

Board of County Commissioners
Clermont County, Ohio

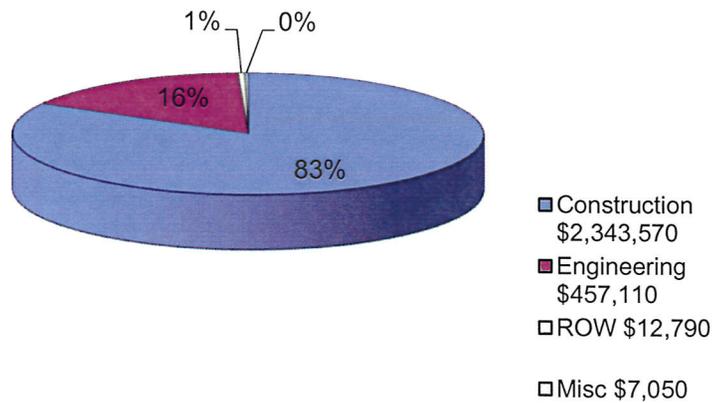


Water Resources Department
5-Year Waterworks & Wastewater
Capital Improvement Plans
2019 - 2023

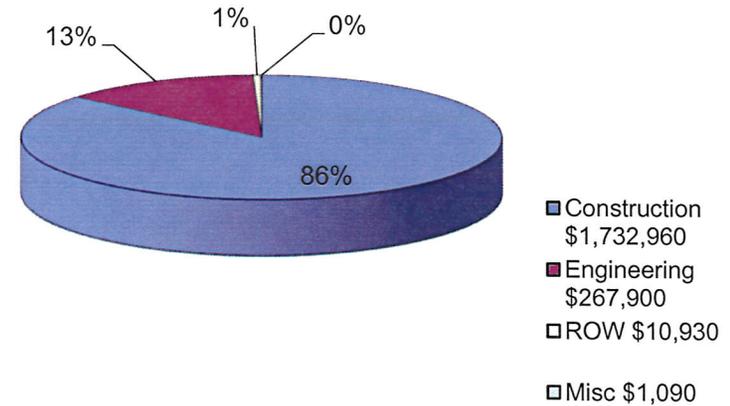
June 24, 2019

2018 CIP Recap

2018 Wastewater CIP Expenditures



2018 Waterworks CIP Expenditures



Construction Activities Completed in 2018

- Bethel Area Sewer Replacement – Phase I
- Nine Mile WWTP Blower Upgrade
- O'Bannon Creek Tributary Restoration and Bank Stabilization

Construction Activities Completed in 2018

- Rancho Lane Water Petition
- Branch Hill Guinea Water Main Replacement – Bridlepath to Jer-Les
- Old SR 74 WM Replacement – SR 32 to Schoolhouse
- Utility Relocations as part of the Village of Owensville Street Improvements
- Surface Water Treatment Master Plan

Water Main Replacement

County Wide

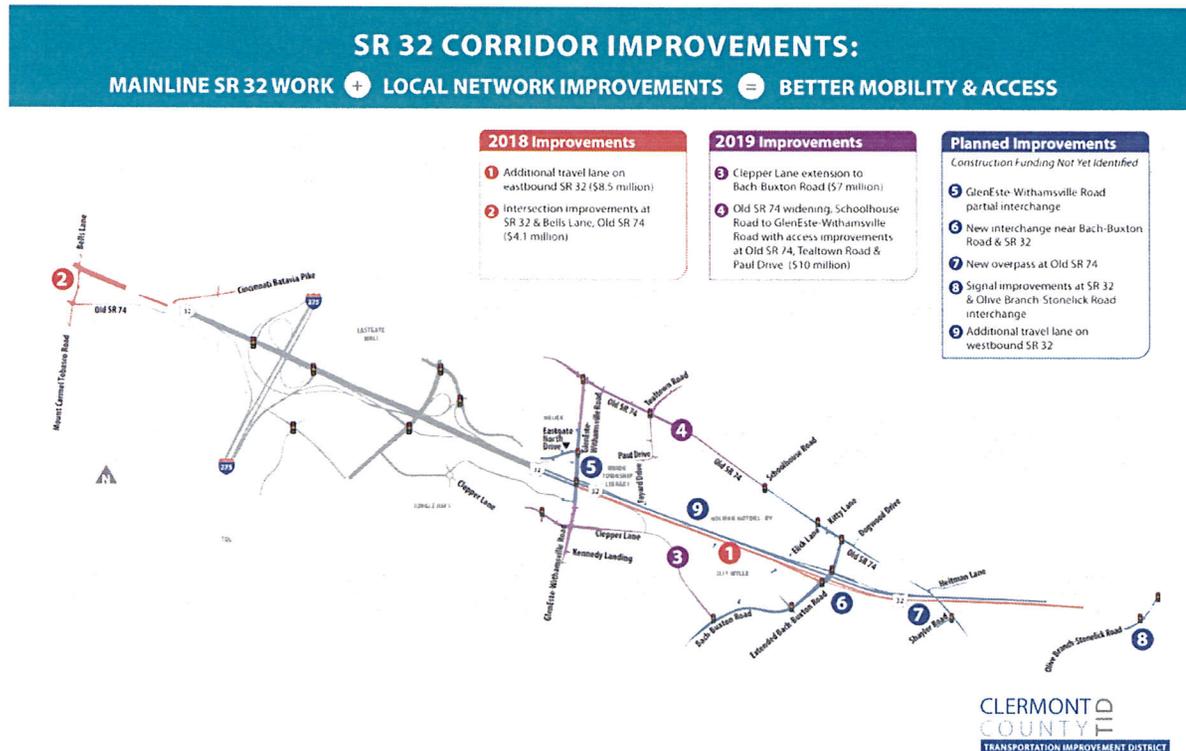
- The existing WRD distribution system consists of approximately 808 miles of water main installed from 1954 to present. Approximately 127 miles was installed in the 1950's and is 60 to 65 years old, with another 73 miles installed in the 1960's and is 50-59 years old.
- According to the American Water Works Association, the average life expectancy for water pipes installed post World War II is 75 years. This can vary depending on the location, soil conditions and installation methods.
- The Water Resources Department's 2015-2020 Strategic Plan includes replacement of 20,000 feet/year as part of the Water Main Replacement Program. To address aging infrastructure, annual replacement goals are anticipated to increase.
- The 2019-2023 Water Works 5 Year CIP calls for approximately 98,700 feet water main to be replaced at an estimated cost of \$19,500,000. This total includes water main replacements required for roadway improvements.

