness and bacteriological free quality. Chemicals were purchased under contracts executed with the most responsive and responsible bidder.

Raw Water Quality

Meander Creek Reservoir is a relatively pure water supply; however, wastes from homes, commercial and industrial establishments, and strip mines drainage are contributing pollution. Oil and gas lines along with three major highways that cross the reservoir are potential hazards.

Eighteen sampling points in the watershed were established by the District and since 1964 they have made nine separate chemical and bacteriological analyses monthly at each point. In addition to these routine tests, the District also performs a more comprehensive analysis of the raw water.

The cost of chemical treatment is directly impacted by raw water quality and chemical purchase costs. While purchase costs are controlled by soliciting bids and awarding contracts based on the most responsive and responsible bids, raw water quality is contingent on various weather conditions including rainfall and temperature.

Chemical Costs

The total cost of chemicals purchased during the year was \$2,224,594. The cost of chemicals used was: beginning inventory of \$115,183 plus purchases of \$2,224,594 less ending inventory of \$167,934 equals \$2,171,843.

The actual cost of chemicals used for water treatment during the year was \$240.46 per million gallons based on a raw volume of water of 9,802.26 million gallons consisting of the following:

Chemical Name	Cost per Million Gallons
Lime	\$47.72
Chlorine	\$9.86
Fluoride	\$5.37
Ammonia - NH ₃	\$2.59
KMnO ₄	\$5.98
Carbon	\$32.05
CO ₂	\$0.00 *
ACH	\$106.46
Anionic-Polymer	\$19.08
Poly-Amine	\$3.05
Phosphate	\$7.98

* Carbon dioxide was purchased at the amount of \$3,164 but was not used to treat the water.

Provided below is the chemical and bacterial analysis of the raw and finished water for the year 2018-2019:

Raw Water Analysis

Month	Turbidity (NTU)	Temp (°C)	pH S.U.	Total Alkalinity (mg/l)	Non Carb Hardness (mg/l)	Total Hardness (mg/l)	TOC (mg/l)	Fluoride (mg/l)	Precipitation (inches)
January	5.44	3.3	8.11	86	33	119	6.7	0.20	2.95
February	9.57	2.3	7.78	78	37	116	6.7	0.18	3.14
March	9.04	3.4	7.82	67	37	105	6.0	0.17	3.62
April	8.85	9.3	7.78	62	37	99	5.8	0.16	3.79
May	6.27	15.1	7.50	64	36	101	5.2	0.16	3.89
June	6.78	18.8	7.44	69	30	99	5.6	0.18	7.49
July	6.94	20.6	7.41	73	21	94	7.0	0.19	4.40
August	8.47	22.2	7.45	79	17	96	7.0	0.19	4.32
September	5.41	2.7	7.51	82	16	98	7.0	0.20	3.29
October	4.54	18.0	7.59	83	18	101	6.3	0.20	2.83
November	5.88	8.2	7.84	81	21	102	6.2	0.19	2.80
December	3.95	3.8	8.00	82	33	118	6.1	0.20	3.48
Total	81.14	127.7	92.23	906	336	1,248	75.3	2.22	46.00
Average	6.76	10.6	7.7	76	28	104	6.3	0.19	3.83
Maximum	9.57	22.2	8.1	86	37	119	7.0	0.20	7.49
Minimum	3.95	2.3	7.4	62	16	94	5.2	0.16	2.80

System Analysis

Month	Turbidity (NTU)	pH S.U.	Total Alkalinity (mg/l)	Non Carb Hardness (mg/l)	Total Hardness (mg/l)	Fluoride (mg/l)	Chlorine Combined (mg/l)	Chlorine Free (mg/l)
January	0.10	10.05	47	41	88	0.91	1.90	0.04
February	0.09	10.10	44	45	88	0.93	1.93	0.04
March	0.08	10.21	45	45	90	0.98	1.95	0.05
April	0.07	10.36	43	45	87	0.98	1.87	0.05
May	0.07	10.20	35	43	79	0.96	1.85	0.05
June	0.09	10.03	34	39	73	1.02	1.84	0.04
July	0.08	10.06	36	31	67	1.01	1.96	0.06
August	0.08	9.74	32	29	61	0.94	1.99	0.06
September	0.07	9.93	34	28	62	1.00	2.47	0.06
October	0.07	10.01	33	29	61	0.97	2.49	0.05
November	0.07	10.23	38	29	67	0.98	1.95	0.05
December	0.12	10.20	42	33	75	0.93	2.41	0.06
Average	0.08	10.09	39	36	75	0.97	2.05	0.05
Maximum	0.12	10.36	47	45	90	1.02	2.49	0.06
Minimum	0.07	9.74	32	28	61	0.91	1.84	0.04

Finished Water Analysis

Month	Turbidity (NTU)	Temp (°C)	pH S.U.	Phenol Alkalinity (mg/l)	Total Alkalinity (mg/l)	Non Carb Hardness (mg/l)	Total Hardness (mg/l)	Calcium (mg/l)
January	0.07	5.6	10.11	22	47	42	89	23
February	0.06	4.6	10.18	24	45	45	90	24
March	0.06	5.7	10.29	26	47	46	92	26
April	0.06	10.9	10.44	27	43	45	87	27
May	0.05	14.9	10.21	19	35	44	79	23
June	0.06	17.8	10.06	17	34	39	73	21
July	0.07	19.7	10.13	18	36	31	67	20
August	0.07	21.4	9.75	12	31	29	60	18
September	0.06	21.7	10.04	17	35	27	62	19
October	0.05	19.4	10.11	17	34	27	61	18
November	0.06	13.9	10.25	22	39	29	68	19
December	0.06	9.0	10.19	22	43	33	75	21
Average	0.06	13.7	10.15	20	39	36	75	21
Maximum	0.07	21.7	10.44	27	47	46	92	27
Minimum	0.05	4.6	9.75	12	31	27	60	18

Month	Magnesium (mg/l)	Nitrate (mg/l)	TOC (mg/l)	Fluoride (mg/l)	Chlorine Combined (mg/l)	Chlorine Free (mg/l)	THM (Ug/l)	Total Coliform (/100ml)
January	8	0.270	3.6	0.95	2.00	0.04		neg
February	8	0.400	4.0	0.95	2.06	0.04	42.5	neg
March	7	0.440	3.3	0.97	2.05	0.05		neg
April	5	0.430	2.9	0.96	2.01	0.04		neg
May	5	0.290	2.8	0.96	2.00	0.05	53.7	neg
June	5	0.280	3.1	1.00	2.07	0.05		neg
July	4	AA	3.6	1.01	2.32	0.06		neg
August	4	AA	3.4	1.00	2.73	0.06	75.4	neg
September	4	AA	3.6	0.98	2.94	0.07		neg
October	4	AA	3.5	0.98	2.82	0.05		neg
November	5	0.160	3.6	0.95	2.08	0.02	44.7	neg
December	6	0.250	3.6	0.95	2.55	0.05		neg
Average	5	0.315	3.4	0.97	2.30	0.05	54.1	neg
Maximum	8	0.440	4.0	1.01	2.94	0.07	75.4	neg
Minimum	4	AA	2.8	0.95	2.00	0.02	42.5	neg

AA – Below detectable limits

During the year, the District pumped to the Member Cities and McDonald a total of 8,671.9 million gallons of water for an average of 23.76 million gallons daily. Of this total, 6,148.8 million gallons or 70.9 percent was used by Youngstown, 2,392.5 million gallons or 27.6 percent used by Niles and 130.6 million gallons or 1.5 percent by McDonald.

Cost of Water

Based on total revenue of \$18,451,123 for the sale of water in the total volume of 8,671.904 gallons to McDonald, Niles and Youngstown in 2019, the yearly average cost for treating water was \$2.1272 per thousand gallons.

Maximum Days

The maximum pumpage reached for this year was 28.532 million gallons on February 4, 2019. Maximum pumpage to Youngstown occurred on February 4, 2019 and was 19.839 million gallons. Maximum pumpage to Niles of 9.654 million gallons occurred on September 25, 2019.

Power

A total 13,578.71 KWH of power was used at the Meander Plant for lighting, plant process equipment and pumping. With the cost of power at the other auxiliary facilities added to the plant power costs, the total cost of power was \$856,838.84 and an average cost of \$96.25 per million gallons based on a plant raw water annual usage of 8,902.262 million gallons.

Water Rates

A cost of service study was conducted to establish the water rates charged by the District to the member cities to pay the costs of operating and maintaining the facilities of the District, pay debt, and finance improvement projects. The resulting schedule is then approved by the Court of Jurisdiction. The rates applied during 2019 were a continuation of rates approved for 2013-2016. The rate includes a fixed cost component of \$15,334,594 annually which is charged to the members monthly in the amount of \$1,277,883 and a variable component based on water pumped to the member cities. Currently the variable cost component is per 1,000 gallons: \$0.1405 for electricity, \$0.1536 for chemicals, and \$0.0661 for sludge.

Water Use

The tables on the following pages illustrate the historical water use per day and a monthly breakdown of water use per day for 2019:

Water Use

Year	MGD Raw	Youngstown	Niles	McDonald	Total
1932-52		286.82	73.81	4.34	364.97
1952-62		255.87	58.88	6.94	291.67
1962-63		23.70	6.68	0.82	31.20
1963-64	32.2	23.35	6.33	0.81	30.50
1964-65	33.61	23.92	6.43	0.88	31.22
1965-66	34.58	25.24	6.71	0.91	32.86
1966-67	38.47	27.97	7.35	0.91	36.23
1967-68	39.5	28.83	7.41	0.93	37.17
1968-69	39.47	29.64	7.03	0.90	37.57
1969-70	41.21	31.15	6.86	0.94	38.95
1970-71	39.34	29.91	6.64	0.92	37.47
1971-72	37.98	28.98	6.03	0.87	35.88
1972-73	40.22	30.42	6.72	0.98	38.13
1973-74	41.28	31.37	6.92	0.92	39.21
1974-75	38.31	29.14	6.12	0.91	36.17
1975-76	40.87	31.60	6.30	0.96	38.86
1976-77	42.38	32.58	6.59	1.13	40.30
1977-78	42.57	32.60	6.60	1.10	40.30
1978-79	42.99	32.83	6.56	1.09	40.48
1979-80	41.54	31.40	6.58	0.99	38.97
1980-81	37.06	28.48	6.00	0.42	34.90
1981-82	37.22	28.35	5.97	0.38	34.70
1982-83	34.36	27.19	6.11	0.40	33.70
1983-84	35.13	27.36	6.51	0.43	37.30
1984-85	36.27	27.65	6.74	0.42	34.80
1985-86	35.54	27.17	7.14	0.43	34.74
1986-87	35.52	27.20	5.66	0.49	34.25
1987-88	37.07	28.37	7.11	0.53	36.01
1988-89	35.6	27.17	6.76	0.55	34.48
1989-90	33.51	25.91	6.73	0.51	33.15
1990-91	30.71	22.61	6.96	0.51	30.08
1991-92	30.61	22.47	6.29	0.45	29.21
1992-93	30.12	22.64	6.00	0.45	29.09
1993-94	30.51	24.59	6.25	0.45	31.29
1994-95	29.49	22.91	6.24	0.48	29.63
1995-96	30.29	22.72	6.34	0.51	29.57
1996-97	29.07	21.76	6.11	0.51	28.38
1997-98	29.41	21.35	6.05	0.51	27.90
1998-99	30.26	21.95	6.29	0.53	28.77

Year	MGD Raw	Youngstown	Niles	McDonald	Total
1999-00	28.81	20.32	6.31	0.58	27.21
2000-01	29.91	20.47	6.13	0.55	27.15
2001-02	26.94	19.44	5.85	0.52	25.81
2002-03	27.94	21.72	5.56	0.58	27.86
2003-04	27.34	21.60	5.16	0.53	27.29
2004-05	26.78	20.60	5.21	0.47	26.28
2005-06	27.2	18.77	6.15	0.48	25.40
2006-07	27.361	17.98	6.53	0.45	24.96
2007-08	27.293	18.27	6.68	0.46	25.40
2008-09	25.38	17.95	6.12	0.45	24.52
2009-10	22.803	17.15	5.32	0.45	22.91
2010-11	23.699	17.67	5.51	0.45	23.62
2011-12	23.75	18.18	4.44	0.40	23.02
2012-13	24.88	18.95	4.65	0.42	24.00
2013-14	23.682	18.02	4.93	0.39	23.68
2014-15	21.345	16.49	4.10	0.39	20.98
2015-16	20.802	15.43	4.51	0.39	20.33
2016-17	22.076	15.86	5.26	0.43	21.56
2017-18	22.864	15.96	5.86	0.40	22.22
2019	24.390	16.85	6.55	0.36	23.76

2019 Month	MGD Raw	Youngstown	Niles	McDonald	Total
January	746.479	516.528	193.802	10.198	720.528
February	722.262	497.951	191.228	9.210	698.389
March	744.237	527.547	186.437	10.233	724.217
April	718.437	505.489	188.721	11.465	705.675
May	758.909	523.274	209.287	12.551	745.112
June	734.710	510.892	196.659	11.827	719.378
July	786.645	536.124	220.385	12.783	769.292
August	807.552	544.888	227.825	12.458	785.171
September	737.931	497.451	209.815	10.397	717.663
October	715.497	488.711	196.153	10.834	695.698
November	698.678	484.184	184.723	9.832	678.739
December	730.925	515.811	187.449	8.782	712.042
Total	8,902.262	6,148.850	2,392.484	130.570	8,671.904
Monthly Average	741.855	512.404	199.374	10.881	722.659
Daily Average	24.390	16.846	6.555	0.358	23.759

Local Economy

According to the United States Census Bureau from 2010 to 2017 the population of Mahoning County has decreased by 3.8 percent and currently is 238,823 and Trumbull County has decreased by 4.7 percent and currently is 210,312. This has translated into a decrease in water consumption. However, Niles has expanded its customer base which has resulted in an increase in water being pumped for 2019. The average for 2019 was 23.759 million gallons per day (mgd).

Long-Term Financial Planning

The cost of services study has indicated that the current rates being charged to the member cities are sufficient to cover the operating expenses, debt payments and partially fund capital projects for the next two years.

The District has major ongoing expense to its water purification plant built in 1926 and the maintenance of 20 buildings and 25 vehicles including heavy equipment. Rehabilitation or the replacement of obsolete infrastructure and equipment vital to the purification of water is a goal of management to ensure continued service without affecting the finished product. The District's Board and management look to implementing new, cutting edge technology in every area of the operation that is economically cost effective and efficient. The current Amendment No. 5 and Amendment No. 6 incorporate some of the latest and best water treatment technology now available and used in the water industry as well as provide a complete overhaul of existing equipment (refurbishing) rather than purchasing new. These Amendments to the Official Plan of the District which was originally established in 1926 were presented to the District's member cities through meetings with important stakeholders and memorialized in the District's five year Operating and Capital Improvement Plan. The five-year forecast is utilized by staff to manage the District's infrastructure resources effectively. The District plans to use a ratio of 50 percent cash to 50 percent debt financing for these projects over the next few years.

Major projects expected to be undertaken in the next five years include:

- Mineral Ridge Dam Rehabilitation Project
- Plant Standby Power
- Phase IV Valve Replacement
- Administration/Filter Building Repair and Restoration
- Filter Gallery Improvement
- Head House Chemical Improvement

Past, Current & Future Projects

Potassium Permanganate Improvement Project

Description: The project was originally developed as part of the MVSD Chemical Feed Improvement Project and broken up into multiple phases to secure external grant funding. This project was one of the phases. The project consisted of the removal of the existing, manually loaded potassium permanganate induction feeds with new, vacuum loaded induction feed systems. The project also consisted of ancillary piping, electrical wiring, control panel installation and process control connection for connection to the MVSD SCDA system.

Status: Project Completed
Design Cost: \$0
Start Date: July 2018

Construction Cost: \$275K
Completion Date: August 2019



New vacuum feed Potassium Permanganate educator system



Installation of control panels for new potassium permanganate feed system.

Ammonia Improvement Project

Description: The project was originally developed as part of the MVSD Chemical Feed Improvement Project and broken up into multiple phases to secure external grant funding. This project was one of the phases. The project consisted of the removal and replacement of existing valves, piping and fittings requiring. Scales also removed and replaced with new scales.

Status: Project Complete
Design Cost: \$0
Start Date: January 2019

Construction Cost: \$98.3K
Completion Date: August 2019



New ammonia system upgrade including new scales, piping and fittings.



Installation of new scale on south tank.

