



OHIO AUDITOR OF STATE  
**KEITH FABER**





MAHONING VALLEY SANITARY DISTRICT  
TRUMBULL COUNTY  
DECEMBER 31, 2021

TABLE OF CONTENTS

TITLE	PAGE
Independent Auditor's Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Required by <i>Government Auditing Standards</i> .....	1

Attachment: Annual Comprehensive Financial Report

**This page intentionally left blank.**

# OHIO AUDITOR OF STATE KEITH FABER



88 East Broad Street  
Columbus, Ohio 43215  
ContactUs@ohioauditor.gov  
(800) 282-0370

## 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, 2021, 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 1, 2022, wherein we noted the financial impact of COVID-19 and the continuing emergency measures may impact subsequent periods of the District.

### ***Internal Control Over Financial Reporting***

In planning and performing our audit of the financial statements, we considered the District's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purposes of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, we do not express an opinion on the effectiveness of the District's internal control.

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 financial statements. 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***

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the District's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the District's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.



Keith Faber  
Auditor of State  
Columbus, Ohio

June 1, 2022

# **Mahoning Valley Sanitary District, Ohio**

**For the Year Ended December 31, 2021  
Annual Comprehensive 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.***

Brenda Duffett  
Finance Manager

*(This page intentionally left blank)*



# **Mahoning Valley Sanitary District, Ohio**

## **Annual Comprehensive Financial Report**

*For the Year Ended December 31, 2021*

Issued by:

Department of Finance and Administration

Brenda Duffett  
Finance Manager

*(This page intentionally left blank)*

---

# Introductory Section

---

*(This page intentionally left blank)*

**Mahoning Valley Sanitary District, Ohio**  
*Annual Comprehensive Financial Report*  
*For the Year Ended December 31, 2021*  
*Table of Contents*

	<u>Page</u>
<b>I. Introductory Section</b>	
Table of Contents .....	i
Letter of Transmittal .....	iii
List of Principal Officials.....	xx
Organizational Chart.....	xxi
Government Finance Officers Association Certificate .....	xxiii
<b>II. Financial Section</b>	
Independent Auditor’s Report.....	1
Management’s Discussion and Analysis.....	5
Basic Financial Statements:	
Fund Financial Statements:	
Statement of Net Position .....	10
Statement of Revenues, Expenses and Changes in Net Position .....	11
Statement of Cash Flows .....	12
Notes to the Basic Financial Statements.....	14
Required Supplementary Information	
Schedule of the District’s Proportionate Share of the Net Pension Liability – Ohio Public Employees Retirement System – Traditional Plan – Last Five Years.....	42
Schedule of the District’s Proportionate Share of the Net Pension Asset – Ohio Public Employees Retirement System – Combined Plan – Last Five Years.....	44
Schedule of the District’s Proportionate Share of the Net OPEB Liability – Ohio Public Employees Retirement System – OPEB Plan – Last Five Years .....	46
Schedule of the District’s Contributions – Ohio Public Employees Retirement System – Traditional Plan – Last Six Years.....	48
Schedule of the District’s Contributions – Ohio Public Employees Retirement System – Combined Plan – Last Six Years.....	50
Schedule of the District’s Contributions – Ohio Public Employees Retirement System – OPEB Plan – Last Six Years .....	52
Notes to the Required Supplementary Information .....	54

**Mahoning Valley Sanitary District, Ohio**  
*Annual Comprehensive Financial Report*  
*For the Year Ended December 31, 2021*  
*Table of Contents*

	<u>Page</u>
III. Statistical Section	
Statistical Section Description .....	S1
Net Position by Component – Last Six Years .....	S2
Changes in Net Position – Last Five Years .....	S4
Charges for Services and Principal Payers – Last Six Years .....	S6
Water Billing Rate – Last Six Years .....	S7
Pledged Revenue Coverage – Last Five Years .....	S9
Ratio of Debt per Capita – Last Six Years .....	S10
Demographic and Economic Statistics – Last Ten Years .....	S12
Principal Employers – Current Year and Nine Years Ago .....	S14
Operating Indicators – Last Six Years .....	S15
Capital Asset Statistics – Last Six Years .....	S17
Full-Time Equivalent District Employees by Department – Last Six Years .....	S19



**MAILING ADDRESS:**  
P.O. Box 4119  
Youngstown, OH 44515-0119

**SHIPPING ADDRESS:**  
1181 Ohltown-McDonald Road  
Mineral Ridge, Ohio 44440

**TELEPHONE: (330) 652-3614 \* (330) 799-6315 \* FAX (330) 652-9869**

---

**STATE OF OHIO**  
**THE MAHONING VALLEY SANITARY DISTRICT**

June 1, 2022

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

We are pleased to submit to you the Annual Comprehensive Financial Report of the Mahoning Valley Sanitary District (the District) for the year ended December 31, 2021. This is the fourth time that the District has submitted its financial report within the broader framework of a annual comprehensive financial report. The annual comprehensive financial report format provides the District with a better way to communicate its financial position with the public. In a annual comprehensive financial report, 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. During 2018, the District 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 controls in place. Because the cost of internal controls 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, 2021. 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.

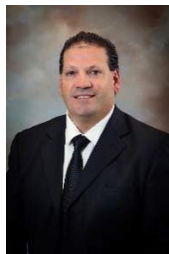
## ***Profile of the District***

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 beginning in 1932; and by special contract to the Village of McDonald beginning in 1944. The members serve surrounding areas such as Girard, Canfield, Mineral Ridge, Lordstown and portions of 10 other townships to approximately 220,000 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 Anthony Donofrio 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. Dr. Michael Neopolitan, the City of Niles mayoral appointment served as President of the Board for the first part of 2021 and Mrs. Germaine, the City of Youngstown mayoral appointment served as President of the Board for the second half of 2021. Other Board members included: Vernard Richberg, the City of Youngstown council appointment and Richard K. Hale, as the City of Niles council appointment.



Richard K. Hale



Dr. Michael Neopolitan



Vernard Richberg



Germaine Bennett

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)
- 12 Certified Class I (Water Supply Operators)

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.

## ***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.



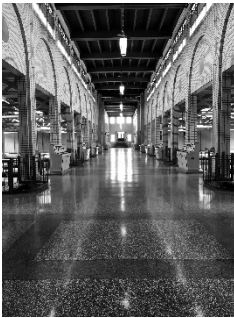
Electric motor-driven centrifugal pumps deliver water to Youngstown and Niles. Since 1944, the District, acting as agent for the two member cities, has supplied water directly from the plant to the Village of McDonald through a village owned pipeline.

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. (Pictured below)



Gallery



Winter  
Photos by Carolyn Hrusovsky



Spring!



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 11.00 billion gallons at spillway elevation 906.50 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	RAW WATER USE FROM BERLIN RESERVIOR				
	MGD Reserved		Million Gallons	% Allocation	% of Total Raw
	1 <sup>st</sup> Half	2 <sup>nd</sup> Half	Use	Use	Water Use
1964-65	13	5	514.05	16	4
1965-66	5	8	1111.4	47	9
1966-67	8	10	2372.5	72	17
1967-68	10	13	2230.2	53	15
1968-69	13	14	1811.4	37	13
1969-70	14	15	2582.4	49	17
1970-71	15	15	0.83	0	0
1971-72	15	15	2736.8	50	20
1972-73	15	15	0	0	0
1973-74	15	15	0	0	0
1974-75	15	15	0	0	0
1975-76	15	15	310.88	6	2
1976-77	15	15	160.58	3	1
1977-78	15	15	0	0	0
1978-79	15	15	0	0	0
1979-80	15	15	0	0	0
1980-81	10	10	0	0	0
1981-82	7	7	203.43	7	1
1982-83	8	8	1255.1	46	10
1983-84	5	5	728.04	31	6
1984-85	6	6	0	0	0
1985-86	6	6	114	5	1
1986-87	6	6	0	0	0
1987-88	6	6	0	0	0
1988-89	6	7	931.79	39	7
1989-90	7	5	0	0	0
1990-91	5	2	0	0	0
1991-92	2	3	803.92	88	7
1992-93	3	2	0	0	0
1993-94	2	2	0	0	0
1994-95	2	2	0	0	0
1995-96	2	2	0	0	0
1996-97	2	2	0	0	0
1997-98	2	2	0	0	0
1998-99	2	2	0	0	0
1999-00	2	2	0	0	0
2000-01	2	2	0	0	0
2001-02	2	2	0	0	0
2002-03	0	0	0	0	0
2003-04	0	0	0	0	0
2004-05	0	0	0	0	0
2005-06	0	0	0	0	0
2006-07	0	0	0	0	0
2007-08	0	0	0	0	0
2008-09	0	0	0	0	0
2009-10	0	0	0	0	0
2010-11	0	0	0	0	0
2011-12	0	0	0	0	0
2012-13	0	0	0	0	0
2013-14	0	0	0	0	0
2014-15	0	0	0	0	0
2015-16	0	0	0	0	0
2016-17	0	0	0	0	0
2017-18	0	0	0	0	0
2018-19	0	0	0	0	0
2019-20	0	0	0	0	0
2020-21	0	0	0	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 inches. Maximum rainfall was 54.01 inches in the year 2011 and the minimum is 23.70 inches in 1963. Rainfall at the District amounted to 38.22 inches this calendar year and 45.22 inches at the Youngstown Warren Airport. Maximum rainfall at the District was 48.90 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, Friday, December 31, 2021 the reservoir elevation was 906.60 feet above sea level. This elevation corresponds to 11.00 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 9,072.55 million gallons, or 24.79 million gallons daily.

### ***Finished Water***

Total water distributed from the Meander Water Treatment Plant during the year was 8,776.47 million gallons, or 23.98 million gallons daily. Total cash basis revenues from the sale of water were \$18,497,112. The average cost of treating water was \$2.11 per thousand gallons.

### ***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 \$2,233,996. The actual cost of chemicals used for water treatment during the year was \$246 per million gallons based on a raw volume of water of 9,072.55 million gallons consisting of the following:

## Total Chemical Costs and Cost per Million Gallons 2021

Contract Number	Chemical Name	Total Cost per Chemical	Cost per Million Gallons
M - 562	Lime	\$370,843.75	\$40.88
M - 567	Carbon	\$337,436.19	\$37.19
M - 564	Fluoride	\$65,668.19	\$7.24
M - 565	NH3	\$27,818.83	\$3.07
M - 563	Chlorine	\$91,853.52	\$10.12
	CO2	\$0.00	\$0.00
M - 568	KMNO4	\$18,768.78	\$2.07
M - 530	ACH	\$943,226.20	\$103.96
M - 570	Anionic-Polymer	\$40,900.50	\$21.49
M - 569	Poly-Amine	\$194,992.17	\$4.51
M - 566	Phosphate	\$142,457.91	\$15.70

**Total Cost all Chemicals**

**\$2,233,966.04**

**Cost per Million Gallons**

**\$246.23**

Provided below is the chemical and bacterial analysis of the raw and finished water for the year 2021:

## Water Quality Report 2021

### Raw Water Analysis 2021

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)	Plant Precipitation (inches)	Youngstown Airport Precipitation (inches)
Jan	4.47	3.6	8.11	82	41	122	5.7	0.20	1.23	2.00
Feb	2.93	3.4	7.86	86	48	134	5.3	0.19	0.88	1.73
Mar	3.72	5.6	7.95	86	50	136	5.3	0.19	2.13	1.60
Apr	4.46	10.2	7.85	83	50	133	5.7	0.18	2.57	2.83
May	8.48	12.5	7.71	80	48	128	5.2	0.18	3.70	4.03
June	6.25	14.9	7.51	79	46	124	6.2	0.18	2.79	5.73
July	6.64	18.9	7.52	87	41	127	6.2	0.18	6.67	5.29
Aug	4.19	21.4	7.49	91	38	129	6.6	0.19	7.57	9.45
Sept	2.96	22.4	7.63	91	35	126	6.8	0.19	1.11	1.30
Oct	3.95	20.0	7.70	89	38	127	5.8	0.20	5.63	6.20
Nov	5.36	11.3	7.82	87	39	126	5.6	0.20	1.30	1.97
Dec	3.25	5.6	8.09	87	42	129	5.2	0.20	2.64	3.09
Total	56.66	149.8	93.24	1028	516	1541	69.4	2.28	38.22	45.22
Ave	4.72	12.5	7.77	86	43	128	5.8	0.19	3.19	3.77
Max	8.48	22.4	8.11	91	50	136	6.8	0.20	7.57	9.45
Min	2.93	3.4	7.49	79	35	122	5.2	0.18	0.88	1.30

### System Analysis 2021

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)		
Jan	0.06	9.82	41	48	89	0.97	2.10	0.05		
Feb	0.07	9.62	42	55	97	0.98	2.40	0.05		
Mar	0.16	9.63	38	59	96	1.01	1.99	0.05		
Apr	0.11	9.57	30	58	88	0.97	1.97	0.05		
May	0.08	9.42	28	58	86	0.94	1.91	0.06		
June	0.08	9.38	27	54	80	0.98	1.88	0.06		
July	0.06	9.45	29	51	80	1.01	1.97	0.05		
Aug	0.08	9.39	29	50	78	1.03	2.08	0.05		
Sept	0.09	9.50	28	47	75	1.04	2.06	0.05		
Oct	0.08	9.54	29	46	75	1.01	2.20	0.05		
Nov	0.11	9.52	34	47	81	0.99	2.12	0.06		
Dec	0.12	9.38	44	49	93	0.93	1.89	0.06		
Ave	0.09	9.52	33	52	85	0.99	2.05	0.05		
Max	0.16	9.82	44	59	97	1.04	2.40	0.06		
Min	0.06	9.38	27	46	75	0.93	1.88	0.05		