Water Main Replacement

Eastern Corridor Segment IVa Roadway Improvements

Currently there are six (6) water main replacement projects in the Water Works 5 Year CIP that are required as part of the Eastern Corridor Segment IV Roadway Improvement Project.

- Construction scheduled for 2019 – 2023
- Design and construction included in scope of TID projects
- Approximately 15,514 feet to be replaced
- Estimated Cost \$2,899,0000



2019 Construction - Water



Miami Township

Miamiville Area Water Main Replacement

- Replacement of approximately 3,190 feet of 6" & 12" water main along SR 126, Front Street and Second Street, originally installed in 1959, with new 8" & 12" ductile iron.
- The total project cost is estimated at \$1,023,300.
- Construction to start late 2019.

Goshen Township

SR 48 & SR 28 Water Main Replacement

- The project calls for the replacement of approximately 9,300 feet of existing 6" & 8" water main, installed in 1959, with new 12" & 16" water main along SR 28 and SR 48.
- The total project cost is \$1,791,400.
- This project was approved for \$800,000 of OPWC funding.
- Construction to start late 2019.

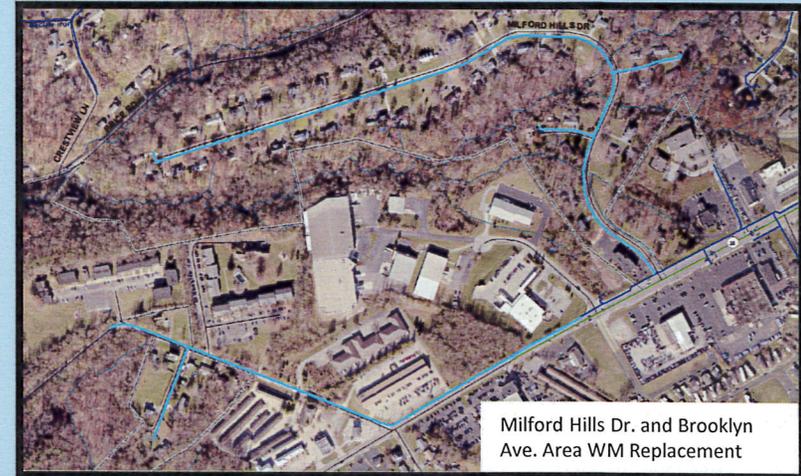


2019 Construction - Water

Miami Township

Milford Hills Dr. and Brooklyn Ave. Area Water Main Replacement

- Replacement of approximately 7,000' of existing 6" WM with new 8" & 6" WM. Originally installed in 1959.
- The total project cost is \$1,052,750.
- The Bid opening was June 6, 2019. Construction to start August, 2019.



Miami Township

SR 28 Water Main Replacement (Buckwheat to Branch Hill Guinea)

- Replacement of approximately 3,800' of 10" & 12" water mains installed in 1959 & 1972, with a single new 16" water main. The new water main shall be approximately 2,513 feet in length.
- The total project cost is \$903,820.
- The Bid opening is tentatively scheduled for August 8, 2019. Construction to start in by October, 2019.

Water Design 2018 - 2019

Union Township

Glendale & Glen Willow Water Main Replacement

- The project calls for the replacement of approximately 4,360' of existing 6" water main, installed in 1958-1968, with new 8" ductile iron water main.
- The total estimated project cost is \$723,325.
- Construction scheduled for 2020.