Headhouse Chemical Improvement

Description: The project will provide complete operational chemical feed systems to treat peak hourly flows and provide 30-day storage at average daily flows. The chemical feed systems include new poly orthophosphate, polyamine and anionic polymer systems along with bulk chemical storage and replace the current temporary feed system.

Status: Project Complete

Design Cost: \$272K

Start Date: 3rd QTR 2020

Construction Cost: \$1.8M

Completion Date: 3rd QTR 2021



Existing Temporary Chemical Feed Configuration to be replaced by new bulk chemical feed system.

Filter Gallery Improvement Project

Description: Project consists of the rehabilitation of existing concrete walkways, beams and portions of the tank walls associated with the existing sand filters. Rehabilitation work consists of either full concrete replacement, crack repair and sealing. Additional scope consists of the replacement of large diameter flange bolts in the drainage system, filter console PLC upgrades and masonry repairs to the Administration and Filter Gallery Building facade.

Status: Procurement

Project Budget: \$2.7M

Start Date: 1st QTR 2020



Photograph of the existing sand filter concrete condition.

Mineral Ridge Dam Rehabilitation Project

Description: Project will rehabilitate and modify the existing primary and auxiliary spillway along with modification of the existing earthen embankment. Primary spillway work consists of installation of rock anchors in the lower stilling basin and post tension anchoring of the spillway toe along with deteriorated concrete replacement and buttressing of the existing spillway. The auxiliary spillway will be replaced with a new roller compacted concrete spillway and modification of the earthen embankment from a 2:1 slope to a 3:1 slope while raising the existing core wall to handle the probable maximum flood and a robust toe drainage system. Ancillary work also consists of replacement of lighting, the rubber bladder dam, steps and gatehouse restoration. The project will be designed to meet current dam design standards.

Status: Design
Accomplishments

- Technical Review Board
- Bathymetric Survey
- Pre Design Deliverable

Project Budget: \$39M
Const. Start Date: 4th QTR 2020/1st QTR 2021



Aerial Photograph of the Principal Spillway located on the MVSD Plan Property



Photograph of the principal spillway.

Plant Standby Power

Description: Installation of new standby power generator to operate the entire physical plant. Removal of existing generators from various locations with the exception of the Filter Gallery Generator. Project will augment the existing dual power feed the plant utilizes from Niles (Primary) and Youngstown (Secondary).

Status: Procurement
Project Budget: \$5.4 M
Start Date 1st QTR 2020



High Service Pump Station Building where the Plant Standby Power project will take place.

Valve Replacement Project - Phase IV

Description: Fourth Phase of the MVSD Valve Improvement Project per Amendment No. 6. Scope consists of the replacement of 21 various sized valves on the Youngstown and Niles Transmission Lines. Additional study of the Youngstown Reservoir to evaluate improvements of the reservoir to right size the volume to current area population/usage. A hydraulic model of the Youngstown system has also been included in order to understand the reservoir.

Status: Procurement
Project Budget: \$8.4M
Start Date: 1st QTR 2020



Transmission system in Youngstown. Project location map depicts the location of valves to be replaced and the Youngstown Reservoir, between Connecticut Ave. and Oakwood Ave..

Administration/Filter Building Repair and Restoration

Description: Construction of new Bacteria and Chemical Laboratory on the 3rd Floor of Building No. 21 Administration Building. Renovation and remodeling of the 2nd Floor with the addition of office spaces, conference/board meeting room and upgrades/improvements to the HVAC, Electrical, Data systems for functional upgrades to the facility. New elevator to provide access to the 2nd and 3rd floor to achieve ADA compliance.

Status: Planning
Project Budget: \$7.4 M
Start Date: 1st QTR 2021



Photograph of the Administration Building (No. 21)

Chemical Feedline Project

Description: Replacement of KP, Carbon, Plant Service, RW Sample and electric feed to from the Carbon Building to the Reservoir Gatehouse.

Status: Planning
Project Budget: \$633K
Start Date: 1st QTR 2020



Photograph of the Carbon Building where the new carbon and potassium permanganate feed will be replaced and incorporate into the new dam embankment.



Process Control Assessment and Standardization

Description: Assessment and evaluation of the District's SCADA system to supplement with uniformity of standards and specifications for future projects. Assessment will be conducted to evaluate the existing system and develop future improvements and optimization of the District's SCADA.

Status: Planning

Project Budget: \$220K

Start Date 4th QTR 2020

Plant Security Update

Description: Upgrades to security infrastructure including security cameras, visitor tracking software, and construction of new guardhouse at the north access gate of the physical plant. Guardhouse will be the location for Patrolmen.

Status: Planning

Project Budget: \$380 K

Start Date 4th QTR 2020

Other Significant System/Process Improvements

Time Clock Implementation

The District invested in a new time clock system to help management document and track employee work, vacation and sick time. The system replaced the antiquated punch clock with new biometric/card readers for more efficient and secure tracking of time. The system also replaced the paper tracking for vacation and sick time and allow the employees to make time requests electronically either at their designated clock, a computer or their own phones. The system also helps management with scheduling and reporting.

Project Management System

With the pending large capital improvement projects planned for the future, the District invested in a new project management information system in order to manage the commercial and financial components of design and construction projects. The system features a cost management system to transparently approve consultant contract invoices, change orders and commitments/contracts. The system also has an automated workflow system to document approvals, ques, overdue items, plan deliverable collaboration and document management to house important contract documents for one accessible location for review and use by all parties with interest in District capital improvement projects.

Laboratory Equipment Upgrade

With the emergence and increasing attention to Harmful Algal Blooms (HABs) in Ohio's natural surface waters due to their negative impact on human health, the focus is now on managing raw water supply to prevent large scale outbreaks of HABs. In an effort to get in front of potential HAB outbreaks and their associated toxic byproducts, the District invested in a Flow Cam 8000 Fluid Imaging Microscope. This device combines the benefits of digital imaging, flow cytometry, and microscopy into a single instrument to count and analyze tens of thousands of particles per minute and see your subvisible particles with superior image quality. This device will eliminate countless hours spent in the laboratory analyzing algae in the raw water and provide the ability to detect HAB species early in advance of large outbreaks as required by the Ohio EPA.

Relevant Financial Policies

The mission of the District is to develop, maintain and implement financial accounting policies and procedures to protect and optimize the financial resources of the District. The District provides a sound accounting system for safeguarding the District's assets through the recording and reporting of financial transactions according to mandated laws and guidelines of Federal law, Ohio Revised Code and Generally Accepted Accounting Principles (GAAP). The departmental goals are to develop sound fiscal policies, provide solid fiscal management for the District, maintain reserves and fiscal integrity and protect the assets of the consumers of the water.

Awards and Acknowledgements

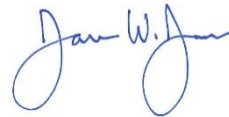
Mahoning Valley Sanitary District received the Certificate of Achievement for Excellence in Financial Reporting from the Government Finance Officers Association (GFOA) for the CAFR submission for the fiscal year ended June 30, 2018. This is the second year that the District has submitted a CAFR report to GFOA for the prestigious Certificate of Achievement for Excellence in Financial Reporting. In order to receive a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized Comprehensive Annual Financial Report, whose contents conform to program standards. Such a report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. We believe our current report conforms to the Certificate of Achievement program requirements, and we are submitting it to GFOA.

The preparation of this report could not have been accomplished without the efficient and dedicated service of various staff within the Administration. Their efforts are greatly appreciated. Credit must also be given to the Board of Directors for their unfailing support for maintaining the highest standards of professionalism in the management of the District's finances. Special appreciation is expressed to the Local Government Services Section of State Auditor Keith Faber's office for assistance in the planning, designing and reviewing of this financial report.

Respectfully submitted,



Rhonda Lucivjansky
Secretary/Treasurer



James Jones, P.E., CCM
Chief Engineer

MAHONING VALLEY SANITARY DISTRICT

List of Principal Officials at December 31, 2019

APPOINTED OFFICIALS

CITY OF NILES, MAYORAL APPOINTMENT
CITY OF NILES, COUNCIL APPOINTMENT

DR. MICHAEL NEOPOLITAN
RICHARD K. HALE

CITY OF YOUNGSTOWN, MAYORAL APPOINTMENT
CITY OF YOUNGSTOWN, COUNCIL APPOINTMENT

JAMES A. GIBBS (1)
VERNARD RICHBERG

ADMINISTRATIVE STAFF

CHIEF ENGINEER
SECRETARY/TREASURER
OPERATIONS MANAGER/ CLASS IV OPERATOR OF RECORD

JAMES JONES
RHONDA LUCIVJANKSY
THOMAS HOLLOWAY

SUPERINTENDENT OF PURIFICATION
CHIEF OF OPERATIONS

JOHN NEMET
KEITH REES

SUPERINTENDENT OF MAINTENANCE

JOE WOODLEY

WATER QUALITY/PROJECT ENGINEER

JON JAMISON

INFORMATION TECHNOLOGY SPECIALIST

FRANK VENNETTI

CHIEF PATROLMAN

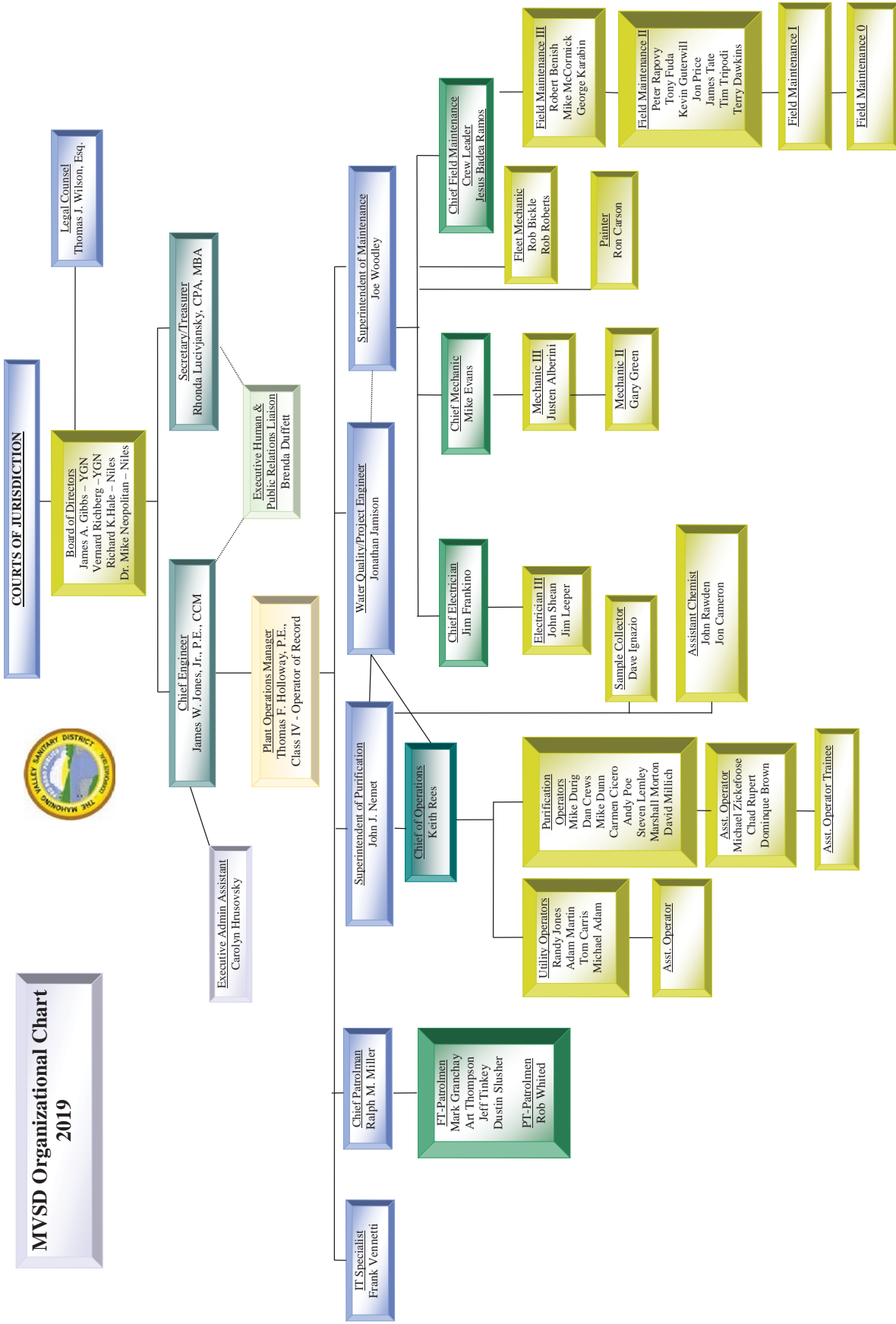
RALPH MILLER

ADMINISTRATIVE ASSISTANTS

BRENDA DUFFETT
CAROLYN HRUSOVSKY

(1) Effective May 6, 2020, James Gibbs was replaced by Germaine Bennett.

MVSD Organizational Chart 2019





Government Finance Officers Association

**Certificate of
Achievement
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in Financial
Reporting**

Presented to

**Mahoning Valley Sanitary District
Ohio**

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2018

Christopher P. Morill

Executive Director/CEO

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Financial Section

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OHIO AUDITOR OF STATE KEITH FABER



101 Central Plaza South
700 Chase Tower
Canton, Ohio 44702-1509
(330) 438-0617 or (800) 443-9272
EastRegion@ohioauditor.gov

INDEPENDENT AUDITOR'S REPORT

Mahoning Valley Sanitary District
Trumbull County
P.O. Box 4119
Youngstown, Ohio 44515

To the Board of Directors:

Report on the Financial Statements

We have audited the accompanying financial statements of the Mahoning Valley Sanitary District, Trumbull County, Ohio (the District), as of and for the year ended December 31, 2019, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for preparing and fairly presenting these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes designing, implementing, and maintaining internal control relevant to preparing and fairly presenting financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to opine on these financial statements based on our audit. We audited in accordance with auditing standards generally accepted in the United States of America and the financial audit standards in the Comptroller General of the United States' *Government Auditing Standards*. Those standards require us to plan and perform the audit to reasonably assure the financial statements are free from material misstatement.

An audit requires obtaining evidence about financial statement amounts and disclosures. The procedures selected depend on our judgment, including assessing the risks of material financial statement misstatement, whether due to fraud or error. In assessing those risks, we consider internal control relevant to the Entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not to the extent needed to opine on the effectiveness of the Entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of management's accounting policies and the reasonableness of their significant accounting estimates, as well as our evaluation of the overall financial statement presentation.

We believe the audit evidence we obtained is sufficient and appropriate to support our audit opinions.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the of the Mahoning Valley Sanitary District, Trumbull County, Ohio, as of December 31, 2019, and the respective changes in financial position and cash flows thereof for the year then ended in accordance with the accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 14 to the 2019 financial statements, the financial impact of COVID-19 and the emergency measures will impact subsequent periods of the District. We did not modify our opinion regarding these matters.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require this presentation to include *management's discussion and analysis*, and schedules of net pension and other post-employment benefit liabilities and pension and other post-employment benefit contributions listed in the table of contents, to supplement the basic financial statements. Although this information is not part of the basic financial statements, the Governmental Accounting Standards Board considers it essential for placing the basic financial statements in an appropriate operational, economic, or historical context. We applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, consisting of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, to the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not opine or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to opine or provide any other assurance.

Supplementary and Other Information

Our audit was conducted to opine on the District's basic financial statements taken as a whole.

The introductory section, and the statistical section information present additional analysis and are not a required part of the basic financial statements.

We did not subject the introductory section and statistical section information to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we express no opinion or any other assurance on them.

Other Reporting Required by Government Auditing Standards

In accordance with *Government Auditing Standards*, we have also issued our report dated June 23, 2020, on our consideration of the District's internal control over financial reporting and our tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements and other matters. That report describes the scope of our internal control testing over financial reporting and compliance, and the results of that testing, and does not opine on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the District's internal control over financial reporting and compliance.

A handwritten signature in black ink that reads "Keith Faber". The signature is written in a cursive, flowing style.

Keith Faber
Auditor of State

Columbus, Ohio
June 23, 2020

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Mahoning Valley Sanitary District
Management's Discussion and Analysis
For the Year Ended December 31, 2019
Unaudited

The discussion and analysis of the Mahoning Valley Sanitary District's (the District) financial performance provides an overall review of the District's financial activities for the year ended December 31, 2019. The intent of this discussion and analysis is to look at the District's financial performance as a whole; readers should also review the transmittal letter, the basic financial statements as well as the notes to the basic financial statements to enhance their understanding of the District's financial performance.

