

# MSD Legislative Fact Sheet

Gérald R. Checco  
Director

METROPOLITAN  
SEWER DISTRICT  
of greater  
CINCINNATI



11/28/2016

**PROJECT**

2017-2021 CAPITAL IMPROVEMENT PROGRAM

**IDENTIFIERS:**

METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI

**LEGISLATIVE ACTION REQUESTED:**

<input checked="" type="checkbox"/> DESIGN <sup>1</sup>	<input checked="" type="checkbox"/> ADD'L DESIGN <sup>2</sup>	<input checked="" type="checkbox"/> EASEMENT OR REAL PROPERTY APPROPRIATION <sup>3</sup>	<input checked="" type="checkbox"/> CONSTRUCTION <sup>4</sup>
<input checked="" type="checkbox"/> ADD'L CONST <sup>5</sup>	<input type="checkbox"/> AMEND CIP <sup>6</sup>	<input checked="" type="checkbox"/> OTHER <sup>7</sup> : Resolutions 1) approving the 2017-2021 MSD CIP and authorizing the preparation of detailed plans, specifications, and estimates of costs, and appropriating funds for the 2017 MSD CIP's Exhibits A projects and Exhibit C programmatic contingency; and 2) enabling the construction of the 2017 MSD CIP's Exhibit B projects by approving detailed plans, specifications, estimates of costs, and/or other relevant documents, declaring project necessity and determining to proceed, appropriating funds, and authorizing advertisement and bidding.	

**PROJECT TYPE:**

<input checked="" type="checkbox"/> PROJECT GROUNDWORK / WWIP	PG / WWIP Activity ID: <u>various</u>	PG / WWIP Milestone Dates: <u>various</u>
<input checked="" type="checkbox"/> PROJECT GROUNDWORK / ASSET MANAGEMENT	<input type="checkbox"/> SUSTAINABLE INFRASTRUCTURE	
<input checked="" type="checkbox"/> OTHER: Assessment sewers		

**PROJECT PURPOSE:**

MSD has structured its capital improvement program (CIP) to reflect Project Groundwork initiatives, which, since the U.S. District Court's 2010 approval of the Wet Weather Improvement Plan (WWIP), encompasses both the WWIP, including sustainable infrastructure projects, as well as a comprehensive district-wide Asset Management (AM) program. For 2017, there are a total of **103** projects on the capital plan (**49** WWIP, **53** AM and **1** Programmatic Contingency) estimated at **\$341,715,398**. MSD further details this cost in the draft document titled "UPDATED 2017 CAPITAL IMPROVEMENT PROGRAM BUDGET REPORT," and available on MSD website, [www.msdbg.org](http://www.msdbg.org). Also, the draft 2017 MSD CIP, dated August 15, 2016, has been available on the MSD website since October 25, 2016. The updated proposed CIP, dated November 23, 2016, also available on

1. **Design** = 1 resolution - authorizing preparation of detailed plans, specifications, and estimate of cost and appropriating funds for the same.  
 2. **Add'l Design** = 1 resolution - appropriating additional funds for design.  
 3. **Easement /Real Property Appropriation** = 3 resolutions - approving detailed plans, specifications and estimate of cost; declaring project necessity and intent to proceed with construction; appropriating easements or full fee takes.  
 4. **Construction** = 4 resolutions - approving detailed plans, specifications and estimate of cost; declaring project necessity and intent to proceed with construction; appropriating funds for construction; authorizing project advertisement & bid.  
 5. **Add'l Construction** = 3 resolutions - amending approved detailed plans, specifications and estimate of cost; amending project necessity and proceed resolutions; appropriating add'l funds for construction.  
 6. **Amend CIP** = 1 resolution - adding proposed project to program year Capital Improvement Plan.  
 7. **Other** = Resolutions not covered above. Purpose is listed.

**PROJECT PURPOSE (cont):**

[www.msdbg.org](http://www.msdbg.org), reflects the collaborative efforts between Hamilton County’s Monitor for MSD and the City’s Department of Sewers, manager and operator of MSD, although it stands as MSD’s recommendation to the County Commissioners.

Through the attached legislation, the City of Cincinnati requests the County Commissioners to consider, approve, and appropriate a total of **\$72,550,800** for the following actions:

- (1) Approve, in general, the submitted 2017-2021 MSD CIP; and
- (2) Order the commencement of planning, design, and easement acquisition activities (**Exhibit A**) for 50 projects contained in the 2017 MSD CIP and appropriate **\$19,950,800** of the above-referenced \$72,550,800 for the same; and
- (3) Take all actions necessary for seven continuing construction projects (**Exhibit B**) contained in the 2017 MSD CIP and appropriate **\$42,600,000** of the above-referenced \$72,550,800 for the same. These seven projects encompass construction activities that are either essential to the continuous operation of MSD, or address collection system asset emergency stabilizations or asset maintenance.
- (4) Approve, per the requirement of the 2017 CIP, the use of MSD Programmatic Contingency fund (**Exhibit C**) and appropriate **\$10,000,000** of the above-referenced \$72,550,800 for the same.

The seven **Exhibit B** projects that require construction activity approval at this time are:

<b>Project Identifiers</b>	<b>Estimated Cost</b>
10180117 Main Sewer Renewal Program 2017	\$12,000,000
10180217 Manhole Renewal Program 2017	\$1,300,000
10280607 Building Sewer Renewal Program 2017	\$5,000,000
10281317 Prioritized Wastewater Collection System Improvements 2017	\$12,000,000
10280917 Wet Weather Facilities Asset Renewal 2017	\$300,000
10280187 WWT System Asset Renewal 2017	\$2,000,000
10280717 Critical Asset Management Projects 2017	\$10,000,000
<b>TOTALS</b>	<b>\$42,600,000</b>

The legislation enabling the construction of these aforementioned projects is attached hereto. These projects encompass construction activities that are either (1) essential to the continuous operation of MSD, or (2) address collection system asset emergency stabilizations or continuous asset maintenance.

When 2017 MSD CIP projects (not in Exhibit B) are ready to proceed with construction, MSD will submit, for Board consideration and approval, the necessary legislation to authorize that activity. Also, if easements are required to be appropriated to permit construction, MSD will submit legislation to the Board authorizing the County Prosecutor to initiate the necessary legal proceedings.

**PROJECT PURPOSE (cont):**

The projects listed herein for 2019 through 2021 are subject to change; the projects listed are placeholders based on historical information. The schedule for Phase 2 of the Wet Weather Improvement Program has not been finalized. The projects to be advanced for legislation in 2019 through 2021 will be dependent upon the outcome of discussions with the Consent Decree Regulators. These discussions are anticipated to occur after the Phase 2 WWIP schedule is submitted no later than June 30, 2017. As such the cost and specific projects listed herein are subject to change.

The Board will hold public hearings on the 2017-2021 MSD CIP on December 7 and December 14, 2016, thereby affording all interested parties the opportunity to comment. The hearing was advertised in the Cincinnati Enquirer on November 26, 2016 and December 3, 2016. Additionally, MSD sent e-mails to a variety of interested stakeholders and Hamilton County political subdivisions notifying them of the public hearings.

**BACKGROUND DATA, SCHEDULES, AND BUDGET:**

PRIOR LEGISLATION

N/A

FUTURE LEGISLATION

- |   |   |
|---|---|
| <input type="checkbox"/> Approving detailed plans, specifications, and estimate of cost | <input type="checkbox"/> Necessity / Proceed Resolution |
| <input type="checkbox"/> Appropriating funds  | <input type="checkbox"/> Advertise and bid              |
| <input checked="" type="checkbox"/> OTHER: AS NECESSARY AND REQUIRED                    |   |

CONSTRUCTION (EXHIBIT B)

**PROPOSED START:** January 2017

**ANTICIPATED END:** December 2017

FUNDING REQUEST

<b>Total Estimated Cost:</b>	\$341,715,398	(2017-2021 MSD CIP)
	\$72,550,800	(for Exhibits A, B, & C in 2017 MSD CIP)
<b>Current Request:</b>	<b>\$72,550,800</b>	(for Exhibits A, B, & C in 2017 MSD CIP)
<b>Programmatic Contingency</b>	<input type="checkbox"/> YES	<input checked="" type="checkbox"/> NO

November 28, 2016

Honorable Board of County Commissioners  
Hamilton County, Ohio  
% Mr. Jeff Aluotto  
Hamilton County Administrator  
County Administration Building  
138 E. Court Street, Room 603  
Cincinnati, Ohio 45202

Honorable Commissioners:

Attached for your consideration are resolutions to effect the adoption of the Metropolitan Sewer District of Greater Cincinnati's ("MSD") 2017-2021 Capital Improvement Program (CIP). On December 7 and December 14, 2016 the Board of County Commissioners of Hamilton County, Ohio will hold public hearings on the MSD CIP. The currently-proposed legislation is required under the 1968 City - County Management Agreement.

The MSD CIP reflects Project Groundwork initiatives, which, since the U.S. District Court's 2010 approval of the Wet Weather Improvement Plan (WWIP), encompasses both the WWIP, including sustainable infrastructure projects, as well as a comprehensive district-wide Asset Management (AM) program. For 2017, there are a total of **103** projects on the capital plan (**49** WWIP, **53** AM and **1** Programmatic Contingency) estimated at **\$341,715,398**.

MSD further details this cost in the draft document titled "UPDATED 2017 CAPITAL IMPROVEMENT PROGRAM BUDGET REPORT," and available on MSD website, [www.msdbg.org](http://www.msdbg.org). Also, the draft 2017 MSD CIP, dated August 15, 2016, has been available on the MSD website since October 25, 2016. The updated proposed CIP, dated November 23, 2016, also available on [www.msdbg.org](http://www.msdbg.org), reflects the collaborative efforts between Hamilton County's Monitor for MSD and the City's Department of Sewers, manager and operator of MSD, although it stands as MSD's recommendation to the County Commissioners.

The projects listed herein for 2019 through 2021 are subject to change; the projects listed are placeholders based on historical information. The schedule for Phase 2 of the Wet Weather Improvement Program has not been finalized. The projects to be advanced for legislation in 2019 through 2021 will be dependent upon the outcome of discussions with the Consent Decree Regulators. These discussions are anticipated to occur after the Phase 2 WWIP schedule is submitted no later than June 30, 2017. As such the cost and specific projects listed herein are subject to change.

*...continued*

November 28, 2016

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Through the attached legislation, the City of Cincinnati requests the County Commissioners to consider, approve, and appropriate a total of **\$72,550,800** for the following actions:

- (1) Approve, in general, the submitted 2017-2021 MSD CIP; and
- (2) Order the commencement of planning, design, and easement acquisition activities (**Exhibit A**) for 50 projects contained in the 2017 MSD CIP and appropriate **\$19,950,800** of the above-referenced \$72,550,800 for the same; and
- (3) Take all actions necessary for seven continuing construction projects (**Exhibit B**) contained in the 2017 MSD CIP and appropriate **\$42,600,000** of the above-referenced \$72,550,800 for the same. These seven projects encompass construction activities that are either essential to the continuous operation of MSD, or address collection system asset emergency stabilizations or asset maintenance.
- (4) Approve, per the requirement of the 2017 CIP, the use of MSD Programmatic Contingency fund (**Exhibit C**) and appropriate **\$10,000,000** of the above-referenced \$72,550,800 for the same.

**RECOMMENDED:**



Gérald R. Checco  
Director, MSD

Approved:



Harry Black  
City Manager

Provided to the Hamilton County Clerk of the Board on 12.1.16.

Reviewed by \_\_\_\_\_, and recommended by County Administration.

On motion of Mr. \_\_\_\_\_, seconded by Mr. \_\_\_\_\_, the following resolutions were adopted....

MSD RESOLUTION

ADOPTING THE 2017-2021 CAPITAL IMPROVEMENT PROGRAM

THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI  
HAMILTON COUNTY, OHIO

AND CAPITAL IMPROVEMENT PROGRAM  
APPROPRIATION

WHEREAS, the Board of County Commissioners of Hamilton County, Ohio (the "Board") did, on May 1, 1968, enter into a contract with the City of Cincinnati for the management and operation of the Metropolitan Sewer District of Greater Cincinnati ("MSD"), organized in accordance with Chapter 6117 of the Ohio Revised Code; and

WHEREAS, said contract, at Section 5.3, provides that the City of Cincinnati annually will prepare a Capital Improvement Program ("MSD CIP") for the year next ensuing and submit said program to the Board for the Board to hold a public hearing thereon; and

WHEREAS, the Director of the Metropolitan Sewer District of Greater Cincinnati (MSD) and the City of Cincinnati Department of Sewers has submitted to this Board, a Capital Improvement Program for the years 2017-2021; and

WHEREAS, after legal advertisement, this Board did conduct public hearings on December 7, 2016 and December 14, 2016 on the 2017-2021 MSD CIP, at which hearing all persons desiring to ask questions and make statements were afforded such opportunity; and

WHEREAS, this Board did, on \_\_\_\_\_, conclude said public hearings on said 2017-2021 MSD CIP; and

WHEREAS, this Board of County Commissioners has reviewed said 2017-2021 MSD CIP; and

WHEREAS, by approving this 2017-2021 MSD CIP, the Board is **specifically** authorizing the preparation of detailed plans, specifications, estimates of cost, and, where appropriate, preparation of tentative assessments for the 50 projects contained and outlined in **Exhibit A**, attached hereto, and by reference made a part hereof; and

WHEREAS, by approving this 2017-2021 MSD CIP, the Board is **specifically** approving the detailed plans, specifications and/or other relevant documents, and estimates of cost for the seven allowance projects contained and outlined in **Exhibit B**, which are attached hereto, and by reference made a part hereof; and

WHEREAS, by approving this 2017-2021 MSD CIP, the Board is **specifically** approving the use of Programmatic Contingency as contained and outlined in **Exhibit C**, which is attached hereto, and by reference made a part hereof; and

WHEREAS, by approving this 2017-2021 MSD CIP the Board is requiring that any project contained in **Exhibit A**, when ordered constructed, have specific authorization and appropriation of funds through legislation passed by the Board; and

WHEREAS, by approving this 2017-2021 MSD CIP the Board is approving, *in concept only*, the submitted project lists and total project cost estimates **not** contained in **Exhibits A or B or C**, and any such project **not** contained in these Exhibits, when ordered designed or constructed, will require specific authorization and appropriation of funds through legislation passed by the Board; and

WHEREAS, these amounts, for the respective Project[s]' activities as contained in **Exhibit A, Exhibit B, or Exhibit C**, are for the purpose of acquiring, constructing, and improving capital assets to be used in the operation and maintenance of the MSD, as operated under Chapter 6117 Revised Code of Ohio ("R.C."), and in compliance with Section 133.01(Z) R.C., and, all projects in **Exhibit A, Exhibit B, or Exhibit C** are recognized as either "sanitary facilities" or "drainage facilities" under Chapter 6117 R.C.; and

WHEREAS, the projects listed herein for 2020 and 2021 are subject to change; the projects listed are placeholders based on historical information. The schedule for Phase 2 of the Wet Weather Improvement Program has not been finalized. The projects to be advanced for legislation in 2020 and 2021 will be dependent upon the outcome of discussions with the Consent Decree Regulators. These discussions are anticipated to occur after the Phase 2 WWIP schedule is submitted no later than June 30, 2017. As such the cost and specific projects listed herein are subject to change; and

WHEREAS, it has been determined sufficient unappropriated funds are available for use by the Metropolitan Sewer District to temporarily finance construction costs prior to the issuance of long-term revenue and/or special assessment bonds.

NOW, THEREFORE, BE IT RESOLVED, by the Board of County Commissioners of Hamilton County, Ohio, that the 2017-2021 Capital Improvement Program of the Metropolitan Sewer District of Greater Cincinnati for the period of January 1, 2017 – December 31, 2017, which is inclusive of **Exhibits A, and B, and C**, be and hereby is approved and adopted.

BE IT FURTHER RESOLVED that:

SECTION 1. By approving this 2017-2021 MSD CIP, the Board is **specifically** appropriating funds amounting to **\$19,950,800** for either (a) planning activities and studies; (b) the preparation of detailed project plans, specifications, cost estimate; (c) project easement acquisition; or (d) a combination of only these project activities for 50 projects contained in and outlined in **Exhibit A**; and

SECTION 2. By approving this 2017-2021 MSD CIP, the Board is **specifically** appropriating funds amounting to **\$42,600,000** for construction and authorizing the construction of the following projects, as identified in **Exhibit B**:

<b>Project Identifiers</b>	<b>Estimated Cost</b>
10180117 Main Sewer Renewal Program 2017	\$12,000,000
10180217 Manhole Renewal Program 2017	\$1,300,000
10280607 Building Sewer Renewal Program 2017	\$5,000,000
10281317 Prioritized Wastewater Collection System Improvements 2017	\$12,000,000
10280917 Wet Weather Facilities Asset Renewal 2017	\$300,000
10280187 WWT System Asset Renewal 2017	\$2,000,000
10280717 Critical Asset Management Projects 2017	\$10,000,000
<b>TOTALS</b>	<b>\$42,600,000</b>

; and

SECTION 3. By approving this 2017-2021 MSD CIP, the Board is **specifically** appropriating funds amounting to **\$10,000,000** for Programmatic Contingency as contained and outlined in **Exhibit C**; and

BE IT FURTHER RESOLVED that the sum of seventy-two million, five hundred fifty thousand, eight hundred dollars (**\$72,550,800**) currently existing in unappropriated funds available for use by the Metropolitan Sewer District in Capital Improvement Fund 704 maintained by the City of Cincinnati, and the Surplus Account held at US Bank is hereby appropriated to pay costs for planning, design, easement acquisition, and/or other related pre-construction activity costs incurred in connection with the 2017-2021 MSD CIP as outlined in **Exhibit A**; and, the construction costs of projects as identified in **Exhibit B**; and the Programmatic Contingency as contained and outlined in **Exhibit C**.

BE IT FURTHER RESOLVED by the Board of County Commissioners of Hamilton County, Ohio as follows:

SECTION 1. Hamilton County, Ohio (the "County") may be expected to pay and/or incur costs with respect to the Project ("Prior Capital Expenditures") on or after the date of this resolution and prior to the issuance of the obligations (the "Obligations") which will finance the projects defined in **Exhibits A and B**. **Exhibit C** lists the projects eligible for utilization of the Programmatic Contingency.

SECTION 2. The Board of County Commissioners hereby approves the use of the Obligations in the maximum principal amount of seventy-two million, five hundred fifty thousand, eight hundred dollars (**\$72,550,800**) to finance the costs of the Projects contained in **Exhibits A, B, and C** and declares its intent that any Prior Capital Expenditures made by the County will be made in anticipation of the issuance of such Obligations to reimburse said prior Capital Expenditures. This declaration is made pursuant to Treas. Reg. Section 1.150-2 or any successor thereto.

SECTION 3. The County Administrator, the Director of the Metropolitan Sewer District, the Director of Finance of the City of Cincinnati, the County Auditor and/or US Bank, N.A., as Trustee, each as applicable, are hereby authorized and directed to reimburse, not later than 18 months after the later of (i) the date the original expenditure was paid or (ii) the date the item was placed in service, only those Prior Capital Expenditures from Projects contained in **Exhibits A, B, and C** and made with respect to assets having a reasonably expected economic life of at least one year, and, in addition, eligible preliminary expenditures paid and incurred in connection with the Project from the Revenue Fund, Replacement and Improvement Account and/or the Surplus Account.