## Finished Water Analysis 2021

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	0.06	5.6	9.69	13	40	49	89	21
February	0.05	5.8	9.52	10	41	56	97	23
March	0.04	8.5	9.58	11	36	59	95	23
April	0.04	12.4	9.52	8	30	58	88	22
May	0.04	14.2	9.35	6	27	58	85	22
June	0.04	15.7	9.37	6	27	54	79	21
July	0.04	18.8	9.49	7	29	51	80	21
August	0.05	20.8	9.42	7	28	50	78	21
September	0.05	21.9	9.56	9	29	47	75	21
October	0.05	19.5	9.48	8	29	46	75	19
November	0.06	13.8	9.46	9	34	48	82	19
December	0.07	8.7	9.35	9	43	50	93	22
Average	0.05	13.8	9.48	9	33	52	85	21
Maximum	0.07	21.9	9.69	13	43	59	97	23
Minimum	0.04	5.6	9.35	6	27	46	75	19

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	8.6	0.29	3.5	1.02	2.22	0.04		neg
February	9.5	0.20	3.2	1.01	2.23	0.04	45.3	neg
March	9.2	0.30	3.1	1.03	2.25	0.05		neg
April	8.2	0.28	2.3	1.01	2.13	0.06		neg
May	7.4	0.24	3.1	0.98	2.09	0.06	50.4	neg
June	6.8	0.24	3.5	1.00	2.14	0.06		neg
July	6.5	<0.10	3.4	1.02	2.27	0.06		neg
August	5.9	<0.10	2.0	1.05	2.53	0.05	63.4	neg
September	5.8	<0.10	3.6	1.02	2.61	0.06		neg
October	6.8	<0.10	3.4	1.02	2.47	0.06		neg
November	8.1	0.15	3.6	1.02	2.34	0.05	60.2	neg
December	9.1	0.13	3.3	0.99	2.12	0.05		neg
Average	7.7	0.227	3.1	1.01	2.28	0.05	54.8	neg
Maximum	9.5	0.300	3.6	1.05	2.61	0.06	63.4	neg
Minimum	5.8	<0.10	2.0	0.98	2.09	0.04	45.3	neg

During the year, the District pumped to the Member Cities and McDonald a total of 8,776.47 million gallons of water for an average of 24.05 million gallons daily. Of this total, 6,351.85 million gallons or 72.37 percent was used by Youngstown, 2,279.80 million gallons or 25.98 percent used by Niles and 144.82 million gallons or 1.65 percent by McDonald.

## Water Usage and Billing 2021

Monthly Billing in Million Gallons(MG) and Percent Usage

Month	Total Pumped (MG)	Total Billed (MG)	City of Youngstown Billed (MG)	% of Billed Water	City of Niles Billed (MG)	% of Billed Water	Village of McDonald Billed (MG)	% of Billed Water
January	787.958	760.242	547.260	71.98%	200.502	26.37%	12.4800	1.642%
February	728.724	705.648	518.376	73.46%	175.837	24.92%	11.4350	1.620%
March	803.266	777.501	562.970	72.41%	201.818	25.96%	12.7130	1.635%
April	738.689	715.800	531.124	74.20%	172.317	24.07%	12.3590	1.727%
May	776.851	750.497	543.574	72.43%	194.014	25.85%	12.9090	1.720%
June	775.997	749.943	529.778	70.64%	205.862	27.45%	14.3030	1.907%
July	796.151	766.280	532.589	69.50%	220.386	28.76%	13.3050	1.736%
August	797.337	768.847	537.452	69.90%	220.107	28.63%	11.2880	1.468%
September	740.588	714.947	509.095	71.21%	194.968	27.27%	10.8840	1.522%
October	714.321	700.902	500.495	71.41%	189.423	27.03%	10.9880	1.568%
November	683.374	657.733	503.876	76.61%	142.973	21.74%	10.8840	1.655%
December	729.293	708.124	535.262	75.59%	161.596	22.82%	11.2680	1.591%
Annual Total	9072.549	8776.464	6351.851	72.37%	2279.803	25.98%	144.8160	1.650%
Monthly Average	756.046	731.372	529.321	72.45%	189.984	25.91%	12.0680	1.649%
Maximum	803.266	777.501	562.970	76.61%	220.386	28.76%	14.3030	1.907%
Minimum	683.374	657.733	500.495	69.50%	142.973	21.74%	10.8840	1.468%
Daily Average	24.788	23.979	17.355		6.229		0.3957	

Daily Average Usage in Million Gallons

Raw Water	24.788	
Billed Water	23.979	
Youngstown	17.355	
Niles	6.229	
McDonald	0.396	

Daily Maximum Pumpage in Million Gallons

Youngstown	20.502	Occurred on March 9, 2021	
Niles	8.296	Occurred on June 28, 2021	
Max Daily	28.585	Occurred on April 18th, 2021	

### *Cost of Water*

Based on total revenue of \$18,497,112 for the sale of water in the total volume of 8,776.47 million gallons to McDonald, Niles and Youngstown in 2021, the yearly average cost for treating water was \$2.11 per thousand gallons.

### *Maximum Days*

The maximum pumpage reached for this year was 28.59 million gallons on April 18, 2021. Maximum pumpage to Youngstown occurred on March 9, 2021 and was 20.50 million gallons. Maximum pumpage to Niles of 8.30 million gallons occurred on June 28, 2021.

### *Power*

A total 13,475,812 KWH of power was used at the Meander Plant for lighting, plant process equipment and pumping at a cost of \$800,319. With the cost of power at the other auxiliary facilities added to the plant power costs, the total cost of power was \$831,865 and an average cost of \$92 per million gallons based on a plant raw water annual usage of 9,072.55 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 2021 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: \$0.14 for electricity, \$0.15 for chemicals, and \$0.06 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 2021:

WATER USE						
No.	YEAR	MGD RAW	Youngstown	Niles	McDonald	Total
1-20	1932-52		286.818	73.812	4.341	364.97
21-30	1952-62		255.874	58.879	6.938	291.67
31	1962-63		23.696	6.679	0.822	31.197
32	1963-64	32.2	23.353	6.332	0.812	30.497
33	1964-65	33.61	23.915	6.426	0.876	31.217
34	1965-66	34.58	25.24	6.708	0.908	32.856
35	1966-67	38.47	27.972	7.346	0.908	36.226
36	1967-68	39.5	28.83	7.408	0.929	37.167
37	1968-69	39.47	29.643	7.031	0.9	37.574
38	1969-70	41.21	31.15	6.863	0.935	38.947
39	1970-71	39.34	29.909	6.641	0.921	37.469
40	1971-72	37.98	28.98	6.027	0.868	35.875
41	1972-73	40.22	30.421	6.721	0.984	38.126
42	1973-74	41.28	31.371	6.921	0.917	39.209
43	1974-75	38.31	29.144	6.124	0.906	36.174
44	1975-76	40.87	31.6	6.3	0.96	38.86
45	1976-77	42.38	32.58	6.59	1.13	40.3
46	1977-78	42.57	32.6	6.6	1.1	40.3
47	1978-79	42.99	32.83	6.56	1.09	40.48
48	1979-80	41.54	31.4	6.58	0.99	38.97
49	1980-81	37.06	28.48	6	0.42	34.9
50	1981-82	37.22	28.35	5.97	0.38	34.7
51	1982-83	34.36	27.19	6.11	0.4	33.7
52	1983-84	35.13	27.36	6.51	0.43	37.3
53	1984-85	36.27	27.65	6.74	0.42	34.8
54	1985-86	35.54	27.17	7.14	0.43	34.74
55	1986-87	35.52	27.2	5.656	0.49	34.25
56	1987-88	37.07	28.37	7.11	0.53	36.01
57	1988-89	35.6	27.17	6.76	0.55	34.48
58	1989-90	33.51	25.91	6.73	0.51	33.15
59	1990-91	30.71	22.61	6.96	0.51	30.08
60	1991-92	30.61	22.47	6.29	0.45	29.21
61	1992-93	30.12	22.64	6	0.45	29.09
62	1993-94	30.51	24.59	6.25	0.45	31.29
63	1994-95	29.49	22.91	6.24	0.48	29.63
64	1995-96	30.29	22.72	6.34	0.51	29.57
65	1996-97	29.07	21.76	6.11	0.51	28.38
66	1997-98	29.41	21.35	6.05	0.51	27.9
67	1998-99	30.26	21.95	6.29	0.53	28.77
68	1999-00	28.81	20.32	6.31	0.58	27.21
69	2000-01	29.91	20.47	6.13	0.55	27.15
70	2001-02	26.94	19.44	5.85	0.52	25.81
71	2002-03	27.94	21.72	5.56	0.58	27.86
72	2003-04	27.34	21.6	5.16	0.53	27.29
73	2004-05	26.78	20.6	5.21	0.47	26.28
74	2005-06	27.2	18.77	6.15	0.48	25.4
75	2006-07	27.361	17.98	6.53	0.45	24.96
76	2007-08	27.293	18.269	6.675	0.456	25.4
77	2008-09	25.38	17.949	6.118	0.453	24.52
78	2009-10	22.803	17.15	5.32	0.446	22.91
79	2010-11	23.699	17.666	5.506	0.448	23.62
80	2011-12	23.75	18.175	4.438	0.403	23.02
81	2012-13	24.88	18.946	4.646	0.417	24
82	2013-14	23.682	18.02	4.929	0.39	23.68
84	2014-15	21.345	16.487	4.101	0.386	20.978
85	2015-16	20.802	15.432	4.506	0.393	20.331
86	2016-17	22.076	15.863	5.261	0.428	21.557
87	2017-18	22.864	15.963	5.858	0.398	22.217
88	2019	24.39	16.846	6.555	0.358	23.759
89	2020	23.815	16.705	6.14	0.338	23.183
90	2021	24.788	17.355	6.229	0.396	23.980



### ***Local Economy***

According to the United States Census Bureau from 2020 the population of Mahoning County has decreased by 4.3 percent and currently is 228,614 and Trumbull County has decreased by 4.0 percent and currently is 201,977 from the 2020 census. The average consumption for 2021 was 23.98 million gallons per day (mgd). This is a 3.4 percent increase in consumption from 2020 to 2021.

### ***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 year.

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.

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
- Chemical Feed Improvements Project

*Past, Current & Future Projects*

**Chemical Feed Improvements 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. This project consists of the installation of three chemical bulk storage systems associated with the treatment of water. The project also consisted of ancillary piping, electrical wiring, control panel installation and process control connection for connection to the MVSD SCADA system.

**Status:**

**Design Fee:** \$272K  
**Revised Fee:** N/A  
**Consultant:** ms Consultants

Construction

**Est. Const. Cost:** \$1.5M  
**Construction Cost:** \$1.27M  
**Contractor:** A.P. O'Horo



Photo 1: Existing Temporary Chemical Feed Configuration to be replaced by new bulk chemical feed system.



Photo 2: Temporary pump/metering system for the application of corrosion chemicals.

**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 filter console PLC upgrades and masonry repairs to the Administration and Filter Gallery Building facade. The Consultant spent the year assessing the condition of the filter walkways and developing a plan for repair of the walk areas. Additionally, a \$36K modification was given to the Consultant through Board approval to add the renovation of the Treasurer's office to the project. The Treasurer's office was outdated, and additional office space is necessary to house District staff. A rendition was prepared that would add a conference room, 2 offices and a kitchen area to support staff. The update would have taken place on the Administration building project, but since there would be disruption to the Treasurer's office due to the filter gallery renovations, it was decided to advance the Treasurer's office renovation to the project.

**Status:**

**Design Fee:** \$498.6K  
**Revised Fee:** \$627.7K  
**Consultant:** CT Consultants, Inc.

Design

**Estimated Cost:** \$2.4M  
**Construction Cost:** TBD  
**Contractor:** TBD



Photo 1: Photograph of the condition of the existing concrete walkways and support beams associated with the plant sand filter.



Photo 2: Proposed floor layout for the Treasurer's office reconstruction.

**Mineral Ridge Dam Rehabilitation Project**

**Description:** The dam rehabilitation will address potential failure modes, bring the facility into compliance with ODNR and federal dam safety criteria and address needed upgrades and repairs. Several major components of the dam rehabilitation project include:

- abandonment of the existing twin emergency spillways and replacement with a roller-compacted concrete auxiliary spillway;
- extend existing embankment concrete core wall/curb to Elevation 918.0 feet and modify the top of dam roadway; flatten the downstream embankment slope from 2.0 Horizontal to 1.0 Vertical (2H:1V) to between 2.5H:1V and 3H:1V, and install internal filter drains to safely collect and convey potential seepage;
- modify and repair the principal (or primary) spillway, including raising and buttressing the existing training walls with new reinforced concrete walls to accommodate the flattened embankment slopes, lining the ogee surface and stilling basin with a new reinforced concrete liner slab, installing rock anchors in the stilling basin slab to improve stability and concrete surface repairs;
- install post-tensioned anchors into the dam's foundation to improve the stability of the principal spillway concrete ogee structure and the gate house structure.
- replace the existing inflatable rubber bladder and controls at the principal spillway.