Financial Highlights

Key financial highlights for 2019 are as follows:

- The District's net position increased by \$5,231,539 from the prior period. This increase is due to a significant increase in the District's current assets and deferred outflows of resources coupled with a decrease in deferred inflows of resources. Liabilities remained consistent with the prior period.
- Capital assets decreased from the prior fiscal year due to current year depreciation and deletions exceeding current year additions. Capital asset additions included additional work on several ongoing construction projects, two completed construction projects and several other additions to equipment and buildings and improvement. The District has several ongoing construction projects at year end.
- Long-term liabilities decreased as the District made an additional year of debt payments. Current year loan payments exceeded the proceeds received for non-final OWDA loans.

Using This Comprehensive Annual Financial Report ("CAFR")

This annual report consists of financial statements and notes to those statements. These statements are presented following the requirements of Governmental Accounting Standards Board ("GASB") Statement No. 34, and are organized so the reader can understand the Mahoning Valley Sanitary District.

The *Statement of Net Position* and *Statement of Revenues, Expenses and Changes in Net Position* provide information about the activities of the District, and asks the questions, "Are we in a better financial position this year than last?" and "Why" or "Why not". The statements include *all assets and deferred outflows of resources and liabilities and deferred inflows of resources* using the *accrual basis of accounting* similar to the accounting used by most private-sector companies. This basis of accounting recognizes all of the current year's revenues and expenses regardless of when cash is received or paid.

The Sanitary District

Recall that the *Statement of Net Position* shows assets, liabilities, deferred outflows and inflows and the difference between them (net position).

Mahoning Valley Sanitary District
Management's Discussion and Analysis
For the Year Ended December 31, 2019
Unaudited

Table 1 provides a summary of the District's net position for 2019 compared to 2018:

Table 1
 Net Position

	2019	2018	Change
Assets			
Current and Other Assets	\$45,277,962	\$40,572,442	\$4,705,520
Noncurrent Assets:			
Net Pension Asset	25,366	31,345	(5,979)
Capital Assets, Net	68,747,940	69,931,743	(1,183,803)
<i>Total Assets</i>	<u>114,051,268</u>	<u>110,535,530</u>	<u>3,515,738</u>
Deferred Outflows of Resources			
Pension	1,580,229	740,983	839,246
OPEB	250,772	157,382	93,390
<i>Total Deferred Outflows of Resources</i>	<u>1,831,001</u>	<u>898,365</u>	<u>932,636</u>
Liabilities			
Current and Other Liabilities	3,644,798	3,038,501	(606,297)
Long-Term Liabilities:			
Compensated Absences	235,311	215,873	(19,438)
Net Pension Liability	5,180,436	3,006,461	(2,173,975)
Net OPEB Liability	2,552,248	2,053,487	(498,761)
OWDA Loans	35,694,444	38,891,701	3,197,257
<i>Total Liabilities</i>	<u>47,307,237</u>	<u>47,206,023</u>	<u>(101,214)</u>
Deferred Inflows of Resources			
Pension	182,652	874,168	691,516
OPEB	58,029	250,892	192,863
<i>Total Deferred Inflows of Resources</i>	<u>240,681</u>	<u>1,125,060</u>	<u>884,379</u>
Net Position			
Net Investment in Capital Assets	30,339,832	28,766,427	1,573,405
Restricted:			
Debt Service	0	106,104	(106,104)
Unrestricted	37,994,519	34,230,281	3,764,238
<i>Total</i>	<u>\$68,334,351</u>	<u>\$63,102,812</u>	<u>\$5,231,539</u>

The net pension liability (NPL) is one of the largest single liabilities reported by the District at December 31, 2019. GASB notes that pension and OPEB obligations, whether funded or unfunded, are part of the "employment exchange" – that is, the employee is trading his or her labor in exchange for wages, benefits, and the promise of a future pension and other postemployment benefits. GASB noted that the unfunded portion of this promise is a present obligation of the government, part of a bargained-for benefit to the

Mahoning Valley Sanitary District
Management's Discussion and Analysis
For the Year Ended December 31, 2019
Unaudited

employee, and should accordingly be reported by the government as a liability since they received the benefit of the exchange. However, the District is not responsible for certain key factors affecting the balance of these liabilities. In Ohio, the employee shares the obligation of funding pension benefits with the employer. Both employer and employee contribution rates are capped by State statute. A change in these caps requires action of both Houses of the General Assembly and approval of the Governor. Benefit provisions are also determined by State statute. The Ohio Revised Code permits, but does not require the retirement systems to provide healthcare to eligible benefit recipients. The retirement systems may allocate a portion of the employer contributions to provide for these OPEB benefits.

Most long-term liabilities have set repayment schedules or, in the case of compensated absences (i.e. sick and vacation leave), are satisfied through paid time-off or termination payments. There is no repayment schedule for the net pension liability or the net OPEB liability. As explained above, changes in benefits, contribution rates, and return on investments affect the balance of these liabilities, but are outside the control of the local government. In the event that contributions, investment returns, and other changes are insufficient to keep up with required payments, State statute does not assign/identify the responsible party for the unfunded portion. Due to the unique nature of how the net pension liability and the net OPEB liability are satisfied, these liabilities are separately identified within the long-term liability section of the statement of net position.

There was an increase in cash and cash equivalents due to the District setting aside money for future construction projects. There was a decrease in capital assets due to a full year of depreciation being taken along with the disposal of several capital assets during the year, which resulted in a significant decrease to depreciable capital assets from the prior period. There was an increase in non-depreciable capital assets due to the continued work on construction projects. Liabilities increase slightly due to increases in the net pension/OPEB liabilities which were offset by annual OWDA loan repayments. These changes resulted in an overall increase in net position for the District.

In order to further understand what makes up the changes in net position for the current year, the following table gives readers further details regarding the results of activities for the current year. Table 2 shows operating revenues, operating expenses, non-operating revenues and expenses and changes in net position for 2019. The District's previous reporting period was a six month interim period to change from a fiscal year to a calendar year. Comparing a full year of activity to six months of activity would not be meaningful; therefore, comparisons have not been presented. In future years, when comparable information is available, a comparative analysis will be presented.

Mahoning Valley Sanitary District
Management's Discussion and Analysis
For the Year Ended December 31, 2019
Unaudited

Table 2
Changes in Net Position

	2019
Operating Revenues	
Charges for Services	\$18,463,625
Miscellaneous	133,212
Total Operating Revenues	18,596,837
Operating Expenses	
Personal Services	4,778,313
Supplies and Services	4,840,658
Depreciation	3,171,330
Claims	606,848
Miscellaneous	9,676
Total Operating Expenses	13,406,825
<i>Operating Income (Loss)</i>	5,190,012
Non-Operating Revenues (Expenses)	
Timber Sales	67,250
Royalties	22,815
Loss on Disposal of Capital Assets	(284,998)
Interest	841,669
Interest and Fiscal Charges	(1,007,310)
Total Non-Operating Revenues (Expenses)	(360,574)
<i>Income (Loss) before Capital Contributions</i>	4,829,438
Capital Contributions	402,101
<i>Change in Net Position</i>	5,231,539
<i>Net Position Beginning of Year</i>	63,102,812
<i>Net Position End of Year</i>	\$68,334,351

Capital Assets and Long-Term Obligations

Capital Assets

At the end of year 2019, the District had, at cost, \$119,825,033 invested in land, easements, construction in progress, land improvements, buildings and improvements, furniture and equipment, vehicles and infrastructure. That total carries an accumulated depreciation of \$51,077,093.

In 2019, the District completed two construction projects and had several other increases to equipment and buildings and improvement. The District has a few major construction projects ongoing as of December 31, 2019. The completed construction projects were the Potassium Permanganate Feed project and the Ammonia Improvement project. The ongoing projects include Dam Renovations, Headhouse Chemical System Improvement and Filter Gallery. For additional information on capital assets, see Note 6 of the notes to the basic financial statements.

Mahoning Valley Sanitary District
Management's Discussion and Analysis
For the Year Ended December 31, 2019
Unaudited

Long-Term Obligations

The District has several loans through the Ohio Water Development Authority (OWDA). As of December 31, 2019, the District has a total outstanding OWDA liability of \$38,233,883. In 2019, new OWDA loans of \$11,739 were issued while the District made payments of \$2,761,461.

For additional information on long-term obligations, see Note 11 of the notes to the basic financial statements.

Current Financial Related Activities

The District receives royalties from two gas wells that are located on District property. These wells were put on District property in the 1970's. No other wells have been drilled on District property since that time. Surrounding the District's property are many gas wells, some of which contribute to royalties that are received by the District. District revenues from royalties have remained fairly constant over the last five years but total gross receipts for gas royalties have lessened since reaching a high about seven years ago.

The Mahoning Valley Sanitary District has committed itself to the highest standards of financial excellence for many years. The District has received the Award for Small Government Cash Basis Reports from the Government Finance Officers Association for fiscal years 2014 through 2017. For fiscal year 2018, the District prepared a comprehensive annual financial report (CAFR). Management believes the CAFR conforms to the Certificate of Achievement program requirements and has submitted it to the Government Finance Officers Association (GFOA).

Contacting the District's Financial Management

This financial report is designed to provide the reader with a broad overview of the District's financial position, as well as a general understanding of the financial operations of the District. If you have any questions about this report or need additional financial information, contact Rhonda Lucivjansky, Secretary/Treasurer, Mahoning Valley Sanitary District, P.O. Box 4119, Youngstown, OH 44515, telephone 330-652-3614.

Mahoning Valley Sanitary District

Statement of Net Position

December 31, 2019

Assets	
Current Assets	
Cash and Cash Equivalents	\$43,480,857
Receivables:	
Accounts	15,045
Intergovernmental	1,539,872
Materials and Supplies Inventory	167,934
Prepaid Items	<u>74,254</u>
Total Current Assets	<u>45,277,962</u>
Noncurrent Assets	
Net Pension Asset	25,366
Nondepreciable Capital Assets	5,976,468
Depreciable Capital Assets, Net	<u>62,771,472</u>
Total Noncurrent Assets	<u>68,773,306</u>
Total Assets	<u>114,051,268</u>
Deferred Outflows of Resources	
Pension	1,580,229
OPEB	<u>250,772</u>
Total Deferred Outflows of Resources	<u>1,831,001</u>
Liabilities	
Current Liabilities	
Accounts Payable	390,560
Accrued Wages	76,185
Contracts Payable	176,625
Intergovernmental Payable	63,990
Claims Payable	42,893
Compensated Absences Payable	355,106
OWDA Loans Payable	<u>2,539,439</u>
Total Current Liabilities	<u>3,644,798</u>
Long-Term Liabilities (net of current portion)	
Compensated Absences Payable	235,311
Net Pension Liability (See Note 9)	5,180,436
Net OPEB Liability (See Note 10)	2,552,248
OWDA Loans Payable	<u>35,694,444</u>
Total Long-Term Liabilities	<u>43,662,439</u>
Total Liabilities	<u>47,307,237</u>
Deferred Inflows of Resources	
Pension	182,652
OPEB	<u>58,029</u>
Total Deferred Inflows of Resources	<u>240,681</u>
Net Position	
Net Investment in Capital Assets	30,339,832
Unrestricted	<u>37,994,519</u>
Total Net Position	<u>\$68,334,351</u>

See accompanying notes to the basic financial statements

Mahoning Valley Sanitary District
*Statement of Revenues,
Expenses and Changes in Net Position
For the Year Ended December 31, 2019*

Operating Revenues	
Charges for Services	\$18,463,625
Miscellaneous	133,212
	<u>18,596,837</u>
<i>Total Operating Revenues</i>	<u>18,596,837</u>
Operating Expenses	
Personal Services	4,778,313
Supplies and Services	4,840,658
Depreciation	3,171,330
Claims	606,848
Miscellaneous	9,676
	<u>13,406,825</u>
<i>Total Operating Expenses</i>	<u>13,406,825</u>
<i>Operating Income (Loss)</i>	<u>5,190,012</u>
Non-Operating Revenues (Expenses)	
Timber Sales	67,250
Royalties	22,815
Loss on Disposal of Capital Assets	(284,998)
Interest	841,669
Interest and Fiscal Charges	(1,007,310)
	<u>(360,574)</u>
<i>Total Non-Operating Revenues (Expenses)</i>	<u>(360,574)</u>
<i>Income (Loss) before Transfers and Capital Contributions</i>	4,829,438
Capital Contributions	402,101
	<u>402,101</u>
<i>Change in Net Position</i>	5,231,539
<i>Net Position Beginning of Year</i>	<u>63,102,812</u>
<i>Net Position End of Year</i>	<u><u>\$68,334,351</u></u>

See accompanying notes to the basic financial statements

Mahoning Valley Sanitary District
Statement of Cash Flows
For the Year Ended December 31, 2019

Increase (Decrease) in Cash and Cash Equivalents

Cash Flows from Operating and Non-Operating Activities

Cash Received from Customers	\$18,451,123
Cash Received from Timber Sales	67,250
Cash Received from Royalties	27,113
Cash Received from Capital Charges	58,561
Other Cash Received	129,669
Cash Payments to Employees for Services	(3,825,036)
Cash Payments to Suppliers for Goods and Services	(4,745,581)
Cash Payments for Claims	(603,193)
Cash Payments for Capital Charges	(54,249)
Other Cash Payments	(10,477)
	(10,477)

Net Cash Provided by (Used for)

Operating and Non-Operating Activities 9,495,180

Cash Flows from Capital and Related Financing Activities

Capital Contributions	402,101
Proceeds of EPA/OWDA Loan	11,739
Redemption of Principal - OWDA Loans	(2,761,461)
Interest and Fiscal Charges - OWDA Loans	(1,007,310)
Acquisition of Capital Assets	(2,280,011)
	(2,280,011)

Net Cash Provided by (Used for)

Capital and Related Financing Activities (5,634,942)

Cash Flows from Investing Activities

Interest on Investments	841,669
	841,669

Net Increase (Decrease) in Cash and Cash Equivalents 4,701,907

Cash and Cash Equivalents Beginning of Year 38,778,950

Cash and Cash Equivalents End of Year \$43,480,857

(continued)

Mahoning Valley Sanitary District
Statement of Cash Flows (continued)
For the Year Ended December 31, 2019

**Reconciliation of Operating Income (Loss) to Net Cash
Provided by (Used for) Operating and Non-Operating Activities**

Operating Income (Loss)	\$5,190,012
Adjustment:	
Depreciation	3,171,330
Non-Operating Revenues (Expenses):	
Timber Sales	67,250
Royalties	27,113
Capital Charge Receipts	58,561
Capital Charge Disbursements	(54,249)
(Increase) Decrease in Assets and Deferred Outflows:	
Accounts Receivable	(2,703)
Intergovernmental Receivable	(13,342)
Materials and Supplies Inventory	(21,523)
Prepaid Items	33,509
Net Pension Asset	(7,618)
Deferred Outflows - Pension	1,094,001
Deferred Outflows - OPEB	162,519
Increase (Decrease) in Liabilities and Deferred Inflows:	
Accounts Payable	126,360
Accrued Wages	13,848
Contracts Payable	(8,821)
Compensated Absences Payable	67,088
Intergovernmental Payable	(24,608)
Claims Payable	3,655
Net Pension Liability	(5,620)
Net OPEB Liability	139,806
Deferred Inflows - Pension	(431,571)
Deferred Inflows - OPEB	(89,817)
	4,305,168
<i>Total Adjustments</i>	4,305,168
<i>Net Cash Provided by (Used for)</i>	
<i>Operating and Non-Operating Activities</i>	\$9,495,180

Noncash Capital Financing Activities

At December 31, 2019, the District had contracts payable related to the acquisition of capital assets of \$174,225.

At December 31, 2018, the District had contracts payable related to the acquisition of capital assets of \$181,711.

See accompanying notes to the basic financial statements

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

Note 1 - Description of the District and Reporting Entity

The Mahoning Valley Sanitary District, Trumbull County (the District), is a political subdivision of the State of Ohio and a body corporate created under Section 6115.08 of the Ohio Revised Code (The Sanitary District Act of Ohio) for the purpose of providing a water supply for domestic, municipal and public use to the Cities of Youngstown and Niles and the Village of McDonald.

On February 5, 1998, Substitute House Bill 26 was enacted to amend various sections of the Revised Code. This bill altered the composition and method of appointment of the members of the Board of Directors of the District, limited the compensation paid and benefits provided to board members; required the members of the Board to file financial disclosure statements with the Ohio Ethics Commission, and subjected the District to financial certification requirements prior to expending moneys.