SECTION 4. The Board of County Commissioners finds and determines that, consistent with the County's budgetary and financial circumstances, it does not have funds currently available and does not expect to have funds available in the future that may be allocated on a long-term basis, other than the proceeds of the Obligations, to finance the Prior Capital Expenditures from Projects contained in Exhibits A, B, and C.

SECTION 5. The Board of County Commissioners hereby directs the County Administrator, the Director of the Metropolitan Sewer District, the Director of Finance of the City of Cincinnati, the County Auditor and/or US Bank, N.A., as Trustee, each as applicable, to take the following action at the time the Prior Capital Expenditures from Projects contained in Exhibits A, B, and C are reimbursed from proceeds of the Obligations only if said reimbursement relieves the proceeds used for reimbursement from any restrictions imposed by both legal documents under which the Obligations were issued and applicable state law: (1) evidence the reimbursement on the books and records maintained with respect to the Obligations, and (2) identify either the actual prior expenditure to be reimbursed or, in the case of reimbursement of a fund or account, the fund or account from which the expenditure was paid.

SECTION 6. The books, records and proceedings of the County with respect to this resolution shall be made reasonably available by the County, for inspection by the general public at the County's administrative office every business day during normal business hours commencing no later than 30 days after the passage of this resolution. Said books, records and proceedings of the County with respect to this resolution will continue to be reasonably available to the general public until the date of issuance of the Obligations.

BE IT FURTHER RESOLVED, that the projects listed herein for 2020 and 2021 are subject to change; the projects listed are placeholders based on historical information. The schedule for Phase 2 of the Wet Weather Improvement Program has not been finalized. The projects to be advanced for legislation in 2020 and 2021 will be dependent upon the outcome of discussions with the Consent Decree Regulators. These discussions are anticipated to occur after the Phase 2 WWIP schedule is submitted no later than June 30, 2017. As such the cost and specific projects listed herein are subject to change.

BE IT FURTHER RESOLVED, that the Clerk of this Board be and hereby is directed to certify copies of this resolution to Jeff Aluotto, Hamilton County Administrator; John Cranley, Mayor, City of Cincinnati; Harry Black, Cincinnati City Manager; the Council of the City of Cincinnati, % the Clerk of Council; and Gérald R. Checco, Director, MSD.

BE IT FURTHER RESOLVED, that this Board of County Commissioners hereby finds and determines that all formal actions relative to the adoption of this Resolution were taken in an open meeting of the Board of County Commissioners, and that all deliberations of this Board of County Commissioners and of its committees, if any, which resulted in formal action were taken in meetings open to the public, in full compliance with applicable legal requirements, including Section 121.22 of the Ohio Revised Code.

ADOPTED at a regularly adjourned meeting of the Board of County Commissioners of Hamilton County, Ohio, this

\_\_\_\_\_ day of \_\_\_\_\_, 2016

Mr. Deters \_\_\_\_\_

Mr. Monzel \_\_\_\_\_

Mr. Portune \_\_\_\_\_

MSD RESOLUTION

AUTHORIZING THE PREPARATION OF DETAILED PLANS, SPECIFICATIONS, AND  
ESTIMATES OF COST  
2017-2021 CAPITAL IMPROVEMENT PROGRAM

THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI

WHEREAS, the Board of County Commissioners of Hamilton County, Ohio (the "Board") did, by resolution adopted on a date even herewith, approve the 2017-2021 Capital Improvement Program ("CIP") for the Metropolitan Sewer District of Greater Cincinnati ("MSD"); and

WHEREAS, the Board wishes to proceed with the completion of detailed plans, specifications, other relevant documents, cost estimates, right-of-way activities, administrative and other miscellaneous activities associated with and necessary to the projects contained in **Exhibit A** located in the MSD, attached hereto and by this reference incorporated herein; and

NOW, THEREFORE, BE IT RESOLVED, by this Board of County Commissioners of Hamilton County, Ohio, that the Director of the Metropolitan Sewer District of Greater Cincinnati be, and he is hereby authorized and directed to complete preparation and submit forthwith, for the consideration and approval of this Board, detail plans, specifications, estimate of cost, and/or other relevant documents for projects contained in **Exhibit A**.

BE IT FURTHER RESOLVED, that this Board of County Commissioners hereby finds and determines that all formal actions relative to the adoption of this Resolution were taken in an open meeting of the Board of County Commissioners and that all deliberations of this Board of County Commissioners and of its committees, if any, which resulted in formal action were taken in meetings open to the public, in full compliance with applicable legal requirements, including Section 121.22 of the Ohio Revised Code.

ADOPTED at a regularly adjourned meeting of the Board of County Commissioners of Hamilton County, Ohio, this

\_\_\_\_\_ day of \_\_\_\_\_, 2016.

Mr. Deters \_\_\_\_\_

Mr. Monzel \_\_\_\_\_

Mr. Portune \_\_\_\_\_

OFFICE OF THE DIRECTOR  
THE METROPOLITAN SEWER DISTRICT  
OF GREATER CINCINNATI

November 28, 2016

2017 – 2021 CAPITAL IMPROVEMENT PROGRAM  
EXHIBIT B

THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI

Honorable Board of County Commissioners  
Hamilton County, Ohio

I herewith certify for your approval the detailed plans, specifications, estimate of cost, and/or other relevant documents for the sanitary sewer projects contained in the 2017 – 2021 Capital Improvement Program's **Exhibit B**, attached hereto and by reference made a part thereof, in the Metropolitan Sewer District of Greater Cincinnati.

Accompanying this certification and contained in **Exhibit B**, attached hereto and by reference made a part thereof, is an itemized listing of the costs of these improvements. I further certify that the detailed plans, specifications, estimates of cost, and/or other relevant documents have remained open to inspection of all persons interested in such improvements.

Respectfully submitted,



Michael Pittinger, P.E.  
Sewers Chief Engineer, MSD  
City of Cincinnati Department of Sewers  
Hamilton County Sanitary Engineer  
(for the purposes of the Metropolitan Sewer District of Greater Cincinnati  
as authorized in the Resolution of February 28, 2007,  
Comm. Minutes, Vol. 305, Images 4190 - 4191)

**FY 2017 MSD CIP Funding Request  
Metropolitan Sewer District of Greater Cincinnati  
Estimate of Construction  
Detailed Project Estimated Cost (Exhibit B)**

ID#	CIP#	Project Name	Planning	Design	Pre-Construction Services	Miscellaneous Expense	Right Of Way	Construction	Contingency	Construction Services	Interest / Financing	Total
10180117	NA	Main Sewer Renewal Program 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000,000.00	\$ -	\$ 2,000,000.00	\$ -	\$ 12,000,000.00
10180217	NA	Manhole Renewal Program 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,200,000.00	\$ -	\$ 100,000.00	\$ -	\$ 1,300,000.00
10280187	NA	WWT System Asset Renewal 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,000,000.00	\$ -	\$ -	\$ -	\$ 2,000,000.00
10280607	NA	Building Sewer Renewal Program 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,750,000.00	\$ -	\$ 250,000.00	\$ -	\$ 5,000,000.00
10280717	NA	Critical Asset Management Projects 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000,000.00	\$ -	\$ -	\$ -	\$ 10,000,000.00
10280917	NA	Wet Weather Facilities Asset Renewal 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 300,000.00	\$ -	\$ -	\$ -	\$ 300,000.00
10281317	NA	Prioritized Wastewater Collection System Improvements 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,500,000.00	\$ -	\$ 500,000.00	\$ -	\$ 12,000,000.00
<b>Total</b>											\$	<b>42,600,000.00</b>

Approved this \_\_\_\_\_ day of \_\_\_\_\_, 2016  
Board of County Commissioners  
Hamilton County, Ohio

  
 Michael Pittinger, P.E.  
 Sewers Chief Engineer, MSD  
 Hamilton County Sanitary Engineer  
 (for the purposes of the Metropolitan Sewer District of Greater Cincinnati  
 as authorized in the Resolution of February 28, 2007, Comm. Minutes, Vol. 305, Images 4190-4191  
 City of Cincinnati Department of sewers

MSD RESOLUTION

APPROVING THE  
DETAILED PLANS, SPECIFICATIONS,  
ESTIMATES OF COST, AND/OR OTHER RELEVANT DOCUMENTS

2017-2020 CAPITAL IMPROVEMENT PROGRAM  
EXHIBIT B

THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI

WHEREAS, the Board of County Commissioners of Hamilton County, Ohio (the "Board") did, by resolution adopted on a date even herewith, approve the 2017-2021 Capital Improvement Program ("CIP") for the Metropolitan Sewer District of Greater Cincinnati ("MSD"); and

WHEREAS, the said detailed plans, specifications, estimate of cost, and/or other relevant documents for the 2017 – 2021 MSD CIP, **Exhibit B** have been presented to this Board by the Hamilton County Sanitary Engineer (for the purposes of the Metropolitan Sewer District of Greater Cincinnati as authorized in the Resolution of February 28, 2007, Comm. Minutes, Vol. 305, Images 4190 - 4191), with his recommendation for approval by this Board.

WHEREAS, said projects as contained in **Exhibit B** are for the purpose of acquiring, constructing, and improving capital assets to be used in the operation and maintenance of the MSD, as operated under Chapter 6117 Revised Code of Ohio ("R.C."), and in compliance with Section 133.01(Z) R.C., and all projects in **Exhibit B** are recognized as either "sanitary facilities" or "drainage facilities" under Chapter 6117 R.C.

NOW, THEREFORE, BE IT RESOLVED, by this Board of County Commissioners of Hamilton County, Ohio, that the aforesaid detailed plans, specifications estimate of cost, and/or other relevant documents for the sanitary sewer projects contained in **Exhibit B** be, and the same are, hereby approved by this Board of County Commissioners.

BE IT FURTHER RESOLVED, that this Board of County Commissioners hereby finds and determines that all formal actions relative to the adoption of this Resolution were taken in an open meeting of the Board of County Commissioners and that all deliberations of this Board of County Commissioners and of its committees, if any, which resulted in formal action were taken in meetings open to the public, in full compliance with applicable legal requirements, including Section 121.22 of the Ohio Revised Code.

ADOPTED at a regularly adjourned meeting of the Board of County Commissioners of Hamilton County, Ohio, this

\_\_\_\_\_ day of \_\_\_\_\_, 2016.

Mr. Deters \_\_\_\_\_

Mr. Monzel \_\_\_\_\_

Mr. Portune \_\_\_\_\_

MSD RESOLUTION

DECLARING THE NECESSITY TO CONSTRUCT  
SEWER PROJECTS IDENTIFIED IN  
EXHIBIT B  
2017-2021 CAPITAL IMPROVEMENT PLAN

THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI  
HAMILTON, COUNTY, OHIO

AND DETERMINING TO PROCEED WITH THE IMPROVEMENTS

WHEREAS, this Board of County Commissioners of Hamilton County, Ohio has heretofore approved a General Plan for the construction, maintenance, and operation of a sanitary sewer system in the Metropolitan Sewer District of Greater Cincinnati, Hamilton County, Ohio (the "Metropolitan Sewer District"); and

WHEREAS, the Board of County Commissioners of Hamilton County, Ohio did approve, on a date even herewith the detailed plans, specifications, estimates of cost, and/or other relevant documents for the sanitary sewer projects as contained in **Exhibit B**; and

WHEREAS, said projects as contained in **Exhibit B** are for the purpose of acquiring, constructing, and improving capital assets to be used in the operation and maintenance of the MSD, as operated under Chapter 6117 Revised Code of Ohio ("R.C."), and in compliance with Section 133.01(Z) R.C., and all projects in **Exhibit B** are recognized as either "sanitary facilities" or "drainage facilities" under Chapter 6117 R.C.

NOW, THEREFORE, BE IT RESOLVED, by the Board of County Commissioners of Hamilton County:

SECTION 1. That it is hereby declared necessary for the preservation and promotion of the public health and welfare to proceed with the construction of the sanitary sewer projects contained in **Exhibit B**.

SECTION 2. That the construction of the projects contained in **Exhibit B**, together with the necessary appurtenances thereto, shall be in accordance with the General Plan of sewerage of the Metropolitan Sewer District of Greater Cincinnati.

SECTION 3. The total estimated cost of construction, including engineering and incidental expenses, is more fully described in **Exhibit B**.

SECTION 4. That to provide a means to pay for the said improvements contained in **Exhibit B**, bonds and certificates of indebtedness in anticipation thereof may be issued in accordance with Chapters 6117 and 133 of the Ohio Revised Code which will be retired from unencumbered sewerage service charge revenues of the Metropolitan Sewer District. No part of the cost of the said improvements shall be assessed against the benefited properties.

SECTION 5. That said projects as contained in **Exhibit B**, together with the necessary appurtenances thereto, shall be located as more fully described under the "EXPLANATION/DESCRIPTION" and the "LOCATION" column of each project in said Exhibit and of the materials set forth in the approved detailed plans, specifications, and/or other relevant documents.

BE IT FURTHER RESOLVED, that said projects as contained in **Exhibit B** in the Metropolitan Sewer District, be and the same is hereby ordered to be constructed in accordance with the detailed plans, specifications, and/or other relevant documents heretofore adopted and approved by this Board, which hereby ratifies the same.

BE IT FURTHER RESOLVED, that this Board of County Commissioners hereby finds and determines that all formal actions relative to the adoption of this Resolution were taken in an open meeting of the Board of County Commissioners and that all deliberations of this Board of County Commissioners and of its committees, if any, which resulted in formal action were taken in meetings open to the public, in full compliance with applicable legal requirements, including Section 121.22 of the Ohio Revised Code.

ADOPTED at a regularly adjourned meeting of the Board of County Commissioners of Hamilton County, Ohio, this \_\_\_\_\_ day of \_\_\_\_\_, 2016.

Mr. Deters \_\_\_\_\_

Mr. Monzel \_\_\_\_\_

Mr. Portune \_\_\_\_\_

MSD RESOLUTION

AUTHORIZING THE CITY MANAGER  
TO ADVERTISE FOR BIDS

WHEREAS, on a date even herewith this Board of County Commissioners of Hamilton County, Ohio, determined to proceed with the construction of projects as contained in **Exhibit B** in the Metropolitan Sewer District of Greater Cincinnati ("MSD"), in accordance with the detailed plans, specifications, estimate of cost, and/or other relevant documents, heretofore approved and ratified; and

WHEREAS, said projects as contained in **Exhibit B** are for the purpose of acquiring, constructing, and improving capital assets to be used in the operation and maintenance of the MSD, as operated under Chapter 6117 Revised Code of Ohio ("R.C."), and in compliance with Section 133.01(Z) R.C., and all projects in **Exhibit B** are recognized as either "sanitary facilities" or "drainage facilities" under Chapter 6117 R.C.

WHEREAS, it is deemed advisable to proceed at once with the next legislative step required by law, which is the offering of said contract for competitive bidding.

NOW, THEREFORE, BE IT RESOLVED by the Board of County Commissioners of Hamilton County, Ohio, that the City Manager of Cincinnati, Ohio, is hereby authorized to proceed at once, at the earliest possible time, in accordance with the pertinent competitive bidding procedures and requirements, to advertise the contract for said projects as contained in **Exhibit B**, in the Metropolitan Sewer District of Greater Cincinnati.

BE IT FURTHER RESOLVED, that this Board of County Commissioners hereby finds and determines that all formal actions relative to the adoption of this Resolution were taken in an open meeting of the Board of County Commissioners and that all deliberations of this Board of County Commissioners and of its committees, if any, which resulted in formal action were taken in meetings open to the public, in full compliance with applicable legal requirements, including Section 121.22 of the Ohio Revised Code.

ADOPTED at a regularly adjourned meeting of the Board of County Commissioners of Hamilton County, Ohio, this \_\_\_\_\_ day of \_\_\_\_\_, 2016.

Mr. Deters \_\_\_\_\_

Mr. Monzel \_\_\_\_\_

Mr. Portune \_\_\_\_\_

CERTIFICATE OF CLERK

IT IS HEREBY CERTIFIED that the foregoing is a true and correct transcript of resolutions adopted by the Board of County Commissioners in session the \_\_\_\_\_ day of \_\_\_\_\_, 2016.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the Official Seal of the Office of the Board of County Commissioners of Hamilton County, Ohio, this \_\_\_\_\_ day of \_\_\_\_\_, 2016.

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Jacqueline Panioto, Clerk  
Board of County Commissioners  
Hamilton County, Ohio

**MSDGC**

**UPDATED  
2017 CAPITAL IMPROVEMENT  
PROGRAM BUDGET REPORT**

**Metropolitan Sewer  
District of Greater  
Cincinnati**

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2017 CIP Budget Report – November 23, 2016

11/23/16

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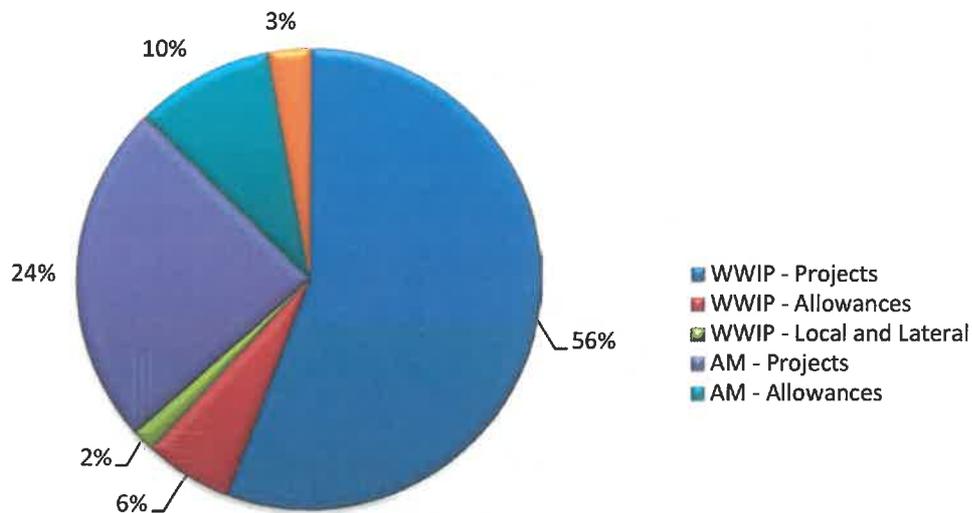
## **LIST OF APPENDICES**

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## 2017 PROPOSED CAPITAL IMPROVEMENT PLAN

### EXECUTIVE SUMMARY

The information contained in this document represents an update to the draft *2017 Capital Improvement Program Budget Report* dated August 15, 2016. There are a total of 103 projects totaling \$341,715,398 which includes the Wet Weather Improvement Program (WWIP) Projects, Allowances and local and lateral, Asset Management Program (AM) Projects and Allowances, and Program Contingency as shown in the chart below. Individual project information may be found in either Appendix A or B. Additional detail regarding allowances may be found later in this document.



There has been ongoing discussions and coordination with the county monitoring team since July 2016. MSD's provided a draft CIP on August 15, 2016, county responded with revision and comments on October 21, 2016 prior to this submittal MSD met with the county and have provided documentation which supports this recommendation. On November 18, 2016, the county monitor team submitted their 2017 CIP budget recommendation to MSD which totals \$304.5M. These recommendations were evaluated and variance analysis is provided herein.

A \$37.2M difference between the County Monitoring teams recommendation of \$304.5M and MSD's current draft CIP of \$341.7M. A notable difference is due to projects have undergone continued design refinement which may have modified (+/-) project cost estimates, projects that were not advanced in 2016, projects that are "not recommended" or underfunded by the county.