In 2020, the Consultant completed the design of the dam and submitted to the Owner final plans for review. The District added to the scope of work the preparation of a 3-D BIM model of the plans to be added for better visualization of the roller compacted spill way. The District is currently evaluating funding options for the project, including to grants, WRSLA loans and WIFIA loans. The plans will need final review by the regulating agencies and the permit fee for ODNR will be required as well as negotiation of scope for CA/RE services by Gannet Fleming.

<b>Status:</b>		Final Design	
<b>Design Fee:</b>	\$550K	<b>Estimated Cost:</b>	45M
<b>Revised Fee:</b>	\$3.47M	<b>Construction Cost:</b>	TBD
<b>Consultant:</b>	Gannet Fleming	<b>Contractor:</b>	TBD



Photo 1: Photograph of the east side of the Carbon/Permanganate Building

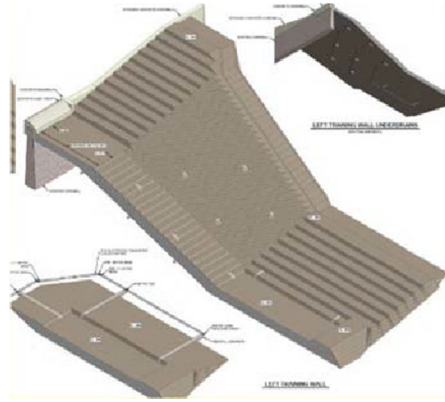


Photo2: BIM Model rendering of the proposed auxiliary spillway.

## **Plant Standby Power**

### **Description:**

Installation of new standby power generator to operate the entire physical plant. Removal of existing generators. The design was stated in 1st QTR 2020 for the installation of a new 3,900 kVA generator to provide standby power in the event the 2 existing plant feeds were down. Scope was added in 2020 for the replacement/reconfiguration of the existing transformer bank on the south side of the Pump Station Building. The Consultant recommended modification of the existing connections to the main switchgear was modified to account for the revised transformer configuration, and the new standby generator connection at the location of the existing 1500 kVA switchgear breaker. Relaying and breaker control logic was also modified to prevent paralleling the transformers. This project was also submitted for a \$300K grant through the Ohio Public Works Commission and was selected for funding in the fiscal year 2021. The generator is being purchased by the District at a cost of \$1,881,461. The contract for installation is with A.P. O'Horo at a cost of \$1,680,100.

### **Status:**

**Design Cost:** \$692K  
**Revised Fee:** \$748K  
**Consultant:** Stantec, Inc.

### **Design**

**Construction Cost:** \$4.2M  
**Construction Cost:** \$3.56M  
**Contractor:** A.P. O'Horo



Photo 1: Location of proposed standby generator



Photo 2: Typical generator housing installation at a water/wastewater treatment facility.

**Valve Replacement Project - Phase IV**

**Description:**

The fourth Phase of the MVSD Valve Improvement Project per Amendment No. 6. Scope consists of the replacement of 29 various sized valves on the Youngstown and Niles Transmission Lines. The District spent a majority of 2020 developing the design for the replacement valves. There was a great deal of coordination undertaken by the District with Norfolk Southern Railroad as 2 of the valves required crossing of NS right of way in Niles. A decision was made to fully replace the vault on Dunlap Ave. outside of the Youngstown Reservoir and add a external check valve in advance of replacing/decommissioning the existing check valve within the Gatehouse structure. An additional part of the design phase included coordination with the City of Youngstown due to several water-connection valves located along the District force mains servicing Youngstown. Through hydraulic modeling, the size of bypassing required to provide adequate service and fire protection to Youngstown was reduced at a cost savings/efficiency to the District. The City of Youngstown was also planning on installing 12-inch cut in valves to assist in isolation of Youngstown lines during replacement. The City wanted their own forces performing the work to assure confidence in the installation. The bid of the project was held for May 2021 with construction to follow.

**Status:**

**Design Fee:** \$702K

**Revised Fee:** \$802.5K

**Consultant:** Stantec, Inc.

Design

**Estimated Cost:** \$10M

**Construction Cost:** \$5.9M

**Contractor:** Kirila Construction



Photo 1: GIS Map of the Youngstown Transmission System



Photo 2: Existing valve proposed for replacement in the Phase IV Project.

**Chemical Feedline 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. This project consists of the replacement of the carbon and potassium permanganate feed lines to the gate house and raw water well in the pump station. An RFP was issued in 2nd QTR 2020 to secure services for professional design. The Project was generated mainly out of the need to have the chemical feedlines installed during work for the modification to the Reservoir earthen embankment. This scope was left out of the MRDR Project and was placed under a separate RFP to include the plant phase work. Gannet Fleming was selected as the most qualified to perform the work, due to the design and understanding of the MRDR project. The level of effort was negotiated, and an agreement entered into for the project.

**Status:**

**Design Fee:** \$320K

**Revised Fee:** N/A

**Consultant:** Gannet Fleming

Project Completed

**Estimated Cost:** \$600K

**Construction Cost:** TBD

**Contractor:** TBD





Photo 1: Project location map for the Chemical Feedline Improvement Project



Photo 2: Photograph of the east side of the Carbon/Permanganate Building

**Document Management Project**

**Description:**

The District houses volumes of record documents and information regarding past District projects, record/as built drawings and other historical information that needs to be retained. There is no current system that organizes and archives these documents for access to consultants and contractors working on District projects. The Districts secured the services in 2020 of a scanning services contractor to digitize a large volume of documents housed in the District vault and on the 3rd floor of the administration building. These digitized documents were then transferred through a FTP cloud system to the District archiving consultant that was then able to categorize and organize all record documents in a secure web database and in the District’s Project Management System PMWeb. The ability to access these documents for future design and construction projects will allow for greater efficiency and access to data and information, which will reduce costs required to search and organize information on a project-by- project basis.

<b>Status:</b>		Underway	
<b>Design Cost:</b>	\$72.5K	<b>Cost to Date:</b>	\$55.7K
<b>Consultant:</b>	CBA, Inc./Extract IQ	<b>Consultant:</b>	CBA, Inc./Extract IQ

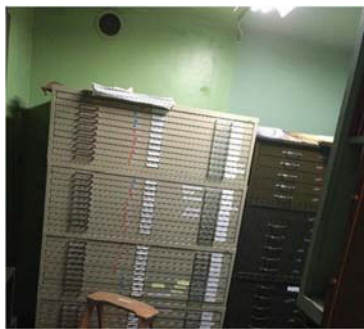


Photo 1: Project Record Vault



Photo 2: Boxes containing scanned records.

### ***Relevant Financial Policies***

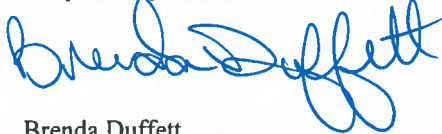
The mission of the District is to develop, maintain and implement financial accounting policies and procedures to protect and optimize the financial resources of the District. The District provides a sound accounting system for safeguarding the District's assets through the recording and reporting of 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. The District also utilizes a financial planner to assist with the development and implementation of a five (5) year forecast involving the rates to be charged and establish an annual budget.

### ***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 annual comprehensive financial report submission for the fiscal year ended June 30, 2020. This is the third year that the District has submitted a annual comprehensive financial 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 Annual Comprehensive 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,



Brenda Duffett  
Finance Manager

# MAHONING VALLEY SANITARY DISTRICT

## List of Principal Officials at December 31, 2021

### 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

GERMAINE BENNETT  
VERNARD RICHBERG

### ADMINISTRATIVE STAFF

CHIEF ENGINEER  
FINANCE MANAGER  
DIRECTOR OF ADMINISTRATIVE SERVICES  
OPERATIONS MANAGER/ CLASS IV OPERATOR OF RECORD  
SUPERINTENDENT OF PURIFICATION  
PROJECT/RESIDENT ENGINEER  
CHIEF OF OPERATIONS  
SUPERINTENDENT OF MAINTENANCE  
INFORMATION TECHNOLOGY SPECIALIST  
CHIEF OF SECURITY  
ADMINISTRATIVE ASSISTANTS

MICHAEL D. MCNINCH  
BRENDA DUFFETT  
JAMES GIBBS  
THOMAS HOLLOWAY  
JON JAMISON  
KEDAR BHIDE  
KEITH REES  
JOE WOODLEY  
FRANK VENNETTI  
RALPH MILLER  
CAROLYN HRUSOVSKY