Glendale & Glen Willow Water Main Replacement



Elwynn, Deblin & Berdova WM Replacement

Miami Township

Elwynn, Deblin, Teakwood & Berdova Water Main Replacement

- Replacement of approximately 5,950 feet of 6" water main with 8" water main, originally installed in 1959.
- The total project cost is estimated at \$1,300,285.
- Construction scheduled to start late 2020.

Water Design – Transmission Mains

James E. Sauls Drive Transmission Main – Design 2019

- Installation of approximately 8,550 feet of 16" water transmission main along James E Sauls Drive from Batavia Road to Half Acre Road. Estimated Total Project Budget \$1,682,000. **Batavia Township.**

Buckwheat Transmission Main – Design 2024 (or Beyond)

- Construction of approximately 46,000 feet of 30" transmission main from the BMW WTP to the proposed 24" main on Stonelick Williams Corner Road at Mt. Zion Road; and approximately 18,000 feet of 16" main along Mt. Zion Road to the Buckwheat Elevated Water Storage Tank. Estimated Total Project Budget \$16,500,000. **Batavia, Stonelick & Miami Townships.**
- The current configuration of the distribution system does not allow use of the full capacity of the BMW Treatment Plant. The rated capacity of the plant is 19 MGD. Installation of this transmission main will allow for the full use of that capacity, improve water delivery to the northern areas of the distribution system and provide water service to additional areas of the county.

Water Design

Continuing Water Design started in 2018

- Menno Drive WM Replacement; Total Project Budget \$107,400. Miami Township.
- McPicken Road WM Replacement; Estimated Total Project Budget \$335,000. Miami Township.
- PUB Well Field Control Tower for Wells 17-20; Estimated Total Project Budget \$215,000. Pierce Township.

Water Design to start in 2019

- Arch Flash Analysis & Labeling; Total Project Budget \$125,000. County Wide.
- SR 125 Water Main Replacement; Total Project Budget \$475,000. Village of Amelia - Pierce & Batavia Township.

Sanitary Sewer Rehabilitation Program

County Wide

- The existing WRD wastewater collection system contains approximately 710 miles of sanitary sewers installed from 1941 to present. Approximately 8.8 miles was installed in 1941, 5.0 miles was installed in the 1950's, and another 194.2 miles installed in the 1960's. Pipe Materials include concrete, asbestos cement and vitrified clay.
- As sanitary sewers near the end of their useful life and when the need for additional capacity or sewer upsizing is not required, sanitary sewer rehabilitation is a viable option. The benefits of rehabilitation include lower overall project costs, little to no excavations, shorten time to install, limited impact on the customers and the public.
- The Water Resources Department's 2015-2020 Strategic Plan calls for an average of 15,000 feet (2.84 miles) of sanitary sewer rehabilitation per year.

Collection System Rehabilitation - Previous Projects

- Collection System Rehabilitation – 2015; 3 miles of sanitary sewers lined. Total construction cost was \$1,997,000.
- Collection System Rehabilitation – 2016; 4 miles of sanitary sewers lined. Total construction cost was \$2,666,000.
- Collection System Rehabilitation – 2018; approximately 4.4 miles of sanitary sewers to be lined. Total project cost is \$3,135,000.

Rehabilitation Budget 2019 - 2023

	2019	2020	2021	2022	2023
Collection System Rehabilitation - 2019	\$20,000	\$502,000	\$0	\$0	\$0
Collection System Rehabilitation	\$0	\$1,500,000	\$1,500,000	\$2,000,000	\$2,000,000