**10 projects totaling \$16.5M were requested by MSD as part of routine legislation in 2016 and the county has not given approval. These projects are additional to the 2017 CIP since the August 15, 2016 draft submittal:**

- 10130740 Werk & Westbourne EHRT Facility
- 11040190 West Fork Creek Riparian Floodplain Restoration
- 11530001 Upper Muddy Creek Interceptor Replacement Contract A
- 10330015 Werk Road Local Sewer (HN 5544-5686)
- 10340024 North Bend Road Local Sewer (HNs 504-565)
- 10230041 Westport Village PS Elimination
- 10240275 SSO 603 and 704 Improvements
- 10240565 Overflow Parking lot for MSDGC Engineering and Administration Buildings
- 10240645 Mill Creek WWC Maintenance Shop Improvements
- 10270007 Dry Run Area Sewers Phase 2 Contract RB

**5 Projects where the county monitoring team and MSD's cost estimates have a difference totaling \$9.2M. These projects have cost estimates greater than \$1M difference and are not reflected in county recommendation:**

- 10240291 Mill Creek WWTP Solids Handling Improvements Phase 1
- 10240480 MCWWTP Dewatering Polymer System Replacement
- 10240590 Mill Creek WWTP Main Substation Improvements
- 10241820 SSO 700 Facility Improvements
- 11240130 Queen City Ave Sewer Separation Phase 2

**2 Allowances where the county has underfunded by a total of \$3.4M. These allowances had a variance greater than \$1M difference and are not reflected in county recommendation:**

- 10199017 Wet Weather Program Management and Support Services 2017
- 10280187 WWT System Asset Renewal 2017

**6 Projects totaling \$10.8M were identified as “not recommended” by the county in their 2017 CIP recommendation:**

- 10240151 Document Control Storage Enhancements
- 10240245 Mill Creek WWTP Service Water (NPW) Reliability and Service Upgrade
- 10240375 Carpenters Run Pump Station Upgrade
- 10240555 Kemper Mill Village Pump Station Upgrade
- 10240655 CSO 449 Sewer Separation
- 10280917 Wet Weather Facilities Asset Renewal 2017

**The remaining 25 projects have an overall net variance of -\$2.7M, project detail can be found in Appendix B**

## 2017 CIP BASIN SUMMARY

A breakdown of the 2017 CIP projects by Watershed is provided in the following table. Majority of the projects listed as System-Wide represent allowances that will be used to improve infrastructure throughout all watersheds and are discussed in detail under the allowance section. A list of projects within each basin can be found in Appendix B.

TABLE 1 – 2017 CIP SUMMARIZED BY BASIN

Basin	Number of Projects	% of Total number of Projects	2017 Fund Request	% of Total Fund Request
<b>Muddy Creek</b>	10	10%	\$7,074,625	2%
<b>Little Miami</b>	21	20%	\$21,287,723	6%
<b>Mill Creek</b>	44	43%	\$236,510,195	69%
<b>Polk Run</b>	3	3%	\$1,999,000	1%
<b>Sycamore</b>	1	1%	\$444,000	0%
<b>Taylor Creek</b>	8	8%	\$10,544,855	3%
<b>System Wide</b>	16	16%	\$63,855,000	19%
<b>7 Basins</b>	<b>103</b>	<b>100%</b>	<b>\$341,715,398</b>	<b>100%</b>

## 2017 CIP PROJECT TYPE SUMMARY

The 2017 CIP covers a full range of utility needs as evidenced by the breakdown by project type found in the table below. This year's annual improvement plan will provide improvements to pump stations and facilities, as well as to the following:

- 59,995 Linear Feet of Sanitary Sewer
- 49,281 Linear Feet of Storm Sewer
- 12,302 Linear Feet Combined Sewer
- 3,076 Linear Feet Force Mains

TABLE 2 – 2017 CIP PROJECT TYPE BY BASIN

Type	Number of Projects	% of Total Number of Projects	2017 Fund Request	% of Total Fund Request
<b><i>Muddy Creek</i></b>				
Pump Station Improvement/Elim	3	30%	\$2,032,600	29%
Sewer Separation	1	10%	\$76,300	1%

Type	Number of Projects	% of Total Number of Projects	2017 Fund Request	% of Total Fund Request
Sewer Replacement	1	10%	\$1,352,100	19%
Study	1	10%	\$1,000,000	14%
Treatment Facility	1	10%	\$1,583,090	22%
Local Sewer	3	30%	\$1,030,535	15%
	<b>10</b>	<b>100%</b>	<b>\$7,074,625</b>	<b>100%</b>

#### *Little Miami*

Pump Station Improvement/Elim	1	5%	\$854,537	4%
Sewer Separation	1	5%	\$1,580,900	7%
SSO Improvement/Elim	2	10%	\$3,039,786	14%
Sewer Replacement	3	14%	\$637,500	3%
CSO Improvement/Elim	2	10%	\$611,700	3%
New Sewer	2	10%	\$12,539,600	59%
Source Control	1	5%	\$300,000	1%
Study	1	5%	\$1,000,000	5%
Lateral Sewer	6	29%	\$349,500	2%
Allowance	1	5%	\$335,000	2%
	<b>21</b>	<b>100%</b>	<b>\$21,287,723</b>	<b>100%</b>

#### *Mill Creek*

Pump Station Improvement/Elim	3	7%	\$1,500,323	1%
Sewer Separation	7	16%	\$29,726,133	13%
SSO Improvement/Elim	1	2%	\$1,729,900	1%
Sewer Replacement	13	30%	\$4,584,677	2%
Source Control	7	16%	\$150,231,697	64%
Treatment Facility	10	23%	\$48,112,365	20%
	<b>44</b>	<b>100%</b>	<b>\$236,510,195</b>	<b>100%</b>

#### *Polk Run*

Treatment Facility	2	67%	\$1,947,000	97%
Lateral Sewer	1	33%	\$52,000	3%
	<b>3</b>	<b>100%</b>	<b>\$1,999,000</b>	<b>100%</b>

Type	Number of Projects	% of Total Number of Projects	2017 Fund Request	% of Total Fund Request
<b><i>Sycamore</i></b>				
Pump Station Improvement/Elim	1	100%	\$444,000	100%
	<b>1</b>	<b>100%</b>	<b>\$444,000</b>	<b>100%</b>
<b><i>Taylor Creek</i></b>				
Pump Station Improvement/Elim	1	13%	\$702,200	7%
New Sewer	1	13%	\$6,458,400	61%
Local Sewer	4	50%	\$3,285,255	31%
Lateral Sewer	2	25%	\$99,000	1%
	<b>8</b>	<b>100%</b>	<b>\$10,544,855</b>	<b>100%</b>
<b><i>System Wide</i></b>				
Allowance	15	94%	\$53,855,000	84%
Program Contingency	1	6%	\$10,000,000	16%
	<b>16</b>	<b>100%</b>	<b>\$63,855,000</b>	<b>100%</b>

## 2017 CIP ACTIVITY SUMMARY

The project budgets are presented each year by the type of legislation necessary. Exhibit A represents the appropriations needed to perform preconstruction activities and are available with the approval of the CIP, Exhibit B details the requests for construction performed under “allowance” funding, and Exhibit C requests approval for the programmatic contingency. Additional approval to utilize Exhibit B and Exhibit C appropriations must be in accordance with rules and regulations. All other proposed construction projects budgets must be legislated separately as plans and specifications are finalized.

- 50 Projects for Exhibit A (PDE) \$19,950,800
- 07 Projects for Exhibit B (Construction Allowances) \$42,600,000
- 01 Programmatic Contingency (Exhibit C) \$10,000,000
- 45 Projects proposed for Construction \$269,164,598

TABLE 3 – 2017 CIP BY ACTIVITY (EXCLUDES PROGRAM CONTINGENCY)

	WWIP	Asset Management	Total	% of Total
<b>PLANNING</b>	\$2,299,300	\$300,000	\$2,599,300	1%
<b>DESIGN</b>	\$479,700	\$2,023,000	\$2,502,700	1%
<b>PRE_CON_SERV</b>	\$112,300	\$510,400	\$622,700	0%
<b>MISC_EXPENSE</b>	\$378,500	\$708,600	\$1,087,100	0%
<b>ROW</b>	\$774,600	\$500,100	\$1,274,700	0%
<b>CONSTRUCTION</b>	\$162,224,590	\$67,241,465	\$229,466,055	84%
<b>CON_SERV</b>	\$18,372,916	\$8,468,437	\$26,841,353	10%
<b>INTEREST</b>	\$5,695,000	\$1,955,900	\$7,650,900	3%
	<b>\$190,336,906</b>	<b>\$81,707,902</b>	<b>\$272,044,808</b>	<b>100%</b>

## 2017 CAPITAL PROGRAM ALLOWANCE DETAIL

The 2017 CIP contains a total of 17 Allowances as summarized in the table below. A detailed description of each proposed allowance and the basis for the 2017 funding request is provided herein.

TABLE 4 – 2017 CIP ALLOWANCE SUMMARY

	<b>Total Funds Requested</b>
10180117 Main Sewer Renewal Program 2017	\$12,000,000
10180217 Manhole Renewal Program 2017	\$1,300,000
10280607 Building Sewer Renewal Program 2017	\$5,000,000
10281317 Prioritized Wastewater Collection System Improvements 2017	\$12,000,000
10280917 Wet Weather Facilities Asset Renewal 2017	\$300,000
10280187 WWT System Asset Renewal 2017	\$2,000,000
10280717 Critical Asset Management Projects 2017	\$10,000,000
10190317 Home Sewer Treatment System Eliminations 2017	\$290,000
10282017 Minor CIP Project Planning 2017	\$1,200,000
10282117 Major CIP Project Planning 2017	\$1,500,000
10190216 Phase 2 WWIP Planning	\$1,500,000
10280237 Hydraulic Modeling 2017	\$715,000
10199017 Wet Weather Program Management and Support Services 2017	\$3,100,000
10180415 MPMP Development and Updates	\$250,000
10280617 Water Quality Program 2017* (New ID's assigned)	\$0
10272017 Mill Creek Water Quality Program	\$150,000
10280617 Little Miami Water Quality Program	\$335,000
10199117 Hamilton County Utility Oversight and Coordination 2017	\$2,700,000
<b>Grand Total</b>	<b>\$54,340,000</b>

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## MAIN SEWER RENEWAL PROGRAM 2017

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The Main Sewer Renewal Program allowance was identified in the Consent Decree as the Trenchless Sewer Technology Program. Section IX.B.1. of the Global Consent Decree dated June 9, 2004 identifies sewer relining and manhole rehabilitation capital measures as part of the Long Term Control Plan to reduce infiltration and inflow. Section C.6.b of the Final WWIP states the Sewer Relining (Trenchless Technology) Program

*“Conducts internal lining of sewers and external lining of aerial sewers as a cost effective method of rehabilitating structurally deteriorated sewers. This program will include, but not limit itself to, spiral wound pipe, pipe bursting, directional drilling, carbon filament wrapping, and jack and boring. These projects are identified through investigations of the sewer lines and are prioritized based on standardized condition assessment procedure.”*

For many years, MSD has used the Main Sewer Renewal Allowance to fund competitively bid fixed-scope main sewer rehabilitation projects. Traditionally, these projects have primarily relied on the use of heat cured-in-place-pipe (CIPP) to cost effectively rehabilitate and extend the remaining useful life of main public sewers in lieu of more expensive open-cut pipe replacement projects. In recent years, MSD has expanded its “trenchless” rehabilitation program to utilize other rehabilitation processes – particularly with large diameter sewers. The 2013 project utilized a cementations spin-cast product to rehabilitate sewers from 60”-108” in diameter. Since these diameter sewers are beyond the practical limits of traditional CIPP technology, the spin-on process provided a cost effective and minimally intrusive method of renewing large diameter pipes. In 2016, MSD’s fixed scope sewer rehabilitation contract specified the use of ultra-violet light CIPP bringing additional benefits of faster cure times, stronger liners and reduced environmental and social impacts to the already proven CIPP technology.

### **Basis for 2017 Main Sewer Renewal Allowance \$12,000,000**

Based upon decades of solid performance and application by MSD to critical assets, relining main sewers using trenchless technology construction methods has proven to be the most cost-effective means of extending main sewer asset life. MSD’s goal is to maintain its highest risk assets with the minimal amount of ratepayer dollars to maximize the benefit for the district; information on which asset to renew is based on a standardized risk analysis procedure of criticality and likelihood of failure that is based on routine inspection information that often modifies priorities based on the most up to date information. In the background documentation (Appendix D of August 15<sup>th</sup> submittal), MSD provided data on how MSD now uses an integrated framework of business applications to produce a standardized recommendation for main sewer renewal methods and risk-driven priority on an asset-by-asset basis utilizing standardized condition assessment information. Structural renewal recommendations stored in the GSAM (Gravity Sewer Asset Management layer) include “Full Lining” and “Specialized Lining”, which form the basis for the scope of work to be completed under the Main Sewer Renewal Program allowance.

Moving forward, MSD proposes to increase asset renewal through this Program to programmatically reduce risk associated with aging main sewers in the most cost effective manner. The 2017 request of \$12M represents a concerted effort to move in this direction, and

represents MSD's new annual expenditure goal for this program. The Wastewater Collection Division's 2017 Operating Budget includes a newly proposed functional work group entitled "Expert Services". The Expert Services Group will (among other responsibilities) manage the expanded Main Sewer Renewal Program through competitively bid fixed scope projects including prioritized assets identified for "Full Lining" and "Specialized Lining" in the GSAM.

The average \$12.5M annual funding request is based upon a four year goal of rehabilitating all assets that are currently identified as "Full Lining" candidates in the GSAM, with an Extreme or High structural risk in MSD's Gravity Sewer Risk Model. MSD proposes to achieve this goal by using new internal personnel proposed in the Wastewater Collection Division's 2017 Personnel Operating Budget, having qualified internal personnel to perform some of the work while expanding lining of prioritized assets with timely support of procurement from both the City and the County.

As more main sewer segments are inspected through MSD's efforts to perform a standardized Initial Condition Assessment over the next several years, and as other assets are inspected through Planned Condition Assessments, it is anticipated that many more main sewer assets posing relatively high structural risk will be identified as candidates for Lining. This ongoing Condition Assessment/Standardized Evaluation process will inherently change the assets selected for inclusion in fixed-scope renewal contracts in future years, and may affect future funding requests under the Main Sewer Renewal Allowance.

After the four year initial "catch-up" period, MSD proposes to establish a programmatic goal of completing the rehabilitation of all newly categorized Extreme and High Structural Risk main sewer assets within three years from the time that individual assets with these risk classifications are confirmed as candidates for internal rehabilitation. MSD believes that establishing this scheduling goal tied to "Risk Tolerance" is the most cost-effective way to maintain an adequate level of service at an acceptable risk level.

For more details regarding the risk-prioritized assets currently proposed to be rehabilitated over the next four calendar years, please see Appendix E.

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## MANHOLE RENEWAL PROGRAM 2017

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The Manhole Renewal Program allowance was identified in the Consent Decree as the Trenchless Technology Manhole Rehabilitation Allowance. Section IX.B.1. of the Global Consent Decree dated June 9, 2004 identifies sewer relining and manhole rehabilitation capital measures as part of the Long Term Control Plan to reduce infiltration and inflow. Section C.6.c of the Final WWIP states the Manhole Rehabilitation (Trenchless Technology) Program

*“provides a cost effective method of rehabilitating structurally deteriorated manholes. Like the Sewer Lining Trenchless Technology Program, manhole rehabilitation projects are identified through investigations and are prioritized based on a standardized condition assessment procedure.”*

Previously, MSD has utilized the Manhole Renewal Program Allowance to complete manhole rehabilitation projects prioritized by the lowest cost per generated Equivalent Residential Credit (ERC). The criteria for the generation of ERCs are outlined in the Short Term Adequate Capacity Plan (STACP) included in the Interim Partial Consent Decree on SSOs and the Global Consent Decree. In practice, MSD has found that prioritizing manhole rehabilitation based upon potential ERCs is not the most beneficial use of these allowance funds.

To provide better overall value for funds expended, MSD has modified its focus to addressing the renewal of manholes with significant structural defects with a greater consequence of failure – coupled with opportunities to complete renewals at a lower cost in coordination with the construction projects of other organizations and street rehabilitation projects. In 2016, MSD actively “reached out” to all municipalities, townships, and organizations responsible for street rehabilitation projects within MSD’s service District in an effort to more readily coordinate manhole rehabilitation and adjustment activities as reimbursable line items on their rehabilitation contracts. MSD has used this approach for many years, but is making a greater effort to actively partner with more organizations that have traditionally not worked with MSD on these projects.

As equally important components of this Program, MSD will rehabilitate manholes with structural defects, and replace defective castings and lids based upon standardized condition assessments in areas not included in construction coordination activities.

### **Basis for Manhole Renewal Allowance \$1,300,000**

In 2017, MSD will continue with its expanded efforts to coordinate condition assessments and structural renewal of MSD manholes with all municipalities, townships and organizations responsible for street rehabilitation projects with the MSD service district. Costs for individual repairs, adjustments, and casting replacements will vary with the actual contracts awarded by each organization, but MSD anticipates that actual expenditures for 2017 will increase compared to historic average expenditures.

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## BUILDING SEWER RENEWAL PROGRAM 2017

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The Building Sewer Renewal Program allowance is intended to fund the structural renewal and repair of the portion of privately owned building sewers located within the public right-of-way or within dedicated main sewer easements consistent with Section 2008 of MSD's Rules and Regulations. Building Sewer failures make up a majority of the emergency repairs and in an effort to have a more robust asset management program that is less reactive and more proactive, MSD recommends continuation this program.

This program is necessary to cost effectively extend asset life while protecting and preserving public health and the environment. This program allows MSD to quickly and efficiently restore and maintain interrupted service while mitigating the risk of additional damages or losses. The scope of work for the program will include resolving emergency sewer repairs such as cave-ins, structurally failed building sewers, sewer overflows that may violate permits and regulations, and imminent danger to structures or real property. The scope of this project will also include all planned work associated with inspection port installations and rehabilitation of privately-owned building sewers within the public right-of-way or dedicated public sewer easements.

### **Basis for 2017 for Building Sewer Renewal Allowance \$5,000,000**

Historically, work associated with the repair or rehabilitation of building sewers has been funded using either the Emergency Sewer Allowance or the High Risk Asset Renewal Allowance. As discussed with the County Monitor, MSD proposes to utilize the Building Sewer Renewal Program to fund all work associated with privately owned Building Sewers. This approach will allow MSD to completely separate expenditures on this privately owned asset class from expenditures on publically owned collection system assets; and will readily support the trending and reporting requested by the County.

As discussed in MSD's 2016 submittal, The Case for Building Sewer Asset Management, *approximately 75% of the reactive repair projects completed by MSD over the past several years (by number of discrete projects) involve privately owned building sewers. If this allowance is not significantly funded, MSD will be required to complete these reactive building sewer repairs using the 2017 Prioritized Wastewater Collection System Improvement allowance – which will hamper MSD's ability to complete planned projects to reduce risk associated with main sewers, and other publically owned assets comprising the MSD wastewater collection system.* In addition, without adequate funding of the Building Sewer Renewal Allowance, MSD will likely be required to reactively complete more repairs to building sewers in lieu of proactively renewing more building sewers at a lower cost prior to failure. Information supporting this analysis has been provided to the County through CR-286, and is further addressed in MSD's answers to questions posed by the Monitor following the submittal of The Case for Building Sewer Asset Management.

Moving forward, MSD proposes to develop and implement an integrated system of business applications to dynamically prioritize and manage the renewal of privately owned building sewers similar to the comprehensive system now being utilized to plan and prioritize work on main gravity sewers through the GSAM.