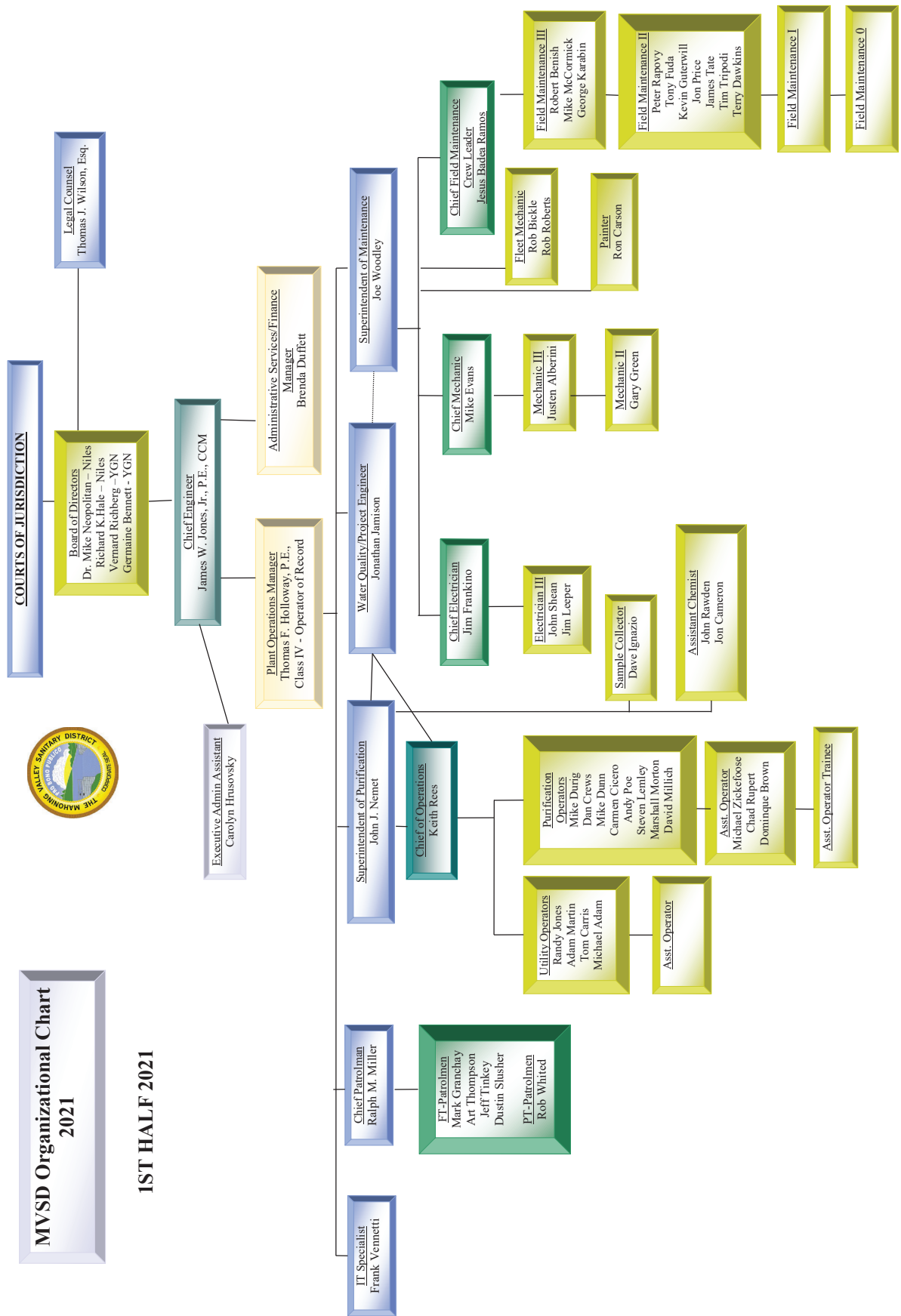


# MVSD Organizational Chart

2021



1ST HALF 2021

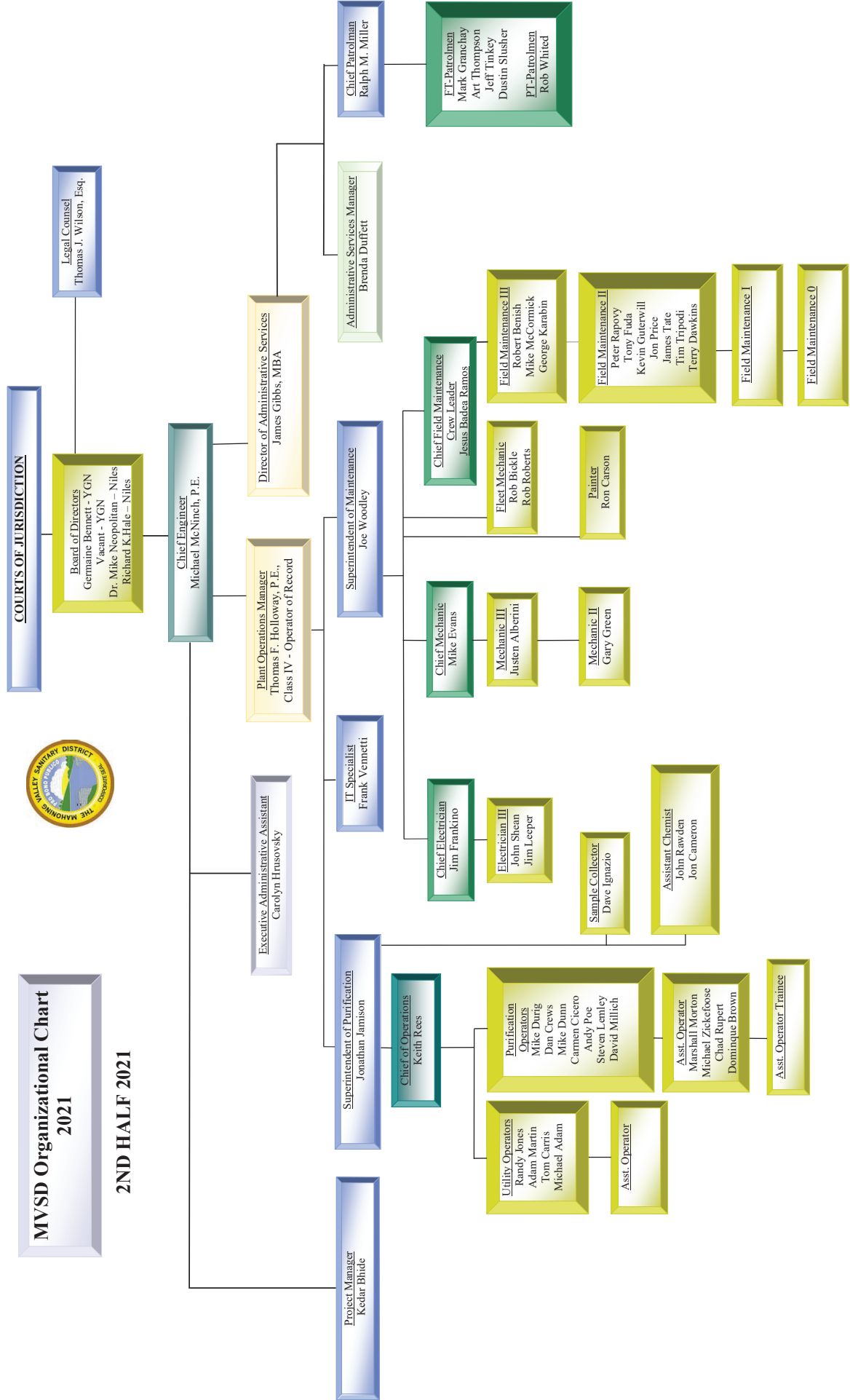


1/27/2022

# MVSD Organizational Chart 2021



## 2ND HALF 2021





Government Finance Officers Association

Certificate of  
Achievement  
for Excellence  
in Financial  
Reporting

Presented to

**Mahoning Valley Sanitary District  
Ohio**

For its Annual Comprehensive  
Financial Report  
For the Fiscal Year Ended

December 31, 2020

*Christopher P. Morill*

Executive Director/CEO

*(This page intentionally left blank)*

---

# Financial Section

---

*(This page intentionally left blank)*

# OHIO AUDITOR OF STATE KEITH FABER



88 East Broad Street  
Columbus, Ohio 43215  
ContactUs@ohioauditor.gov  
(800) 282-0370

## 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 Audit of the Financial Statements**

#### ***Opinion***

We have audited the financial statements of the Mahoning Valley Sanitary District, Trumbull County, Ohio (District), as of and for the year ended December 31, 2021, and the related notes to the financial statements, which collectively comprise the District's basic financial statements as listed in the table of contents.

In our opinion, the accompanying financial statements referred to above present fairly, in all material respects, the financial position of the Mahoning Valley Sanitary District, Trumbull County, Ohio as of December 31, 2021, and the changes in financial position and its cash flows for the year then ended in accordance with the accounting principles generally accepted in the United States of America.

#### ***Basis for Opinion***

We conducted our audit in accordance with auditing standards generally accepted in the United States of America (GAAS) and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are required to be independent of the District, and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

#### ***Emphasis of Matter***

As discussed in Note 14 to the financial statements, during 2021, the financial impact of COVID-19 and the continuing emergency measures may impact subsequent periods of the District. Our opinion is not modified with respect to this matter.

#### ***Responsibilities of Management for the Financial Statements***

Management is responsible for the preparation and fair presentation of the financial statements in accordance with accounting principles generally accepted in the United States of America, and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the District's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

### ***Auditor's Responsibilities for the Audit of the Financial Statements***

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with GAAS and *Government Auditing Standards* will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with GAAS and *Government Auditing Standards*, we

- exercise professional judgment and maintain professional skepticism throughout the audit.
- identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the District's internal control. Accordingly, no such opinion is expressed.
- evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the District's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the *management's discussion and analysis*, and schedules of net pension and other post-employment benefit liabilities and pension and other post-employment benefit contributions be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.



**Other Information**

Management is responsible for the other information included in the annual financial report. The other information comprises the introductory and statistical sections but does not include the basic financial statements and our auditor's report thereon. Our opinions on the basic financial statements do not cover the other information, and we do not express an opinion or any form of assurance thereon.

In connection with our audit of the basic financial statements, our responsibility is to read the other information and consider whether a material inconsistency exists between the other information and the basic financial statements, or the other information otherwise appears to be materially misstated. If, based on the work performed, we conclude that an uncorrected material misstatement of the other information exists, we are required to describe it in our report.

**Other Reporting Required by *Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated June 1, 2022, 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. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the District's 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.



Keith Faber  
Auditor of State  
Columbus, Ohio

June 1, 2022

*(This page intentionally left blank)*

**Mahoning Valley Sanitary District**  
*Management's Discussion and Analysis*  
*For the Year Ended December 31, 2021*  
*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, 2021. 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 2021 are as follows:

- The District's net position increased by \$6,725,828 from the prior period. This increase is due to a significant increase in the District's current assets coupled with a decrease in long-term liabilities.
- 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 and several other additions to equipment, building and building improvements, vehicles and land improvements. The District has several ongoing construction projects at year end.
- Long-term liabilities decreased as the District made an additional year of debt payments. All current OWDA loans have been finalized and have an existing amortization schedule. There were no loan proceeds received in 2021.

### **Using This Annual Comprehensive Financial Report**

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, 2021*  
*Unaudited*

Table 1 provides a summary of the District's net position for 2021 compared to 2020:

**Table 1**  
 Net Position

	2021	2020	Change
<b>Assets</b>			
Current and Other Assets	\$51,366,980	\$48,803,592	\$2,563,388
Noncurrent Assets:			
Net Pension Asset	63,556	45,173	18,383
Net OPEB Asset	380,403	0	380,403
Capital Assets, Net	66,424,000	67,156,508	(732,508)
<i>Total Assets</i>	<u>118,234,939</u>	<u>116,005,273</u>	<u>2,229,666</u>
<b>Deferred Outflows of Resources</b>			
Pension	734,850	853,551	(118,701)
OPEB	320,571	489,775	(169,204)
<i>Total Deferred Outflows of Resources</i>	<u>1,055,421</u>	<u>1,343,326</u>	<u>(287,905)</u>
<b>Liabilities</b>			
Current and Other Liabilities	3,857,112	3,726,749	(130,363)
Long-Term Liabilities:			
Compensated Absences	230,567	231,473	906
Net Pension Liability	3,236,398	4,021,130	784,732
Net OPEB Liability	0	2,753,403	2,753,403
OWDA Loans	30,409,956	33,087,215	2,677,259
<i>Total Liabilities</i>	<u>37,734,033</u>	<u>43,819,970</u>	<u>6,085,937</u>
<b>Deferred Inflows of Resources</b>			
Pension	1,418,758	882,873	(535,885)
OPEB	1,162,287	396,302	(765,985)
<i>Total Deferred Inflows of Resources</i>	<u>2,581,045</u>	<u>1,279,175</u>	<u>(1,301,870)</u>
<b>Net Position</b>			
Net Investment in Capital Assets	33,025,254	31,379,714	1,645,540
Unrestricted	45,950,028	40,869,740	5,080,288
<i>Total</i>	<u>\$78,975,282</u>	<u>\$72,249,454</u>	<u>\$6,725,828</u>

The net pension liability (NPL) is one of the largest liabilities reported by the District at December 31, 2021. 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 employee, and should accordingly be reported by the government as a liability since they received the

**Mahoning Valley Sanitary District**  
*Management's Discussion and Analysis*  
*For the Year Ended December 31, 2021*  
*Unaudited*

---

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 net 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 decreased due to decreases in the net pension/OPEB liabilities and OWDA Loans. 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 2021 and 2020.

**Mahoning Valley Sanitary District**  
*Management's Discussion and Analysis*  
For the Year Ended December 31, 2021  
Unaudited

**Table 2**  
Changes in Net Position

	2021	2020	Change
<b>Operating Revenues</b>			
Charges for Services	\$18,499,363	\$18,385,867	\$113,496
Miscellaneous	101,215	318,614	(217,399)
<b>Total Operating Revenues</b>	<u>18,600,578</u>	<u>18,704,481</u>	<u>(103,903)</u>
<b>Operating Expenses</b>			
Personal Services	1,762,439	4,715,821	2,953,382
Supplies and Services	5,620,437	5,587,697	(32,740)
Depreciation	3,225,262	3,196,583	(28,679)
Claims	964,877	751,314	(213,563)
Miscellaneous	8,803	9,724	921
<b>Total Operating Expenses</b>	<u>11,581,818</u>	<u>14,261,139</u>	<u>2,679,321</u>
<i>Operating Income (Loss)</i>	<u>7,018,760</u>	<u>4,443,342</u>	<u>2,575,418</u>
<b>Non-Operating Revenues (Expenses)</b>			
Timber Sales	416,200	0	416,200
Royalties	38,196	13,023	25,173
Gain on Sale of Capital Assets	15,710	0	15,710
Loss on Disposal of Capital Assets	0	(20,805)	20,805
Interest	47,433	293,923	(246,490)
Interest and Fiscal Charges	(878,425)	(943,910)	65,485
<b>Total Non-Operating Revenues (Expenses)</b>	<u>(360,886)</u>	<u>(657,769)</u>	<u>296,883</u>
<i>Income (Loss) before Capital Contributions</i>	<u>6,657,874</u>	<u>3,785,573</u>	<u>2,872,301</u>
Capital Contributions	67,954	129,530	(61,576)
<i>Change in Net Position</i>	<u>6,725,828</u>	<u>3,915,103</u>	<u>2,810,725</u>
<i>Net Position Beginning of Year</i>	<u>72,249,454</u>	<u>68,334,351</u>	<u>3,915,103</u>
<i>Net Position End of Year</i>	<u><u>\$78,975,282</u></u>	<u><u>\$72,249,454</u></u>	<u><u>\$6,725,828</u></u>

For 2021, OPERS recognized a change in benefit terms for their OPEB plan. These changes contributed to OPEB expense decreasing from \$302,582 in 2020 to a negative OPEB expense of \$2,196,412 for 2021.

The District had a decrease in their operating revenues due to a decrease in miscellaneous revenue due to less additional amounts received from the bureau of workers' compensation. The District had a decrease in interest revenue due to changes in economic conditions, which resulted in a lesser return on investments.

**Mahoning Valley Sanitary District**  
*Management's Discussion and Analysis*  
*For the Year Ended December 31, 2021*  
*Unaudited*

---

## **Capital Assets and Long-Term Obligations**

### ***Capital Assets***

At the end of year 2021, the District had, at cost, \$123,691,142 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 \$57,267,142.

In 2021, the District had various increases to construction in progress, equipment, building and building improvements, vehicles and land improvements. The District has a few major construction projects ongoing as of December 31, 2021. The completed construction project was the Drainwater Gate. The ongoing projects include Dam Renovations, Headhouse Chemical System Improvement, Filter Gallery, Standby Power and Valve 4, Dam Chemical Feedline Improvement, Headhouse Chemical Feeding Project, and Phase IV Valve Replacement. For additional information on capital assets, see Note 6 of the notes to the basic financial statements.

### ***Long-Term Obligations***

The District has several loans through the Ohio Water Development Authority (OWDA). As of December 31, 2021, the District has a total outstanding OWDA liability of \$33,087,215. In 2021 the District made payments of \$2,607,227.