2018 & 2019 Construction Activity - Wastewater

Collection System Rehabilitation - 2018

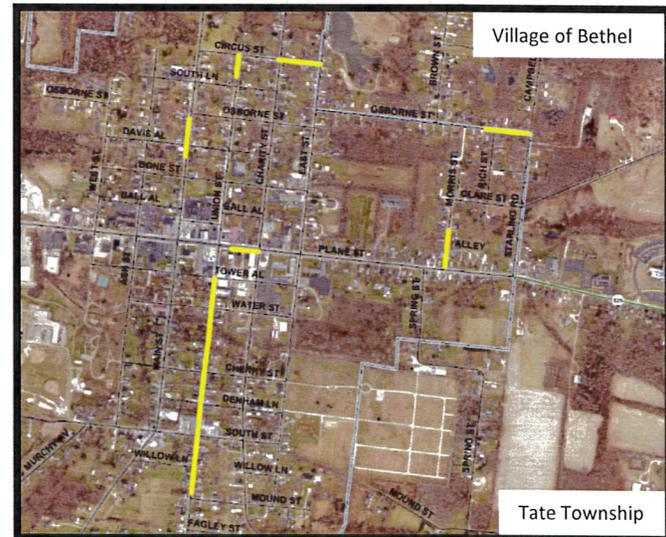
Union, Pierce, Batavia & Tate Townships

Collection System Rehabilitation - 2018

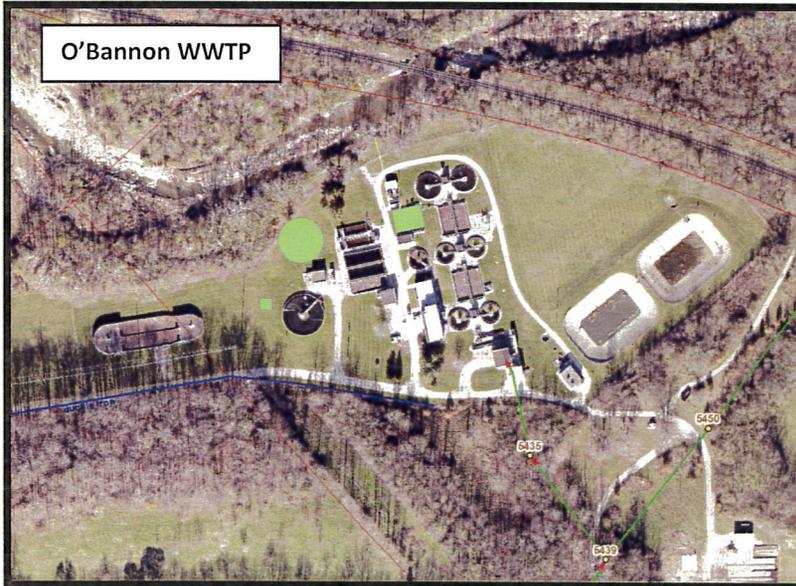
- Rehabilitation of existing sanitary sewers, manholes, and laterals.
- Reduces I/I and rehabilitates deteriorated pipe and manholes.
- The total estimated project cost is \$3,135,000.
- Additional 4,671 feet of sanitary sewer main lining added to the project in the Village of Bethel.

The project includes:

Approximately 23,360 feet of sanitary sewer main lining, 263 laterals, installation of 263 cleanouts & lining of 64 manholes.



2019 Construction Activity – Wastewater



Goshen Township

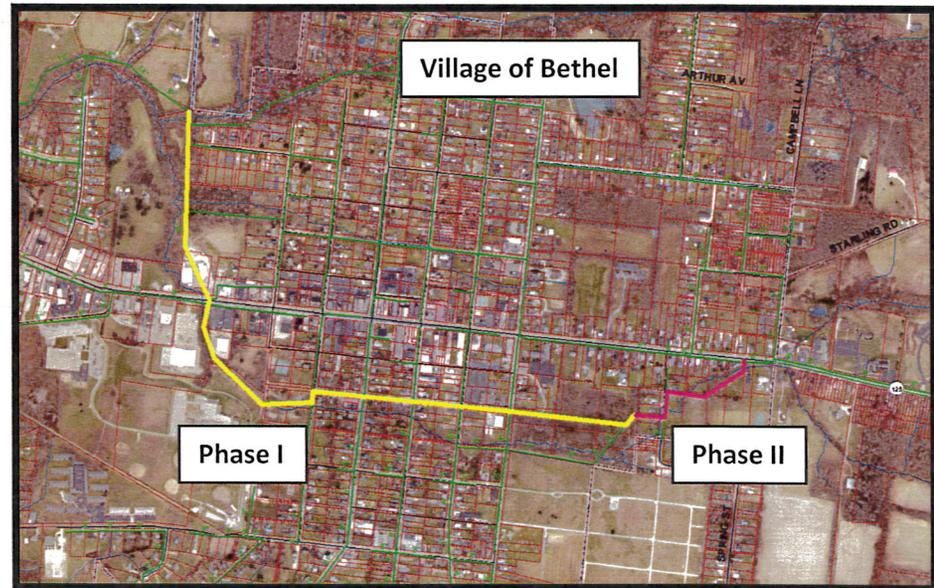
O'Bannon WWTP Filter & Clarifier Improvements

- Project calls for the replacement of two existing tertiary sand filters with a single centralized cloth disk filter system, addition of a second clarifier on the oxidation ditch side of the plant, modifications at the parshall flume and various yard piping modifications.
- The bid opening was December 6, 2018.
- Notice to Proceed is March 11, 2019 with 365 contract duration.
- The total estimated project cost is \$5,229,600.

Tate Township

Bethel Area Sewer Replacement (Phase II)

- Project calls for the replacement of approximately 1,151' of existing 8" sanitary sewers, originally installed in 1941. New sewers will be upsized to provide improved sewer capacity.
- The total estimated project cost is \$345,000.
- Phase I was completed in 2018. Phase II to start construction late 2019.