The Board of Directors of the Mahoning Valley Sanitary District is made up of four members. One is appointed by the Mayor of the City of Youngstown, one by the Mayor of the City of Niles, one by the Youngstown City Council, and one by the Niles City Council.

The positions of Secretary and Treasurer were combined on January 15, 1997. The Secretary/Treasurer is the fiscal officer of the District as well as the custodian of the records of the District and its corporate seal.

The Chief Engineer is the superintendent of all the public works and improvements.

In evaluating how to define the District for financial reporting purposes, management has considered all agencies, departments and organizations making up the District and its potential component units consistent with Governmental Accounting Standards Board Statement No. 14, "The Financial Reporting Entity" and Governmental Accounting Standard Board (GASB) Statement No. 61, "The Financial Reporting Entity: Omnibus."

Component units are legally separate organizations for which the District is financially accountable. The District is financially accountable for an organization if the District appoints a voting majority of the organization's governing board and (1) the District is able to significantly influence the programs or services performed or provided by the organization; or (2) the District is legally entitled to or can otherwise access the organization's resources; the District is legally obligated or has otherwise assumed the responsibility to finance the deficits of, or provide financial support to, the organization; or the District is obligated for the debt of the organization. Component units may also include organizations that are fiscally dependent on District in that District approves the budget, the issuance of debt or the levying of taxes. The District has no component units.

Note 2 - Summary of Significant Accounting Policies

The financial statements of the Mahoning Valley Sanitary District have been prepared in conformity with generally accepted accounting principles (GAAP) as applied to governmental units. The Governmental Accounting Standards Board (GASB) is the accepted standard-setting body for establishing governmental accounting and financial reporting principles. The more significant of the District's accounting policies are described below.

Basis of Presentation

The District's basic financial statements consist of a statement of net position, a statement of revenues, expenses and changes in net position and a statement of cash flows.

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

The District uses enterprise accounting to maintain its financial records during the year. Enterprise accounting focuses on the determination of operating income, change in net position, financial position and cash flows. Enterprise accounting may be used to account for any activity for which a fee is charged to external users for goods or services.

The District uses fund accounting to maintain its financial records during the year. A fund is defined as a fiscal and accounting entity with a self-balancing set of accounts. The operations of the District are reported as a single enterprise fund.

Measurement Focus

The enterprise fund is accounted for on a flow of economic resources measurement focus. All assets and deferred outflows of resources and all liabilities and deferred inflows of resources associated with the operation of the District are included on the statement of net position. The statement of changes in net position presents increases (i.e., revenues) and decreases (i.e., expenses) in total net position. The statement of cash flows provides information about how the District finances and meets the cash flow needs of its enterprise activity.

Basis of Accounting

Basis of accounting determines when transactions are recorded in the financial records and reported on the financial statements. The District's financial statements are prepared using the accrual basis of accounting. On the accrual basis, revenue is recorded on exchange transactions when the exchange takes place. Nonexchange transactions, in which the District receives value without directly giving equal value in return, include capital contributions. Expenses are recognized at the time they are incurred.

Deferred Outflows/Inflows of Resources In addition to assets, the statement of net position will sometimes report a separate section for deferred outflows of resources. Deferred outflows of resources represent a consumption of net position that applies to a future period and will not be recognized as an outflow of resources (expense/expenditure) until then. For the District, deferred outflows of resources are reported on the statement of net position for pension and OPEB plans. The deferred outflows of resources related to pension and OPEB plans are explained in Notes 9 and 10.

In addition to liabilities, the statement of net position reports a separate section for deferred inflows of resources. Deferred inflows of resources represent an acquisition of net position that applies to a future period and will not be recognized until that time. For the District, deferred inflows of resources include pension and OPEB. Deferred inflows of resources related to pension and OPEB plans are reported on the statement of net position (See Notes 9 and 10).

Pensions/Other Postemployment Benefits (OPEB)

For purposes of measuring the net pension/OPEB asset/liability, deferred outflows of resources and deferred inflows of resources related to pensions/OPEB, and pension/OPEB expense, information about the fiduciary net position of the pension/OPEB plans and additions to/deductions from their fiduciary net position have been determined on the same basis as they are reported by the pension/OPEB plan. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. The pension/OPEB plans report investments at fair value.

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

Budgetary Process

Although the District reports a single enterprise fund, the Ohio Revised Code requires the District to account for its day-to-day activity using a maintenance fund and a bond fund. The maintenance fund accounts for all moneys received as compensation for providing a water supply for domestic, municipal and public use under Section 6115.19, Ohio Revised Code. The bond fund accounts for proceeds of levies made against the special assessments of benefits equalized and confirmed under Section 6115.01 to 6115.79, inclusive, of the Ohio Revised Code. Capital projects funds are used to account for financial resources to be used for the acquisition or construction of major capital facilities or equipment. The maintenance fund also receives all operating revenue due from the member Cities of Youngstown and Niles and from the Village of McDonald based on an approved water rate schedule.

The Ohio Revised Code requires that the maintenance fund be budgeted annually. The Mahoning Valley Sanitary District prepares a budget for the maintenance fund and the capital projects fund. The bond fund is currently not in use since the District has no bonds outstanding.

Budgetary expenses (that is, disbursements and encumbrances) may not exceed appropriations at the fund or function level of control, and appropriations may not exceed estimated resources. Appropriation authority includes current year appropriations plus encumbrances carried over from the prior year (if any). The Board of Directors must annually approve appropriation measures and subsequent amendments. Unencumbered appropriations lapse at year end.

Estimated resources include estimates of cash to be received (budgeted receipts) plus unencumbered cash as of January 1.

The Ohio Revised Code requires the District to reserve (encumber) appropriations when commitments are made. Encumbrances outstanding at year end are carried over and need not be re-appropriated.

Cash and Cash Equivalents

The District's cash and cash equivalents are considered to be cash on hand, demand deposits, savings accounts and short-term investments with original maturities of three months or less from the date of acquisition, including the District's participation in an external investment pool.

During 2019, the District invested in STAR Ohio. STAR Ohio (the State Treasury Asset Reserve of Ohio), is an investment pool managed by the State Treasurer's Office which allows governments within the State to pool their funds for investment purposes. STAR Ohio is not registered with the SEC as an investment company, but has adopted Governmental Accounting Standards Board (GASB), Statement No. 79, Certain External Investment Pools and Pool Participants. The District measures their investment in STAR Ohio at the net asset value (NAV) per share provided by STAR Ohio. The NAV per share is calculated on an amortized cost basis that provides an NAV per share that approximates fair value.

For 2019, there were no limitations or restrictions on any participant withdrawals due to redemption notice periods, liquidity fees, or redemption gates. However, twenty-four hours advance notice is appreciated for deposits and withdrawals of \$25 million or more. STAR Ohio reserves the right to limit the transactions to \$100 million per day, requiring the excess amount to be transacted the following business day(s), but only to the \$100 million limit. All accounts of the participant will be combined for these purposes.

Inventory

Inventories are presented at cost on a first-in, first-out basis and are expensed when used. Inventory consists of expendable supplies held for consumption.

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

Prepaid Items

Payments made to vendors for services that will benefit periods beyond December 31, 2019 are recorded as prepaid items using the consumption method by recording a current asset for the prepaid amount and reflecting the expense in the year in which services are consumed.

Capital Assets

All capital assets are capitalized at cost (or estimated historical cost) and updated for additions and retirements during the year. Donated capital assets are recorded at their acquisition values as of the date received. The District maintains a capitalization threshold of five thousand dollars. Improvements are capitalized; the costs of normal maintenance and repairs that do not add to the value of the asset or materially extend an asset's life are not.

All reported capital assets except land, easements and construction in progress are depreciated. Improvements are depreciated over the remaining useful lives of the related capital assets. Useful lives for infrastructure were estimated based on the District's historical records of necessary improvements and replacement. Depreciation is computed using the straight-line method over the following useful lives:

<u>Description</u>	<u>Governmental Activities Estimated Lives</u>
Land Improvements	20 years
Buildings and Improvements	20 - 40 years
Furniture and Equipment	5 - 10 years
Vehicles	5 years
Infrastructure	10 - 50 years

The District's infrastructure consists of waterlines, the dam and roads within the District's property. All infrastructure acquired by the District since its inception is recorded.

Compensated Absences

Vacation benefits are accrued as a liability as the benefits are earned if the employees' rights to receive compensation are attributable to services already rendered and it is probable that the employer will compensate the employees for the benefits through paid time off or some other means. The District records a liability for accumulated unused vacation time when earned for all employees with more than one year of service.

Sick leave benefits are accrued as a liability using the vesting method. The liability includes the employees who are currently eligible to receive termination benefits and those that the District has identified as probable of receiving payment in the future (those employees who will be eligible to receive termination payments in the next twenty years). The amount is based on accumulated sick leave and employee wage rates at year end taking into consideration any limits specified in the District's termination policy.

Contributions of Capital

Contributions of capital in the financial statements arise from contributions of resources restricted to capital acquisition and construction.

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

Net Position

Net position represents the difference between all other elements in a statement of financial position. Net investment in capital assets consists of capital assets, net of accumulated depreciation, reduced by the outstanding balances of any borrowings used for the acquisition, construction or improvement of those assets. Net position is reported as restricted when there are limitations imposed on their use through external restrictions imposed by creditors, grantors or laws or regulations of other governments. The District applies restricted resources first when an expense is incurred for purposes for which both restricted and unrestricted net position is available.

Operating Revenues and Expenses

Operating revenues are those revenues that are generated directly from the primary activity of the enterprise fund. For the District, these revenues are charges for services and certain revenues collected through the special assessment process. Operating expenses are necessary costs that have been incurred in order to provide the good or service that is the primary activity of the fund. Any revenues and expenses not meeting the definitions of operating are reported as non-operating.

Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results may differ from those estimates.

Note 3 - Deposits and Investments

Monies held by the District are classified by State statute into three categories.

Active monies are public monies determined to be necessary to meet current demands upon the District treasury. Active monies must be maintained either as cash in the District treasury, in commercial accounts payable or withdrawable on demand, including negotiable order of withdrawal (NOW) accounts, or in money market deposit accounts.

Inactive deposits are public deposits that the Board has identified as not required for use within the current five year period of designation of depositories. Inactive deposits must either be evidenced by certificates of deposit maturing not later than the end of the current period of designation of depositories, or by savings or deposit accounts including, but not limited to, passbook accounts.

Interim deposits are deposits of interim monies. Interim monies are those monies which are not needed for immediate use but which will be needed before the end of the current period of designation of depositories. Interim deposits must be evidenced by time certificates of deposit maturing not more than one year from the date of deposit or by savings or deposit accounts, including passbook accounts.

Interim monies held by the District can be deposited or invested in the following securities:

1. United States Treasury bills, bonds, notes, or any other obligation or security issued by the United States Treasury, or any other obligation guaranteed as to principal and interest by the United States;

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

2. Bonds, notes, debentures, or any other obligations or securities issued by any federal government agency or instrumentality including, but not limited to, the Federal National Mortgage Association, Federal Home Loan Bank, Federal Farm Credit Bank, Federal Home Loan Mortgage Corporation, and Government National Mortgage Association. All federal agency securities shall be direct issuances of federal government agencies or instrumentalities;
3. No-load money market mutual funds consisting exclusively of obligations described in (1) or (2) and repurchase agreements secured by such obligations, provided that investments in securities described in this division are made only through eligible institutions;
4. Time certificates of deposit or savings or deposit accounts including, but not limited to, passbook accounts;
5. Bonds and other obligations of the State of Ohio, and, with certain limitations including a requirement for maturity within ten years from the date of settlement, bonds and other obligations of political subdivisions of the State of Ohio, if training requirements have been met;
6. The State Treasurer's investment pool (STAR Ohio);
7. Certain bankers' acceptances (for a period not to exceed one hundred eighty days) and commercial paper notes (for a period not to exceed two hundred seventy days) in an amount not to exceed 40 percent of the interim monies available for investment at any one time if training requirements have been met; and
8. Written repurchase agreements in the securities described in (1) or (2) provided the market value of the securities subject to the repurchase agreement must exceed the principal value of the agreement by at least two percent and be marked to market daily, and the term of the agreement must not exceed thirty days.

Investments in stripped principal or interest obligations, reverse repurchase agreements, and derivatives are prohibited. The issuance of taxable notes for the purpose of arbitrage, the use of leverage, and short selling are also prohibited. Except as noted above, an investment must mature within five years from the date of purchase, unless matched to a specific obligation or debt of the District, and must be purchased with the expectation that it will be held to maturity.

Investments may only be made through specified dealers and institutions. Payment for investments may be made only upon delivery of the securities representing the investments to the treasurer or, if the securities are not represented by a certificate, upon receipt of confirmation of transfer from the custodian.

Deposits

Custodial Credit Risk Custodial credit risk for deposits is the risk that in the event of bank failure, the District will not be able to recover deposits or collateral securities that are in possession of an outside party. At December 31, 2019, \$590,326 of the District's bank balance of \$2,165,811 was exposed to custodial credit risk because those deposits were uninsured and uncollateralized. The District's financial institution participates in the Ohio Pooled Collateral System (OPCS) and was approved for a reduced collateral floor of 50 percent resulting in the uninsured and uncollateralized balance.

The District has no deposit policy for custodial risk beyond the requirements of State statute. Ohio law requires that deposits be either insured or be protected by:

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

Eligible securities pledged to the District and deposited with a qualified trustee by the financial institution as security for repayment whose market value at all times shall be at least one hundred five percent of the deposits being secured; or

Participation in the Ohio Pooled Collateral System (OPCS), a collateral pool of eligible securities deposited with a qualified trustee and pledged to the Treasurer of State to secure the repayment of all public monies deposited in the financial institution. OPCS requires the total market value of the securities pledged to be one hundred two percent of the deposits being secured or a rate set by the Treasurer of State.

At year end, the District had \$200 in undeposited cash on hand which is included as part of “Equity in Pooled Cash and Cash Equivalents”.

Investments

As of December 31, 2019, the District had STAR Ohio as an investment. STAR Ohio is being held with an amount of \$41,340,951 which is measured at net asset value per share. The average maturity is 55.7 days.

Interest Rate Risk As a means of limiting its exposure to fair value losses caused by rising interest rates, the District’s investment policy requires that operating funds be invested primarily in short-term investments maturing within five years from the date of purchase and that the District’s investment portfolio be structured so that the securities mature to meet cash requirements for ongoing operations and/or long-term debt payments. The stated intent of the policy is to avoid the need to sell securities prior to maturity. To date, no investments have been purchased with a life greater than two years.

Credit Risk Ohio law requires that STAR Ohio maintain the highest rating provided by at least one nationally recognized standard service rating. The District has no investment policy that addresses credit risk.

Concentration of Credit Risk The District places no limit on the amount it may invest in any one issuer.

Note 4 - Receivables

Receivables at December 31, 2019, consisted of charges for services, royalties and Bureau of Workers’ Compensation and Magellan insurance refunds. All receivables are considered collectible in full. All receivables are expected to be collected within one year.

A summary of principal items of intergovernmental receivables follows:

	<u>Amount</u>
City of Youngstown Water Billing	\$1,111,506
City of Niles Water Billing	403,928
Village of McDonald Water Billing	22,776
Bureau of Workers' Compensation Refund	<u>1,662</u>
Total	<u><u>\$1,539,872</u></u>

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

Note 5 - Compensated Absences

The criteria for determining vacation and sick leave benefits are derived from negotiated agreements and State laws. Service and maintenance employees and patrolmen earn ten to thirty-five days of vacation per year, depending upon length of service and hours worked. Accumulated unused vacation time is paid to classified employees upon termination of employment. Each employee earns sick leave at a rate of 4.62 hours per pay period. Upon retirement or termination after ten years of consecutive service, payment is made for one half of the employee's accrued but unused sick days up to one half of 180 days. The maximum number of days to be paid out is 90 days. For purposes of retirement, the employee receiving such payment must meet the eligibility requirement provisions set by OPERS.