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 received the Award for Small Government Cash Basis Reports from the Government Finance Officers Association (GFOA) for fiscal years 2014 through 2017. Beginning in fiscal year 2018, the District prepared an annual comprehensive financial report. The District has received the certificate of achievement from GFOA for each of the past three years. Management believes the annual comprehensive financial report conforms to the Certificate of Achievement program requirements and has submitted it to the 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 Brenda Duffett, Finance Manager, 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, 2021*

---

---

<b>Assets</b>	
<b>Current Assets</b>	
Cash and Cash Equivalents	\$49,644,183
Receivables:	
Accounts	26,345
Intergovernmental	1,541,996
Materials and Supplies Inventory	124,534
Prepaid Items	29,922
<b>Total Current Assets</b>	<b>51,366,980</b>
<b>Noncurrent Assets</b>	
Net Pension Asset (See Note 9)	63,556
Net OPEB Asset (See Note 10)	380,403
Nondepreciable Capital Assets	8,974,922
Depreciable Capital Assets, Net	57,449,078
<b>Total Noncurrent Assets</b>	<b>66,867,959</b>
<b>Total Assets</b>	<b>118,234,939</b>
<b>Deferred Outflows of Resources</b>	
Pension	734,850
OPEB	320,571
<b>Total Deferred Outflows of Resources</b>	<b>1,055,421</b>
<b>Liabilities</b>	
<b>Current Liabilities</b>	
Accounts Payable	153,447
Accrued Wages	119,932
Contracts Payable	313,585
Intergovernmental Payable	71,115
Retainage Payable	22,992
Claims Payable	109,613
Compensated Absences Payable	389,169
OWDA Loans Payable	2,677,259
<b>Total Current Liabilities</b>	<b>3,857,112</b>
<b>Long-Term Liabilities (net of current portion)</b>	
Compensated Absences Payable	230,567
Net Pension Liability (See Note 9)	3,236,398
OWDA Loans Payable	30,409,956
<b>Total Long-Term Liabilities</b>	<b>33,876,921</b>
<b>Total Liabilities</b>	<b>37,734,033</b>
<b>Deferred Inflows of Resources</b>	
Pension	1,418,758
OPEB	1,162,287
<b>Total Deferred Inflows of Resources</b>	<b>2,581,045</b>
<b>Net Position</b>	
Net Investment in Capital Assets	33,025,254
Unrestricted	45,950,028
<b>Total Net Position</b>	<b>\$78,975,282</b>

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, 2021*

<b>Operating Revenues</b>	
Charges for Services	\$18,499,363
Miscellaneous	101,215
	<u>18,600,578</u>
<i>Total Operating Revenues</i>	
	<u>18,600,578</u>
<b>Operating Expenses</b>	
Personal Services	1,762,439
Supplies and Services	5,620,437
Depreciation	3,225,262
Claims	964,877
Miscellaneous	8,803
	<u>11,581,818</u>
<i>Total Operating Expenses</i>	
	<u>11,581,818</u>
<i>Operating Income (Loss)</i>	
	<u>7,018,760</u>
<b>Non-Operating Revenues (Expenses)</b>	
Timber Sales	416,200
Royalties	38,196
Gain on Sale of Capital Assets	15,710
Interest	47,433
Interest and Fiscal Charges	(878,425)
	<u>(360,886)</u>
<i>Total Non-Operating Revenues (Expenses)</i>	
	<u>(360,886)</u>
<i>Income (Loss) before Transfers and Capital Contributions</i>	
	6,657,874
Capital Contributions	
	<u>67,954</u>
<i>Change in Net Position</i>	
	6,725,828
<i>Net Position Beginning of Year</i>	
	<u>72,249,454</u>
<i>Net Position End of Year</i>	
	<u>\$78,975,282</u>

See accompanying notes to the basic financial statements

**Mahoning Valley Sanitary District**  
*Statement of Cash Flows*  
For the Year Ended December 31, 2021

---



---

<b><i>Increase (Decrease) in Cash and Cash Equivalents</i></b>	
<b>Cash Flows from Operating and Non-Operating Activities</b>	
Cash Received from Customers	\$18,497,112
Cash Received from Timber Sales	416,200
Cash Received from Royalties	30,438
Cash Received from Capital Charges	63,825
Other Cash Received	94,378
Cash Payments to Employees for Services	(4,157,079)
Cash Payments to Suppliers for Goods and Services	(5,738,471)
Cash Payments for Claims	(926,829)
Cash Payments for Capital Charges	(63,825)
Other Cash Payments	(8,803)
	<u>(8,803)</u>
 <i>Net Cash Provided by (Used for)</i>	
<i>Operating and Non-Operating Activities</i>	<u>8,206,946</u>
 <b><i>Cash Flows from Capital and Related Financing Activities</i></b>	
Capital Contributions	67,954
Redemption of Principal - OWDA Loans	(2,607,227)
Interest and Fiscal Charges - OWDA Loans	(878,425)
Acquisition of Capital Assets	(2,272,494)
Proceeds from Sale of Capital Assets	24,629
	<u>24,629</u>
 <i>Net Cash Provided by (Used for)</i>	
<i>Capital and Related Financing Activities</i>	<u>(5,665,563)</u>
 <b>Cash Flows from Investing Activities</b>	
Interest on Investments	47,433
	<u>47,433</u>
 <i>Net Increase (Decrease) in Cash and Cash Equivalents</i>	
	2,588,816
 <i>Cash and Cash Equivalents Beginning of Year</i>	
	<u>47,055,367</u>
 <i>Cash and Cash Equivalents End of Year</i>	
	<u>\$49,644,183</u>

(continued)

**Mahoning Valley Sanitary District**  
*Statement of Cash Flows (continued)*  
For the Year Ended December 31, 2021

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

Operating Income (Loss)	\$7,018,760
Adjustment:	
Depreciation	3,225,262
Non-Operating Revenues (Expenses):	
Timber Sales	416,200
Royalties	30,438
Capital Charge Receipts	63,825
Capital Charge Disbursements	(63,825)
(Increase) Decrease in Assets and Deferred Outflows:	
Accounts Receivable	(3,319)
Intergovernmental Receivable	(5,769)
Materials and Supplies Inventory	32,959
Prepaid Items	9,006
Net Pension Asset	(7,508)
Deferred Outflows - Pension	861,243
Deferred Outflows - OPEB	457,243
Increase (Decrease) in Liabilities and Deferred Inflows:	
Accounts Payable	(145,205)
Accrued Wages	6,538
Contracts Payable	(6,039)
Compensated Absences Payable	(59,107)
Intergovernmental Payable	(3,680)
Claims Payable	38,048
Net Pension Liability	(17,339)
Net OPEB Liability	(1,838,402)
Deferred Inflows - Pension	(984,925)
Deferred Inflows - OPEB	(817,458)
	1,188,186
<i>Total Adjustments</i>	<u>1,188,186</u>
<i>Net Cash Provided by (Used for)</i> <i>Operating and Non-Operating Activities</i>	<u>\$8,206,946</u>

**Noncash Capital Financing Activities**

At December 31, 2021, the District had contracts and retainage payable related to the acquisition of capital assets of \$288,539 and \$22,992, respectively.

At December 31, 2020, the District had contracts payable related to the acquisition of capital assets of \$82,352.

See accompanying notes to the basic financial statements

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
*For the Year Ended December 31, 2021*

---

**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, 2021*

---

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 assets 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 assets 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, 2021*

---

***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 2021, the District invested in STAR Ohio (the State Treasury Asset Reserve of Ohio). STAR 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 2021, 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 \$100 million or more. STAR Ohio reserves the right to limit the transaction to \$250 million per day, requiring the excess amount to be transacted the following business day(s), but only to the \$250 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, 2021*

---

***Prepaid Items***

Payments made to vendors for services that will benefit periods beyond December 31, 2021 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, 2021*

---

***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, 2021*

---

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, 2021, \$0 of the District's bank balance of \$12,117,374 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, 2021*

---

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, 2021, the District had STAR Ohio as an investment. STAR Ohio is being held with an amount of \$37,665,745 which is measured at net asset value per share. The average maturity is 52.1 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, 2021, 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	\$1,158,734
City of Niles Water Billing	349,823
Village of McDonald Water Billing	29,335
Bureau of Workers' Compensation Refund	<u>4,104</u>
Total	<u><u>\$1,541,996</u></u>

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
For the Year Ended December 31, 2021

**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, 2021, was as follows:

	Balance 12/31/2020	Additions	Deletions	Balance 12/31/2021
<b>Business-Type Activities</b>				
<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	5,079,577	2,042,632	(63,530)	7,058,679
<b>Total Capital Assets, not being depreciated</b>	<b>6,995,820</b>	<b>2,042,632</b>	<b>(63,530)</b>	<b>8,974,922</b>
<i>Capital Assets, being depreciated:</i>				
Land Improvements	515,873	70,858	0	586,731
Buildings and Improvements	76,965,412	78,463	0	77,043,875
Furniture and Equipment	2,762,022	315,897	0	3,077,919
Vehicles	999,950	57,353	(89,183)	968,120
Infrastructure	33,039,575	0	0	33,039,575
<b>Total Capital Assets, being depreciated</b>	<b>114,282,832</b>	<b>522,571</b>	<b>(89,183)</b>	<b>114,716,220</b>
<i>Less Accumulated Depreciation:</i>				
Land Improvements	(246,165)	(23,802)	0	(269,967)
Buildings and Improvements	(35,841,472)	(1,956,241)	0	(37,797,713)
Furniture and Equipment	(1,978,030)	(110,118)	0	(2,088,148)
Vehicles	(672,302)	(75,145)	80,264	(667,183)
Infrastructure	(15,384,175)	(1,059,956)	0	(16,444,131)
<b>Total Accumulated Depreciation</b>	<b>(54,122,144)</b>	<b>(3,225,262)</b>	<b>80,264</b>	<b>(57,267,142)</b>
<b>Total Capital Assets, being depreciated, net</b>	<b>60,160,688</b>	<b>(2,702,691)</b>	<b>(8,919)</b>	<b>57,449,078</b>
<b>Business-Type Activities Capital Assets, Net</b>	<b>\$67,156,508</b>	<b>(\$660,059)</b>	<b>(\$72,449)</b>	<b>\$66,424,000</b>

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
*For the Year Ended December 31, 2021*

---

**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, 2021.

***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 2021, the District contracted with Love Insurance for various types of insurance coverage as follows:

Type	Coverage	Deductible
Property/Inland Marine	\$198,585,792	\$10,000
Boiler & Machinery	198,585,792	10,000
Earthquake	1,000,000	100,000
Flood	1,000,000	100,000
General Liability	6,000,000/8,000,000	2,500
Public Official Liability	6,000,000/8,000,000	2,500
Employment Practices Liability	6,000,000/8,000,000	2,500
<b>Fleet Vehicle</b>		
Auto Liability	6,000,000	0
Physical Damage	10,000	500
Comprehensive	10,000	250
<b>Crime Coverage</b>		
Employee Dishonesty	100,000	1,000
Cyber Coverage	1,000,000	25,000
Malicious Act	1,000,000	0

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

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
*For the Year Ended December 31, 2021*

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 \$45,000 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.

The claims liability of \$109,613 reported at December 31, 2021, 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
2020	\$42,893	\$751,314	\$722,642	\$71,565
2021	71,565	964,877	926,829	109,613

The average monthly cost per covered employee for stop loss protection and administration of claims is \$556. The annual premium for stop loss coverage and claims administration is \$353,299.

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 liability (asset) represent the District’s proportionate share of each pension/OPEB plan’s collective actuarial present value of projected benefit payments attributable to past periods of service, net of each pension/OPEB plan’s fiduciary net position. The net pension/OPEB liability (asset) calculation is

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
*For the Year Ended December 31, 2021*

---

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.

The Ohio Revised Code limits the District's obligation for this liability 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.

GASB 68/75 assumes the liability is 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 liability (asset). Resulting adjustments to the net pension/OPEB liability (asset) would be effective when the changes are legally enforceable. The Ohio Revised Code 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/OPEB 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 (OPERS)***

District employees 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. Participating employers are divided into state, local, law enforcement and public safety divisions. While members in the state and local divisions may participate in all three plans, law enforcement and public safety divisions exist only within the traditional plan.

OPERS provides retirement, disability, survivor and death benefits, and annual cost of living adjustments to members of the traditional and combined plans. Authority to establish and amend benefits is provided by Chapter 145 of the Ohio Revised Code. 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 Comprehensive Financial Report referenced above for additional information, including requirements for reduced and unreduced benefits):

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
*For the Year Ended December 31, 2021*

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

Final average Salary (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. The initial amount of a member's pension benefit is vested upon receipt of the initial benefit payment for calculation of an annual cost-of-living adjustment.

When a traditional plan benefit recipient has received benefits for 12 months, current law provides for an annual cost of living adjustment (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 cost-of-living adjustment on the defined benefit portion of their pension benefit. For those who retired prior to January 7, 2013, the cost of living adjustment is 3 percent. 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*  
For the Year Ended December 31, 2021

Beginning in 2022, the Combined Plan will be consolidated under the Traditional Pension Plan (defined benefit plan) and the Combined Plan option will no longer be available for new hires beginning in 2022.