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## PRIORITIZED WASTEWATER COLLECTION SYSTEM IMPROVEMENTS 2017

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This Prioritized WWC System Improvements allowance will allow the District to respond to sudden, unexpected wastewater collection system failures, complete planned repairs and improvements to high risk utility-owned assets, and complete prioritized system improvements through construction coordination projects to maintain acceptable levels of service at the lowest asset life-cycle cost.

This program represents a consolidation of the former “Emergency Sewer” and “High Risk Asset Renewal” Asset Management allowances. As previously discussed with the County Monitor Team, the two separate allowances have historically been used somewhat interchangeably (with the County’s permission) to fund both reactive and planned work – although the categorization of reactive and planned work was not consistently populated or tracked in MSD’s legacy “Project Tracking” system; enhanced tracking has been implemented in 2016. As a result, maintaining the two separate allowances provides little benefit in historical tracking and/or trending. To the contrary, continuing to fund planned work from a nominal “Emergency” allowance will inevitably continue to cause great confusion in reporting.

Therefore, MSD maintains its recommendation for operational consistency and process improvement to have a single “Prioritized Wastewater Collection System Improvements” allowance to fund all planned and reactive improvements to publically owned asset classes that comprise the wastewater collection system – excluding work specifically covered in other Consent Decree specified allowances (Main Sewer Renewal and Manhole Renewal) and the structural renewal and/or improvement of Privately-owned Building Sewers (Building Sewer Renewal) consistent with MSD’s Rules and Regulations.

Using this single allowance will not hinder MSD’s ability to classify individual projects as “reactive” or “planned” within its Computerized Maintenance Management System (Cityworks) for performance monitoring and reporting. It is also not a Consent Decree requirement to have 2 different allowances in this regard.

### **Basis for 2017 Prioritized WWC System Improvement Allowance \$12,000,000**

MSD now uses an integrated framework of business applications to produce a standardized recommendation for main sewer renewal methods and risk-driven priority on an asset-by-asset basis utilizing standardized condition assessment information. Structural renewal recommendations stored in the GSAM (Gravity Sewer Asset Management layer) include “Point Repair” and “Full Replacement” classifications, which will provide the majority of the individual projects to be completed on an annual basis under the Prioritized Wastewater Collection System Improvements Allowance. Projects involving the repair, replacement, and improvement of other asset classes in the wastewater collection system including (but not limited to) pressurized main sewers, force main appurtenances, mechanical regulators, and odor control systems will also be funded through this allowance.

An analysis of projects currently identified within the GSAM to potentially be completed through this Prioritized Wastewater Collections System Improvement allowance was included in Appendix F of the August 15<sup>th</sup> submittal. This analysis is based on the standardized PACP condition assessment of 51% of the main sewers in the MSD wastewater collection system. As more main sewer segments are inspected through MSD’s efforts to perform a standardized Initial Condition Assessment over the next several years, and as other assets are inspected

through Planned Condition Assessments, it is anticipated that many more main sewer assets posing relatively high structural risk will be identified as candidates for “Point Repair” or “Full Replacement”. This ongoing Condition Assessment/Standardized Evaluation process will inherently reprioritize the assets selected for projects, and will likely affect the magnitude of future annual funding requests under the Prioritized Wastewater Collection System Improvements allowance.

In recent years MSD has made good progress at refining custom GIS spatial tools that will further refine discrete point repair and full replacement cost estimates based upon probable construction method, repair depth, shoring requirements, traffic control requirements, and other factors. As these cost estimates are refined, the recommended structural action plan per asset may change in the standardized decision tree – resulting in a different recommended structural action plan for some assets. Setting these refinements aside, it is clear that there is a significant body of planned work to be completed through this Allowance over the coming years to lower the structural risk associated with main public sewers to an acceptable threshold. Successfully achieving this goal will be dependent upon successfully filling the positions proposed in the Wastewater Collection Division’s 2017 Personnel Operating Budget with qualified personnel, and timely support for procurement from both the City and the County.

The funding request for the 2017 Prioritized Wastewater Collection System Improvements is based upon the approximate sum of the average yearly expenditures for the combined Emergency Sewer Repair and High Risk Asset Renewal allowances. This request will represent a significant increase in work completed on high structural risk main sewers if adequate funding is provided in the 2017 Building Sewer Renewal allowance.

If MSD continues to fund reactive Building Sewer Renewal work out of the Prioritized Wastewater Collection System Improvement allowance at the requested funding level, progress towards reduction in risk associated with main sewers in the MSD collection system will be lessened.

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## WET WEATHER FACILITIES ASSET RENEWAL 2017

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In 2015, the RTC facilities resulted in capturing and reducing over 650 MG of CSO. SSO 700 Storage and Treatment Facility (STF) was activated 28 times storing and treating over 225 MG of inflow - all of this results in a benefit to receiving streams and improves water quality throughout the region. Flows treated through the chemically enhanced high rate settling portion of the SSO 700 STF undergo ultraviolet disinfection prior to discharge to the Mill Creek. Disinfection and treatment of this flow typically reduces fecal coliforms by greater than 90%.

The purpose of the Wet Weather Facilities Asset Renewal allowance is to provide MSD's Watershed Operations (WO) Division a means of addressing unanticipated situations and necessary equipment replacements that are outside of a defined project. Capital for such unanticipated situations will be utilized under this allowance in the same manner as the WWT System Asset Renewal Fund. This allowance serves as an annual "budget" from which smaller expenditures will be made as the need arises. To manage this allowance, MSD will maintain a prioritized list of proposed expenditures that will be updated as needs arise and seek legislative approval according to established thresholds. MSD has developed an "Allowance-BCE" that will be submitted along with an updated risk-based prioritized list use to request approval from the County in order to expend funds for requests that exceed \$100,000. For expenditures below \$100,000 MSD will utilize an internal review process for expediting necessary near term replacements; this information will be reported monthly in the EMAR.

MSD's wet weather facilities that utilize this allowance include real time control (RTC), high rate treatment (HRT), storage, and other operable assets designed to manage wet weather flows. These facilities are maintained to preserve function, operated to optimize performance, and monitored to demonstrate value. Bi-weekly operational status meetings are held for the RTC facilities and for the SSO 700 CEHRT facility in order to review recent performance and to coordinate any necessary maintenance or critical equipment replacement which may be required. Dashboards for wet weather facility performance and availability were developed in late 2015 and these were rolled out in early 2016 to allow monitoring of performance, review of system availability, and also provide specific information related to subsystem component availability. Data for these dashboards would not have been available if it were not provided through the Wet Weather SCADA system which allows them to be continually updated. This information is especially helpful in targeting maintenance activities to ensure optimum system readiness and availability.

Asset management activities have been progressively employed since 2014 for the wet weather facilities managed by Watershed Operations. Reliability Centered Maintenance (RCM) studies have been utilized to identify improved maintenance strategies in order to provide high availability and reliability. Biweekly meetings are held to review operational concerns and to focus required maintenance activities which are implemented through a Computerized Maintenance Management System to implement both scheduled and corrective maintenance activities. Dashboards for wet weather facility performance and availability were developed in 2015. These dashboards were rolled out in early 2016 to allow monitoring of performance, review of system availability, and also provide specific information related to subsystem component availability. Data for these dashboards would not have been available if it were not provided through the Wet Weather SCADA system which allows them to be continually updated. The information presented is current within a day and is especially helpful in targeting maintenance activities to ensure optimum system readiness and availability.

Additionally, an Asset Management System Implementation project has been initiated and has recently been kicked off. This effort will provide MSD with a system to plan for the replacement of treatment plant and Watershed Operation division facility assets. This will allow more accurate forecasting of asset renewal and replacement efforts and will also assist in forecasting CIP projects. This effort is currently split between Operating and Capital funding sources. Only the Operating portions of this effort have been initiated. The remaining Capital effort is awaiting County approval. If approved, this effort is anticipated to be completed by mid-2017.

The CIP Wet Weather Facilities Asset Renewal Allowance Request is based on a predicted annual Renewal and Replacement rate of 2.5% of the facility value annually. This predicted R&R rate is less than 50% of the AWWA median benchmark rate of 5.8% and was chosen due to the relatively young age of these assets and the limited complexity of these systems.

### **Basis for 2017 Wet Weather Facilities Allowance \$300,000**

The types of emergency situations and equipment repairs/replacements for District wide facilities (Multiple locations), High Rate Treatment Facilities (SSO 700 CEHRT, Muddy Creek, Westbourne HRT, Daly Road HRT) and Real Time Control Facilities (Ross Run RTC, Lick Run RTC, Badgeley Run RTC, Mitchel Avenue RTC). Anticipated actions to be addressed under this allowance may include but are not limited to:

- Pumping System Replacements
- Rotating Equipment Replacements
- Electrical Replacements
- On-Site Buried Infrastructure Replacements
- HVAC System Replacements
- Process Equipment Replacements

### **Benefits resulting from work performed under this allowance**

- This allowance will facilitate timely replacement of Watershed Operation division infrastructure and continue to improve the reliability of equipment and processes and extend remaining useful life. Recommendations from preventative maintenance and condition assessment activities can be addressed prior to failure.
- This allowance will provide an immediate funding mechanism to address emergency situations and equipment failures. Examples of past expenditures that would be covered by this allowance include:
  - Replacement of frozen backflow preventer
  - Replacement of failed U/V Disinfection ballasts
  - Replacement of failed raw sewage pump VFD
  - Replacement of coagulant induction mixer

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## WWT SYSTEM ASSET RENEWAL 2017

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The purpose of the WWT System Asset Renewal allowance is to provide MSD's Wastewater Treatment (WWT) Division with a means of addressing urgent situations caused by unforeseen as well as predicted, or planned, equipment or process failures. This allowance provides MSD with a rapid means to replace equipment that fails unexpectedly or to address other short-term capital needs that require little or no design, that are needed sooner than the normal CIP project process allows, and/or are of significantly less cost than a typical standalone CIP project. This includes replacement of equipment when impending failure is detected by predictive technologies such as vibration analysis or thermal imaging large motors or pumps in order to prevent catastrophic failure and limit additional damage and cost. Projects that are larger or able to be planned years in advance are to be submitted as standalone CIP projects or may utilize the Critical Asset Management Allowance.

This allowance serves as an annual "budget" from which smaller expenditures will be made as the need arises. To manage this allowance, MSD will maintain a risk-based prioritized list of proposed expenditures that will be updated as needs arise and seek legislative approval according to established thresholds.

The Asset Management System Implementation project has been initiated to support the development of asset management CIP projects. This effort will provide MSD with a system to plan for the replacement of Wastewater Treatment and Watershed Operation division facility assets. The new system will allow more accurate forecasting of asset renewal and replacement efforts and will also assist in forecasting CIP budgets and scopes.

### **Basis for 2017 WWT System Asset Renewal Allowance \$2,000,000**

The types of capital expenditures anticipated to be made under this allowance include:

- Pump and pumping system rehabilitation or replacement – multiple fail or need rehab or rehabilitation each year
- Rotating rehabilitation or replacement
- Electric motor and electrical system rehabilitation or replacement
- Emergency bypass pumping
- Instrumentation replacement
- HVAC System rehabilitation or replacement
- Process Equipment rehabilitation or replacement

The amount of this funding request is based on historical spending as summarized in the table below and includes potential Facilities Asset Management future projects. Future year requests will be made more accurate by utilizing the proposed aforementioned Asset Management System together with historical data. Additional detail regarding the WWT Asset Renewal Program is included in Appendix G.

### **Benefits resulting from work performed under this allowance**

- This allowance will facilitate timely replacement of wastewater treatment infrastructure and will continue to improve the reliability of equipment and processes while extend remaining useful life of system assets. It will utilize data from the MSD maintenance program to prevent catastrophic failure when possible and reduce outages and costs.
- This allowance will provide an immediate and expeditious funding mechanism to address urgent situations caused by unforeseen equipment or process failures. Together with the MSD Facility Asset Management allowance, this allowance is a key part of MSD's long term asset management strategy.

### **Work anticipated to be performed under 2017 WWT Asset Renewal Allowance**

TABLE 5 – LIST OF POTENTIAL WWT ACTIVITIES

Estimated Cost Breakdown of Expenditures*	2017	2014-2016 Average**
Pump Replacements / Refurbishments	\$350,000	\$325,595
Centrifuge Rotating Assembly Refurbishment	\$300,000	\$151,299
HVAC System Replacements and Upgrades	\$125,000	\$99,251
Electrical Equipment Replacement and Upgrades	\$160,000	\$146,941
Generator Replacements	\$93,000	\$84,826
Instrumentation Replacements and Upgrades	\$42,000	\$39,113
Gate and Actuator Replacements / Refurbishments	\$27,000	\$24,788
Process Area Safety and Security Enhancements	\$150,000	\$157,278
Raw Sewage Pump Refurbishment (Mill Creek) ***	\$120,000	\$0
Various Mill Creek Potable Water System Improvements****	\$120,000	\$0
Other Process Equipment Replacements / Upgrades *****	\$523,000	\$370,822
<b>Totals</b>	<b>\$2,000,000</b>	<b>\$1,399,914</b>

\*Cost breakdown has been estimated based on historical needs. Due to the nature of this allowance, individual projects are typically not identified until the calendar year in which the expenditure occurs.

\*\*Averages include OTEA for years 2014 and 2015. No OTEA has been used in 2016. The 2016 data used in the average represents encumbrances from only the first two quarters and has been weighted as such.

\*\*\*The twelve (12) Mill Creek raw sewage pumps have historically been refurbished every 5 years. The pumps were all refurbished during a capital project that ended in 2012 and MSD must resume a refurbishment program. It is planned to refurbish three pumps in 2017, and two in each successive year.

\*\*\*\*This cost is based on an in-house study that determined that several valves, expansion joints, and hydrants should be replaced. The nature of these capital expenditures does not lend itself well to a single CIP project.

\*\*\*\*\*There is an increase in this line item to reflect both increasing costs, a surge in expected end-of-life equipment replacements due to early Phase 1 projects, and an increasing diligence on the part of MSD to capitalize equipment replacement costs whenever possible to reduce the burden on the operating budget.

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## CRITICAL ASSET MANAGEMENT PROJECTS 2017

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The purpose of the Critical Asset Management Projects allowance is to provide MSD with an expeditious means of addressing infrastructure and other asset failures in advance of catastrophic failure when possible where in recent years, there has not been a clear way to fund these Critical Asset Management needs. This allowance is an outcome of feedback from the County to have an critical asset management allowance to address larger ongoing asset management needs which can be based on risk management and prioritization data, of which MSD is developing. It will utilize best information available such as district wide condition reports, field data, studies and other analyses in coordination with in-house engineering to provide MSD with a rapid means to address facility equipment or process needs, failing roofs, roadways, other unforeseen capital needs that require little or no design, that are needed sooner than the normal CIP project process allows, and/or are of significantly less cost than a typical standalone CIP project. This allowance differs from the WWT System Asset Renewal allowance in that it extends to all MSD divisions, more complex projects that may be more construction oriented and may require more significant in-house engineering (as opposed to direct equipment refurbishment or replacement).

This allowance serves as an annual “budget” from which smaller expenditures will be made as the need arises. The Asset Management System Implementation project has been initiated to support the development of asset management CIP projects. This effort will provide MSD with a system to plan for the replacement of Wastewater Treatment and Watershed Operation division facility assets that will complement and integrate with Wastewater Collection’s asset management program. The new system will allow more accurate forecasting of asset renewal and replacement efforts and will also assist in forecasting CIP budgets and scopes.

### **Basis for 2017 Critical Asset Management Allowance \$10,000,000**

Provides MSD with a rapid means of addressing urgent situations caused by unforeseen equipment or process failures as well as those detected by predictive maintenance methods and address other short-term capital needs with little or no design. This allowance will facilitate timely replacement of assets and will continue to improve the reliability of process systems while extending the remaining useful life of system assets. It will utilize data from the MSD maintenance program to prevent catastrophic failure when possible and reduce outages and associated costs. This allowance is part of MSD’s long term asset management strategy.

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## HOME SEWER TREATMENT SYSTEM ELIMINATIONS 2017

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The Home Sewer Treatment System Elimination allowance was identified in the Consent Decree. Section C.6.c of the Final WWIP states the Home Sewage Treatment System (HSTS) Program

*“conducts the design, property acquisition and construction of new sanitary sewers to connect properties in built up areas of the MSD service area to eliminate home sewage treatment systems (HSTS).”*

These projects improve the water quality of watershed by replacing failing or inadequate home systems. Assessment sewer projects that eliminate household sewage treatment systems are initiated based on MSD Rules and Regulations, Section 1805, which requires either a citizen petition with majority support, declaration of public nuisance by a local Board of Health, or orders from Ohio EPA. HSTS construction projects undergo public review and evaluation as part of proposed legislation and approval by the Board of County Commissioners. This program supports the overall HSTS Elimination program by funding planning and petition services for various local sewer assessment projects and sewer lateral assessment projects in all watersheds. The allowance also funds design of sewer lateral projects. Design and construction of local sewers and construction of all lateral projects are funded through individual legislation.

### **Basis for 2017 HSTS Allowance \$290,000**

Work under this allowance is performed on an as-needed basis dependent upon petition requests received from property owners or neighborhoods. The current funding request aligns well with historical commitments and has been escalated to account for a backlog of petition requests that have accumulated during the past year in which staffing levels prevented processing of petitions. This allowance is used for planning, design and petition services for HSTS Elimination Program including the following activities.

- Communicate/coordinate/educate/respond to miscellaneous inquiries with/from property owners, Hamilton County staff, Hamilton County Public Health and other stakeholders regarding assessment sewer policy, projects and progress.
- Develop petitions for assessment sewers and sewer lateral assessments.
  - Prepare preliminary plan for assessment sewers and laterals (site visit, concept plan, research sewer availability, review past petition efforts, determine assessment district boundaries, develop property owner data, review local zoning constraints.
  - Prepare/provide citizen petitions for assessment sewers.
  - Prepare petition, statement and waivers for sewer lateral assessments.
- Manage citizen petitions (provide petition and flyer to petitioner, respond to property owner questions, tabulate petition vote results, prepare and mail polling ballots, tabulate and document polling results, prepare documentation of petition/polling results for submittal to Board, manage petition meetings with stakeholders).
- Prepare plans/specs/estimate of costs, obtain field investigation data, and obtain easement for sewer lateral assessments.
- Prepare legislative requests for design authorization for local sewer assessment projects (develop design proposal, prepare initial estimate of costs, compose project description and respond to MSD and Hamilton County questions regarding legislative requests).

- Prepare final assessment data and legislation.

**Benefits resulting from work performed under this allowance**

- Elimination of home sewage treatment systems by providing connection to the public sewer system provides the following benefits: Reduces discharge of pollutants to watersheds Failing or improperly functioning HSTS are a source of pollutants that has been linked to dry weather bacterial exceedances. This allowance will facilitate actions required to ultimately improve local water quality.
- Resolves public health and environmental problems identified by the local health districts.
- Provides improved quality of life for HSTS property owners by eliminating odors and lifestyle restrictions related to limited flow capacity of their HSTS.
- Removes a major impediment to marketability of HSTS properties.
- Creates new sewer district customers.

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## CIP PROJECT PLANNING 2017

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The CIP Project Planning allowance provides the funding necessary for CIP planning efforts which include wastewater collection system, source control opportunities, wastewater treatment and pumping facilities, integrated planning partnerships, and watershed optimization. These planning allowances provide a means to prepare an effective prioritization of capital resources and development of comprehensive business case evaluations.