2018 & 2019 Re-Design - Wastewater

Wayne Township

Newtonsville WWTP & Newtonsville Collections System Assessment

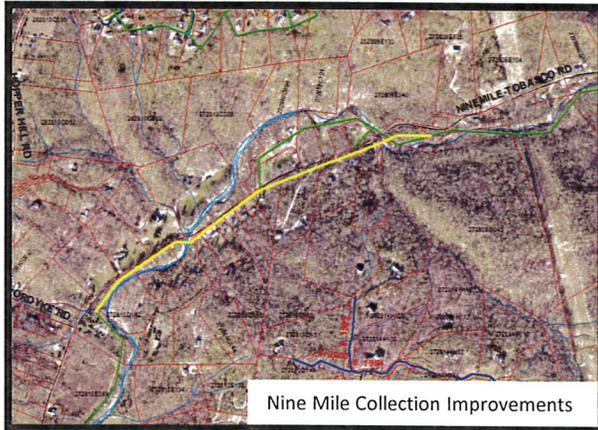
- Design and construction of a wastewater treatment plant and collection system to provide sanitary sewer service to the residents of the Village of Newtonsville and surrounding adjacent area.
- Design to a full gravity collection system. This work will include modifications to the proposed wastewater treatment plant due to changes in plant loading.
- The project has received a USDA/RD grant of \$2M & a loan of \$4.218M. It has also received a \$1M grant from Ohio Public Work Commission. The current total project cost is estimated at \$10,887,870. A revised engineer's cost estimate will be included in the redesign services.



Revised Tentative Schedule

- Public Informational Meeting July, 2019.
- 2nd Public Hearing October, 2019.
- Easement and Permit acquisition November, 2019 to April, 2020.
- Bid Project June – August, 2020.
- Start construction October, 2020.
- Sewers available February, 2022.

2019 Detailed Design - Wastewater



Nine Mile Collection Improvements



Nine Mile WWTP Improvements

Pierce Township

Nine Mile Collection Improvements

- Following flow monitoring and model calibration several storm simulations were run to develop the recommendations for the Nine-Mile Collection Improvements Project.
- The project includes the replacement of approximately 3600 feet of 18" sanitary sewer with 21" sanitary sewer. Approximately 1300 feet will be relocated away from the Nine-Mile Creek.
- The recommendations also include inflow and infiltration removal in the upper area of the Nine-Mile Collection System.
- The total estimated replacement cost is \$3M – 5.3M.
- Construction to start in 2021.

Nine Mile WWTP Improvements

- The project calls for the replacement of the existing fine screens to improve the WWTP's wet weather treatment capacity. The project includes improvements to the grit removal system and arc flash analysis and labeling
- The total estimated project cost is \$1,370,000.
- Construction to start in 2020.

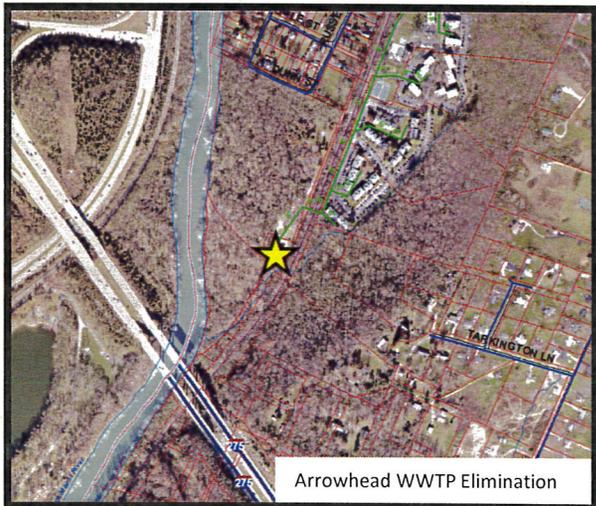
2019 Design Continuing - Wastewater



Miami Township

Lewis Road Trunk Sewer

- The project calls for the installation of approximately 5,500' of 12" sanitary sewer from the Lewis Road Lift Station to the Belle Meade Lift Station. Includes 500' bore under I-275.
- Will eliminate the Belle Meade Lift Station and allow future elimination of the Miami Trails WWTP.
- The total estimated project cost is \$1,062,000.
- Construction to start in 2020.



Arrowhead Wastewater Treatment Plant Elimination

- The project calls for the installation of gravity sewer and/or a lift station and force main to eliminate the existing Arrowhead WWTP. Flows will be directed to the Wards Corner WWTP.
- The WWTP was installed in 1972.
- The total estimated project cost is \$2,260,000.
- Construction to start in 2021.
- Madingley Falls Sewer Oversizing – 3,390' of 12" sanitary sewer; oversizing contribution \$63,882