Note 6 - Capital Assets

Capital asset activity for the year ended December 31, 2019, was as follows:

	Balance 12/31/2018	Additions	Deletions	Balance 12/31/2019
Business-Type Activities				
<i>Capital Assets, not being depreciated:</i>				
Land	\$1,879,335	\$0	\$0	\$1,879,335
Easements	36,908	0	0	36,908
Construction in Progress	2,521,782	1,538,443	0	4,060,225
Total Capital Assets, not being depreciated	4,438,025	1,538,443	0	5,976,468
<i>Capital Assets, being depreciated:</i>				
Land Improvements	452,624	0	0	452,624
Buildings and Improvements	76,497,193	468,219	0	76,965,412
Furniture and Equipment	3,216,914	250,331	(841,600)	2,625,645
Vehicles	845,809	15,532	0	861,341
Infrastructure	32,943,543	0	0	32,943,543
Total Capital Assets, being depreciated	113,956,083	734,082	(841,600)	113,848,565
<i>Less Accumulated Depreciation:</i>				
Land Improvements	(206,849)	(18,867)	0	(225,716)
Buildings and Improvements	(31,942,481)	(1,944,266)	0	(33,886,747)
Furniture and Equipment	(2,406,460)	(88,766)	556,602	(1,938,624)
Vehicles	(542,719)	(63,087)	0	(605,806)
Infrastructure	(13,363,856)	(1,056,344)	0	(14,420,200)
Total Accumulated Depreciation	(48,462,365)	(3,171,330)	556,602	(51,077,093)
Total Capital Assets, being depreciated, net	65,493,718	(2,437,248)	(284,998)	62,771,472
Business-Type Activities Capital Assets, Net	\$69,931,743	(\$898,805)	(\$284,998)	\$68,747,940

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

Note 7 - Contingencies

Grants

The District receives financial assistance from state agencies in the form of grants. The disbursement of funds received under these programs generally requires compliance with terms and conditions specified in the grant agreements and are subject to audit by the grantor agencies. Any disallowed claims resulting from such audits could become a liability of the District's operating fund or any other applicable funds. However, in the opinion of management, any such disallowed claims will not have a material adverse effect on the overall financial position of the District at December 31, 2019.

Litigation

The District is not a party to any material legal proceedings.

Note 8 - Risk Management

Property and Liability

The District is exposed to various risks of loss to torts; thefts of, damage to and destruction of assets; errors and omissions; injuries to employees and natural disaster. During 2019, the District contracted with Love Insurance for various types of insurance coverage as follows:

<u>Type</u>	<u>Coverage</u>	<u>Deductible</u>
Property/Inland Marine	\$194,250,000	\$10,000
Earthquake	1,000,000	100,000
Flood	1,000,000	100,000
Liability	6,000,000/8,000,000	2,500
Fleet Vehicle		
Physical Damage	50,000	500
Comprehensive	50,000	250

Settled claims have not exceeded this commercial coverage in any of the past three years. There have been no significant reductions in coverage from last year.

Employee Benefits

The District provides health insurance to its employees. The District provides these benefits through a partially self-funded medical and drug benefits program. The District provides hospitalization and drug benefit coverage as outlined in the ERISA document provided to all employees which includes the Summary of Benefits and Coverage of our named plan, the Mahoning Valley Sanitary District Employee Benefits Plan. Medical Mutual of Ohio is the medical provider network and Mutual Health Services, Inc. as third party administrator for claims. The District also has a contract with HCC Life Insurance Company; a reinsurer to protect the District against catastrophic illness situations. The District's monthly premium, which is paid to Mutual Health Services, provides for stop loss coverage and administration of all claims. The District has stop loss coverage set at \$40,000 per member of our plan which includes all employees, their spouses and dependents. The District is responsible for all claims up to that point on all of its covered members. All stop loss premiums and claims are paid from the internal service account of the District and receives its funding from the revenue stream of the District. The hospitalization budget is established at January 1 of each year.

Mahoning Valley Sanitary District
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For the Year Ended December 31, 2019

The claims liability of \$42,893 reported at December 31, 2019, is based on an estimate provided by the Treasurer and the requirements of Governmental Accounting Standards Board Statement No. 30 which requires that a liability for unpaid claims costs, including estimates of costs relating to incurred but not reported claims, be reported. The estimate was not affected by incremental claim adjustment expenses and does not include other allocated or unallocated claim adjustment expenses.

Changes in the fund's claims liability amount follows:

	Beginning Balance	Current Claims	Claim Payments	Ending Balance
2018 *	\$35,159	\$306,177	\$302,098	\$39,238
2019	39,238	606,848	603,193	42,893

* 2018 represents the six month period from July – December 2018.

The average monthly cost per covered employee for stop loss protection and administration of claims is \$476. The annual premium for stop loss coverage and claims administration is \$302,631.

Workers' compensation is provided by the State. The District pays the State Workers' Compensation System a premium based on a rate per \$100 of salaries. This rate is calculated based on accident history and administrative costs.

Note 9 – Defined Benefit Pension Plans

The Statewide retirement systems provide both pension benefits and other postemployment benefits (OPEB).

Net Pension Liability (Asset)/Net OPEB Liability

The net pension liability (asset) and the net OPEB liability reported on the statement of net position represent liabilities to employees for pensions and OPEB, respectively. Pensions/OPEB are a component of exchange transactions – between an employer and its employees – of salaries and benefits for employee services. Pensions/OPEB are provided to an employee – on a deferred-payment basis – as part of the total compensation package offered by an employer for employee services each financial period. The obligation to sacrifice resources for pensions is a present obligation because it was created as a result of employment exchanges that already have occurred.

The net pension/OPEB liabilities (asset) represent the District's proportionate share of each pension/OPEB plans' collective actuarial present value of projected benefit payments attributable to past periods of service, net of each pension/OPEB plans' fiduciary net position. The net pension/OPEB liabilities (asset) calculations are dependent on critical long-term variables, including estimated average life expectancies, earnings on investments, cost of living adjustments and others. While these estimates use the best information available, unknowable future events require adjusting these estimates annually.

Ohio Revised Code (ORC) limits the District's obligation for these liabilities to annually required payments. The District cannot control benefit terms or the manner in which pensions are financed; however, the District does receive the benefit of employees' services in exchange for compensation including pension and OPEB.

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

GASB 68/75 assume the liabilities are solely the obligation of the employer, because (1) they benefit from employee services; and (2) State statute requires funding to come from these employers. All pension contributions to date have come solely from these employers (which also includes pension costs paid in the form of withholdings from employees). The retirement systems may allocate a portion of the employer contributions to provide for these OPEB benefits. In addition, health care plan enrollees pay a portion of the health care costs in the form of a monthly premium. State statute requires the retirement systems to amortize unfunded pension liabilities within 30 years. If the pension amortization period exceeds 30 years, each retirement system's board must propose corrective action to the State legislature. Any resulting legislative change to benefits or funding could significantly affect the net pension/OPEB liabilities (asset). Resulting adjustments to the net pension/OPEB liabilities (asset) would be effective when the changes are legally enforceable. The ORC permits, but does not require the retirement systems to provide healthcare to eligible benefit recipients.

The proportionate share of each plan's unfunded benefits is presented as a *net pension asset* or a long-term *net pension/OPEB liability* on the accrual basis of accounting. Any liability for the contractually-required pension/OPEB contribution outstanding at the end of the year is included in *intergovernmental payable* on both the accrual and modified accrual bases of accounting. The remainder of this note includes the required pension disclosures. See Note 10 for the required OPEB disclosures.

Plan Description – Ohio Public Employees Retirement System

Plan Description – District employees, other than full-time police and firefighters, participate in the Ohio Public Employees Retirement System (OPERS). OPERS administers three separate pension plans. The traditional pension plan is a cost-sharing, multiple-employer defined benefit pension plan. The member-directed plan is a defined contribution plan and the combined plan is a combination cost-sharing, multiple-employer defined benefit/defined contribution pension plan.

OPERS provides retirement, disability, survivor and death benefits, and annual cost of living adjustments (COLA) to members of the traditional and combined plans. Authority to establish and amend benefits is provided by Chapter 145 of the Ohio Revised Code (ORC). OPERS issues a stand-alone financial report that includes financial statements, required supplementary information and detailed information about OPERS' fiduciary net position that may be obtained by visiting <https://www.opers.org/financial/reports.shtml>, by writing to the Ohio Public Employees Retirement System, 277 East Town Street, Columbus, Ohio 43215-4642, or by calling (800) 222-7377.

Senate Bill (SB) 343 was enacted into law with an effective date of January 7, 2013. In the legislation, members in the traditional and combined plans were categorized into three groups with varying provisions of the law applicable to each group. The following table provides age and service requirements for retirement and the retirement formula applied to final average salary (FAS) for the three member groups under the traditional and combined plans as per the reduced benefits adopted by SB 343 (see OPERS' annual financial report referenced previously for additional information, including requirements for reduced and unreduced benefits):

Mahoning Valley Sanitary District
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Group A Eligible to retire prior to January 7, 2013 or five years after January 7, 2013	Group B 20 years of service credit prior to January 7, 2013 or eligible to retire ten years after January 7, 2013	Group C Members not in other Groups and members hired on or after January 7, 2013
State and Local	State and Local	State and Local
Age and Service Requirements: Age 60 with 60 months of service credit or Age 55 with 25 years of service credit	Age and Service Requirements: Age 60 with 60 months of service credit or Age 55 with 25 years of service credit	Age and Service Requirements: Age 57 with 25 years of service credit or Age 62 with 5 years of service credit
Traditional Plan Formula: 2.2% of FAS multiplied by years of service for the first 30 years and 2.5% for service years in excess of 30	Traditional Plan Formula: 2.2% of FAS multiplied by years of service for the first 30 years and 2.5% for service years in excess of 30	Traditional Plan Formula: 2.2% of FAS multiplied by years of service for the first 35 years and 2.5% for service years in excess of 35
Combined Plan Formula: 1% of FAS multiplied by years of service for the first 30 years and 1.25% for service years in excess of 30	Combined Plan Formula: 1% of FAS multiplied by years of service for the first 30 years and 1.25% for service years in excess of 30	Combined Plan Formula: 1% of FAS multiplied by years of service for the first 35 years and 1.25% for service years in excess of 35

FAS represents the average of the three highest years of earnings over a member's career for Groups A and B. Group C is based on the average of the five highest years of earnings over a member's career.

Members who retire before meeting the age and years of service credit requirement for unreduced benefits receive a percentage reduction in the benefit amount.

When a traditional plan benefit recipient has received benefits for 12 months, current law provides for an COLA. This COLA is calculated on the base retirement benefit at the date of retirement and is not compounded. Members retiring under the combined plan receive a COLA on the defined benefit portion of their pension benefit. For those retiring prior to January 7, 2013, current law provides for a 3 percent COLA. For those retiring subsequent to January 7, 2013, beginning in calendar year 2019, current law provides that the COLA will be based on the average percentage increase in the Consumer Price Index, capped at 3 percent.

Defined contribution plan benefits are established in the plan documents, which may be amended by the Board. Member-directed plan and combined plan members who have met the retirement eligibility requirements may apply for retirement benefits. The amount available for defined contribution benefits in the combined plan consists of the member's contributions plus or minus the investment gains or losses resulting from the member's investment selections. Combined plan members wishing to receive benefits must meet the requirements for both the defined benefit and defined contribution plans. Member-directed participants must have attained the age of 55, have money on deposit in the defined contribution plan and have terminated public service to apply for retirement benefits. The amount available for defined contribution benefits in the member-directed plan consists of the members' contributions, vested employer contributions and investment gains or losses resulting from the members' investment selections. Employer contributions and associated investment earnings vest over a five-year period, at a rate of 20 percent each year. At retirement, members may select one of several distribution options for payment of the vested balance in their individual OPERS accounts. Options include the annuitization of the benefit (which includes joint and survivor options), partial lump-sum payments (subject to limitations), a rollover of the vested account balance to another financial institution, receipt of entire account balance, net of taxes withheld, or a combination of these options.

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
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Funding Policy – The ORC provides statutory authority for member and employer contributions as follows:

	State and Local
2019 Statutory Maximum Contribution Rates	
Employer	14.0 %
Employee *	10.0 %
2019 Actual Contribution Rates	
Employer:	
Pension **	14.0 %
Post-employment Health Care Benefits **	0.0
Total Employer	14.0 %
Employee	10.0 %

* Member contributions within the combined plan are not used to fund the defined benefit retirement allowance.

** These pension and employer health care rates are for the traditional and combined plans. The employer contributions rate for the member-directed plan is allocated 4 percent for health care with the remainder going to pension.

For 2019, The District’s contractually required contribution was \$400,727 for the traditional plan, \$13,501 for the combined plan and \$5,282 for the member-directed plan. Of these amounts, \$10,138 is reported as an intergovernmental payable for the traditional plan, \$341 for the combined plan, and \$134 for the member-directed plan.

Pension Liabilities (Asset), Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

The net pension liability (asset) for OPERS was measured as of December 31, 2018, and the total pension liability used to calculate the net pension liability (asset) was determined by an actuarial valuation as of that date. The District's proportion of the net pension liability (asset) was based on the District's share of contributions to the pension plan relative to the contributions of all participating entities. Following is information related to the proportionate share and pension expense of the District’s defined benefit pension plans:

	OPERS Traditional Plan	OPERS Combined Plan	
Proportion of the Net Pension Liability/Asset:			
Current Measurement Date	0.01891500%	0.02268400%	
Prior Measurement Date	0.01916400%	0.02302500%	
Change in Proportionate Share	-0.00024900%	-0.00034100%	
Proportionate Share of the:			Total
Net Pension Liability	\$5,180,436	\$0	\$5,180,436
Net Pension Asset	0	(25,366)	(25,366)
Pension Expense	1,056,397	7,023	1,063,420

Mahoning Valley Sanitary District
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2019 pension expense for the member-directed defined contribution plan was \$5,282. The aggregate pension expense for all pension plans was \$1,068,702 for 2019.

At December 31, 2019, the District reported deferred outflows of resources and deferred inflows of resources related to defined benefit pensions from the following sources:

	OPERS <u>Traditional Plan</u>	OPERS <u>Combined Plan</u>	<u>Total</u>
Deferred Outflows of Resources			
Differences between expected and actual experience	\$239	\$0	\$239
Changes of assumptions	450,970	5,666	456,636
Net difference between projected and actual earnings on pension plan investments	703,130	5,464	708,594
Changes in proportion and differences between District contributions and proportionate share of contributions	0	532	532
District contributions subsequent to the measurement date	<u>400,727</u>	<u>13,501</u>	<u>414,228</u>
Total Deferred Outflows of Resources	<u>\$1,555,066</u>	<u>\$25,163</u>	<u>\$1,580,229</u>
Deferred Inflows of Resources			
Differences between expected and actual experience	\$68,022	\$10,360	\$78,382
Changes in proportion and differences between District contributions and proportionate share of contributions	<u>104,270</u>	<u>0</u>	<u>104,270</u>
Total Deferred Inflows of Resources	<u>\$172,292</u>	<u>\$10,360</u>	<u>\$182,652</u>

\$414,228 reported as deferred outflows of resources related to pension resulting from District contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability or increase to the net pension asset in 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pension will be recognized in pension expense as follows:

Year Ending December 31:	OPERS <u>Traditional Plan</u>	OPERS <u>Combined Plan</u>	<u>Total</u>
2020	\$376,456	\$925	\$377,381
2021	213,354	(166)	213,188
2022	65,229	(50)	65,179
2023	327,008	1,660	328,668
2024	0	(586)	(586)
Thereafter	<u>0</u>	<u>(481)</u>	<u>(481)</u>
Total	<u>\$982,047</u>	<u>\$1,302</u>	<u>\$983,349</u>

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Actuarial Assumptions - OPERS

Actuarial valuations of an ongoing plan involve estimates of the values of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and cost trends. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employers and plan members) and include the types of benefits provided at the time of each valuation. The total pension liability was determined by an actuarial valuation as of December 31, 2018, using the following actuarial assumptions applied to all periods included in the measurement in accordance with the requirements of GASB 67. Key methods and assumptions used in the latest actuarial valuation, reflecting experience study results, prepared as of December 31, 2018, are presented as follows:

	<u>OPERS Traditional Plan</u>	<u>OPERS Combined Plan</u>
Wage Inflation	3.25 percent	3.25 percent
Future Salary Increases, including inflation	3.25 to 10.75 percent including wage inflation	3.25 to 8.25 percent including wage inflation
COLA or Ad Hoc COLA:		
Pre-January 7, 2013 Retirees	3 percent, simple	3 percent, simple
Post-January 7, 2013 Retirees	3 percent, simple through 2018, then 2.15 percent, simple	3 percent, simple through 2018, then 2.15 percent, simple
Investment Rate of Return	7.2 percent	7.2 percent
Actuarial Cost Method	Individual Entry Age	Individual Entry Age

In October of 2018, the OPERS Board adopted a change in the investment return assumption, reducing it from 7.5 percent to 7.2 percent. This change was effective beginning with the 2018 valuation.