This allowance will provide resources and funding for the prioritization of infrastructure capital needs; identification of opportunities for integrated planning and construction coordination (paving, utility construction, transportation, etc.) and analysis evaluation and preparation for Phase 2A negotiation; and technical support needed to facilitate a successful Phase 2A suite of projects and programs. It will result in the technical narrative and supports what the Regulators are looking for in the Phase 2A schedule submittal.

### **Basis for 2017 CIP Planning Allowances \$4,200,000:**

Based on the county monitor team recommendations, the CIP Planning Allowance is separated into three separate buckets that will be defined as Minor, Major and Phase 2 WWIP.

- 1. Minor CIP Planning Allowance (10282017) - \$1,200,000**
- 2. Major CIP Planning Allowance (10282117) - \$1,500,000**
- 3. Phase 2 WWIP Planning Allowance (10190216) - \$1,500,000**

MSD utilizes both employee staff and professional consultants for preparation of Business Case Evaluations (BCEs) for project nominations received from the Watershed Operations, Wastewater Collection, and Wastewater Treatment Divisions. The planning activities described herein provide a representative sampling of necessary activities and evaluations, though there may be more added to this list and some efforts may get re-prioritized. It is not likely that all projects will be initiated during the budget year due to coordination and staffing limitations. As the 2017 CIP budget is developed, MSD cannot anticipate which projects will be dropped from the list. Projects' detail scope can be found in Appendix H.

**Minor CIP Planning Allowance \$1.2M (10282017) – Anticipates planning projects to be \$75,000 or less, the potential planning projects (below) are tentative and subject to change.**

#### Pump Station Major anticipated planning projects

- Bold Face Pump Station Reliability & Service Upgrades
- Muddy Creek Pump Station Reliability and Service
- Cleves Pump Station
- Pleasant Run Pump

#### Treatment Plant & Facility Major Planning Activities

- Mill Creek WWTP Standby Power Distribution Improvements

- Mill Creek WWTP Electrical Arc Flash Protection
- Sycamore Creek WWTP Facility Plan
- Muddy Creek WWTP Facility Plan
- Mill Creek WWTP Primary Settling Process Area Improvements
- Mill Creek WWTP Primary Treatment Odor Control
- Mill Creek WWTP Solids Handling Improvements Phases 2 & Phase 3 new thickening centrifuges and improvements to primary thickening."
- Fort Scott Improvements
- Sycamore Creek WWTP WAS System Improvements
- Sycamore Creek WWTP Secondary Treatment Pumping Improvements

#### Wastewater Operations Major Planning Activities

- BCEs for WWC projects in planning backlog - Unspecified planning effort for projects not yet nominated by WWC for 2017.

#### Watershed Operations Major Planning Activities

- Flow Monitoring for Capital
- High Rate Treatment Performance Refinements
- CSO 005 (Lick Run RTC) Improvements
- Daly Road CSO Treatment Facility

**Major CIP Planning Allowance \$1.5M (10282117) – Anticipates projects greater than \$75,000, the potential planning projects (below) are tentative and subject to change.**

#### Pump Station Minor Planning Activities

- Blanchetta #2 Pump Station
- Harcourt Estates Pump
- Taylor Creek WWTP RAS Pump Station Upgrades

#### Treatment Plant & Facility Minor Planning Activities

- Mill Creek WWTP 4.16 kV and 13.2 kV Loop Improvements
- Taylor Creek WWTP Clarifier Upgrades
- Taylor Creek WWTP Gate & Valve Motorization
- Taylor Creek WWTP Aeration Basin Improvements & Backup Chemical Feed System
- Sycamore Creek WWTP High Rate Recirculation Pump Station
- Sycamore Creek WWTP DISC Filter Freeze Protection
- Sycamore Creek WWTP Tank Improvements
- Sycamore Creek WWTP Sludge Handling Improvements
- Polk Run WWTP Effluent Pumping
- Document Control Storage Enhancements
- Little Miami WWTP Non-Potable Water System Upgrades
- Mill Creek WWTP South Plant Control Room

Wastewater Operations Minor Planning Activities:

- *CSO 226 I-75 Relocation*
- *CSO 449 Sewer Separation*
- *CSO/SSO Relocation and Access Drive Improvements*
- *Muddy Creek CSO HW/DW Protection*
- *Stout & Penderly Avenue Sewer Capacity Evaluation*
- *Stonebridge Apartments Sewer Repair*
- *5053 Ridge Ave Sewer Replacement*
- *Morrison Avenue Sewer Replacement*
- *3731 Glenmore Avenue Sewer Evaluation*
- *Ledgewood Ave Sewer Replacement*
- *911 McPherson Avenue Sewer Replacement*
- *Davey Avenue Sewer Replacement*
- *Wasson Ravine Sewer Replacement*
- *Paxton Avenue Sewer Evaluation*
- *Aux Mill Creek Interceptor and Channel Repair*
- *Mandarin Court Sewer Replacement*
- *Preliminary Planning for new ODOT projects*
- *Elm Court Sewer Replacement*
- *Thru the Valley*

Watershed Operations Minor Planning Activities

- *Mill Creek Interceptor Crossover Automation*
- *Real Time Control Projects*
- *CSO 125 (Badgely Run RTC) Improvements*

**Phase 2 WWIP Planning Allowance \$1.5M (10190216) – Prioritize and develop WWIP phase 2 schedule and submittal.**

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## HYDRAULIC MODELING 2017

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The Hydraulic Modeling Program allowance will provide hydraulic, hydrologic and treatment process modeling services to be used to support MSD's long-range planning needs, and to meet MSD's SSO and CSO monitoring requirements. Sewer modeling is used to assist in the planning and design process and is required as part of the Global Consent Decree and MSD's CSO NPDES permit. MSD is committed to ensuring its system-wide model meets the latest standards and provides the best available tool for assessing, planning, and designing MSD's infrastructure. Based on the county's preference, several hydraulic modeling support activities that were previously funded out of the capital program allowance are proposed in the 2017 operating budget. Totaling \$442,000, these activities include: BCE Support for CIPs, Initial Flow Monitoring Modeling and Data Quality Review, Phase 2 Mill Creek Model Update for Projected 2018 Improvements.

### **Basis for 2017 funding request \$715,000**

Expand the baseline System-Wide Model if flow or other data is available for areas not previously calibrated. Run the updated System-Wide Model for the 1970 Typical Year and document changes in overflows on an outfall-by-outfall basis.

- Expand the baseline System-Wide Model Refinements for real-time control and implementation of coordinated control.
- Complete the WWTP Process Model for Mill Creek and develop the treatment operator interface controls.
- Develop the Muddy Creek Treatment plant grit and solids handling facilities process model.
- Develop the Indian Creek WWTP process model. The Schreiber Counter-Current Aeration System was converted to a step feed plug flow reactor. A new process model is required to support the upcoming Total Phosphorus studies required to be completed by the end of 2017.
- The following modeling activities provide a representative sampling of needed work. It is not likely that all projects will be initiated in 2017 due to coordination and staffing limitations. However, at this time MSD does not know which projects will be dropped from the list. Modeling activities will be performed using a combination of staff and consultant resources. More detailed descriptions of each task are provided following the table.

The following activities are proposed by MSD to be completed using 2017 Hydraulic Modeling Allowance.

- Expand the Baseline Model for Newly Constructed/Monitored Areas: When areas are newly constructed or monitored in detail for the first time, the upstream limits of the current baseline model must be expanded and calibrated. The 1970 Typical Year model must be updated to include these changes. The change in overflows must be documented on an outfall-by-outfall basis.

- Expand the Model to include RTC and Coordinated Control rules; include developing a new baseline model which reflects the system-wide model for real-time control and implementation of coordinated control.
- WWTP Process Model: Mill Creek: include modeling of the Mill Creek treatment plant processes and develop the treatment operator interface controls.
- WWTP Process Model: Muddy Creek: A new process model for the Muddy Creek Treatment Plant needs to be developed which reflects the recent construction of grit and solids handling facilities.
- WWTP Process and Hydraulic Model: Indian Creek: The Indian Creek WWTP process model was developed in 2013 and includes all relevant processes installed at that time. Most importantly is the Schreiber Counter-Current Aeration System. Since that time the Schreiber system has been converted to a step feed plug flow reactor under the Indian Creek WWTP upgrades project (10210010). These upgrades are scheduled to be completed in 2016. A new existing process model is required to reflect the process change is needed in the near term to support the upcoming Total Phosphorus studies required to be completed by the end of 2017.

MSD staff will coordinate the system-wide model with on-going activities including but not limited to Watershed Operations' use of the system-wide model and the developing Water Quality Program. At the end of the year, if these efforts are not attributable to future capital projects, the cost will be expensed. MSDGC will utilize this allowance subject to the following criteria

- MSD will provide scopes to the County for review
- Work performed will be properly documented with the Annual Capital Reconciliation Report that is issued in draft form to the County every March 30<sup>th</sup> for the prior year.
- The allowance will be used for expenditures in 2017 only.
- The allowance will not be used for specific capital project work.

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## WET WEATHER PROGRAM MANAGEMENT & SUPPORT SERVICES 2017

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MSD program management efforts have successfully assisted the District – both internal and external – to have access to up to date information as the end of Phase 1 is approached with regard to capital projects and the overall Consent Decree and Asset Management Program. MSD proposes to maintain this level of reporting for transparency of information to the stakeholders of the District to maintain the momentum required to complete Phase 1 of the Wet Weather Improvement Program, streamline the Asset Management Program, and while developing an optimized and affordable schedule for Phase 2 (and future phases) of the Wet Weather Improvement Program. This project funds the Capital Reporting, Document Control and Program Controls (scheduling and estimating) services necessary to carry out the Capital Program. The County has requested that MSD fund these in the Operating budget but MSD has not had assurance that the funding has been added to the Operation budget; as such is remains a recommendation for the Capital program since these are supportive of the Capital program. The activities performed under this project include compliance reporting, Master CIP coordination, project and program scheduling, project estimating and project controls.

### **Basis for 2017 funding request \$3,100,000**

The MSD wet weather program management team includes both internal personnel and supplemental outside professional consultants to manage and report on the multiple projects in planning, design, and construction phases. MSD continues to integrate some of the supplemental staff positions with MSD personnel. Due to the size and complexity of the capital program, supplemental staffing provided by external consultants will continue to be utilized for the next several years to ensure all Final WWIP milestones are fully satisfied. A categorization of the activities funded under this allowance is presented in the following table and described herein.

- **MSDGC Labor:** Master Capital Program Management includes MSD staff members. Staff members are serving the following roles: Project Controls Manager, Change Management Coordinator, Document Control Manager, Document Control Specialists and Accountants for Project Costing. MSD staff from across the District provide as-needed services and support to the Master Capital Program Management Division for addressing Consent Decree questions, County coordination, stakeholder education, and a variety of other technical issues associated with MSDGC's Capital Improvement Program.

**Master Capital Program/Enterprise Management:** The Master Capital Program Management is a critical function that is responsible and accountable for all aspects of the District's capital program for the next 5 years; it includes:

- Legal Assistance
- Expert Technical Services
- Reporting

The 2017 Program Management and Support Services budget has been modified based on County comments to exclude expert services for MPMP development for enhancement: a new ID has been added to the CIP for MPMP development. A new Phase 2 WWIP Planning allowance has been added as shown in the CIP Planning Allowance section for affordability analysis, regulatory support and regulator engagement.

- Program Controls: The Program Controls Team is responsible for the day-to-day oversight, coordination, and reporting of the Capital Program performance and implementation including individual projects' schedule, budget, cash flow, change management activities, and estimating. This group is responsible for administering and updating as necessary MSDGC's Financial Analysis Manual (FAM). Comprehensive monthly, quarterly, and annual reporting is completed by the Program Controls Team.
  - Basin Control Specialists
  - Estimating
  - Estimating Documentation Review
  - Financial Policy Review and Development
  - Change Management Automation
  
- Document Control: The 2017 PMC budget includes funding for supplemental staff to assist the City with administering and implementing the document control system for all capital projects. In 2014 the City began managing the document control function and provided the majority of administrative specialists. MSDGC will continue to transition all document control positions to the City as more staff become fully trained and vacancies are filled.

## WATER QUALITY PROGRAM 2017

The purpose of Water Quality Program allowance is to facilitate implementation of a comprehensive water quality program for MSDGC. Based on the comments received from Hamilton County, the preference is to split this allowance into two projects:

1. Little Miami Water Quality Program 10272017 - \$335,000
2. Mill Creek Water Quality Program 10242017 - \$150,000

TABLE 6 – LITTLE MIAMI WATER QUALITY PROGRAM ACTIVITY

Little Miami Water Quality Program Activity	2016 Activities	2017 CIP	2018 CIP	2019 CIP
Water Quality Model Construction	Completed			
Water Quality Sampling for Model Development		\$335,000		
Water Quality Model Calibration			\$120,000	
Microbial Source Tracking Studies w/USEPA				\$100,000
<b>TOTALS</b>		<b>\$335,000</b>	<b>\$120,000</b>	<b>\$100,000</b>

TABLE 7 – MILL CREEK WATER QUALITY PROGRAM ACTIVITY

Mill Creek Water Quality Program Activity	2016 Activities	2017 CIP	2018 CIP	2019 CIP
Water Quality Sampling for Model Development	Completed			
Water Quality Model Construction	Completed			
Water Quality Model Calibration		\$150,000		
Microbial Source Tracking Studies w/USEPA	Underway		\$100,000	
<b>TOTALS</b>		<b>\$150,000</b>	<b>\$100,000</b>	

**Benefits resulting from work performed under the water quality program:**

- Collection of pertinent data and local field conditions for use in development of a comprehensive water quality model applicable that can be calibrated and verified to facilitate simulation of various alternatives for capital improvement projects.
- Progress toward linking capital expenditures with CSO reduction and water quality benefits.
- The purpose of watershed planning is to identify measures to meet the SSO and CSO volume reduction requirements of the Final WWIP, as part of Hamilton County's and the City of Cincinnati's Consent Decree, through an Integrated Planning approach, while selecting holistic projects that will also provide the best water quality improvements possible and maximize the benefits of the investment for the rate payers. MSDGC proposes to fund each IWAP under separate project IDs.

## WATER QUALITY PROGRAM FOR LITTLE MIAMI 2017

At the request of the County the Little Miami Sampling plan includes the Upper Duck Creek and associated CSOS for use in the development of an IWAP.

The purpose of this project is to facilitate implementation of a comprehensive water quality program for the Little Miami Basin of MSDGC. The water quality program activities determine the water quality conditions in streams, creeks, and rivers; identify potential sources for pollutants of concern; identify how pollutants are transported to water bodies; and refine the assumptions used for design of green infrastructure best management practices (BMPs).

All the information collected under the various water quality program initiatives and activities will be crucial for informing the Phase 2 WWIP. The Water Quality Program for Little Miami River will provide confidence on decision making to develop cost effective strategies and individual projects associated with the affordability of the wet weather improvement program.

### **Basis for 2017 funding request \$335,000**

Water Quality Model Development. Many utilities around the country are faced with combined overflows (CSOs) and sanitary overflows (SSOs) issues which require multi-billion dollar programs to address these wet weather pollution sources. Prioritization on capital improvement projects are often challenging because many sources contribute to the water quality pollution in a given watershed. An important part of MSDGC's Water Quality Program is completing the development of water quality models to include additional upstream coverage and resolution. The upgraded models will be able to simulate the fate and transport of a suite of pollutants of concerns including E.Coli, species of nitrogen and phosphorus, algae, and dissolved oxygen. Limnotech has prepared the water quality model for Little Miami Basin. It is essential that the water quality sampling of the Little Miami River be conducted in 2017 to coincide with the mandated IPS sampling.

Little Miami Basin Water Quality Sampling for Model Development – Water quality sampling for model development in the Little Miami Basin during wet-weather events. These sampling points are along the Little Miami River and Duck Creek. Other items related to the sampling and modeling will also be performed.

Sample five wet weather events to characterize of the Little Miami River watershed and stream conditions. The sampling will be along the main stem of the Little Miami River and will include the Duck Creek. Most of the CSOs sampled are on the Duck Creek. 8-10 in-stream locations and 5-6 CSOs and SSOs will be sampled up to five times over the course of each event. It is imperative that this task be performed during 2017 while the bioassessment is performed in the Little Miami Basin. The tasks are broken down as follows but not limited to:

- Planning, coordination, reporting, project management, up to two false starts: \$40,000
- CSO/SSO sampling cost per event: \$12,000 for a total of \$60,000
- In-stream sampling cost per event: \$30,000 for a total of \$150,000
- Data review per event: \$3,000 for a total of \$15,000

- MSD lab costs (reagents, bottles, staff time/overtime) for each event: \$9,000, for a total of \$45,000
- Coordination with IPS bio-assessment program. \$25,000

#### WATER QUALITY PROGRAM FOR MILL CREEK 2017

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The purpose of this project is to facilitate implementation of a comprehensive water quality program for the Mill Creek Basin of MSDGC. The water quality program activities determine the water quality conditions in streams, creeks, and rivers; identify potential sources for pollutants of concern; identify how pollutants are transported to water bodies; and refine the assumptions used for design of green infrastructure best management practices (BMPs).

All the information collected under the various water quality program initiatives and activities will be crucial for informing the Phase 2 WWIP. The Water Quality Program for Mill Creek will provide confidence on decision making to develop cost effective strategies and individual projects associated with the affordability of the wet weather improvement program.

#### **Basis for 2017 funding request \$150,000**

Water Quality Model Development. Many utilities around the country are faced with combined overflows (CSOs) and sanitary overflows (SSOs) issues which require multi-billion dollar programs to address these wet weather pollution sources. Prioritization on capital improvement projects are often challenging because many sources contribute to the water quality pollution in a given watershed. An important part of MSDGC's Water Quality Program is completing the development of water quality models to include additional upstream coverage and resolution. The upgraded models will be able to simulate the fate and transport of a suite of pollutants of concerns including E.Coli, species of nitrogen and phosphorus, algae, and dissolved oxygen. Black and Veatch and CH2M Hill have prepared the water quality models for Mill Creek Basin.

Mill Creek Basin Water Quality Model Calibration - Integration of the SSO 700 IWAP Water Quality Model (CH2M Hill) and the Mill Creek Water Quality Model (B&V) and calibration of the resulting model.

Questions regarding the content of this document should be submitted to MSDGC Director of Sewers Gerald Checco ([Gerald.Checco@cincinnati-oh.gov](mailto:Gerald.Checco@cincinnati-oh.gov)).