Sewer Design

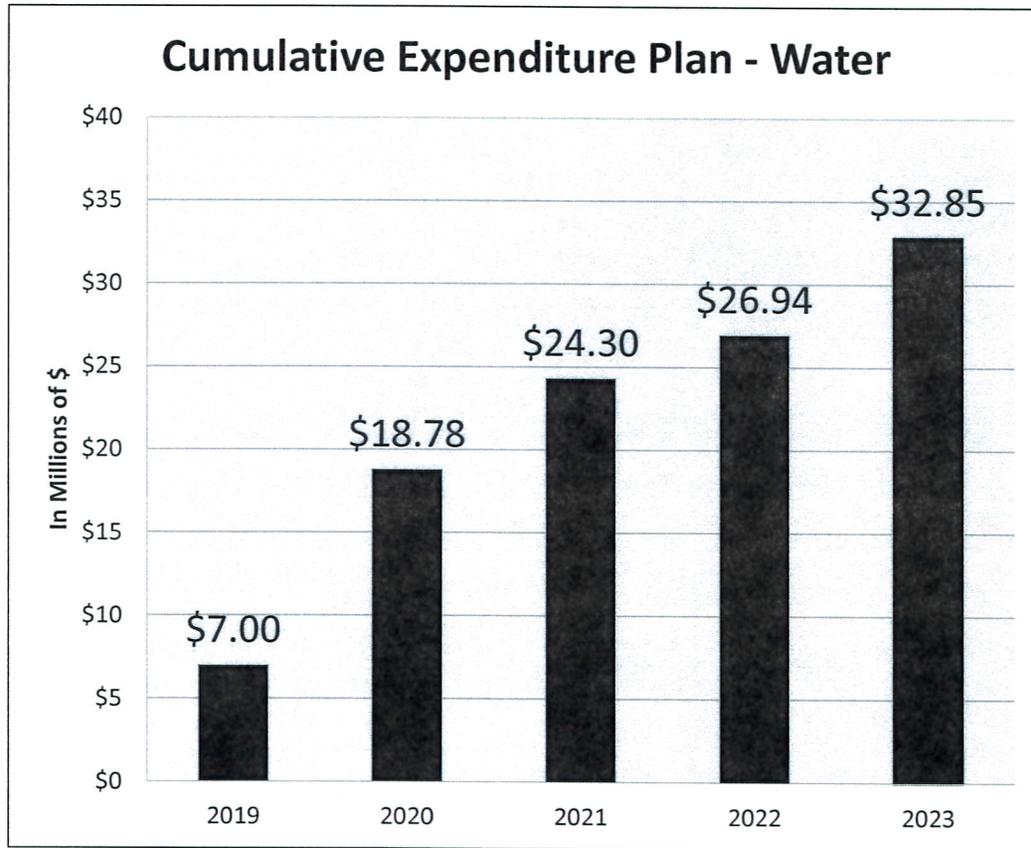
Continuing Wastewater Design Started in 2018

- Deerfield Road Sewer Petition (In house); Total Project Budget \$211,100. Miami & Goshen Townships.
- Branch Hill Guinea Road Sewer Petition (In house); Total Project Budget \$108,500. Miami Township.
- Deblin Drive Sewer Replacement (In house); Total Project Budget \$100,000. Miami Township.
- Greenbriar Road Lift Station Improvements; Total Project Budget \$1,439,000. Batavia Township.

Wastewater Design to start in 2019

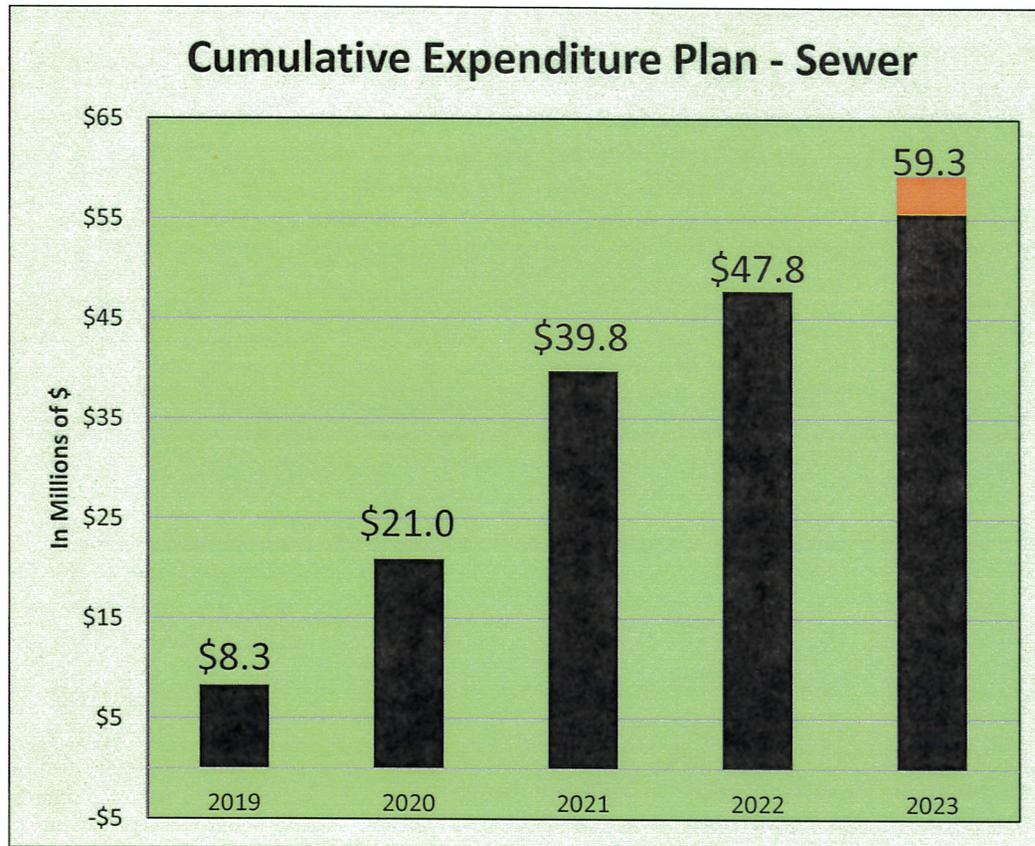
- Arch Flash Analysis & Labeling; Total Project Budget \$250,000. County Wide.
- Back Bone Creek Sewer Replacement Total Project Budget \$165,000. Batavia Township.
- Bio-Solids Management Evaluation Total Project Budget \$25,000. County Wide.
- SR 132 Lift Station Improvements Total Project Budget \$180,000. Stonelick Township.