Pre-retirement mortality rates are based on the RP-2014 Employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates are based on the RP-2014 Healthy Annuitant mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates for disabled retirees are based on the RP-2014 Disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to all of the previously described tables.

The most recent experience study was completed for the five year period ended December 31, 2015.

The long-term rate of return on defined benefit investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected real rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adjusted for inflation.

During 2018, OPERS managed investments in three investment portfolios: the Defined Benefit portfolio, the Health Care portfolio, and the Defined Contribution portfolio. The Defined Benefit portfolio contains the investment assets for the traditional pension plan, the defined benefit component of the combined plan and the annuitized accounts of the member-directed plan. Within the Defined Benefit portfolio, contributions into the plans are all recorded at the same time, and benefit payments all occur on the first of the month. Accordingly,

Mahoning Valley Sanitary District
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the money-weighted rate of return is considered to be the same for all plans within the portfolio. The annual money-weighted rate of return expressing investment performance, net of investment expenses and adjusted for the changing amounts actually invested, for the Defined Benefit portfolio was a loss of 2.94 percent for 2018.

The allocation of investment assets with the Defined Benefit portfolio is approved by the Board of Trustees as outlined in the annual investment plan. Plan assets are managed on a total return basis with a long-term objective of achieving and maintaining a fully funded status for the benefits provided through the defined benefit pension plans. The following table displays the Board-approved asset allocation policy for 2018 and the long-term expected real rates of return:

Asset Class	Target Allocation	Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)
Fixed Income	23.00 %	2.79 %
Domestic Equities	19.00	6.21
Real Estate	10.00	4.90
Private Equity	10.00	10.81
International Equities	20.00	7.83
Other investments	18.00	5.50
Total	100.00 %	5.95 %

Discount Rate For 2018, the discount rate used to measure the total pension liability was 7.2 percent for the traditional plan and the combined plan. For 2017, the discount rate used to measure the total pension liability was 7.5 percent for the traditional plan and the combined plan. The projection of cash flows used to determine the discount rate assumed that contributions from plan members and those of the contributing employers are made at the contractually required rates, as actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefits payments of current plan members; therefore, the long-term expected rate of return on pension plan investments for the traditional pension plan, combined plan and member-directed plan was applied to all periods of projected benefit payments to determine the total pension liability.

Sensitivity of the District's Proportionate Share of the Net Pension Liability (Asset) to Changes in the Discount Rate The following table presents the District's proportionate share of the net pension liability (asset) calculated using the current period discount rate assumption of 7.2 percent, as well as what the District's proportionate share of the net pension liability (asset) would be if it were calculated using a discount rate that is one-percentage-point lower (6.2 percent) or one-percentage-point higher (8.2 percent) than the current rate:

	1% Decrease (6.20%)	Discount Rate (7.20%)	1% Increase (8.20%)
District's proportionate share of the net pension liability (asset):			
OPERS Traditional Plan	\$7,653,009	\$5,180,436	\$3,125,704
OPERS Combined Plan	(8,393)	(25,366)	(37,655)

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

Note 10 - Defined Benefit OPEB Plans

See Note 9 for a description of the net OPEB liability.

Plan Description – Ohio Public Employees Retirement System

Plan Description – The Ohio Public Employees Retirement System (OPERS) administers three separate pension plans: the traditional pension plan, a cost-sharing, multiple-employer defined benefit pension plan; the member-directed plan, a defined contribution plan; and the combined plan, a cost-sharing, multiple-employer defined benefit pension plan that has elements of both a defined benefit and defined contribution plan.

OPERS maintains a cost-sharing, multiple-employer defined benefit post-employment health care trust, which funds multiple health care plans including medical coverage, prescription drug coverage and deposits to a Health Reimbursement Arrangement to qualifying benefit recipients of both the traditional pension and the combined plans. This trust is also used to fund health care for member-directed plan participants, in the form of a Retiree Medical Account (RMA). At retirement or refund, member directed plan participants may be eligible for reimbursement of qualified medical expenses from their vested RMA balance.

In order to qualify for postemployment health care coverage, age and service retirees under the traditional pension and combined plans must have twenty or more years of qualifying Ohio service credit with a minimum age of 60, or generally 30 years of qualifying service at any age. Health care coverage for disability benefit recipients and qualified survivor benefit recipients is available. The health care coverage provided by OPERS meets the definition of an Other Post Employment Benefit (OPEB) as described in GASB Statement No. 75. See OPERS' annual financial report referenced later for additional information.

The Ohio Revised Code (ORC) permits, but does not require, OPERS to provide health care to its eligible benefit recipients. Authority to establish and amend health care coverage is provided to the Board in Chapter 145 of the ORC.

Disclosures for the health care plan are presented separately in the OPERS' annual financial report. Interested parties may obtain a copy by visiting <https://www.opers.org/financial/reports.shtml>, by writing to OPERS, 277 East Town Street, Columbus, Ohio 43215-4642, or by calling (614) 222-5601 or (800) 222-7377.

Funding Policy – The ORC provides the statutory authority allowing public employers to fund postemployment health care through their contributions to OPERS. When funding is approved by OPERS' Board of Trustees, a portion of each employer's contribution to OPERS is set aside to fund OPERS health care plans. Beginning in 2018, health care was no longer being funded.

Employer contribution rates are expressed as a percentage of the earnable salary of active members. In 2019, state and local employers contributed at a rate of 14.0 percent of earnable salary and public safety and law enforcement employers contributed at 18.1 percent. These are the maximum employer contribution rates permitted by the ORC. Active member contributions do not fund health care.

Each year, the OPERS Board determines the portion of the employer contribution rate that will be set aside to fund health care plans. As recommended by OPERS' actuary, beginning January 1, 2018, OPERS no longer allocated a portion of its employer contributions to health care for the traditional plan and the combined plan. The OPERS Board is also authorized to establish rules for the retiree or their surviving beneficiaries to pay a portion of the health care provided. Payment amounts vary depending on the number of covered dependents and the coverage selected. The employer contribution as a percentage of covered payroll deposited into the RMA for participants in the member-directed plan for 2019 was 4.0 percent.

Employer contribution rates are actuarially determined and are expressed as a percentage of covered payroll.

Mahoning Valley Sanitary District
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The District's contractually required contribution was \$2,113 for 2019. Of this amount, \$53 is reported as an intergovernmental payable.

OPEB Liabilities, OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

The net OPEB liability and total OPEB liability for OPERS were determined by an actuarial valuation as of December 31, 2017, rolled forward to the measurement date of December 31, 2018, by incorporating the expected value of health care cost accruals, the actual health care payment, and interest accruals during the year. The District's proportion of the net OPEB liability was based on the District's share of contributions to the retirement plan relative to the contributions of all participating entities. Following is information related to the proportionate share and OPEB expense:

	OPERS
Proportion of the Net OPEB Liability:	
Current Measurement Date	0.01957600%
Prior Measurement Date	0.01891000%
Change in Proportionate Share	0.00066600%
Proportionate Share of the Net OPEB Liability	\$2,552,248
OPEB Expense	\$214,621

At December 31, 2019, the District reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	OPERS
Deferred Outflows of Resources	
Differences between expected and actual experience	\$864
Changes of assumptions	82,287
Net difference between projected and actual earnings on OPEB plan investments	117,006
Changes in proportion and differences between District contributions and proportionate share of contributions	48,502
District contributions subsequent to the measurement date	2,113
Total Deferred Outflows of Resources	\$250,772
Deferred Inflows of Resources	
Differences between expected and actual experience	\$6,925
Changes in proportion and differences between District contributions and proportionate share of contributions	51,104
Total Deferred Inflows of Resources	\$58,029

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\$2,113 reported as deferred outflows of resources related to OPEB resulting from District contributions subsequent to the measurement date will be recognized as a reduction of the net OPEB liability in 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

Year Ending December 31:	OPERS
2020	\$68,549
2021	43,137
2022	20,000
2023	58,944
Total	\$190,630

Actuarial Assumptions - OPERS

Actuarial valuations of an ongoing plan involve estimates of the values of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and cost trends. Actuarially determined amounts are subject to continual review or modification as actual results are compared with past expectations and new estimates are made about the future.

Projections of health care costs for financial reporting purposes are based on the substantive plan (the plan as understood by the employers and plan members) and include the types of coverage provided at the time of each valuation and the historical pattern of sharing of costs between OPERS and plan members. The total OPEB liability was determined by an actuarial valuation as of December 31, 2017, rolled forward to the measurement date of December 31, 2018. The actuarial valuation used the following actuarial assumptions applied to all prior periods included in the measurement in accordance with the requirements of GASB 74:

Wage Inflation	3.25 percent
Projected Salary Increases, including inflation	3.25 to 10.75 percent including wage inflation
Single Discount Rate:	
Current measurement date	3.96 percent
Prior Measurement date	3.85 percent
Investment Rate of Return	6.00 percent
Municipal Bond Rate:	
Current measurement date	3.71 percent
Prior Measurement date	3.31 percent
Health Care Cost Trend Rate:	
Current measurement date	10.0 percent, initial 3.25 percent, ultimate in 2029
Prior Measurement date	7.25 percent, initial 3.25 percent, ultimate in 2028
Actuarial Cost Method	Individual Entry Age Normal

In October of 2018, the OPERS Board adopted a change in the investment return assumption, reducing it from 6.5 percent to 6.0 percent. This change was effective for the 2018 valuation.

Mahoning Valley Sanitary District
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Pre-retirement mortality rates are based on the RP-2014 Employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates are based on the RP-2014 Healthy Annuitant mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates for disabled retirees are based on the RP-2014 Disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to all of the previously described tables.

The most recent experience study was completed for the five year period ended December 31, 2015.

The long-term expected rate of return on health care investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected real rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adjusted for inflation.

During 2018, OPERS managed investments in three investment portfolios: the Defined Benefit portfolio, the Health Care portfolio and the Defined Contribution portfolio. The Health Care portfolio includes the assets for health care expenses for the Traditional Pension Plan, Combined Plan and Member-Directed Plan eligible members. Within the Health Care portfolio, contributions into the plans are assumed to be received continuously throughout the year based on the actual payroll payable at the time contributions are made, and health care-related payments are assumed to occur mid-year. Accordingly, the money-weighted rate of return is considered to be the same for all plans within the portfolio. The annual money-weighted rate of return expressing investment performance, net of investment expenses and adjusted for the changing amounts actually invested, for the Health Care portfolio was a loss of 5.6 percent for 2018.

The allocation of investment assets within the Health Care portfolio is approved by the Board of Trustees as outlined in the annual investment plan. Assets are managed on a total return basis with a long-term objective of continuing to offer a sustainable health care program for current and future retirees. OPERS' primary goal is to achieve and maintain a fully funded status for the benefits provided through the defined pension plans. Health care is a discretionary benefit. The following table displays the Board-approved asset allocation policy for 2018 and the long-term expected real rates of return:

Asset Class	Target Allocation	Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)
Fixed Income	34.00 %	2.42 %
Domestic Equities	21.00	6.21
Real Estate Investment Trust	6.00	5.98
International Equities	22.00	7.83
Other investments	17.00	5.57
Total	100.00 %	5.16 %

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

Discount Rate A single discount rate of 3.96 percent was used to measure the OPEB liability on the measurement date of December 31, 2018. A single discount rate of 3.85 percent was used to measure the OPEB liability on the measurement date of December 31, 2017. Projected benefit payments are required to be discounted to their actuarial present value using a single discount rate that reflects (1) a long-term expected rate of return on OPEB plan investments (to the extent that the health care fiduciary net position is projected to be sufficient to pay benefits), and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate are not met). This single discount rate was based on an expected rate of return on the health care investment portfolio of 6.00 percent and a municipal bond rate of 3.71 percent. The projection of cash flows used to determine this single discount rate assumed that employer contributions will be made at rates equal to the actuarially determined contribution rate. Based on these assumptions, the health care fiduciary net position and future contributions were sufficient to finance health care costs through 2031. As a result, the long-term expected rate of return on health care investments was applied to projected costs through the year 2031, and the municipal bond rate was applied to all health care costs after that date.

Sensitivity of the District's Proportionate Share of the Net OPEB Liability to Changes in the Discount Rate The following table presents the District's proportionate share of the net OPEB liability calculated using the single discount rate of 3.96 percent, as well as what the District's proportionate share of the net OPEB liability would be if it were calculated using a discount rate that is one-percentage-point lower (2.96 percent) or one-percentage-point higher (4.96 percent) than the current rate:

	1% Decrease (2.96%)	Current Discount Rate (3.96%)	1% Increase (4.96%)
District's proportionate share of the net OPEB liability	\$3,265,277	\$2,552,248	\$1,985,202

Sensitivity of the District's Proportionate Share of the Net OPEB Liability to Changes in the Health Care Cost Trend Rate Changes in the health care cost trend rate may also have a significant impact on the net OPEB liability. The following table presents the net OPEB liability calculated using the assumed trend rates, and the expected net OPEB liability if it were calculated using a health care cost trend rate that is 1.0 percent lower or 1.0 percent higher than the current rate.

Retiree health care valuations use a health care cost-trend assumption that changes over several years built into the assumption. The near-term rates reflect increases in the current cost of health care; the trend starting in 2019 is 10.00 percent. If this trend continues for future years, the projection indicates that years from now virtually all expenditures will be for health care. A more reasonable alternative is that in the not-too-distant future, the health plan cost trend will decrease to a level at, or near, wage inflation. On this basis, the actuary's project premium rate increases will continue to exceed wage inflation for approximately the next decade, but by less each year, until leveling off at an ultimate rate, assumed to be 3.25 percent in the most recent valuation.

	1% Decrease	Current Health Care Cost Trend Rate Assumption	1% Increase
District's proportionate share of the net OPEB liability	\$2,453,264	\$2,552,248	\$2,666,251

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

Note 11 - Long Term Obligations

The original issue date, interest rate, original issue amount and date of maturity of each of the District's long-term obligations follows:

Debt Issue	Interest Rate	Original Issue	Year of Maturity
Business-Type Activities			
<i>OWDA Loans from Direct Borrowings</i>			
Filter System Improvement	3.35%	\$7,105,074	2025
Niles Standpipe Replacement	3.25%	1,298,746	2027
Chemical Feed Building Roof	3.25%	1,609,624	2027
Administration and Filter Building Roof	4.47%	302,790	2027
Valve Replacement/Gate House	0.00%	2,488,513	2030
Solids Contact Clarifier/Recarbonation	3.99%	14,327,587	2032
Solid Clarifiers/Recarbonation	2.00%	8,000,000	2032
Phase II Valve/Pipeline Replacement	2.00%	4,326,310	2036
Berlin Pump Station Improvements	2.00%	2,364,846	2036
SCADA/Instrumentation Improvements	2.94%	611,719	2035
SCADA/Enhanced Security Improvements	4.32%	3,202,817	2035
Dam/Spillway Improvement Design	4.45%	362,614	2020
Chemical Feed Systems	0.81%	2,575,037	2037
Phase III Valve/Main Replacement	0.81%	6,408,951	2038

The changes in the District's long-term obligations during the 2019 consist of the following:

	Principal Outstanding 12/31/2018	Additions	(Reductions)	Principal Outstanding 12/31/2019	Amount Due in One Year
Business-Type Activities:					
<i>OWDA Loans from Direct Borrowings</i>					
Filter Systems Improvement	\$3,036,962	\$0	(\$391,830)	\$2,645,132	\$405,067
Niles Standpipe Replacement	655,059	0	(68,080)	586,979	70,310
Chemical Feed Building Roof	811,859	0	(84,376)	727,483	87,140
Administration and Filter Building Roof	169,339	0	(15,664)	153,675	16,372
Valve Replacement/Gate House	1,493,108	0	(124,426)	1,368,682	124,425
Solids Contact Clarifier/Recarbonation	11,143,632	0	(607,967)	10,535,665	632,466
Solid Clarifiers/Recarbonation	5,924,575	0	(370,642)	5,553,933	378,092
Phase II Valve/Pipeline Replacement	3,966,976	0	(185,102)	3,781,874	188,823
Berlin Pump Station Improvements	2,168,427	0	(101,181)	2,067,246	103,214
SCADA/Instrumentation Improvements	541,104	0	(24,946)	516,158	25,685
SCADA/Enhanced Security Improvements	2,878,475	0	(117,690)	2,760,785	122,830
Dam/Spillway Improvement Design	314,636	11,739	(326,375)	0	0
Chemical Feed Systems	1,948,421	0	(68,485)	1,879,936	100,411
Phase III Valve/Main Replacement	5,931,032	0	(274,697)	5,656,335	284,604
<i>Total OWDA Loans</i>	<u>\$40,983,605</u>	<u>\$11,739</u>	<u>(\$2,761,461)</u>	<u>\$38,233,883</u>	<u>\$2,539,439</u>

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

	Principal Outstanding 12/31/2018	Additions	(Reductions)	Principal Outstanding 12/31/2019	Amount Due in One Year
Business-Type Activities (continued):					
<i>Other Long Term Obligations:</i>					
Net Pension Liability	\$3,006,461	\$2,173,975	\$0	\$5,180,436	\$0
Net OPEB Liability	2,053,487	498,761	0	2,552,248	0
Compensated Absences	523,329	374,544	(307,456)	590,417	355,106
<i>Total Other Long Term Obligation</i>	<u>5,583,277</u>	<u>3,047,280</u>	<u>(307,456)</u>	<u>8,323,101</u>	<u>355,106</u>
Total Business-Type Activities	<u>\$46,566,882</u>	<u>\$3,059,019</u>	<u>(\$3,068,917)</u>	<u>\$46,556,984</u>	<u>\$2,894,545</u>

The District's outstanding OWDA loans from direct borrowings of \$38,233,883 contain provisions that in the event of default (1) the amount of such default shall bear interest at the default rate from the due date until the date of payment, (2) if any of the charges have not been paid within 30 days, in addition to the interest calculated at the default rate, a late charge of 1 percent on the amount of each default shall also be paid to the OWDA, and (3) for each additional 30 days during which the charges remain unpaid, the District shall continue to pay an additional late charge of 1 percent on the amount of the default until such charges are paid.