Funding Policy - The Ohio Revised Code (ORC) provides statutory authority for member and employer contributions as follows:

	State and Local
<b>2021 Statutory Maximum Contribution Rates</b>	
Employer	14.0 %
Employee *	10.0 %
<b>2021 Actual Contribution Rates</b>	
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.

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

For 2021, the District's contractually required contribution was \$440,558 for the traditional plan, \$13,592 for the combined plan and \$5,512 for the member-directed plan. Of these amounts, \$16,016 is reported as an intergovernmental payable for the traditional plan, \$494 for the combined plan, and \$200 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, 2020, 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:



**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
For the Year Ended December 31, 2021

	OPERS <u>Traditional Plan</u>	OPERS <u>Combined Plan</u>	<u>Total</u>
Proportion of the Net Pension Liability/Asset:			
Current Measurement Date	0.02185600%	0.02201700%	
Prior Measurement Date	<u>0.02034400%</u>	<u>0.02166300%</u>	
Change in Proportionate Share	<u>0.00151200%</u>	<u>0.00035400%</u>	
Proportionate Share of the:			
Net Pension Liability	\$3,236,398	\$0	\$3,236,398
Net Pension Asset	0	(63,556)	(63,556)
Pension Expense	304,069	1,552	305,621

2021 pension expense for the member-directed defined contribution plan was \$5,512. The aggregate pension expense for all pension plans was \$311,133 for 2021.

At December 31, 2021, 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>
<b>Deferred Outflows of Resources</b>			
Changes of assumptions	\$0	\$3,969	\$3,969
Changes in proportion and differences between District contributions and proportionate share of contributions	275,427	1,304	276,731
District contributions subsequent to the measurement date	<u>440,558</u>	<u>13,592</u>	<u>454,150</u>
Total Deferred Outflows of Resources	<u>\$715,985</u>	<u>\$18,865</u>	<u>\$734,850</u>
<b>Deferred Inflows of Resources</b>			
Differences between expected and actual experience	\$135,381	\$11,990	\$147,371
Net difference between projected and actual earnings on pension plan investments	1,261,453	9,452	1,270,905
Changes in proportion and differences between District contributions and proportionate share of contributions	<u>0</u>	<u>482</u>	<u>482</u>
Total Deferred Inflows of Resources	<u>\$1,396,834</u>	<u>\$21,924</u>	<u>\$1,418,758</u>

\$454,150 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 2022. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pension will be recognized in pension expense as follows:

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
For the Year Ended December 31, 2021

Year Ending December 31:	OPERS Traditional Plan	OPERS Combined Plan	Total
2022	(\$327,185)	(\$4,412)	(\$331,597)
2023	(107,968)	(2,751)	(110,719)
2024	(514,211)	(4,931)	(519,142)
2025	(172,043)	(2,220)	(174,263)
2026	0	(872)	(872)
Thereafter	0	(1,465)	(1,465)
Total	<u>(\$1,121,407)</u>	<u>(\$16,651)</u>	<u>(\$1,138,058)</u>

***Actuarial Assumptions - OPERS***

Actuarial valuations of an ongoing plan involve estimates of the value 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, 2020, 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, 2020, are presented below.

	OPERS Traditional Plan	OPERS Combined Plan
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	0.5 percent, simple through 2021, then 2.15 percent, simple	0.5 percent, simple through 2021, 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 2020, the OPERS Board adopted a change in COLA for Post-January 7, 2013 retirees, changing it from 1.4 percent simple through 2020 then 2.15 simple to 0.5 percent simple through 2021 then 2.15 percent simple.

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

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
For the Year Ended December 31, 2021

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 above described tables.

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

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 long-term expected 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. Best estimates of arithmetic real rates of return were provided by the Board's investment consultant. For each major asset class that is included in the Defined Benefit portfolio's target asset allocation as of December 31, 2020, these best estimates are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)</u>
Fixed Income	25.00 %	1.32 %
Domestic Equities	21.00	5.64
Real Estate	10.00	5.39
Private Equity	12.00	10.42
International Equities	23.00	7.36
Other investments	9.00	4.75
Total	<u>100.00 %</u>	<u>5.43 %</u>

**Discount Rate** The discount rate used to measure the total pension liability was 7.2 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:

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
*For the Year Ended December 31, 2021*

	1% Decrease (6.20%)	Discount Rate (7.20%)	1% Increase (8.20%)
<b>District's proportionate share of the net pension liability (asset)</b>			
OPERS Traditional Plan	\$6,173,446	\$3,236,398	\$794,247
OPERS Combined Plan	(44,254)	(63,556)	(77,940)

**Changes between the Measurement Date and the Reporting Date** During 2021, the OPERS Board lowered the investment rate of return from 7.2 percent to 6.9 along with certain other changes to assumptions for the actuarial valuation as of December 31, 2021. The effects of these changes are unknown.

**Note 10 - Defined Benefit OPEB Plans**

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

**Plan Description – Ohio Public Employees Retirement System (OPERS)**

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 (HRA) to qualifying benefit recipients of both the traditional pension and the combined plans. Currently, Medicare-eligible retirees are able to select medical and prescription drug plans from a range of options and may elect optional vision and dental plans. Retirees and eligible dependents enrolled in Medicare Parts A and B have the option to enroll in a Medicare supplemental plan with the assistance of the OPERS Medicare Connector. The OPERS Medicare Connector is a relationship with a vendor selected by OPERS to assist retirees, spouses and dependents with selecting a medical and pharmacy plan. Monthly allowances, based on years of service and the age at which the retiree first enrolled in OPERS coverage, are deposited into an HRA. For non-Medicare retirees and eligible dependents, OPERS sponsors medical and prescription coverage through a professionally managed self-insured plan. An allowance to offset a portion of the monthly premium is offered to retirees and eligible dependents. The allowance is based on the retiree's years of service and age when they first enrolled in OPERS coverage.

Medicare-eligible retirees who choose to become re-employed or survivors who become employed in an OPERS-covered position are prohibited from participating in an HRA. For this group of retirees, OPERS sponsors secondary coverage through a professionally managed self-insured program. Retirees who enroll in this plan are provided with a monthly allowance to offset a portion of the monthly premium. Medicare-eligible spouses and dependents can also enroll in this plan as long as the retiree is enrolled

OPERS provides a monthly allowance for health care coverage for eligible retirees and their eligible dependents. The base allowance is determined by OPERS.

The health care 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 separation, member directed plan participants may be eligible for reimbursement of qualified medical expenses from their vested RMA balance.

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
*For the Year Ended December 31, 2021*

---

Effective January 1, 2022, OPERS will discontinue the group plans currently offered to non-Medicare retirees and re-employed retirees. Instead, eligible non-Medicare retirees will select an individual medical plan. OPERS will provide a subsidy or allowance via an HRA allowance to those retirees who meet health care eligibility requirements. Retirees will be able to seek reimbursement for plan premiums and other qualified medical expenses. These changes are reflected in the December 31, 2020, measurement date health care valuation.

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. Current retirees eligible (or who become eligible prior to January 1, 2022) to participate in the OPERS health care program will continue to be eligible after January 1, 2022. Eligibility requirements will change for those retiring after January 1, 2022, with differing eligibility requirements for Medicare retirees and non-Medicare retirees. The health care coverage provided by OPERS meets the definition of an Other Post Employment Benefit (OPEB) as described in GASB Statement 75. See OPERS' Annual Comprehensive Financial Report referenced later for additional information.

The Ohio Revised Code 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 Ohio Revised Code.

Disclosures for the health care plan are presented separately in the OPERS 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 Ohio Revised Code 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, OPERS no longer allocated a portion of its employer contributions to health care for the traditional plan and the combined plan.

Employer contribution rates are expressed as a percentage of the earnable salary of active members. In 2021, 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 Ohio Revised Code. 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. For 2021, OPERS did not allocate any employer contribution to health care for members in the Traditional Pension Plan and 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 2021 was 4.0 percent.

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
For the Year Ended December 31, 2021

Employer contribution rates are actuarially determined and are expressed as a percentage of covered payroll. The District's contractually required contribution was \$2,205 for 2021. Of this amount, \$80 is reported as an intergovernmental payable.

***OPEB Liabilities (Asset), OPEB Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB***

The net OPEB liability (asset) and total OPEB liability for OPERS were determined by an actuarial valuation as of December 31, 2019, rolled forward to the measurement date of December 31, 2020, 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 (asset) 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	0.02135200%
Prior Measurement Date	0.01993400%
Change in Proportionate Share	0.00141800%
Proportionate Share of the Net	
OPEB Liability (Asset)	(\$380,403)
OPEB Expense	(\$2,196,412)

At December 31, 2021, the District reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	OPERS
<b>Deferred Outflows of Resources</b>	
Changes of assumptions	\$187,010
Changes in proportion and differences between District contributions and proportionate share of contributions	131,356
District contributions subsequent to the measurement date	2,205
Total Deferred Outflows of Resources	\$320,571
<b>Deferred Inflows of Resources</b>	
Differences between expected and actual experience	\$343,312
Changes of assumptions	616,367
Net difference between projected and actual earnings on OPEB plan investments	202,608
Changes in proportion and differences between District contributions and proportionate share of contributions	0
Total Deferred Inflows of Resources	\$1,162,287

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
For the Year Ended December 31, 2021

\$2,205 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 or an increase to the net OPEB asset in 2022. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows:

	OPERS
Year Ending December 31:	
2022	(\$424,255)
2023	(307,748)
2024	(88,045)
2025	(23,873)
Total	(\$843,921)

***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, 2019, rolled forward to the measurement date of December 31, 2020. 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	6.00 percent
Prior Measurement date	3.16 percent
Investment Rate of Return	6.00 percent
Municipal Bond Rate:	
Current measurement date	2.00 percent
Prior Measurement date	2.75 percent
Health Care Cost Trend Rate:	
Current measurement date	8.5 percent, initial 3.50 percent, ultimate in 2035
Prior Measurement date	10.5 percent, initial 3.50 percent, ultimate in 2030
Actuarial Cost Method	Individual Entry Age Normal

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

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
For the Year Ended December 31, 2021

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 above described tables.

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

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 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. For each major asset class that is included in the Health Care's portfolio's target asset allocation as of December 31, 2019, these best estimates are summarized in the following table:

Asset Class	Target Allocation	Weighted Average Long-Term Expected Real Rate of Return (Arithmetic)
Fixed Income	34.00 %	1.07 %
Domestic Equities	25.00	5.64
Real Estate Investment Trust	7.00	6.48
International Equities	25.00	7.36
Other investments	9.00	4.02
Total	100.00 %	4.43 %

**Discount Rate** A single discount rate of 6.0 percent was used to measure the OPEB liability on the measurement date of December 31, 2020. A single discount rate of 3.16 percent was used to measure the OPEB liability on the measurement date of December 31, 2019. 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 2.00 percent (Fidelity Index's "20-Year Municipal GO AA Index"). 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 2120. As a result, the actuarial assumed long-term expected rate of return on health care investments was applied to projected costs through the year 2120, the duration of the projection period through which projected health care payments are fully funded.



**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
For the Year Ended December 31, 2021

***Sensitivity of the District's Proportionate Share of the Net OPEB Liability (Asset) to Changes in the Discount Rate*** The following table presents the District's proportionate share of the net OPEB liability (asset) calculated using the single discount rate of 3.16 percent, as well as what the District's proportionate share of the net OPEB liability (asset) would be if it were calculated using a discount rate that is one-percentage-point lower (2.16 percent) or one-percentage-point higher (4.16 percent) than the current rate:

	1% Decrease (2.16%)	Current Discount Rate (3.16%)	1% Increase (4.16%)
District's proportionate share of the net OPEB liability (asset)	(\$94,589)	(\$380,403)	(\$615,365)

***Sensitivity of the District's Proportionate Share of the Net OPEB Liability (Asset) 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 (asset). The following table presents the net OPEB liability (asset) calculated using the assumed trend rates, and the expected net OPEB liability (asset) 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 2021 is 8.50 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 actuaries 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 3.50 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 (asset)	(\$389,674)	(\$380,403)	(\$370,030)

***Changes between the Measurement Date and the Reporting Date*** During 2021, the OPERS Board made various changes to assumptions for the actuarial valuation as of December 31, 2021. The effects of these changes are unknown.