5 Year - Waterworks Funding



- Available Funding (2019-2023) \$40,187,557
- Includes \$1.6 million in Grants
- Includes \$331,600 contribution from the Wastewater Funds
- 5-Year Plan 100% Funded

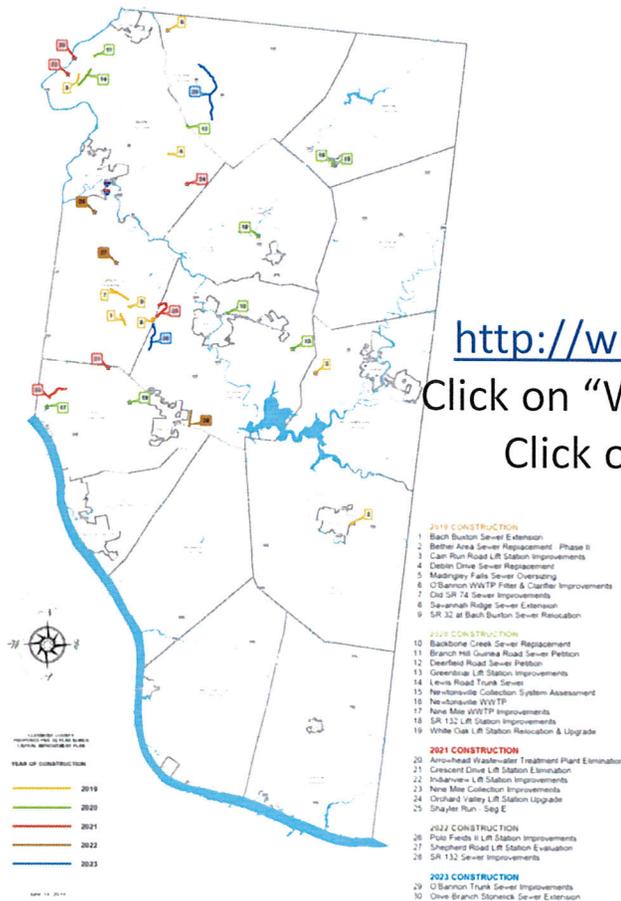
5 Year - Wastewater Funding



- Available Funding (2019-2023) \$55,608,624
- Includes \$4.1 million in Grants
- Includes \$4.2 million in Loans
- Includes a \$331,600 contribution to the Water Meter Replacement Project
- 5-Year Plan is 94% Funded; Shortage of \$3.7M.

Questions/Comments

CLERMONT COUNTY PROPOSED FIVE (5) YEAR WASTEWATER CAPITAL IMPROVEMENT PLAN



CLERMONT COUNTY PROPOSED FIVE (5) YEAR WATERWORKS CAPITAL IMPROVEMENT PLAN



<http://wr.d.clermontcountyohio.gov/>

Click on "Water Resources Department"

Click on "Capital Improvement"