The District was approved for a \$7,105,074 Ohio Water Development Authority loan for improvements to the filtration system. This loan was issued for a twenty year period with a final maturity in 2025.

The District was approved for a \$1,298,746 Ohio Water Development Authority loan for the replacement of the Niles Standpipe. This loan was issued for a twenty year period with a final maturity in 2027.

The District was approved for a \$1,609,624 Ohio Water Development Authority loan for the replacement of the Chemical Feed roof. This loan was issued for a twenty year period with a final maturity in 2027.

The District was approved for a \$302,790 Ohio Water Development Authority loan for the replacement of the Administration and Filter Building roof. This loan was issued for a twenty year period with a final maturity in 2027.

The District was approved for a \$2,488,513 Ohio Water Development Authority loan for the Valve Replacement/Gate House project. This loan was issued for a twenty year period with a final maturity in 2030.

The District was approved for a \$14,327,587 Ohio Water Development Authority loan for the Solids Contact Clarifier/Recarbonation project. This loan was issued for a twenty year period with a final maturity in 2032.

The District was approved for an \$8,000,000 Ohio Water Development Authority loan for the Solid Clarifiers/Recarbonation project. This loan was issued for a twenty year period with a final maturity in 2032.

The District was approved for a \$4,326,310 Ohio Water Development Authority loan for the Phase II Valve/Pipeline Replacement project. This loan was issued for a twenty year period with a final maturity in 2036.

The District was approved for a \$2,364,846 Ohio Water Development Authority loan for the Berlin Pump Station Improvements project. This loan was issued for a twenty year period with a final maturity in 2036.

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

The District was approved for a \$611,719 Ohio Water Development Authority loan for the SCADA/Instrumentation Improvements project. This loan was issued for a twenty year period with a final maturity in 2035.

The District was approved for a \$3,202,817 Ohio Water Development Authority loan for the SCADA/Enhanced Security Improvements project. This loan was issued for a twenty year period with a final maturity in 2035.

The District was approved for a \$362,614 Ohio Water Development Authority loan for the Dam/Spillway Improvement Design project. As of December 31, 2019, the District has drawn down proceeds of \$335,169. Total current year additions consisted of capitalized interest of \$11,739. In 2019, the District paid off the entire loan balance.

The District was approved for a \$2,575,037 Ohio Water Development Authority loan for the Chemical Feed Systems project. This loan was issued for a twenty year period with a final maturity in 2037.

The District was approved for a \$6,408,951 Ohio Water Development Authority loan for the Phase III Valve/Main Replacement project. This loan was issued for a twenty year period with a final maturity in 2038.

An analysis of the OWDA loan balances is as follows:

	EPA/OWDA Loans
Outstanding Principal at December 31, 2018	\$40,983,605
Current Year Capitalized Interest	11,739
Current Year Principal Payments	(2,761,461)
Outstanding Principal at December 31, 2019	\$38,233,883

The District has pledged future revenues, net of operating expenses, to repay OWDA loans. The debt is payable solely from net revenues through 2038. Annual principal and interest payments on the debt issues are expected to require 41.55 percent of net revenues. The total principal and interest remaining to be paid on the debt is \$45,382,710. Principal and interest paid for the current year and total net revenues available were \$3,768,771 and \$9,069,799, respectively.

Principal and interest requirements to retire long-term obligations outstanding at December 31, 2019, are as follows:

	From Direct Borrowings	
	OWDA Loans	
	Principal	Interest
2020	\$2,539,439	\$943,911
2021	2,607,227	878,428
2022	2,677,259	840,778
2023	2,749,618	740,886
2024	2,824,385	668,679
2025 - 2029	12,692,450	2,296,051
2030 - 2034	9,654,261	730,265
2035 - 2038	2,489,244	49,829
Total	\$38,233,883	\$7,148,827

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

Note 12 – Significant Commitments

Contractual Commitments

As of December 31, 2019, the District had the following contractual commitments outstanding:

Vendor Name	Contract Amount	Amount Paid To Date	Remaining Contract
MS Consultants - Headhouse	\$272,743	\$170,687	\$102,056
Gannett Fleming - Dam	2,535,302	2,085,384	449,918
AP O'Horo - Emergency Repair 48" Main	230,100	0	230,100
Stantec - Valve Phase IV Standby Power	1,809,400	0	1,809,400
CT Consultants - Filter Gallery	498,625	15,212	483,413
C. Crump Inc - Lime Residual Removal	526,204	0	526,204
Total	<u>\$5,872,374</u>	<u>\$2,271,283</u>	<u>\$3,601,091</u>

Remaining commitment amounts were encumbered at year end.

Encumbrances

Encumbrances are commitments related to unperformed contracts for goods or services. Encumbrance accounting is utilized to the extent necessary to assure effective budgetary control and accountability and to facilitate effective cash planning and control. At year end, the District had \$4,827,345 of encumbrances expected to be honored upon performance by the vendor in the next year.

Note 13 – Change in Accounting Principle

The Governmental Accounting Standards Board (GASB) recently issued GASB Statement No. 95, *Postponement of the Effective Dates of Certain Authoritative Guidance*. The District evaluated implementing these certain GASB pronouncements based on the guidance in GASB 95.

For 2019, the District implemented Governmental Accounting Standards Board (GASB) Statement No. 84, *Fiduciary Activities*, Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*, and related guidance from (GASB) Implementation Guide No. 2019-2, *Fiduciary Activities*.

For 2019, the District also implemented the Governmental Accounting Standards Board's (GASB) *Implementation Guide No. 2018-1*. These changes were incorporated in the District's 2019 financial statements; however, there was no effect on beginning net position/fund balance.

GASB Statement No. 84 established specific criteria for identifying activities that should be reported as fiduciary activities and clarifies whether and how business type activities should report their fiduciary activities. These changes were incorporated in the District's 2019 financial statements; however, there was no effect on beginning net position/fund balance.

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

GASB Statement 88 improves the information that is disclosed in notes to government financial statements related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt. These changes were incorporated in the District's 2019 financial statements; however, there was no effect on beginning net position/fund balance.

Note 14 – Subsequent Events

The United States and the State of Ohio declared a state of emergency in March of 2020 due to the COVID-19 pandemic. The financial impact of COVID-19 and the ensuing emergency measures will impact subsequent periods of the District. The investments of the pension and other employee benefit plans in which the District participates fluctuate with market conditions, and, due to market volatility, the amount of gains or losses that will be recognized in subsequent periods, if any, cannot be determined. In addition, the impact on the District's future operating costs, revenues, and any recovery from emergency funding, either federal or state, cannot be estimated.

Mahoning Valley Sanitary District
Notes to the Basic Financial Statements
For the Year Ended December 31, 2019

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Required Supplementary Information

Mahoning Valley Sanitary District
Required Supplementary Information
Schedule of the District's Proportionate Share of the Net Pension Liability
Ohio Public Employees Retirement System - Traditional Plan
*Last Three Years (1) **

	2019	2018	2017
District's Proportion of the Net Pension Liability	0.01891500%	0.01916400%	0.02064600%
District's Proportionate Share of the Net Pension Liability	\$5,180,436	\$3,006,461	\$4,688,356
District's Covered Payroll	\$2,585,650	\$2,532,562	\$2,668,875
District's Proportionate Share of the Net Pension Liability as a Percentage of its Covered Payroll	200.35%	118.71%	175.67%
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	74.70%	84.66%	77.25%

(1) Although this schedule is intended to reflect information for ten years, information prior to 2017 is not available. An additional column will be added each year.

*Amounts presented for each year were determined as of the District's measurement date which is the prior calendar year end.

See accompanying notes to the required supplementary information

Mahoning Valley Sanitary District
Required Supplementary Information
Schedule of the District's Proportionate Share of the Net Pension Asset
Ohio Public Employees Retirement System - Combined Plan
*Last Three Years (1) **

	2019	2018	2017
District's Proportion of the Net Pension Asset	0.02268400%	0.02302500%	0.02366100%
District's Proportionate Share of the Net Pension Asset	\$25,366	\$31,345	\$13,168
District's Covered Payroll	\$97,014	\$94,300	\$92,100
District's Proportionate Share of the Net Pension Asset as a Percentage of its Covered Payroll	-26.15%	-33.24%	-14.30%
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	126.64%	137.28%	116.55%

(1) Although this schedule is intended to reflect information for ten years, information prior to 2017 is not available. An additional column will be added each year.

*Amounts presented for each year were determined as of the District's measurement date which is the prior calendar year end.

See accompanying notes to the required supplementary information

Mahoning Valley Sanitary District
Required Supplementary Information
Schedule of the District's Proportionate Share of the Net OPEB Liability
Ohio Public Employees Retirement System - OPEB Plan
*Last Three Years (1) **

	2019	2018	2017
District's Proportion of the Net OPEB Liability	0.01957600%	0.01891000%	0.02034300%
District's Proportionate Share of the Net OPEB Liability	\$2,552,248	\$2,053,487	\$2,054,712
District's Covered Payroll	\$2,807,413	\$2,836,000	\$2,861,650
District's Proportionate Share of the Net OPEB Liability as a Percentage of its Covered Payroll	90.91%	72.41%	71.80%
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	46.33%	54.14%	54.05%

(1) Although this schedule is intended to reflect information for ten years, information prior to 2017 is not available. An additional column will be added each year.

*Amounts presented for each year were determined as of the District's measurement date which is the prior calendar year end.

See accompanying notes to the required supplementary information

Mahoning Valley Sanitary District
Required Supplementary Information
Schedule of the District's Contributions
Ohio Public Employees Retirement System - Traditional Plan
Last Four Years (1)

Net Pension Liability	<u>2019</u>	<u>2018 Interim (2)</u>	<u>Fiscal Year 2018</u>	<u>Fiscal Year 2017</u>
Contractually Required Contribution	\$400,727	\$186,320	\$341,627	\$333,539
Contributions in Relation to the Contractually Required Contribution	<u>(400,727)</u>	<u>(186,320)</u>	<u>(341,627)</u>	<u>(333,539)</u>
Contribution Deficiency (Excess)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
District Covered Payroll	\$2,862,336	\$1,330,857	\$2,531,377	\$2,674,827
Pension Contributions as a Percentage of Covered Payroll	<u>14.00%</u>	<u>14.00%</u>	<u>13.50%</u>	<u>12.47%</u>

(1) Although this schedule is intended to reflect information for ten years, information prior to fiscal year 2017 is not available. An additional column will be added each year.

(2) "2018 Interim" is a six month period to change from a Fiscal Year to Calendar Year basis.

See accompanying notes to the required supplementary information

Mahoning Valley Sanitary District
Required Supplementary Information
Schedule of the District's Contributions
Ohio Public Employees Retirement System - Combined Plan
Last Four Years (1)

Net Pension Liability	<u>2019</u>	<u>2018 Interim (2)</u>	<u>Fiscal Year 2018</u>	<u>Fiscal Year 2017</u>
Contractually Required Contribution	\$13,501	\$6,888	\$12,966	\$11,306
Contributions in Relation to the Contractually Required Contribution	<u>(13,501)</u>	<u>(6,888)</u>	<u>(12,966)</u>	<u>(11,306)</u>
Contribution Deficiency (Excess)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
District Covered Payroll	\$96,436	\$49,200	\$96,060	\$90,379
Pension Contributions as a Percentage of Covered Payroll	<u>14.00%</u>	<u>14.00%</u>	<u>13.50%</u>	<u>12.51%</u>

(1) Although this schedule is intended to reflect information for ten years, information prior to fiscal year 2017 is not available. An additional column will be added each year.

(2) "2018 Interim" is a six month period to change from a Fiscal Year to Calendar Year basis.

See accompanying notes to the required supplementary information

Mahoning Valley Sanitary District
Required Supplementary Information
Schedule of the District's Contributions
Ohio Public Employees Retirement System - OPEB Plan
Last Four Years (1)

Net OPEB Liability	<u>2019</u>	<u>2018 Interim (2)</u>	<u>Fiscal Year 2018</u>	<u>Fiscal Year 2017</u>
Contractually Required Contribution	\$2,113	\$2,641	\$17,946	\$44,309
Contributions in Relation to the Contractually Required Contribution	<u>(2,113)</u>	<u>(2,641)</u>	<u>(17,946)</u>	<u>(44,309)</u>
Contribution Deficiency (Excess)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
District Covered Payroll	\$3,011,597	\$1,446,082	\$2,744,887	\$2,815,831
Pension Contributions as a Percentage of Covered Payroll	<u>0.07%</u>	<u>0.18%</u>	<u>0.65%</u>	<u>1.57%</u>

(1) Although this schedule is intended to reflect information for ten years, information prior to fiscal year 2017 is not available. An additional column will be added each year.

(2) "2018 Interim" is a six month period to change from a Fiscal Year to Calendar Year basis.

See accompanying notes to the required supplementary information

Mahoning Valley Sanitary District
Notes to the Required Supplementary Information
For the Year Ended December 31, 2019

Changes in Assumptions – OPERS Pension – Traditional Plan

Amounts reported beginning in 2019 incorporate changes in assumptions used by OPERS in calculating the total pension liability in the latest actuarial valuation. These new assumptions compared with those used in 2017 and in 2016 and prior are presented as follows:

	<u>2019</u>	<u>2017</u>	<u>2016 and prior</u>
Wage Inflation	3.25 percent	3.25 percent	3.75 percent
Future Salary Increases, including inflation	3.25 to 10.75 percent including wage inflation	3.25 to 10.75 percent including wage inflation	4.25 to 10.05 percent including wage inflation
COLA or Ad Hoc COLA:			
Pre-January 7, 2013 Retirees	3 percent, simple	3 percent, simple	3 percent, simple
Post-January 7, 2013 Retirees	3 percent, simple through 2018, then 2.15 percent, simple	3 percent, simple through 2018, then 2.15 percent, simple	3 percent, simple through 2018, then 2.8 percent, simple
Investment Rate of Return	7.2 percent	7.5 percent	8 percent
Actuarial Cost Method	Individual Entry Age	Individual Entry Age	Individual Entry Age

Amounts reported beginning in 2017 use mortality rates based on the RP-2014 Healthy Annuitant mortality table. For males, Healthy Annuitant Mortality tables were used, adjusted for mortality improvement back to the observation period base of 2006 and then established the base year as 2015. For females, Healthy Annuitant Mortality tables were used, adjusted for mortality improvements back to the observation period base year of 2006 and then established the base year as 2010. The mortality rates used in evaluating disability allowances were based on the RP-2014 Disabled mortality tables, adjusted for mortality improvement back to the observation base year of 2006 and then established the base year as 2015 for males and 2010 for females. Mortality rates for a particular calendar year for both healthy and disabled retiree mortality tables are determined by applying the MP-2015 mortality improvement scale to the previously described tables.

Amounts reported for 2016 and prior use mortality rates based on the RP-2000 Mortality Table projected 20 years using Projection Scale AA. For males, 105 percent of the combined healthy male mortality rates were used. For females, 100 percent of the combined healthy female mortality rates were used. The mortality rates used in evaluating disability allowances were based on the RP-2000 mortality table with no projections. For males 120 percent of the disabled female mortality rates were used set forward two years. For females, 100 percent of the disabled female mortality rates were used.