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Tadros, Ihab - MSD

# **Metropolitan Sewer District of Greater Cincinnati**

## **Capital Budget and Capital Improvement Program Year 2017**

# Proposed

**Tuesday, November 22, 2016**

**Metropolitan Sewer District of Greater Cincinnati  
Capital Budget and Capital Improvement Program  
Year 2017**

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## Glossary of Terms

<u>Abbreviation</u>	<u>Description</u>
ALW	Allowance
BOCC	Board of County Commissioners, Hamilton County, OH
CDOTE	Cincinnati Department of Transportation & Engineering
CEHRT	Chemically Enhanced High Rate Treatment
CIP	Capital Improvement
CSO	Combined Sewer Overflow; discharge from a combined sewer collection system.
EPA	Environmental Protection Agency
ESP	Early Success Project
FAC	Treatment Facility
HA	Highly Active SSOs (HASSOs)
HNS	Home Numbers
HSTS	Home Sewage Treatment Systems
HW/DW	High Water, Dry Weather, refers to a specific type of CSO, the condition that occurs when the interceptor sewer floods from area rivers or creeks back-flowing into a CSO structure, resulting in extraneous waters that cause a combined discharge further down the collection system
ITS	IT Systems
IWAP	Integrated Watershed Action Plan
LAT	Lateral Sewer
LMCPR	Lower Mill Creek Partial Remedy
LOC	Local Sewer
MGD	Million Gallons per Day
MSD	Metropolitan Sewer District
NPDES	National Pollution Discharge Elimination System; permitting authority overseen by USEPA
O&M	Operations and Maintenance
OEPA	Ohio Environmental Protection Agency
ORC	Ohio Revised Code
PRG	Program Contingency
PSE	Pump Station Improvement Elimination
PSO	Pump Station Overflow
RDI/I	Rainfall Derived Infiltration Inflow (IL), extraneous sources of storm ground water into a sanitary sewer system
REG	Regulator Improvement
REP	Sewer Replacement
SBU	Sewer Back Up (aka WIB Water-In-Basement)
SCADA	Supervisory Control and Data Acquisition
SEP	Sewer Separation
SEW	New Sewer
SMU	Stormwater Management Utility
SRC	Source Control
SSO	Sanitary Sewer Overflow; discharge from a separate sanitary sewer
STY	Study
SUP	Supplemental Environmental Project
TUN	Tunnel
USEPA	United States Environmental Protection Agency
WWC	Wastewater Collection Division of MSD
WWIP	Wet Weather Improvement Program
WWT	Wastewater Treatment Division of MSD
WWTP	Wastewater Treatment Plant



## 2017 CIP Projects

### Metropolitan Sewer District of Greater Cincinnati

#### Planning/Design/Easement Funding Request (Exhibit A)

Project No	CIP Type	Project Type	Project Name	P/D/E Funds Requested
10171740	WWIP	SEP	CSO 551 Sewer Separation (Easement)	\$274,600
10180415	WWIP	ALW	MPMP Development and Updates (Design)	\$250,000
10190216	WWIP	ALW	Phase 2 WWIP Planning (Planning)	\$1,500,000
10190317	WWIP	ALW	Home Sewer Treatment System Eliminations 2017 (Planning)	\$290,000
10199017	WWIP	ALW	Wet Weather Program Management and Support Services 2017 (Design)	\$3,100,000
10199117	WWIP	ALW	Hamilton County Utility Oversight and Coordination 2017 (Design)	\$2,700,000
10240021	WWIP	SRC	CSO 217 483 Source Control - Phase C (Design)	\$64,200
10330006	WWIP	LOC	Devils Backbone Road Sewer Local (HN 1234 & 1250) (Design,Easement)	\$58,800
10330015	WWIP	LOC	Werk Road Local Sewer (HN 5544-5686) (Design)	\$6,200
10340024	WWIP	LOC	North Bend Road Local Sewer (HNs 504-565) (Design)	\$1,600
10370050	WWIP	LOC	Stewart Road Local Sewer (HNs 5706 - 5710) (Design)	\$39,200
10420035	WWIP	LAT	Jessup Road Sewer Lateral Assessment (HN 5950) (Design)	\$2,000
10420040	WWIP	LAT	W Galbraith Road Sewer Lateral Assessment (HN 4198) (Design)	\$2,000
10450035	WWIP	LAT	Hopewell Road Sewer Lateral Assessment (HN 9283) (Design)	\$2,000
10470009	WWIP	LAT	Markley Road Sewer Lateral Assessment (HN 1019) (Design)	\$2,500
10470031	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8217) (Design)	\$2,500
10470032	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8263) (Design)	\$2,500
10470033	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8253) (Design)	\$2,500
10470034	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8273) (Design)	\$2,500
11040190	WWIP	SRC	West Fork Creek Riparian Floodplain Restoration (Design)	\$7,300
11130015	WWIP	STY	Muddy Creek Watershed IWAP (Planning)	\$1,000,000
11142745	WWIP	SEP	CSO 488 Strategic Sewer Separation Phase A (Planning,Design,Easement)	\$1,615,800
11170035	WWIP	STY	Duck Creek IWAP (Planning)	\$1,000,000
11240020	WWIP	SRC	CSO 181 Real Time Control (Design)	\$21,400
11243141	WWIP	SRC	CSO 217 483 Source Control Phase B (Design)	\$61,100
10230125	ASSET	PSE	East Branch Muddy Creek Pump Station Upgrades (Design,Easement)	\$411,300
10240151	ASSET	FAC	Document Control Storage Enhancements (Design)	\$130,000
10240245	ASSET	FAC	Mill Creek WWTP Service Water (NPW) Reliability and Service Upgrade (Design)	\$19,300
10240275	ASSET	SSO	SSO 603 and 704 Improvements (Design)	\$30,000
10240291	ASSET	FAC	Mill Creek WWTP Solids Handling Improvements Phase 1 (Design)	\$52,900
10240320	ASSET	REP	Wilder Avenue Sewer Replacement (Design)	\$210,000
10240420	ASSET	REP	Freeland Avenue Area Sewer Replacement (Design,Easement)	\$128,100
10240465	ASSET	REP	Hosea Street Sewer Replacement (Design,Easement)	\$429,900
10240480	ASSET	FAC	MCWWTP Dewatering Polymer System Replacement (Design)	\$47,700
10240525	ASSET	REP	Victory Parkway Sewer Rehabilitation (Design)	\$106,400
10240590	ASSET	FAC	Mill Creek WWTP Main Substation Improvements (Design)	\$22,500
10240655	ASSET	SEP	CSO 449 Sewer Separation (Design,Easement)	\$143,600
10240665	ASSET	FAC	Mill Creek WWTP Septage Receiving Station Odor Control Improvements (Design)	\$178,800



**2017 CIP Projects**  
**Metropolitan Sewer District of Greater Cincinnati**  
**Planning/Design/Easement Funding Request (Exhibit A)**

<b>Project No</b>	<b>CIP Type</b>	<b>Project Type</b>	<b>Project Name</b>	<b>P/D/E Funds Requested</b>
10241820	ASSET	FAC	SSO 700 Facility Improvements (Design,Easement)	\$660,300
10242017	ASSET	STY	Water Quality Program for Mill Creek (Planning)	\$150,000
10260025	ASSET	PSE	South Clippinger Force Main Replacement and Pump Station Upgrade (Design,Easement)	\$444,000
10270007	ASSET	SEW	Dry Run Area Sewers Phase 2 Contract RB (Design)	\$30,000
10270008	ASSET	SEW	Dry Run Sewers - Contract 8M (Design)	\$20,600
10270165	ASSET	REP	Delta and Greist Sewer Replacement (Design,Easement)	\$297,700
10270170	ASSET	CSO	CSO 83 and 472 Dynamic Underflow Control (Design,Easement)	\$379,000
10270205	ASSET	SRC	Mt Washington Source Control Pilot (Planning)	\$300,000
10272017	ASSET	STY	Water Quality Program for Little Miami (Planning)	\$335,000
10280237	ASSET	ALW	Hydraulic Modeling 2017 (Planning)	\$715,000
10282017	ASSET	ALW	Minor CIP Project Planning 2017 (Planning)	\$1,200,000
10282117	ASSET	ALW	Major CIP Planning Allowance 2017 (Planning)	\$1,500,000
<b>50 Planning/Design/Easement Projects in 2017</b>				<b>\$ 19,950,800</b>

Draft

**FY 2017 MSD CIP Funding Request  
Metropolitan Sewer District of Greater Cincinnati  
Estimate of Construction  
Detailed Project Estimated Cost (Exhibit B)**

ID#	CIP#	Project Name	Location	Explanation/Description	Legislation Type	Resolution 1	Resolution 2	Resolution 3	Current Request	WWIP	AM	Proj Start	Proj End
10180217	NA	Main Sewer Renewal Program 2017	Throughout the MSD service area	This program supports internal rehabilitation and renewal of existing main sewers throughout the District as a cost effective alternative to open-cut (excavation) replacement. The scope of work for this program will include, but not limit itself to, cured-in-place lining, slip-lining, spin-casting, sprayed castings, and carbon filament wrapping. The sewer segments to be addressed under this program are identified through standardized visual PACP condition assessments, and are prioritized by risk considering likelihood and consequence of failure as well as opportunities for construction coordination.	Const	Approve - plans/ specs/ cost est.	Necessity/ Proceed	Authorize - advertise and bid	12,000,000.00	X		Jan 2017	Dec 2017
10180217	NA	Manhole Renewal Program 2017	Throughout the MSD service area	This program supports the renewal of structurally deficient manholes in the MSD wastewater collection system, and the installation of new manholes to support operation and maintenance of the wastewater collection system. Manhole renewal projects are identified by evaluating structural condition, consequence of failure, and opportunities for construction coordination. The scope of work for the program will include manhole repairs, replacement manholes, new manholes, and adjustments and chimney repairs completed in conjunction with paving projects.	Const	Approve - plans/ specs/ cost est.	Necessity/ Proceed	Authorize - advertise and bid	1,300,000.00	X		Jan 2017	Dec 2017
10280187	NA	WWT System Asset Renewal 2017	Throughout the MSD service area	This project provides appropriated funds to replace/improve wastewater treatment facility assets throughout the District using standardized condition assessment and reliability tools and methodologies. Defective assets, or portions of assets, will be discovered throughout the year either through preventative maintenance and the above mentioned condition assessment activities or after a failure.	Const	Approve - plans/ specs/ cost est.	Necessity/ Proceed	Authorize - advertise and bid	2,000,000.00		X	Jan 2017	Dec 2017
10280607	NA	Building Sewer Renewal Program 2017	Throughout the MSD service area	This program is necessary to cost effectively extend asset life while protecting and preserving public health and the environment. This program allows MSD to quickly and efficiently restore and maintain interrupted service while mitigating the risk of additional damages or losses. The scope of work for the program will include resolving emergency sewer repairs such as cave-ins, structurally failed building sewers, sewer overflows that may violate permits and regulations, and imminent danger to structures or real property. The scope of this project will also include all planned work associated with inspection port installations and rehabilitation of privately-owned building sewers within the public right-of-way or dedicated public sewer easements.	Const	Approve - plans/ specs/ cost est.	Necessity/ Proceed	Authorize - advertise and bid	5,000,000.00		X	Jan 2017	Dec 2017
10280717	NA	Critical Asset Management Projects 2017	Throughout the MSD service area	This allowance is to address critical asset management projects and equipment for the collection system, treatment plants, pumping stations, and wet weather facilities. This allowance fund is for projects that are larger asset renewal projects.	Const	Approve - plans/ specs/ cost est.	Necessity/ Proceed	Authorize - advertise and bid	10,000,000.00		X	Jan 2017	Dec 2017
10280917	NA	Wet Weather Facilities Asset Renewal 2017	Throughout the MSD service area	This project provides appropriated funds to replace or improve wet weather facility assets throughout the District using condition assessment and reliability tools and methodologies. Defective assets, or portions of assets, will be discovered throughout the year either through preventative maintenance, condition assessment activities, or after a failure.	Const	Approve - plans/ specs/ cost est.	Necessity/ Proceed	Authorize - advertise and bid	300,000.00		X	Jan 2017	Dec 2017
10281317	NA	Prioritized Wastewater Collection System Improvements 2017	Throughout the MSD service area	This program will allow the District to respond to sudden, unexpected wastewater collection system failures, complete planned repairs and improvements to high risk utility-owned assets, and complete prioritized system improvements through construction coordination projects to maintain acceptable levels of service at the lowest asset life-cycle cost. This program represents a consolidation of the former "Emergency Sewer" and "High Risk Asset Renewal" Asset Management allowances.	Const	Approve - plans/ specs/ cost est.	Necessity/ Proceed	Authorize - advertise and bid	12,000,000.00		X	Jan 2017	Dec 2017
<b>Total</b>									<b>\$ 42,600,000.00</b>				

**FY 2017 MSD CIP Funding Request  
Metropolitan Sewer District of Greater Cincinnati  
Estimate of Construction  
Detailed Project Estimated Cost (Exhibit B)**

ID#	CIP#	Project Name	Planning	Design	Pre-Construction Services	Miscellaneous Expense	Right Of Way	Construction	Contingency	Construction Services	Interest / Financing	Total
10180117	NA	Main Sewer Renewal Program 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000,000.00	\$ -	\$ 2,000,000.00	\$ -	\$ 12,000,000.00
10180217	NA	Manhole Renewal Program 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,200,000.00	\$ -	\$ 100,000.00	\$ -	\$ 1,300,000.00
10280187	NA	WWT System Asset Renewal 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,000,000.00	\$ -	\$ -	\$ -	\$ 2,000,000.00
10280607	NA	Building Sewer Renewal Program 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,750,000.00	\$ -	\$ 250,000.00	\$ -	\$ 5,000,000.00
10280717	NA	Critical Asset Management Projects 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,000,000.00	\$ -	\$ -	\$ -	\$ 10,000,000.00
10280917	NA	Wet Weather Facilities Asset Renewal 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 300,000.00	\$ -	\$ -	\$ -	\$ 300,000.00
10281317	NA	Prioritized Wastewater Collection System Improvements 2017	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,500,000.00	\$ -	\$ 500,000.00	\$ -	\$ 12,000,000.00
<b>Total</b>												<b>\$ 42,600,000.00</b>

Approved this \_\_\_\_\_ day of \_\_\_\_\_, 2016  
Board of County Commissioners  
Hamilton County, Ohio

\_\_\_\_\_  
Michael Pittinger, P.E.  
Sewers Chief Engineer, MSD  
Hamilton County Sanitary Engineer  
(for the purposes of the Metropolitan Sewer District of Greater Cincinnati  
as authorized in the Resolution of February 28, 2007, Comm. Minutes, Vol. 305, Images 4190-4191  
City of Cincinnati Department of Sewers

EXHIBIT C  
FY 2017 MSD CIP

Programmatic Contingency is calculated based upon a formula applied to activities to be performed and included in MSD's annual cash flow forecast for each active capital project. The following list of projects are included in the cash flow forecast and serve as the basis for the requested Programmatic Contingency amount. Programmatic Contingency can be utilized during any active phase of a project. All projects in this list are eligible for use with Programmatic Contingency.

<u>Project ID/Name</u>	<u>Project ID/Name</u>
10130740 Werk & Westbourne EHRT Facility	10199017 Wet Weather Program Management and Support Services 2017
10131180 Muddy Creek WWTP Dewatering Improvements	10199117 Hamilton County Utility Oversight and Coordination 2017
10131220 Glenview Pump Station Upgrade	10210010 Indian Creek WWTP Reliability and Service Upgrades
10131240 Muddy Creek WWTP Grit Improvements	10220054 Bruestle Avenue Pump Station Elimination
10141080 Ludlow and Lafayette Parallel Sewer	10220061 Whitewater Township Regional Sewer District SR 128 Sewer Exten
10142020 Daly Road Sewer Replacement	10221245 Taylor Creek WWTP Disinfection Upgrade
10143220 CSO 179 Sewer Separation	10230031 CSO 404,405,410,411 Outfall Reconstruction
10143920 CSO 194 High Point Sewer Separation	10230032 CSO 405 Outfall Reconstruction
10143940 CSO 195 Westwood Northern Sewer Separation	10230033 CSO 410 Outfall Reconstruction
10144880 Mill Creek WWTP Preliminary and Primary Treatment Improvement	10230034 CSO 411 Outfall Reconstruction
10170080 SSO 1000 Elimination	10230041 Westport Village PS Elimination
10170100 SSO 228 Elimination	10230060 Muddy Creek WWTP Sludge Processing Odor Control
10170176 Stanley Ave Lateral Relocations	10230065 Muddy Creek WWTP Electrical Upgrades
10170789 LMWWTP Planning Bundle	10230070 Muddy Creek WWTP-Primary Skimming/Sludge Removal System R
10170816 Little Miami WWTP Main Outfall Improvements	10230090 Barrington Hills, Barrington Hills BLK. F, Gil Volz, and Kirkridge Acre
10171580 CSO 54 Improvements	10230125 East Branch Muddy Creek Pump Station Upgrades
10171740 CSO 551 Sewer Separation	10230130 Dry Weather Channel for SS 937
10171862 CSO 470 and CSO 471 Sewer Separation Phase 3	10230135 Lower Muddy Creek Interceptor SSO Remediation
10171900 Eastern/Delta Sewer Separation Phase 3	10230150 Addyston Creek and Sewer Rehab
10180116 Main Sewer Renewal Program 2016	10230155 Darwin Avenue Sewer Backup Remediation (HN 3520)
10180117 Main Sewer Renewal Program 2017	10240010 Dellway Avenue Sewer Replacement
10180216 Manhole Renewal Program 2016	10240012 Sharon Industrial Park PS Replacement
10180217 Manhole Renewal Program 2017	10240018 CSO 125 Stream Separation
10180415 MPMP Development and Updates	10240021 CSO 217/483 Source Control - Phase C
10190216 Phase 2 WWIP Planning	10240027 Cora Avenue Sewer Replacement
10190316 Home Sewer Treatment System Extensions 2016	10240029 German Cemetery Sewer Replacement
10190317 Home Sewer Treatment System Eliminations 2017	10240052 MCWWTP Blower Energy Efficiency Upgrade
10199016 Wet Weather Program Management and Support Services 2016	10240054 DIW Office and Laboratory Improvements Phase 2
10240144 Millbrook # 2 Pump Station Upgrade	10240465 Hosea Street Sewer Replacement
10240150 Mt Airy Forest Sewer Replacement	10240470 Bahama Gardens Pump Station Upgrade and Force Main Replacem

EXHIBIT C  
FY 2017 MSD CIP

Programmatic Contingency is calculated based upon a formula applied to activities to be performed and included in MSD's annual cash flow forecast for each active capital project. The following list of projects are included in the cash flow forecast and serve as the basis for the requested Programmatic Contingency amount. Programmatic Contingency can be utilized during any active phase of a project. All projects in this list are eligible for use with Programmatic Contingency.