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
For the Year Ended December 31, 2021

**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
<b>Business-Type Activities</b>			
<i>OWDA Loans from Direct Borrowings</i>			
Filter System Improvement	3.35%	\$7,105,074	2026
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	2028
Valve Replacement/Gate House	0.00%	2,488,513	2031
Solids Contact Clarifier/Recarbonation	3.99%	14,327,587	2033
Solid Clarifiers/Recarbonation	2.00%	8,000,000	2033
Phase II Valve/Pipeline Replacement	2.00%	4,326,310	2037
Berlin Pump Station Improvements	2.00%	2,364,846	2037
SCADA/Instrumentation Improvements	2.94%	611,719	2036
SCADA/Enhanced Security Improvements	4.32%	3,202,817	2036
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 2021 consist of the following:

	Principal Outstanding 12/31/2020	Additions	(Reductions)	Principal Outstanding 12/31/2021	Amount Due in One Year
<b>Business-Type Activities:</b>					
<i>OWDA Loans from Direct Borrowings</i>					
Filter Systems Improvement	\$2,240,065	\$0	(\$418,750)	\$1,821,315	\$432,896
Niles Standpipe Replacement	516,669	0	(72,614)	444,055	74,993
Chemical Feed Building Roof	640,343	0	(89,995)	550,348	92,944
Administration and Filter Building Roof	137,303	0	(17,111)	120,192	17,885
Valve Replacement/Gate House	1,244,257	0	(124,426)	1,119,831	124,426
Solids Contact Clarifier/Recarbonation	9,903,199	0	(657,954)	9,245,245	684,467
Solid Clarifiers/Recarbonation	5,175,841	0	(385,692)	4,790,149	393,444
Phase II Valve/Pipeline Replacement	3,593,050	0	(192,618)	3,400,432	196,490
Berlin Pump Station Improvements	1,964,032	0	(105,289)	1,858,743	107,405
SCADA/Instrumentation Improvements	490,473	0	(26,445)	464,028	27,228
SCADA/Enhanced Security Improvements	2,637,955	0	(128,193)	2,509,762	133,791
Chemical Feed Systems	1,779,525	0	(101,226)	1,678,299	102,047
Phase III Valve/Main Replacement	5,371,730	0	(286,914)	5,084,816	289,243
<i>Total OWDA Loans</i>	<u>\$35,694,442</u>	<u>\$0</u>	<u>(\$2,607,227)</u>	<u>\$33,087,215</u>	<u>\$2,677,259</u>

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
For the Year Ended December 31, 2021

	Principal Outstanding 12/31/2020	Additions	(Reductions)	Principal Outstanding 12/31/2021	Amount Due in One Year
<b>Business-Type Activities (continued):</b>					
<i>Other Long Term Obligations:</i>					
Net Pension Liability	\$4,021,130	\$0	(\$784,732)	\$3,236,398	\$0
Net OPEB Liability	2,753,403	0	(2,753,403)	0	0
Compensated Absences	678,843	388,263	(447,370)	619,736	389,169
<i>Total Other Long Term Obligation</i>	<u>7,453,376</u>	<u>388,263</u>	<u>(3,985,505)</u>	<u>3,856,134</u>	<u>389,169</u>
Total Business-Type Activities	<u>\$43,147,818</u>	<u>\$388,263</u>	<u>(\$6,592,732)</u>	<u>\$36,943,349</u>	<u>\$3,066,428</u>

The District's outstanding OWDA loans from direct borrowings of \$33,087,215 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 2026.

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 2028.

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 2031.

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 2033.

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 2033.

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 2037.

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 2037.

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
*For the Year Ended December 31, 2021*

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 2036.

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 2036.

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.

The District has pledged future revenues, net of operating expenses, to repay OWDA loans. The debt is payable solely from net revenues through 2039. Annual principal and interest payments on the debt issues are expected to require 34.21 percent of net revenues. The total principal and interest remaining to be paid on the debt is \$38,413,703. Principal and interest paid for the current year and total net revenues available were \$3,485,653 and \$10,190,240, respectively.

Principal and interest requirements to retire long-term obligations outstanding at December 31, 2021, are as follows:

	<u>From Direct Borrowings</u>	
	OWDA	
	Loans	
	<u>Principal</u>	<u>Interest</u>
2022	\$2,677,259	\$840,778
2023	2,749,618	740,886
2024	2,824,385	668,679
2025	2,901,646	594,066
2026	2,487,073	520,636
2027 - 2031	12,288,512	1,650,203
2032 - 2036	6,610,451	307,026
2037 - 2039	548,271	4,214
Total	<u>\$33,087,215</u>	<u>\$5,326,488</u>

**Mahoning Valley Sanitary District**  
*Notes to the Basic Financial Statements*  
For the Year Ended December 31, 2021

**Note 12 – Significant Commitments**

***Contractual Commitments***

As of December 31, 2021, the District had the following contractual construction commitments outstanding:

Vendor Name	Contract Amount	Amount Paid To Date	Remaining Contract
MS Consultants - Headhouse	\$272,743	\$265,609	\$7,134
AP O'Horo - Headhouse	1,237,000	532,770	\$704,230
Gannett Fleming - Dam	2,115,019	1,916,863	\$198,156
Gannett Fleming - Chem Feedline	320,705	112,177	\$208,528
Stantec - Valve Phase IV Standby power	1,940,500	1,299,421	\$641,079
CT Consultants - Filter Gallery	627,686	415,254	\$212,432
AP O'Horo - Standby Power	1,680,100	0	\$1,680,100
CAT - Generator - Standby Power	1,881,461	0	\$1,881,461
Kirila - Phase IV Valve Replacement	5,851,691	0	\$5,851,691
<b>Total</b>	<b>\$15,926,905</b>	<b>\$4,542,094</b>	<b>\$11,384,811</b>

Remaining commitment amounts were encumbered at year end. The amounts of \$288,539 and \$22,992 of contracts and retainage payable, respectively, have been capitalized.

***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 \$13,378,085 of encumbrances expected to be honored upon performance by the vendor in the next year.

**Note 13 – Change in Accounting Principle**

For 2021, the District implemented the Governmental Accounting Standards Board's (GASB) Statement No. 98, *The Annual Comprehensive Financial Report*. GASB 98 establishes the term annual comprehensive financial report and its acronym ACFR. That new term and acronym replace instances of comprehensive annual financial report and its acronym in generally accepted accounting principles for state and local governments. The District is also implementing *Implementation Guide No. 2019-1*. These changes were incorporated in the District's 2021 financial statements; however, there was no effect on beginning net position/fund balance.

**Note 14 – COVID-19**

The United States and the State of Ohio declared a state of emergency in March of 2020 due to the COVID-19 pandemic. Ohio's state of emergency ended in June, 2021 while the national state of emergency continues. The financial impact of COVID-19 and the continuing emergency measures may impact subsequent periods of the District. The District's investment portfolio fluctuates with market conditions, and due to market volatility, the amount of gains or losses that will be realized in subsequent periods, if any, cannot be determined. In addition, the impact of the District's future operating costs, revenues and additional recovery from emergency funding, either federal or state, cannot be estimated.

*(This page intentionally left blank)*

---

## 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 Five Years (1) \**

	2021	2020	2019
District's Proportion of the Net Pension Liability	0.02185600%	0.02034400%	0.01891500%
District's Proportionate Share of the Net Pension Liability	\$3,236,398	\$4,021,130	\$5,180,436
District's Covered Payroll	\$3,076,843	\$2,862,336	\$2,585,650
District's Proportionate Share of the Net Pension Liability as a Percentage of its Covered Payroll	105.19%	140.48%	200.35%
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	86.88%	82.17%	74.70%

(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



<u>2018</u>	<u>2017</u>
0.01916400%	0.02064600%
\$3,006,461	\$4,688,356
\$2,532,562	\$2,668,875
118.71%	175.67%
84.66%	77.25%

**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 Five Years (1) \**

	2021	2020	2019
District's Proportion of the Net Pension Asset	0.02201700%	0.02166300%	0.02268400%
District's Proportionate Share of the Net Pension Asset	\$63,556	\$45,173	\$25,366
District's Covered Payroll	\$97,029	\$96,436	\$97,014
District's Proportionate Share of the Net Pension Asset as a Percentage of its Covered Payroll	-65.50%	-46.84%	-26.15%
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	157.67%	145.28%	126.64%

(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

<u>2018</u>	<u>2017</u>
0.02302500%	0.02366100%
\$31,345	\$13,168
\$94,300	\$92,100
-33.24%	-14.30%
137.28%	116.55%

**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 Five Years (1) \**

	2021	2020	2019
District's Proportion of the Net OPEB Liability	0.02135200%	0.01993400%	0.01957600%
District's Proportionate Share of the Net OPEB Liability	(\$380,403)	\$2,753,403	\$2,552,248
District's Covered Payroll	\$3,227,797	\$3,011,597	\$2,807,413
District's Proportionate Share of the Net OPEB Liability as a Percentage of its Covered Payroll	-11.79%	91.43%	90.91%
Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability	115.57%	47.80%	46.33%

(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

---

---

<u>2018</u>	<u>2017</u>
0.01891000%	0.02034300%
\$2,053,487	\$2,054,712
\$2,836,000	\$2,861,650
72.41%	71.80%
54.14%	54.05%

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

	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018 Interim (2)</u>
<b>Net Pension Liability</b>				
Contractually Required Contribution	\$440,558	\$430,758	\$400,727	\$186,320
Contributions in Relation to the Contractually Required Contribution	<u>(440,558)</u>	<u>(430,758)</u>	<u>(400,727)</u>	<u>(186,320)</u>
Contribution Deficiency (Excess)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
District Covered Payroll	\$3,146,843	\$3,076,843	\$2,862,336	\$1,330,857
Pension Contributions as a Percentage of Covered Payroll	<u>14.00%</u>	<u>14.00%</u>	<u>14.00%</u>	<u>14.00%</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

<u>Fiscal Year</u> <u>2018</u>	<u>Fiscal Year</u> <u>2017</u>
\$341,627	\$333,539
<u>(341,627)</u>	<u>(333,539)</u>
<u>\$0</u>	<u>\$0</u>
\$2,531,377	\$2,674,827
<u>13.50%</u>	<u>12.47%</u>

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

	2021	2020	2019	2018 Interim (2)
<b>Net Pension Liability</b>				
Contractually Required Contribution	\$13,592	\$13,584	\$13,501	\$6,888
Contributions in Relation to the Contractually Required Contribution	<u>(13,592)</u>	<u>(13,584)</u>	<u>(13,501)</u>	<u>(6,888)</u>
Contribution Deficiency (Excess)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
District Covered Payroll	\$97,086	\$97,029	\$96,436	\$49,200
Pension Contributions as a Percentage of Covered Payroll	<u>14.00%</u>	<u>14.00%</u>	<u>14.00%</u>	<u>14.00%</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



<u>Fiscal Year</u> <u>2018</u>	<u>Fiscal Year</u> <u>2017</u>
\$12,966	\$11,306
<u>(12,966)</u>	<u>(11,306)</u>
<u>\$0</u>	<u>\$0</u>
\$96,060	\$90,379
<u>13.50%</u>	<u>12.51%</u>

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

	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018 Interim (2)</u>
<b>Net OPEB Liability</b>				
Contractually Required Contribution	\$2,205	\$2,157	\$2,113	\$2,641
Contributions in Relation to the Contractually Required Contribution	<u>(2,205)</u>	<u>(2,157)</u>	<u>(2,113)</u>	<u>(2,641)</u>
Contribution Deficiency (Excess)	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>
District Covered Payroll	\$3,299,054	\$3,227,797	\$3,011,597	\$1,446,082
Pension Contributions as a Percentage of Covered Payroll	<u>0.07%</u>	<u>0.07%</u>	<u>0.07%</u>	<u>0.18%</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

<u>Fiscal Year</u> <u>2018</u>	<u>Fiscal Year</u> <u>2017</u>
\$17,946	\$44,309
<u>(17,946)</u>	<u>(44,309)</u>
<u>\$0</u>	<u>\$0</u>
\$2,744,887	\$2,815,831
<u>0.65%</u>	<u>1.57%</u>

**Mahoning Valley Sanitary District**  
*Notes to the Required Supplementary Information*  
For the year ended December 31, 2021

**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 prior years are presented below:

	<u>2019</u>	<u>2018 and 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	see below	see below	see below
Investment Rate of Return	7.2 percent	7.5 percent	8 percent
Actuarial Cost Method	Individual Entry Age	Individual Entry Age	Individual Entry Age

The assumptions related COLA or Ad Hoc COLA for Post-January 7, 2013 Retirees are as follows:

COLA or Ad Hoc COLA, Post-January 7, 2013 Retirees:

2021	0.5 percent, simple through 2021 then 2.15 percent, simple
2020	1.4 percent, simple through 2020 then 2.15 percent, simple
2017 through 2019	3.0 percent, simple through 2018 then 2.15 percent, simple
2016 and prior	3.0 percent, simple through 2018 then 2.80 percent, simple

Amounts reported beginning in 2017 use 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 above 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.

**Mahoning Valley Sanitary District**  
*Notes to the Required Supplementary Information*  
*For the year ended December 31, 2021*

---

**Changes in Assumptions – OPERS Pension – Combined Plan**

For 2021 and 2020, the Combined Plan had the same change in COLA or Ad Hoc COLA for Post-January 2, 2013 retirees as the Traditional Plan. For 2019, the investment rate of return changed from 7.5 percent to 7.2 percent.