Changes in Assumptions – OPERS Pension – Combined Plan

For 2019, the investment rate of return changed from 7.5 percent to 7.2 percent.

Changes in Assumptions – OPERS OPEB

For 2019, the single discount rate changed from 3.85 percent to 3.96 percent and the municipal bond rate changed from 3.31 percent to 3.71 percent. For 2019, the health care cost trend rate was 10 percent, initial; 3.25 ultimate in 2029. For 2018, the health care cost tend rate was 7.25 percent, initial; 3.25 percent ultimate in 2028.

For 2018, the single discount rate changed from 4.23 percent to 3.85 percent.

Statistical Section

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Statistical Section

This part of the Mahoning Valley Sanitary District's comprehensive annual financial report presents detailed information as a context for understanding what the information in the financial statements, note disclosures, and required supplementary information says about the District's overall financial health.

<u>Contents</u>	<u>Page(s)</u>
Financial Trends These schedules contain trend information to help the reader understand how the District's financial performance and well-being have changed over time.	S2 - S3
Revenue Capacity These schedules contain information to help the reader assess the District's most significant local revenue source, charges for services.	S4 - S5
Debt Capacity These schedules present information to help the reader assess the affordability of the District's current levels of outstanding debt and the District's ability to issue additional debt in the future.	S7 - S9
Economic and Demographic Information These schedules offer economic and demographic indicators to help the reader understand the environment within which the District's financial activities take place.	S10 - S12
Operating Information These schedules contain service data to help the reader understand how the information in the District's financial report relates to the services the District provides and the activities it performs.	S13 - S15

Sources: Unless otherwise noted, the information in these schedules is derived from the comprehensive annual financial reports for the relevant fiscal year.

Mahoning Valley Sanitary District
Net Position by Component
Last Four Years (1)
(accrual basis of accounting)

	<u>2019 Calendar</u>	<u>2018 Interim (2)</u>	<u>2018 Fiscal</u>	<u>2017 Fiscal</u>
Net Investment in Capital Assets	\$30,339,832	\$28,766,427	\$23,474,961	\$17,089,717
Restricted for:				
Debt Service	0	106,104	2,696,074	4,172,643
Unrestricted	<u>37,994,519</u>	<u>34,230,281</u>	<u>32,622,512</u>	<u>31,694,700</u>
<i>Total Net Position</i>	<u><u>\$68,334,351</u></u>	<u><u>\$63,102,812</u></u>	<u><u>\$58,793,547</u></u>	<u><u>\$52,957,060</u></u>

Source: District Financial Records

- (1) The District implemented an accrual basis of accounting beginning fiscal year 2018. Therefore, information prior to 2017 is not available.
- (2) "2018 Interim" is a six month period to change from Fiscal to Calendar Year Basis. 2019 is reported on a Calendar Year Basis, 2017-2018 are reported on a Fiscal Year Basis.

Mahoning Valley Sanitary District

Changes in Net Position

Last Three Years (1)

(accrual basis of accounting)

	2019 Calendar	2018 Interim (2)	2018 Fiscal
Operating Revenues			
Charges for Services	\$18,463,625	\$9,175,830	\$18,024,450
Miscellaneous	133,212	70,248	589,075
<i>Total Operating Revenues</i>	<u>18,596,837</u>	<u>9,246,078</u>	<u>18,613,525</u>
Operating Expenses			
Personal Services	4,778,313	1,712,291	3,902,045
Supplies and Services	4,840,658	1,309,919	4,186,781
Depreciation	3,171,330	1,601,180	2,573,366
Claims	606,848	306,177	563,761
Miscellaneous	9,676	6,868	623,675
<i>Total Operating Expenses</i>	<u>13,406,825</u>	<u>4,936,435</u>	<u>11,849,628</u>
<i>Operating Income (Loss)</i>	<u>5,190,012</u>	<u>4,309,643</u>	<u>6,763,897</u>
Non-Operating Revenues (Expenses)			
Timber Sales	67,250	71,000	100,000
Royalties	22,815	16,736	34,217
Miscellaneous - Non Operating Revenue	0	2,688	0
Miscellaneous - Non Operating Expense	0	(2,116)	0
Loss on Disposal of Capital Assets	(284,998)	(31,775)	0
Interest	841,669	230,084	136,943
Interest and Fiscal Charges	<u>(1,007,310)</u>	<u>(576,444)</u>	<u>(1,198,570)</u>
<i>Total Non-Operating Revenues (Expenses)</i>	<u>(360,574)</u>	<u>(289,827)</u>	<u>(927,410)</u>
<i>Income (Loss) Before Transfers and Capital Contributions</i>	4,829,438	4,019,816	5,836,487
Capital Contributions	<u>402,101</u>	<u>289,449</u>	<u>0</u>
Change in Net Position	<u><u>\$5,231,539</u></u>	<u><u>\$4,309,265</u></u>	<u><u>\$5,836,487</u></u>

Source: District Financial Records

(1) The District implemented an accrual basis of accounting beginning fiscal year 2018. Therefore, information prior to 2018 is not available.

(2) "2018 Interim" is a six month period to change from Fiscal to Calendar Year Basis. 2019 is reported on a Calendar Year Basis, 2017-2018 are reported on a Fiscal Year Basis.

Mahoning Valley Sanitary District
Charges for Services and Principal Payers
Last Four Years (1)

Year	Amount Billed						Total Billed
	City of Youngstown		City of Niles		Village of McDonald		
	Revenue	Percentage	Revenue	Percentage	Revenue	Percentage	
2019 Calendar	\$13,066,023	70.81 %	\$5,101,519	27.65 %	\$283,581	1.54 %	\$18,451,123
2018 Interim (4)	6,443,603	70.09	2,575,736	28.02	173,413	1.89	9,192,752
2018 Fiscal	13,301,354	73.79	4,375,673	24.28	347,787	1.93	18,024,814
2017 Fiscal	13,381,490	73.65	4,424,669	24.35	362,589	2.00	18,168,748

Source: District's Financial Records

- (1) Information prior to fiscal year 2017 is not available.
- (2) This information is presented on a cash basis.
- (3) The Cities of Youngstown and Niles and the Village of McDonald are the District's only customers.
- (4) "2018 Interim" is a six month period to change from Fiscal to Calendar Year Basis. 2019 is reported on a Calendar Year Basis, 2017-2018 are reported on a Fiscal Year Basis.

Mahoning Valley Sanitary District

Water Billing Rate

Last Four Years (1)

<u>Year</u>	<u>Rate per Million Gallons</u>
2019 Calendar	\$2,242.93
2018 Interim (2)	2,287.76
2018 Fiscal	2,240.15
2017 Fiscal	2,466.10

Source: District's Financial Records

(1) Information prior to fiscal year 2017 is not available

(2) "2018 Interim" is a six month period to change from Fiscal to Calendar Year Basis. 2019 is reported on a Calendar Year Basis, 2017-2018 are reported on a Fiscal Year Basis.

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Mahoning Valley Sanitary District

Pledged Revenue Coverage

Last Three Years (1)

<u>Year</u>	<u>Water Service Charges and Interest</u>	<u>Direct Operating Expenses (3)</u>	<u>Net Available Revenue</u>	<u>Debt Service (2)</u>		<u>Coverage</u>
				<u>Principal</u>	<u>Interest</u>	
2019 Calendar	\$19,305,294	\$10,235,495	\$9,069,799	\$2,761,461	\$1,007,310	2.41
2018 Interim (4)	9,405,914	3,335,255	6,070,659	3,819,369	576,444	1.38
2018 Fiscal	18,161,393	9,276,262	8,885,131	4,827,321	1,198,570	1.47

(1) Information prior to fiscal year 2018 is not available.

(2) Revenue debt includes Water Revenue Bonds and OWDA loans payable solely from net revenues. Water Revenue Bonds were fully repaid in the 2018 Interim period.

(3) Direct operating expenses do not include depreciation.

(4) "2018 Interim" is a six month period to change from Fiscal to Calendar Year Basis. 2019 is reported on a Calendar Year Basis, 2018 is reported on a Fiscal Year Basis.

Source: District Financial Records

Mahoning Valley Sanitary District

Ratio of Debt per Capita

Last Four Years (1)

<u>Fiscal Year</u>	<u>Personal Income (2)</u>	<u>Population (2)</u>	<u>General Bonded Debt Outstanding</u>
2019 Calendar	\$1,571,624,992	89,511	\$0
2018 Interim (3)	1,571,624,992	89,511	0
2018 Fiscal	1,571,624,992	89,511	2,592,264
2017 Fiscal	1,571,624,992	89,511	5,126,698

Source: District Financial Records

(1) Information prior to fiscal year 2017 is not available.

(2) From Demographics and Economic Statistics, S10-S11.

(3) "2018 Interim" is a six month period to change from Fiscal to Calendar Year Basis. 2019 is reported on a Calendar Year Basis, 2017-2018 are reported on a Fiscal Year Basis.

<u>Loans</u>	<u>Total Debt</u>	<u>Ratio of Debt to Personal Income</u>	<u>Debt Per Capita</u>
\$38,233,883	\$38,233,883	2.43%	\$427.14
40,983,605	40,983,605	2.61	457.86
42,214,649	44,806,913	2.85	500.57
41,815,738	46,942,436	2.99	524.43

Mahoning Valley Sanitary District
Demographic and Economic Statistics
Last Ten Years

Year	City of Youngstown			City of Niles		
	Estimated Population	Total Personal Income	Personal Income Per Capita	Estimated Population	Total Personal Income	Personal Income Per Capita
2019 Calendar	66,982	\$1,052,488,166	\$15,713	19,266	\$444,081,300	\$23,050
2018 Interim (2)	66,982	1,052,488,166	15,713	19,266	444,081,300	23,050
2018 Fiscal	66,982	1,052,488,166	15,713	19,266	444,081,300	23,050
2017 Fiscal	66,982	1,052,488,166	15,713	19,266	444,081,300	23,050
2016 Fiscal	66,982	1,052,488,166	15,713	19,266	444,081,300	23,050
2015 Fiscal	66,982	1,052,488,166	15,713	19,266	444,081,300	23,050
2014 Fiscal	66,982	1,052,488,166	15,713	19,266	444,081,300	23,050
2013 Fiscal	66,982	1,052,488,166	15,713	19,266	444,081,300	23,050
2012 Fiscal	66,982	1,052,488,166	15,713	19,266	444,081,300	23,050
2011 Fiscal	66,982	1,052,488,166	15,713	19,266	444,081,300	23,050
2010 Fiscal	82,026	1,090,371,618	13,293	20,893	406,180,813	19,441

Source: 2000 U.S. Census Bureau and 2010 U.S. Census Bureau
American Fact Finder, U.S. Census Bureau
Ohio Labor Market Information

- (1) 2018 Interim and 2019 Unemployment for the City of Youngstown as of December 31 per Ohio Labor Market Information.
- (2) "2018 Interim" is a six month period to change from Fiscal to Calendar Year Basis. 2019 is reported on a Calendar Year Basis, 2010-2018 are reported on a Fiscal Year Basis.

Village of McDonald			Total			Unemployment Rate (1)
Estimated Population	Total Personal Income	Personal Income Per Capita	Estimated Population	Total Personal Income	Personal Income Per Capita	
3,263	\$75,055,526	\$23,002	89,511	\$1,571,624,992	\$17,558	6.1%
3,263	75,055,526	23,002	89,511	1,571,624,992	17,558	7.5
3,263	75,055,526	23,002	89,511	1,571,624,992	17,558	8.1
3,263	75,055,526	23,002	89,511	1,571,624,992	17,558	8.4
3,263	75,055,526	23,002	89,511	1,571,624,992	17,558	7.7
3,263	75,055,526	23,002	89,511	1,571,624,992	17,558	7.6
3,263	75,055,526	23,002	89,511	1,571,624,992	17,558	9.0
3,263	75,055,526	23,002	89,511	1,571,624,992	17,558	11.9
3,263	75,055,526	23,002	89,511	1,571,624,992	17,558	11.1
3,263	75,055,526	23,002	89,511	1,571,624,992	17,558	13.7
3,481	63,260,213	18,173	106,400	1,559,812,644	14,660	14.7

Mahoning Valley Sanitary District
Principal Employers
Current Year and Nine Years Ago

2019			
Name of Employer	Nature of Business	Employees	Percentage of Total District Employment
Mercy Health	Healthcare	4,400	5.36%
Youngstown Air Reserve Base	Government	1,792	2.18
Steward Valley Health Care Systems	Healthcare	1,400	1.70
Windsor House	Assisted Living	1,400	1.70
Trumbull County	Government	1,280	1.56
Warren City School District	Education	1,211	1.48
AIM National Lease	Trucking	750	0.91
Alorica (formerly West Corporation)	Call Center	700	0.85
Aptiv (formerly Delphi Packard)	Auto Parts	600	0.73
Ohio Security Systems	Security/Janitorial	600	0.73
Total		<u>14,133</u>	<u>17.20%</u>
Total Employment within the District		<u>82,192</u>	

2010			
Employer	Nature of Business	Employees	Percentage of Total District Employment
General Motors Corporation	Car Manufacturing	3,700	3.77%
Youngstown Air Reserve Base	Government	2,125	2.17
Trumbull County	Government	1,711	1.74
West Corporation	Sales	1,500	1.53
Severstal Warren	Manufacturing	1,350	1.38
Warren City School District	Education	810	0.83
Ohio Security Systems	Security/Janitorial	600	0.61
Delphi Packard	Vehicle Wiring Systems	590	0.61
AVI Food Systems	Food Service	500	0.51
Covelli Enterprise	Food Service	500	0.51
Total		<u>13,386</u>	<u>13.65%</u>
Total Employment within the District		<u>98,100</u>	

Source: Trumbull County 2018 CAFR

Mahoning Valley Sanitary District

Operating Indicators

Last Four Years (1)

Description	2019 Calendar	2018 Interim (2)	2018 Fiscal	2017 Fiscal
Annual Volume of Water Produced (Billions of gallons)	8.9	4.4	7.5	7.9
Water Treatment Plant Capacity (Millions of gallons per day)	60	60	60	60
Water Storage Capacity (Millions of gallons)	35.9	35.9	35.9	35.9
Average Daily Usage (Millions of gallons per day)	23.76	23.09	20.46	21.56
Population Served	220,000	220,000	220,000	220,000
Daily Average Gallons Pumped (Millions of gallons)				
City of Youngstown	16.85	16.08	15.10	15.86
City of Niles	6.55	6.61	4.97	5.26
Village of McDonald	0.36	0.40	0.39	0.43
Total Gallons Pumped (Millions of gallons)				
City of Youngstown	6,148.85	2,958.20	5,511.39	5,789.91
City of Niles	2,392.48	1,216.07	1,813.36	1,921.99
Village of McDonald	130.57	73.73	143.93	156.34

Source: District records

(1) Information prior to 2017 is not available.

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Mahoning Valley Sanitary District

Capital Asset Statistics

Last Four Years (1)

	2019 Calendar	2018 Interim (2)	2018 Fiscal	2017 Fiscal
Land				
Total Acres	5,570	5,570	5,570	5,570
Water/Reservoir Acres	2,167	2,167	2,167	2,167
Reservoir Capacity (in billions of gallons)	11	11	11	11
Buildings	20	20	20	20
Vehicles	35	34	30	30
Pipelines (in miles)	27.4	27.4	27.4	27.4

Source: District records

(1) Information prior to fiscal year 2017 is not available.

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Mahoning Valley Sanitary District
Full-Time Equivalent District Employees by Department
Last Four Years (1)

Department	2019 Calendar	2018 Interim (2)	2018 Fiscal	2017 Fiscal
Police	4.5	3.5	3.5	3.5
Field Maintenance	14.0	12.0	12.0	12.0
Pump Station	6.0	8.0	8.0	9.0
Purification	18.0	16.0	16.0	13.0
Administration	11.0	10.0	10.0	9.0
Total Employees	53.5	49.5	49.5	46.5

Method: Using 1.0 for each full-time employee and 0.5 for each part-time employee at year end.

Source: District records

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OHIO AUDITOR OF STATE KEITH FABER



MAHONING VALLEY SANITARY DISTRICT

TRUMBULL COUNTY

CLERK'S CERTIFICATION

This is a true and correct copy of the report which is required to be filed in the Office of the Auditor of State pursuant to Section 117.26, Revised Code, and which is filed in Columbus, Ohio.

Susan Babbitt

CLERK OF THE BUREAU

**CERTIFIED
JULY 14, 2020**