<u>Project ID/Name</u>	<u>Project ID/Name</u>
10240151 Document Control Storage Enhancements	10240475 Foraker Ave Sewer Replacement - Alms Pl to E. Terminus
10240167 Fairmount Avenue Sewer Replacement	10240480 MCWWTP Dewatering Polymer System Replacement
10240180 3934 Winding Way Sewer Replacement	10240490 Colerain Ave at Gordon St Sewer Replacement
10240185 Legends of Carpenters Run Pump Station Elimination	10240495 Wahl Terrace Sewer Replacement
10240190 E. Mitchell Avenue Sewer Replacement	10240500 Yoast Avenue Sewer Improvements
10240245 Mill Creek WWTP Service Water (NPW) Reliability and Service Upgrac	10240505 Mt. Pleasant Ave. Sewer Replacement
10240271 Lower Mill Creek HW/DW Protection	10240515 Mayhew and Leath Avenues Sewer Replacement
10240275 SSO 603 and 704 Improvements	10240520 Freeman Ave - Klotter to McMicken Sewer Replacement
10240291 Mill Creek WWTP Solids Handling Improvements Phase 1	10240525 Victory Parkway Sewer Rehabilitation
10240320 Wilder Avenue Sewer Replacement	10240526 Cypress St - Ashland Av to 250 feet east Sewer Replacement
10240325 Glen Landing Pump Station Improvements	10240540 Spring Grove Av, Township St. Sewer Improvements
10240330 Otte Avenue Sewer Replacement	10240545 Central Parkway Sewer Replacement (HN 2402)
10240335 3568 Bogart Avenue Sewer Replacement	10240550 Pardee Alley Sewer Replacement-Oswald Al to 200' north
10240340 Station Avenue Sewer Replacement	10240555 Kemper Mill Village Pump Station Upgrade
10240350 McKeone Avenue Sewer Replacement	10240560 Schulte Drive Sewer Replacement
10240360 Timbers Pump Station Elimination	10240565 Overflow Parking lot for MSDGC Engineering and Administration B
10240365 Quebec Road Sewer Replacement	10240575 MCWWTP Enhanced Incinerator Emission Controls
10240375 Carpenters Run Pump Station Upgrade	10240580 Quebec Heights Sewer Rehabilitation
10240380 CSO 005 Water Connection	10240581 Queen City and Cora Ave Sewer Rehabilitation
10240395 Winton Woods Diversion Gate Replacement	10240590 Mill Creek WWTP Main Substation Improvements
10240405 Ponderosa Woods Pump Station Elimination	10240635 Mill Creek WWTP Plant Influent and Headworks Odor Control
10240415 Carr Street Access Rehab	10240645 Mill Creek WWC Maintenance Shop Improvements
10240420 Freeland Avenue Area Sewer Replacement	10240650 Hackberry Street Sewer Replacement
10240430 Berkley Avenue Sewer Replacement	10240655 CSO 449 Sewer Separation
10240435 Pleasant Run Central Force Main Repairs	10240665 Mill Creek WWTP Septage Receiving Station Odor Control Improve
10240450 Vinton Street - Beekman to Liddell Street Sewer Replacement	10240685 Division of Industrial Waste Building Roof Replacement
10240455 Spring Grove Avenue Sewer Replacement and Rehabilitation	10240695 Mill Creek WWTP Odor Control Dispersion Model
10240700 Mill Creek WWTP Security Enhancements	10272017 Water Quality Program for Little Miami
10241320 Greenpine Acres Pump Station Elimination	10280114 SCADA System Installs and Upgrades
10241325 Montana Ave Sewer - Fermcroft to Mustang Dr.	10280124 CIP Project Planning

EXHIBIT C  
FY 2017 MSD CIP

Programmatic Contingency is calculated based upon a formula applied to activities to be performed and included in MSD's annual cash flow forecast for each active capital project. The following list of projects are included in the cash flow forecast and serve as the basis for the requested Programmatic Contingency amount. Programmatic Contingency can be utilized during any active phase of a project. All projects in this list are eligible for use with Programmatic Contingency.

<u>Project ID /Name</u>	<u>Project ID /Name</u>
10241820 SSO 700 Facility Improvements	10280186 WWT System Asset Renewal 2016
10241825 SSO 700 Operational Improvements	10280187 WWT System Asset Renewal 2017
10242017 Water Quality Program for Mill Creek	10280236 Hydraulic Modeling 2016
10250025 Huntington Pump Station Elimination	10280237 Hydraulic Modeling 2017
10250030 Polk Run UV System/Post Aeration Improvements	10280316 Emergency Sewer Repairs 2016
10250035 Polk Run Non-Potable Water Upgrades	10280505 Pump Station Telemetry System Upgrades
10260025 South Clipping Force Main Replacement and Pump Station Upgrade	10280516 High Risk Asset Renewal 2016
10270000 Dry Run Area Sewers Phase 1	10280606 Building Sewer Renewal Program 2016
10270005 Dry Run Area Sewers Phase 2	10280607 Building Sewer Renewal Program 2017
10270007 Dry Run Area Sewers Phase 2 Contract RB	10280700 Watershed Operational Data System
10270026 Camargo Canyon Pump Station Elimination	10280716 Critical Asset Management Projects 2016
10270110 Linwood Avenue Sewer Replacement	10280717 Critical Asset Management Projects 2017
10270120 Cath Calvary Cemetery Sewer Replacement	10280800 Asset Management System Implementation
10270125 Portsmouth Avenue Sewer Replacement	10280917 Wet Weather Facilities Asset Renewal 2017
10270135 Airport and Robb Ave Sewer Replacement	10281317 Prioritized Wastewater Collection System Improvements 2017
10270140 Grove Avenue Sewer Replacement	10282017 Minor CIP Project Planning 2017
10270145 Columbia Parkway at Delta Sewer Replacement	10282117 Major CIP Planning Allowance 2017
10270150 3981 Watterson Rd Sewer Replacement	10290145 Financial Systems Integration Efforts
10270160 Prospect Woods Pump Station Upgrade	10310005 Bridgetown Road Local Sewer (HNs 8477-8647)
10270165 Delta and Greist Sewer Replacement	10310006 Bridgetown Road Local Sewer (HNs 8768-8783)
10270170 CSO 83 and 472 Dynamic Underflow Control	10320012 Parrakeet Drive Local Sewer (HNs 6002-6068)
10270175 East Hill Ave Sewer Replacement	10320030 Sagebrush Lane, Susanna Drive & Yellowstone Drive Local Sewer
10270185 Paxton Ave at Linwood Ave Sewer Replacement	10320056 Ramblingridge Drive & Twinwillow Lane Local Sewer
10270190 Columbia Square Development Separation	10320058 Kern Drive & Springdale Road Local Sewer
10270195 Little Miami WWTP Incineration Improvements	10320060 Mapleknoll Drive Local Sewer (HNs 9420-9562)
10270205 Mt Washington Source Control Pilot	10320065 Reemelin Road Local Sewer (HNs 3489-3860)
10320070 Crestnoll Lane Local Sewer (HN 3491-3609)	10470033 Woodruff Road Sewer Lateral Assessment (HN 8253)
10320075 Old Blue Rock Road Local Sewer (HN 5240-5327)	10470034 Woodruff Road Sewer Lateral Assessment (HN 8273)
10320080 Russell Heights Drive Local Sewer	11040010 Rapid Run Park Source Control

EXHIBIT C  
FY 2017 MSD CIP

Programmatic Contingency is calculated based upon a formula applied to activities to be performed and included in MSD's annual cash flow forecast for each active capital project. The following list of projects are included in the cash flow forecast and serve as the basis for the requested Programmatic Contingency amount. Programmatic Contingency can be utilized during any active phase of a project. All projects in this list are eligible for use with Programmatic Contingency.

<u>Project ID/Name</u>	<u>Project ID/Name</u>
10320085 Brierly Creek Road Local Sewer (HNs 6040-6100)	11040190 West Fork Creek Riparian Floodplain Restoration
10330006 Devils Backbone Road Sewer Local (HN 1234 & 1250)	11042800 Urban Water Grant, North Fairmount (Denham/Carll Ravine ESP)
10330015 Werk Road Local Sewer (HN 5544-5686)	11042801 North Fairmount Bioswale Project
10330037 Upper Road Local Sewer (HNs 6340-6434)	11130015 Muddy Creek Watershed IWAP
10340021 Carpol Avenue, Honeywell Avenue & E. Kemper Road Local Sewer	11140010 SSO 700 Integrated Watershed Action Plan
10340024 North Bend Road Local Sewer (HNs 504-565)	11142741 CSO 488/490 I-75 Reconstruction Coordination
10350020 Deerfield Road Local Sewer (HNs 11551-11662)	11142745 CSO 488 Strategic Sewer Separation Phase A
10370025 Kenwood Hills Local Sewer	11142750 Brent Spence Bridge I-75 Reconstruction Coordination
10370032 Coldstream Drive & Asbury Road Local Sewer	11143100 CSO 30 Stream Separation Phase A
10370045 Mt. Carmel/Vicbarb/Appleblossom Local Sewer	11143260 CSO 21 I-75 Reconstruction Coordination
10370050 Stewart Road Local Sewer (HNs 5706 - 5710)	11170035 Duck Creek IWAP
10420035 Jessup Road Sewer Lateral Assessment (HN 5950)	11240000 Lick Run Valley Conveyance System
10420040 W Galbraith Road Sewer Lateral Assessment (HN 4198)	11240001 Lick Run Property Demolitions
10430020 Foley Road Sewer Laterals (HNS 5579, 5583 - 5599, 5602)	11240010 Sunset Ave, Sunset Lane and Rapid Run Pike Sewer Separation
10440060 Pottinger Road Sewer Lateral Assessment (HN 10444)	11240020 CSO 181 Real Time Control
10440065 Poole Road Sewer Lateral Assessment (HN 3759)	11240030 Wyoming and Minion Avenues Sewer Separation
10440070 Acreview Drive Sewer Lateral Assessment (HN 1602)	11240090 White Street Sewer Separation
10450015 Enyart Road Sewer Lateral Assessments (HN 11258)	11240110 Quebec Rd Sewer Separation
10450017 Enyart Road Sewer Lateral Assessments (HN 11262)	11240130 Queen City Ave Sewer Separation Phase 2
10450025 E. Kemper Road Sewer Lateral Assessment (HN 269)	11240150 Queen City and Cora Avenues R/W Sewer Separation
10450035 Hopewell Road Sewer Lateral Assessment (HN 9283)	11240170 Quebec Heights Sewer Separation
10460000 Drake Road Sewer Lateral Assessment (HN 7315)	11240270 Queen City Ave Sewer Separation Phase 1
10470009 Markley Road Sewer Lateral Assessment (HN 1019)	11242841 CSO 12 Sewer Separation Phase A.2
10470025 Woodruff Road Sewer Lateral Assessment (HN 8237)	11242843 CSO 12 Sewer Separation Phase A.4a - I-75 to Colerain Ave
10470031 Woodruff Road Sewer Lateral Assessment (HN 8217)	11242846 CSO 12 Sewer Separation Phase A.4b - Colerain to Spring Grove Av
10470032 Woodruff Road Sewer Lateral Assessment (HN 8263)	11243140 CSO 217/483 Source Control Phase A
11243141 CSO 217/483 Source Control Phase B	
11243142 CSO 217/483 Source Control Phase A2	
11243840 CSO 127 and 128 Stream Separations	

EXHIBIT C  
FY 2017 MSD CIP

Programmatic Contingency is calculated based upon a formula applied to activities to be performed and included in MSD's annual cash flow forecast for each active capital project. The following list of projects are included in the cash flow forecast and serve as the basis for the requested Programmatic Contingency amount. Programmatic Contingency can be utilized during any active phase of a project. All projects in this list are eligible for use with Programmatic Contingency.

<u>Project ID/Name</u>	<u>Project ID/Name</u>
11530000	Upper Muddy Creek Interceptor Replacement
11530001	Upper Muddy Creek Interceptor Replacement Contract A
11540001	Benson Street Sewer Replacement Phase 2
12240350	Mill Creek Interceptor – Specific Basin Study



## 2017 CIP Projects

### Metropolitan Sewer District of Greater Cincinnati

<b>Project ID</b>	<b>Project Category</b>	<b>Project Type</b>	<b>Project Name</b>	<b>2017 Total Requested</b>	<b>Total Project Cost</b>
10130740	WWIP	FAC	Werk & Westbourne EHRT Facility (Construction)	\$1,583,090	\$48,606,777
10131220	WWIP	PSE	Glenview Pump Station Upgrade (Construction)	\$578,700	\$1,290,694
10141080	WWIP	SEP	Ludlow and Lafayette Parallel Sewer (Construction)	\$2,034,800	\$2,472,022
10170080	WWIP	SSO	SSO 1000 Elimination (Construction)	\$925,800	\$1,147,200
10170100	WWIP	SSO	SSO 228 Elimination (Construction)	\$2,113,986	\$2,509,586
10170176	WWIP	REP	Stanley Ave Lateral Relocations (Construction)	\$155,400	\$300,300
10171580	WWIP	CSO	CSO 54 Improvements (Construction)	\$232,700	\$338,100
10171740	WWIP	SEP	CSO 551 Sewer Separation (Easement,Construction)	\$1,580,900	\$2,067,800
10180117	WWIP	ALW	Main Sewer Renewal Program 2017 (Construction)	\$12,000,000	\$12,000,000
10180217	WWIP	ALW	Manhole Renewal Program 2017 (Construction)	\$1,300,000	\$1,300,000
10180415	WWIP	ALW	MPMP Development and Updates (Design)	\$250,000	\$250,000
10190216	WWIP	ALW	Phase 2 WWIP Planning (Planning)	\$1,500,000	\$1,500,000
10190317	WWIP	ALW	Home Sewer Treatment System Eliminations 2017 (Planning)	\$290,000	\$290,000
10199017	WWIP	ALW	Wet Weather Program Management and Support Services 2017 (Design)	\$3,100,000	\$3,100,000
10199117	WWIP	ALW	Hamilton County Utility Oversight and Coordination 2017 (Design)	\$2,700,000	\$2,700,000
10240018	WWIP	SRC	CSO 125 Stream Separation (Construction)	\$10,034,200	\$13,999,296
10240021	WWIP	SRC	CSO 217 483 Source Control - Phase C (Design,Construction)	\$4,963,340	\$6,643,080
10320058	WWIP	LOC	Kern Drive & Springdale Road Local Sewer (Construction)	\$1,079,255	\$1,276,141
10320065	WWIP	LOC	Reemelin Road Local Sewer (HNs 3489-3860) (Construction)	\$1,116,100	\$1,496,345
10320070	WWIP	LOC	Crestnoll Lane Local Sewer (HN 3491-3609) (Construction)	\$907,800	\$1,214,668
10320075	WWIP	LOC	Old Blue Rock Road Local Sewer (HN 5240-5327) (Construction)	\$182,100	\$381,004
10330006	WWIP	LOC	Devils Backbone Road Sewer Local (HN 1234 & 1250) (Design,Easement)	\$58,800	\$321,300



## 2017 CIP Projects

### Metropolitan Sewer District of Greater Cincinnati

<b>Project ID</b>	<b>Project Category</b>	<b>Project Type</b>	<b>Project Name</b>	<b>2017 Total Requested</b>	<b>Total Project Cost</b>
10330015	WWIP	LOC	Werk Road Local Sewer (HN 5544-5686) (Design,Construction)	\$703,500	\$876,684
10330037	WWIP	LOC	Upper Road Local Sewer (HNs 6340-6434) (Construction)	\$268,235	\$366,178
10340024	WWIP	LOC	North Bend Road Local Sewer (HNs 504-565) (Design,Construction)	\$429,700	\$637,740
10370050	WWIP	LOC	Stewart Road Local Sewer (HNs 5706 - 5710) (Design)	\$39,200	\$179,800
10420035	WWIP	LAT	Jessup Road Sewer Lateral Assessment (HN 5950) (Design,Construction)	\$47,000	\$47,000
10420040	WWIP	LAT	W Galbraith Road Sewer Lateral Assessment (HN 4198) (Design,Construction)	\$52,000	\$52,000
10440055	WWIP	LAT	E. Galbraith Road Sewer Lateral Assessment (HN 4454) (Construction)	\$45,400	\$47,400
10450035	WWIP	LAT	Hopewell Road Sewer Lateral Assessment (HN 9283) (Design,Construction)	\$52,000	\$52,000
10470009	WWIP	LAT	Markley Road Sewer Lateral Assessment (HN 1019) (Design,Construction)	\$124,000	\$124,000
10470025	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8237) (Construction)	\$43,500	\$72,300
10470031	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8217) (Design,Construction)	\$46,000	\$46,000
10470032	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8263) (Design,Construction)	\$45,000	\$45,000
10470033	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8253) (Design,Construction)	\$46,000	\$46,000
10470034	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8273) (Design,Construction)	\$45,000	\$45,000
11040190	WWIP	SRC	West Fork Creek Riparian Floodplain Restoration (Design,Construction)	\$295,300	\$295,300
11130015	WWIP	STY	Muddy Creek Watershed IWAP (Planning)	\$1,000,000	\$1,000,000
11142745	WWIP	SEP	CSO 488 Strategic Sewer Separation Phase A (Planning,Design,Easement)	\$1,615,800	\$8,014,650



## 2017 CIP Projects

### Metropolitan Sewer District of Greater Cincinnati

<b>Project ID</b>	<b>Project Category</b>	<b>Project Type</b>	<b>Project Name</b>	<b>2017 Total Requested</b>	<b>Total Project Cost</b>
11143260	WWIP	SEP	CSO 21 I-75 Reconstruction Coordination (Construction)	\$2,988,600	\$3,873,666
11170035	WWIP	STY	Duck Creek IWAP (Planning)	\$1,000,000	\$1,000,000
11240000	WWIP	SRC	Lick Run Valley Conveyance System (Construction)	\$112,076,557	\$167,193,866
11240020	WWIP	SRC	CSO 181 Real Time Control (Design,Construction)	\$3,733,200	\$4,528,786
11240110	WWIP	SEP	Quebec Rd Sewer Separation (Construction)	\$6,726,900	\$9,071,335
11240130	WWIP	SEP	Queen City Ave Sewer Separation Phase 2 (Construction)	\$12,343,100	\$16,574,898
11243140	WWIP	SEP	CSO 217 483 Source Control Phase A (Construction)	\$3,873,333	\$8,732,807
11243141	WWIP	SRC	CSO 217 483 Source Control Phase B (Design,Construction)	\$11,846,100	\$15,131,323
11243142	WWIP	SRC	CSO 217 483 Source Control Phase A2 (Construction)	\$7,283,000	\$7,302,000
11530001	WWIP	REP	Upper Muddy Creek Interceptor Replacement Contract A (Construction)	\$1,352,100	\$1,352,100
13090000	OTHER	PRG	Programmatic Contingency (Design)	\$10,000,000	\$54,843,057
10220054	ASSET	PSE	Bruestle Avenue Pump Station Elimination (Construction)	\$702,200	\$988,084
10220061	ASSET	SEW	Whitewater Township Regional Sewer District SR 128 Sewer Extension (Construction)	\$6,458,400	\$7,895,900
10230041	ASSET	PSE	Westport Village PS Elimination (Construction)	\$1,042,600	\$1,416,562
10230125	ASSET	PSE	East Branch Muddy Creek Pump Station Upgrades (Design,Easement)	\$411,300	\$2,867,841
10230155	ASSET	SEP	Darwin Avenue Sewer Backup Remediation (HN 3520) (Construction)	\$76,300	\$221,300
10240029	ASSET	REP	German Cemetery Sewer Replacement (Construction)	\$741,200	\$1,106,493
10240151	ASSET	FAC	Document Control Storage Enhancements (Design,Construction)	\$5,308,000	\$5,565,411
10240245	ASSET	FAC	Mill Creek WWTP Service Water (NPW) Reliability and Service Upgrade (Design,Construction)	\$3,812,200	\$4,485,943
10240275	ASSET	SSO	SSO 603 and 704 Improvements (Design,Construction)	\$1,729,900	\$9,252,481
10240291	ASSET	FAC	Mill Creek WWTP Solids Handling Improvements Phase 1 (Design,Construction)	\$19,468,300	\$21,743,157