**Changes in Assumptions – OPERS OPEB**

Investment Return Assumption:	
Beginning in 2019	6.00 percent
2018	6.50 percent
Municipal Bond Rate:	
2021	2.00 percent
2020	2.75 percent
2019	3.71 percent
2018	3.31 percent
Single Discount Rate:	
2021	6.00 percent
2020	3.16 percent
2019	3.96 percent
2018	3.85 percent
Health Care Cost Trend Rate:	
2021	8.5 percent, initial 3.5 percent, ultimate in 2035
2020	10.5 percent, initial 3.5 percent, ultimate in 2030
2019	10.0 percent, initial 3.25 percent, ultimate in 2029
2018	7.5 percent, initial 3.25 percent, ultimate in 2028

**Changes in Benefit Terms – OPERS OPEB**

On January 15, 2020, the Board approved several changes to the health care plan offered to Medicare and non-Medicare retirees in efforts to decrease costs and increase the solvency of the health care plan. These changes are effective January 1, 2022, and include changes to base allowances and eligibility for Medicare retirees, as well as replacing OPERS-sponsored medical plans for non-Medicare retirees with monthly allowances, similar to the program for Medicare retirees. These changes are reflected in 2021.

*(This page intentionally left blank)*

---

# Statistical Section

---

*(This page intentionally left blank)*



## Statistical Section

This part of the Mahoning Valley Sanitary District's annual comprehensive 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>
<b>Financial Trends</b> These schedules contain trend information to help the reader understand how the District's financial performance and well-being have changed over time.	S2 - S5
<b>Revenue Capacity</b> These schedules contain information to help the reader assess the District's most significant local revenue source, charges for services.	S6 - S7
<b>Debt Capacity</b> 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.	S9 - S11
<b>Economic and Demographic Information</b> These schedules offer economic and demographic indicators to help the reader understand the environment within which the District's financial activities take place.	S12 - S14
<b>Operating Information</b> 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.	S15 - S20

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

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

	2021 Calendar	2020 Calendar	2019 Calendar	2018 Interim (2)
Net Investment in Capital Assets	\$33,025,254	\$31,379,714	\$30,339,832	\$28,766,427
Restricted for:				
Debt Service	0	0	0	106,104
Unrestricted	<u>45,950,028</u>	<u>40,869,740</u>	<u>37,994,519</u>	<u>34,230,281</u>
<i>Total Net Position</i>	<u><u>\$78,975,282</u></u>	<u><u>\$72,249,454</u></u>	<u><u>\$68,334,351</u></u>	<u><u>\$63,102,812</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.  
2019-2021 are reported on a Calendar Year Basis, 2017-2018 are reported on a Fiscal Year Basis.

<u>2018</u> <u>Fiscal</u>	<u>2017</u> <u>Fiscal</u>
\$23,474,961	\$17,089,717
2,696,074	4,172,643
<u>32,622,512</u>	<u>31,694,700</u>
<u>\$58,793,547</u>	<u>\$52,957,060</u>

## Mahoning Valley Sanitary District

*Changes in Net Position*

*Last Five Years (1)*

*(accrual basis of accounting)*

	2021 Calendar	2020 Calendar	2019 Calendar
<b>Operating Revenues</b>			
Charges for Services	\$18,499,363	\$18,385,867	\$18,463,625
Miscellaneous	101,215	318,614	133,212
<i>Total Operating Revenues</i>	<u>18,600,578</u>	<u>18,704,481</u>	<u>18,596,837</u>
<b>Operating Expenses</b>			
Personal Services	1,762,439	4,715,821	4,778,313
Supplies and Services	5,620,437	5,587,697	4,840,658
Depreciation	3,225,262	3,196,583	3,171,330
Claims	964,877	751,314	606,848
Miscellaneous	8,803	9,724	9,676
<i>Total Operating Expenses</i>	<u>11,581,818</u>	<u>14,261,139</u>	<u>13,406,825</u>
<i>Operating Income (Loss)</i>	<u>7,018,760</u>	<u>4,443,342</u>	<u>5,190,012</u>
<b>Non-Operating Revenues (Expenses)</b>			
Timber Sales	416,200	0	67,250
Royalties	38,196	13,023	22,815
Miscellaneous - Non Operating Revenue	0	0	0
Miscellaneous - Non Operating Expense	0	0	0
Gain on Sale of Capital Assets	15,710	0	0
Loss on Disposal of Capital Assets	0	(20,805)	(284,998)
Interest	47,433	293,923	841,669
Interest and Fiscal Charges	(878,425)	(943,910)	(1,007,310)
<i>Total Non-Operating Revenues (Expenses)</i>	<u>(360,886)</u>	<u>(657,769)</u>	<u>(360,574)</u>
<i>Income (Loss) Before Capital Contributions</i>	6,657,874	3,785,573	4,829,438
Capital Contributions	67,954	129,530	402,101
<b>Change in Net Position</b>	<u><u>\$6,725,828</u></u>	<u><u>\$3,915,103</u></u>	<u><u>\$5,231,539</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. 2019-2021 are reported on a Calendar Year Basis, 2017-2018 are reported on a Fiscal Year Basis.

2018 Interim (2)	2018 Fiscal
\$9,175,830	\$18,024,450
70,248	589,075
<u>9,246,078</u>	<u>18,613,525</u>
1,712,291	3,902,045
1,309,919	4,186,781
1,601,180	2,573,366
306,177	563,761
6,868	623,675
<u>4,936,435</u>	<u>11,849,628</u>
<u>4,309,643</u>	<u>6,763,897</u>
71,000	100,000
16,736	34,217
2,688	0
(2,116)	0
0	0
(31,775)	0
230,084	136,943
<u>(576,444)</u>	<u>(1,198,570)</u>
<u>(289,827)</u>	<u>(927,410)</u>
4,019,816	5,836,487
<u>289,449</u>	<u>0</u>
<u>\$4,309,265</u>	<u>\$5,836,487</u>

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

Year	Amount Billed						Total Billed
	City of Youngstown		City of Niles		Village of McDonald		
	Revenue	Percentage	Revenue	Percentage	Revenue	Percentage	
2021 Calendar	\$13,354,229	72.20 %	\$4,836,534	26.15 %	\$306,349	1.66 %	\$18,497,112
2020 Calendar	13,224,942	71.92	4,873,655	26.50	290,929	1.58	18,389,526
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. 2019-2021 are reported on a Calendar Year Basis, 2017-2018 are reported on a Fiscal Year Basis.

**Mahoning Valley Sanitary District**

*Water Billing Rate*

*Last Six Years (1)*

---

---

<u>Year</u>	<u>Rate per Million Gallons</u>
2021 Calendar	\$2,164.80
2020 Calendar	2,143.81
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. 2019-2021 are reported on a Calendar Year Basis, 2017-2018 are reported on a Fiscal Year Basis.

*(This page intentionally left blank)*



**Mahoning Valley Sanitary District**

*Pledged Revenue Coverage*

*Last Five Years (1)*

Year	Water Service Charges and Interest	Direct Operating Expenses (3)	Net Available Revenue	Debt Service (2)		Coverage
				Principal	Interest	
2021 Calendar	\$18,546,796	\$8,356,556	\$10,190,240	\$2,607,227	\$878,425	2.92
2020 Calendar	18,679,790	11,064,556	7,615,234	2,539,441	943,910	2.19
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. 2019-2021 are 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 Six Years (1)*

---

---

<u>Fiscal Year</u>	<u>Personal Income (2)</u>	<u>Population (2)</u>	<u>General Bonded Debt Outstanding</u>
2021 Calendar	\$1,571,624,992	89,511	\$0
2020 Calendar	1,571,624,992	89,511	0
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. 2019-2021 are 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>
\$33,087,215	\$33,087,215	2.11%	\$369.64
35,694,442	35,694,442	2.27	398.77
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
2021 Calendar	66,982	\$1,052,488,166	15,713	19,266	\$444,081,300	\$23,050
2020 Calendar	66,982	1,052,488,166	15,713	19,266	444,081,300	23,050
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

**Source:** 2010 U.S. Census Bureau  
American Fact Finder, U.S. Census Bureau  
Ohio Labor Market Information  
[LAUS Results \(ohiolmi.com\)](http://ohiolmi.com)

- (1) 2018 Interim and 2019-2021 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. 2019-2021 are reported on a Calendar Year Basis, 2011-2018 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	5.2%
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	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

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

<b>2021</b>			
Name of Employer	Nature of Business	Employees	Percentage of Total District Employment
Mercy Health (Multi County)	Hospital Services	4,400	5.06%
Youngstown Air Reserve Base	Military	1,792	2.06
Windsor House (Multi County)	Nursing/Assisted Living	1,500	1.73
Steward Valley Systems (Multi County)	Hospital Services	1,400	1.61
Trumbull County	Government	1,280	1.47
Warren City School District	Education	1,211	1.39
Alorica	Call Center	700	0.81
AIM National Lease	Trucking	600	0.69
Aptiv (formerly Delphi Packard)	Auto Parts	600	0.69
Ohio Security Systems	Security/Janitorial	600	0.69
Total		<u>14,083</u>	<u>16.20%</u>
Total Employment within the District		<u>86,952</u>	

<b>2012</b>			
Employer	Nature of Business	Employees	Percentage of Total District Employment
General Motors Corporation	Car Manufacturing	4,500	4.87%
Youngstown Air Reserve Base	Government	2,125	2.30
West Corporation	Call Center	1,300	1.41
Trumbull County	Government	1,280	1.38
RG Steel	Steel Products	1,050	1.14
Warren City School District	Education Service	810	0.88
Ohio Security Systems	Security/Janitorial	600	0.65
Delphi Packard	Vehicle Wiring Systems	590	0.64
RTI Niles	RTI Niles	575	0.62
Covelli Enerprise (Panera)	Food Service	500	0.54
Total		<u>13,330</u>	<u>14.43%</u>
Total Employment within the District		<u>92,400</u>	

Source: Trumbull County 2020 Annual Comprehensive Financial Report

## Mahoning Valley Sanitary District

### Operating Indicators

Last Six Years (1)

Description	2021 Calendar	2020 Calendar	2019 Calendar
Annual Volume of Water Produced (Billions of gallons)	9.0	8.5	8.9
Water Treatment Plant Capacity (Millions of gallons per day)	60	60	60
Water Storage Capacity (Millions of gallons)	35.9	35.9	35.9
Average Daily Usage (Millions of gallons per day)	24.79	23.19	23.76
Population Served	220,000	220,000	220,000
Daily Average Gallons Pumped (Millions of gallons)			
City of Youngstown	17.40	16.75	16.85
City of Niles	6.25	6.16	6.55
Village of McDonald	0.40	0.34	0.36
Total Gallons Pumped (Millions of gallons)			
City of Youngstown	6,351.85	6,114.12	6,148.85
City of Niles	2,279.80	2,247.40	2,392.48
Village of McDonald	144.82	123.70	130.57

**Source:** District records

(1) Information prior to 2017 is not available.

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

2019-2021 are reported on a Calendar Year Basis, 2017-2018 are reported on a Fiscal Year Basis.

2018 Interim (2)	2018 Fiscal	2017 Fiscal
4.4	7.5	7.9
60	60	60
35.9	35.9	35.9
23.09	20.46	21.56
220,000	220,000	220,000
16.08	15.10	15.86
6.61	4.97	5.26
0.40	0.39	0.43
2,958.20	5,511.39	5,789.91
1,216.07	1,813.36	1,921.99
73.73	143.93	156.34



**Mahoning Valley Sanitary District**

*Capital Asset Statistics*

*Last Six Years (1)*

---

---

	2021 Calendar	2020 Calendar	2019 Calendar	2018 Interim (2)
<b>Land</b>				
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
<b>Buildings</b>	20	20	20	20
<b>Vehicles</b>	27	35	35	34
<b>Pipelines (in miles)</b>	27.4	27.4	27.4	27.4

**Source:** District 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.

2019-2021 are reported on a Calendar Year Basis, 2017-2018 are reported on a Fiscal Year Basis.

---

---

<u>2018</u> <u>Fiscal</u>	<u>2017</u> <u>Fiscal</u>
5,570	5,570
2,167	2,167
11	11
20	20
30	30
27.4	27.4

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

<b>Department</b>	2021 Calendar	2020 Calendar	2019 Calendar	2018 Interim (2)
<b>Police</b>	4.5	4.5	4.5	3.5
<b>Field Maintenance</b>	14.0	14.0	14.0	12.0
<b>Pump Station</b>	6.0	6.0	6.0	8.0
<b>Purification</b>	18.0	18.0	18.0	16.0
<b>Administration</b>	11.0	11.0	11.0	10.0
Total Employees	53.5	53.5	53.5	49.5

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

**Source:** District 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.  
 2019-2021 are reported on a Calendar Year Basis, 2017-2018 are reported on a Fiscal Year Basis.

---

---

<u>2018</u> <u>Fiscal</u>	<u>2017</u> <u>Fiscal</u>
3.5	3.5
12.0	12.0
8.0	9.0
16.0	13.0
<u>10.0</u>	<u>9.0</u>
<u>49.5</u>	<u>46.5</u>

# OHIO AUDITOR OF STATE KEITH FABER



**MAHONING VALLEY SANITARY DISTRICT**

**TRUMBULL COUNTY**

**AUDITOR OF STATE OF OHIO CERTIFICATION**

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



**Certified for Release 7/12/2022**

88 East Broad Street, Columbus, Ohio 43215  
Phone: 614-466-4514 or 800-282-0370

This report is a matter of public record and is available online at  
[www.ohioauditor.gov](http://www.ohioauditor.gov)