LAMORNA COVE STORMWATER DISTRICT

MIAMI TOWNSHIP
CLERMONT COUNTY, OHIO

JUNE 24, 2019

Clermont County Engineer's Office
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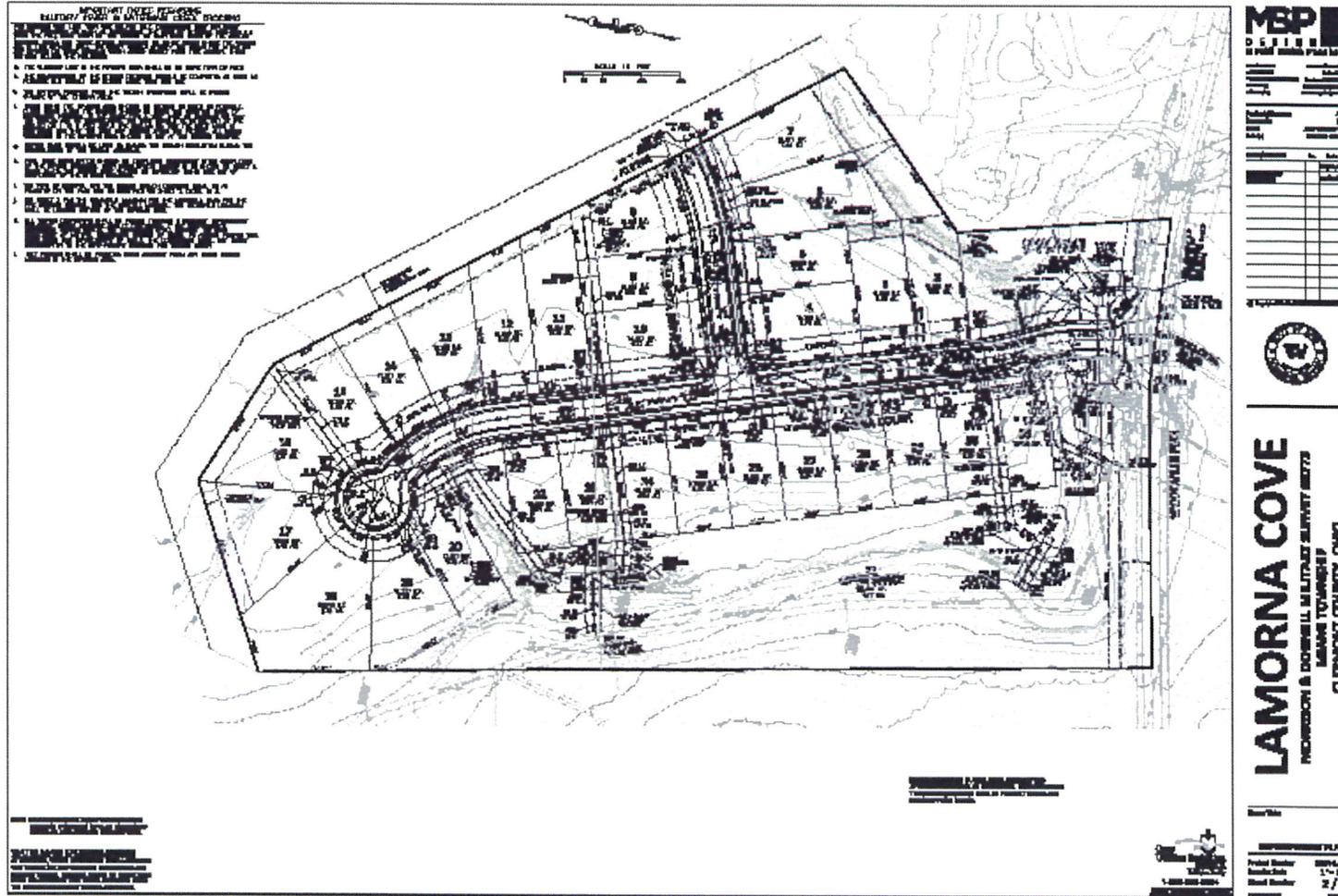
INTRODUCTION/BACKGROUND

- In the Fall of 2017, M/I Homes of Cincinnati, LLC initiated the design submittal process through the various Clermont County reviewing authorities relative to the Lamorna Cove Subdivision located in Miami Township.
- In June of 2018, after construction of the subdivision was completed, M/I Homes presented to the Engineer's Office a request to initiate, through the Board of County Commissioners, the creation of a stormwater utility district encompassing all the lots in the proposed Lamorna Cove Subdivision.
- In August of 2018, the Engineer's Office provided all pertinent information to M/I Homes relative to the proposed Lamorna Cove Stormwater Utility District. On April 15, 2019, they provided the Engineer's Office an approval letter relative to the creation of the Lamorna Cove Stormwater Utility District.
- In June of 2019, the BCC set a public meeting to discuss establishing the Lamorna Cove Stormwater District under R.C. Sec. 6117. Also in June, M/I Homes and the eight (8) individual property owners were advised that the Lamorna Cove Stormwater Utility District was being considered and if approved, they would be assessed for improvements, repairs as well as, on-going maintenance.

LAMORNA COVE STORMWATER UTILITY DISTRICT

- **SERVICE AREA** of the district (where)
- **EXTENT OF SERVICE** of the district (what)
- **LEVEL OF SERVICE** of the district (how often)
- **COST OF SERVICE** of the district (how much)

LAMORNA COVE STORMWATER UTILITY DISTRICT



LAMORNA COVE

STORMWATER UTILITY DISTRICT

(Extent of Service)

- **Lamorna Cove Subdivision**

- Total number of buildable lots 29
- Total Number of structures 15
- Total Number of detention basins 2
- Total length of pipe runs 1,022 feet (outside of Dedicated R/W)

- **Material Breakdown in Length**

- 100 % HDPE (plastic pipe)

- **Condition Rating**

- 0 % Rated 1 - Immediate action recommended
- 0 % Rated 2 – OK for now, continue to monitor
- 100 % (1,022') Rated 3 - No maintenance/replacement required at this time

LAMORNA COVE

STORMWATER UTILITY DISTRICT

(Level of Service)

- **Operating/Maintenance Items**

- structure cleaning & Inspection
- structure repair
- TV inspection
- pipe cleaning

- **Capital/Replacement Items**

- headwalls
- manholes
- inlets
- outlets
- stormwater pipes

LAMORNA COVE STORMWATER UTILITY DISTRICT (Cost of Service)