## 2017 CIP Projects

### Metropolitan Sewer District of Greater Cincinnati

Project ID	Project Category	Project Type	Project Name	2017 Total Requested	Total Project Cost
10240320	ASSET	REP	Wilder Avenue Sewer Replacement (Design)	\$210,000	\$794,118
10240350	ASSET	REP	McKeone Avenue Sewer Replacement (Construction)	\$161,300	\$240,906
10240365	ASSET	REP	Quebec Road Sewer Replacement (Construction)	\$427,400	\$554,456
10240375	ASSET	PSE	Carpenters Run Pump Station Upgrade (Construction)	\$513,100	\$780,939
10240405	ASSET	PSE	Ponderosa Woods Pump Station Elimination (Construction)	\$299,900	\$512,445
10240420	ASSET	REP	Freeland Avenue Area Sewer Replacement (Design,Easement)	\$128,100	\$243,965
10240430	ASSET	REP	Berkley Avenue Sewer Replacement (Construction)	\$728,860	\$956,681
10240455	ASSET	REP	Spring Grove Avenue Sewer Replacement and Rehabilitation (Construction)	\$550,917	\$695,313
10240465	ASSET	REP	Hosea Street Sewer Replacement (Design,Easement)	\$429,900	\$2,889,732
10240475	ASSET	REP	Foraker Ave Sewer Replacement - Alms Pl to E. Terminus (Construction)	\$141,700	\$229,434
10240480	ASSET	FAC	MCWWTP Dewatering Polymer System Replacement (Design,Construction)	\$6,641,900	\$6,716,900
10240515	ASSET	REP	Mayhew and Leath Avenues Sewer Replacement (Construction)	\$533,700	\$689,075
10240525	ASSET	REP	Victory Parkway Sewer Rehabilitation (Design)	\$106,400	\$468,707
10240526	ASSET	REP	Cypress St - Ashland Av to 250 feet east Sewer Replacement (Construction)	\$215,300	\$282,300
10240550	ASSET	REP	Pardee Alley Sewer Replacement-Oswald A1 to 200' north (Construction)	\$209,900	\$378,253
10240555	ASSET	PSE	Kemper Mill Village Pump Station Upgrade (Construction)	\$687,323	\$1,056,042
10240565	ASSET	FAC	Overflow Parking lot for MSDGC Engineering and Administration Buildings (Construction)	\$527,500	\$532,500
10240590	ASSET	FAC	Mill Creek WWTP Main Substation Improvements (Design,Construction)	\$7,610,100	\$7,929,200
10240635	ASSET	FAC	Mill Creek WWTP Plant Influent and Headworks Odor Control (Construction)	\$1,259,000	\$1,468,200
10240645	ASSET	FAC	Mill Creek WWC Maintenance Shop Improvements (Construction)	\$1,681,665	\$1,830,421



## 2017 CIP Projects

### Metropolitan Sewer District of Greater Cincinnati

Project ID	Project Category	Project Type	Project Name	2017 Total Requested	Total Project Cost
10240655	ASSET	SEP	CSO 449 Sewer Separation (Design,Easement)	\$143,600	\$699,000
10240665	ASSET	FAC	Mill Creek WWTP Septage Receiving Station Odor Control Improvements (Design,Construction)	\$1,143,400	\$1,143,400
10241820	ASSET	FAC	SSO 700 Facility Improvements (Design,Easement)	\$660,300	\$8,928,706
10242017	ASSET	STY	Water Quality Program for Mill Creek (Planning)	\$150,000	\$250,000
10250030	ASSET	FAC	Polk Run UV System Post Aeration Improvements (Construction)	\$1,669,000	\$1,910,956
10250035	ASSET	FAC	Polk Run Non-Potable Water Upgrades (Construction)	\$278,000	\$384,663
10260025	ASSET	PSE	South Clippinger Force Main Replacement and Pump Station Upgrade (Design,Easement)	\$444,000	\$1,424,700
10270007	ASSET	SEW	Dry Run Area Sewers Phase 2 Contract RB (Design,Construction)	\$7,187,500	\$7,187,500
10270008	ASSET	SEW	Dry Run Sewers - Contract 8M (Design,Construction)	\$5,352,100	\$5,352,100
10270150	ASSET	REP	3981 Watterson Rd Sewer Replacement (Construction)	\$184,400	\$327,568
10270160	ASSET	PSE	Prospect Woods Pump Station Upgrade (Construction)	\$854,537	\$1,182,236
10270165	ASSET	REP	Delta and Greist Sewer Replacement (Design,Easement)	\$297,700	\$1,544,115
10270170	ASSET	CSO	CSO 83 and 472 Dynamic Underflow Control (Design,Easement)	\$379,000	\$3,206,835
10270205	ASSET	SRC	Mt Washington Source Control Pilot (Planning)	\$300,000	\$300,000
10272017	ASSET	STY	Water Quality Program for Little Miami (Planning)	\$335,000	\$555,000
10280187	ASSET	ALW	WWT System Asset Renewal 2017 (Construction)	\$2,000,000	\$2,000,000
10280237	ASSET	ALW	Hydraulic Modeling 2017 (Planning)	\$715,000	\$715,000
10280607	ASSET	ALW	Building Sewer Renewal Program 2017 (Construction)	\$5,000,000	\$5,000,000
10280717	ASSET	ALW	Critical Asset Management Projects 2017 (Construction)	\$10,000,000	\$10,000,000
10280917	ASSET	ALW	Wet Weather Facilities Asset Renewal 2017 (Construction)	\$300,000	\$300,000
10281317	ASSET	ALW	Prioritized Wastewater Collection System Improvements 2017 (Construction)	\$12,000,000	\$12,000,000



## 2017 CIP Projects

### Metropolitan Sewer District of Greater Cincinnati

<b>Project ID</b>	<b>Project Category</b>	<b>Project Type</b>	<b>Project Name</b>	<b>2017 Total Requested</b>	<b>Total Project Cost</b>
10282017	ASSET	ALW	Minor CIP Project Planning 2017 (Planning)	\$1,200,000	\$1,200,000
10282117	ASSET	ALW	Major CIP Planning Allowance 2017 (Planning)	\$1,500,000	\$1,500,000
<b>103 CIP Projects for 2017</b>				<b>\$341,715,398</b>	<b>\$558,659,741</b>

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## ANNUAL CIP LEGISLATION ASSUMPTIONS

**The purpose of this page is to provide readers with very broad and high-level assumptions pertaining to the MSD annual CIP legislation. For all in-depth assumptions the reader should refer to the MSD Financial Analysis Manual.**

### **Escalation, Inflation, and Labor Inflation**

Per MSD's Financial Analysis Manual (which is updated annually):

- a. Escalation = 3.5%
- b. Inflation = 3.5%
- c. Labor inflation = 3.0%

### **Planning / Study**

The cost for planning or study, during any stage of the planning phase, by MSD personnel or by consultant contract.

### **Design**

The cost for design during the design phase by MSD personnel or by consultant contract.

### **Pre Construction Services**

The cost of project manager and other personnel costs performing support functions during the planning and design phases.

### **Miscellaneous Expense**

The cost of all permit fees paid directly by MSD during the design phase. These costs include, but are not limited to, PTI, street opening permit, building permits, 401 permits. In addition utility relocations if not handled during construction.

### **Right of Way**

The cost of easement acquisition by City Real Estate personnel, professional services, for appraisal and title opinions, appropriation costs, court costs, and compensation paid to property owners for easements during the design phase.

### **Construction**

The bid cost to construct the project as estimated by the engineer including startup and commissioning if required for project.

### **Construction Services**

The cost of project management, construction management, construction inspection, field engineering and other personnel costs performing support function during the construction phase.

### **Interest/Financing**

The cost of interest charged prior to the asset being placed in service. This is only applied to projects that have a prospective borrowing, such as the projects financed through the OEPA low interest loan program.

### **Program Contingency**

Contingency is utilized in any activity to cover unforeseen costs and for bids above the amount legislated for construction. The Programmatic Contingency level is calculated based on a formula found in the MSD Financial Policy manual.

### **2019, 2020 and 2021 CIP**

The schedule for the Phase 2 WWIP remains under development by the City and County in preparation for anticipated regulatory discussions. Individual projects to be advanced are subject to change pending on-going engineering considerations. More detailed information will be presented to the public in early 2017 prior to the June 2017 Consent Decree Phase 2 Schedule Submittal to USEPA. Due to the evolving nature of these evaluations and their direct impact on future regulatory compliance, the high level information presented herein is for order of magnitude budget forecasting purposes only.

# **2017 WWIP Projects**

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## 2017 Projects

### Metropolitan Sewer District of Greater Cincinnati

### WWIP Projects

Project ID	CIP Type	Project Type	Project Name	MSD	Other	Total	Page
10130740	WWIP	FAC	Werk & Westbourne EHRT Facility (Construction)	\$1,583,090	\$0	\$1,583,090	24
10131220	WWIP	PSE	Glenview Pump Station Upgrade (Construction)	\$578,700	\$0	\$578,700	25
10141080	WWIP	SEP	Ludlow and Lafayette Parallel Sewer (Construction)	\$2,034,800	\$0	\$2,034,800	26
10170080	WWIP	SSO	SSO 1000 Elimination (Construction)	\$925,800	\$0	\$925,800	27
10170100	WWIP	SSO	SSO 228 Elimination (Construction)	\$2,113,986	\$0	\$2,113,986	28
10170176	WWIP	REP	Stanley Ave Lateral Relocations (Construction)	\$155,400	\$0	\$155,400	29
10171580	WWIP	CSO	CSO 54 Improvements (Construction)	\$232,700	\$0	\$232,700	30
10171740	WWIP	SEP	CSO 551 Sewer Separation (Easement,Construction)	\$1,580,900	\$0	\$1,580,900	31
10180117	WWIP	ALW	Main Sewer Renewal Program 2017 (Construction)	\$12,000,000	\$0	\$12,000,000	32
10180217	WWIP	ALW	Manhole Renewal Program 2017 (Construction)	\$1,300,000	\$0	\$1,300,000	33
10180415	WWIP	ALW	MPMP Development and Updates (Design)	\$250,000	\$0	\$250,000	34
10190216	WWIP	ALW	Phase 2 WWIP Planning (Planning)	\$1,500,000	\$0	\$1,500,000	35
10190317	WWIP	ALW	Home Sewer Treatment System Eliminations 2017 (Planning)	\$290,000	\$0	\$290,000	36
10199017	WWIP	ALW	Wet Weather Program Management and Support Services 2017 (Design)	\$3,100,000	\$0	\$3,100,000	37
10199117	WWIP	ALW	Hamilton County Utility Oversight and Coordination 2017 (Design)	\$2,700,000	\$0	\$2,700,000	38
10240018	WWIP	SRC	CSO 125 Stream Separation (Construction)	\$10,034,200	\$0	\$10,034,200	39
10240021	WWIP	SRC	CSO 217 483 Source Control - Phase C (Design,Construction)	\$4,963,340	\$0	\$4,963,340	40
10320058	WWIP	LOC	Kern Drive & Springdale Road Local Sewer (Construction)	\$1,079,255	\$0	\$1,079,255	41
10320065	WWIP	LOC	Reemelin Road Local Sewer (HNs 3489-3860) (Construction)	\$1,116,100	\$0	\$1,116,100	42
10320070	WWIP	LOC	Crestnoll Lane Local Sewer (HN 3491-3609) (Construction)	\$907,800	\$0	\$907,800	43
10320075	WWIP	LOC	Old Blue Rock Road Local Sewer (HN 5240-5327) (Construction)	\$182,100	\$0	\$182,100	44
10330006	WWIP	LOC	Devils Backbone Road Sewer Local (HN 1234 & 1250) (Design,Easement)	\$58,800	\$0	\$58,800	45
10330015	WWIP	LOC	Werk Road Local Sewer (HN 5544-5686) (Design,Construction)	\$703,500	\$0	\$703,500	46
10330037	WWIP	LOC	Upper Road Local Sewer (HNs 6340-6434) (Construction)	\$268,235	\$0	\$268,235	47
10340024	WWIP	LOC	North Bend Road Local Sewer (HNs 504-565) (Design,Construction)	\$429,700	\$0	\$429,700	48
10370050	WWIP	LOC	Stewart Road Local Sewer (HNs 5706 - 5710) (Design)	\$39,200	\$0	\$39,200	49



## 2017 Projects

### Metropolitan Sewer District of Greater Cincinnati

### WWIP Projects

Project ID	CIP Type	Project Type	Project Name	MSD	Other	Total	Page
10420035	WWIP	LAT	Jessup Road Sewer Lateral Assessment (HN 5950) (Design,Construction)	\$47,000	\$0	\$47,000	50
10420040	WWIP	LAT	W Galbraith Road Sewer Lateral Assessment (HN 4198) (Design,Construction)	\$52,000	\$0	\$52,000	51
10440055	WWIP	LAT	E. Galbraith Road Sewer Lateral Assessment (HN 4454) (Construction)	\$45,400	\$0	\$45,400	52
10450035	WWIP	LAT	Hopewell Road Sewer Lateral Assessment (HN 9283) (Design,Construction)	\$52,000	\$0	\$52,000	53
10470009	WWIP	LAT	Markley Road Sewer Lateral Assessment (HN 1019) (Design,Construction)	\$124,000	\$0	\$124,000	54
10470025	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8237) (Construction)	\$43,500	\$0	\$43,500	55
10470031	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8217) (Design,Construction)	\$46,000	\$0	\$46,000	56
10470032	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8263) (Design,Construction)	\$45,000	\$0	\$45,000	57
10470033	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8253) (Design,Construction)	\$46,000	\$0	\$46,000	58
10470034	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8273) (Design,Construction)	\$45,000	\$0	\$45,000	59
11040190	WWIP	SRC	West Fork Creek Riparian Floodplain Restoration (Design,Construction)	\$295,300	\$0	\$295,300	60
11130015	WWIP	STY	Muddy Creek Watershed IWAP (Planning)	\$1,000,000	\$0	\$1,000,000	61
11142745	WWIP	SEP	CSO 488 Strategic Sewer Separation Phase A (Planning,Design,Easement)	\$1,615,800	\$0	\$1,615,800	62
11143260	WWIP	SEP	CSO 21 I-75 Reconstruction Coordination (Construction)	\$2,988,600	\$0	\$2,988,600	63
11170035	WWIP	STY	Duck Creek IWAP (Planning)	\$1,000,000	\$0	\$1,000,000	64
11240000	WWIP	SRC	Lick Run Valley Conveyance System (Construction)	\$112,076,557	\$0	\$112,076,557	65
11240020	WWIP	SRC	CSO 181 Real Time Control (Design,Construction)	\$3,733,200	\$0	\$3,733,200	66
11240110	WWIP	SEP	Quebec Rd Sewer Separation (Construction)	\$6,726,900	\$0	\$6,726,900	67
11240130	WWIP	SEP	Queen City Ave Sewer Separation Phase 2 (Construction)	\$12,343,100	\$0	\$12,343,100	68
11243140	WWIP	SEP	CSO 217 483 Source Control Phase A (Construction)	\$3,873,333	\$0	\$3,873,333	69
11243141	WWIP	SRC	CSO 217 483 Source Control Phase B (Design,Construction)	\$11,846,100	\$0	\$11,846,100	70
11243142	WWIP	SRC	CSO 217 483 Source Control Phase A2 (Construction)	\$7,283,000	\$0	\$7,283,000	71
11530001	WWIP	REP	Upper Muddy Creek Interceptor Replacement Contract A (Construction)	\$1,352,100	\$0	\$1,352,100	72



**2017 Projects**  
**Metropolitan Sewer District of Greater Cincinnati**  
**WWIP Projects**

<b>Project ID</b>	<b>CIP Type</b>	<b>Project Type</b>	<b>Project Name</b>	<b>MSD</b>	<b>Other</b>	<b>Total</b>	<b>Page</b>
<b>Total Cost for 49 WWIP CIP Projects</b>				<b>\$216,807,496</b>	<b>\$0</b>	<b>\$216,807,496</b>	

Draft

# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Werk & Westbourne EHRT Facility		
Project ID	10130740	CIP Number	1995-47
Project Type	Treatment Facility	Sewer Number	3834

## Purpose and Justification

This project is required by the Global Consent Decree. This project will remediate frequent health, odor, and aesthetic problems in the neighboring area caused by wet weather discharges from Combined Sewer Overflow (CSO) 522. The project will greatly improve the quality of water being discharged to Schaible Creek during wet weather events. The Werk & Westbourne Enhanced High Rate Treatment (EHRT) facility will serve as a demonstration to assess the effectiveness of EHRT technology for this specific application.

## Impact to Operating Budget

MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.

## Description and Location

This project includes construction of a 35 million gallon per day chemically enhanced high rate treatment facility to provide storage, settling, and screening of combined sewage discharges from CSO 522 located at the intersection of Werk Road and Westbourne Drive in the Muddy Creek basin in Green Township, Hamilton County, Ohio.

The original project cost equals the WWIP estimate escalated to current schedule.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$1,982,904	\$1,265,525	\$0	\$0	\$1,265,525
Design	\$1,982,904	\$7,276,318	\$0	\$0	\$7,276,318
Pre-Construction Services	\$1,189,742	\$468,657	\$0	\$0	\$468,657
Miscellaneous Expense	\$828,015	\$297,500	\$0	\$0	\$297,500
Right-of-Way	\$501,756	\$563,100	\$0	\$0	\$563,100
Construction	\$20,383,574	\$32,241,473	\$0	\$0	\$32,241,473
Program Management	\$0	\$597,214	\$0	\$0	\$597,214
Construction Services	\$2,070,037	\$3,106,000	\$1,583,090	\$0	\$4,689,090
Interest / Financing	\$1,035,013	\$1,207,900	\$0	\$0	\$1,207,900
<b>Total</b>	<b>\$29,973,945</b>	<b>\$47,023,687</b>	<b>\$1,583,090</b>	<b>\$0</b>	<b>\$48,606,777</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$47,023,687	\$1,583,090	\$0	\$0	\$0	\$0	\$48,606,777

## Prior Legislation Action

Oct 2000, Dec 2006, Jan 2007, Dec 2009, Dec 2010, Mar 2011, Jan 2014, May 2014, Mar 2015, Jul



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Glenview Pump Station Upgrade

Project ID 10131220 CIP Number 2006-37  
 Project Type Pump Station Improvement/Elim Sewer Number 5783

## Purpose and Justification

This project will upgrade the existing Glenview pump station which has deteriorated beyond its useful life and is not capable of handling wet weather flows. This project has the ability to reduce or possibly eliminate an existing sanitary sewer overflow. (CSO 522) This is a consent decree Phase 1 required project.

## Impact to Operating Budget

None

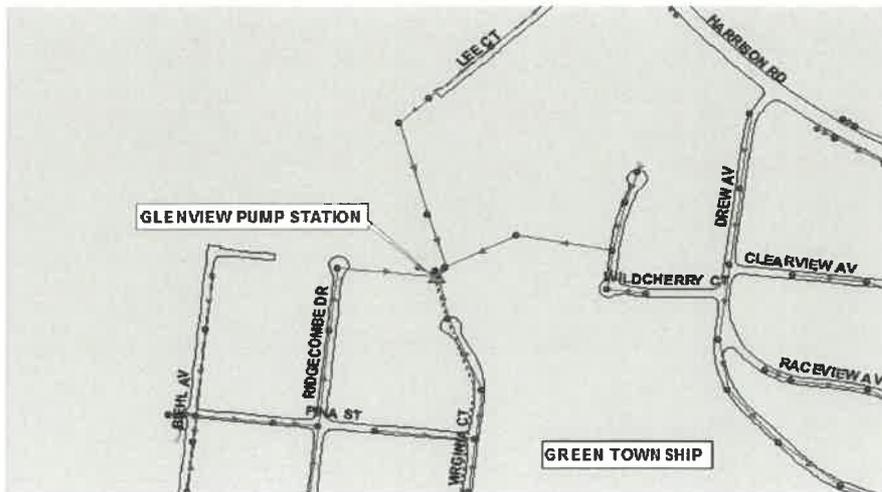
## Description and Location

This project will install a new 570 GPM pump station northeast of the current Glenview Pump Station. Work includes demolition of the existing pump station, installation of approximately 16 feet of a new 18" gravity sewer from existing wet well to the new wet well and 21 feet of new 6" force main from the new valve vault to the existing force main. This project is located in Green Township.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$188,000	\$327,722	\$0	\$0	\$327,722
Pre-Construction Services	\$44,000	\$44,000	\$0	\$0	\$44,000
Miscellaneous Expense	\$30,000	\$30,000	\$0	\$0	\$30,000
Right-of-Way	\$300,000	\$274,778	\$0	\$0	\$274,778
Construction	\$1,171,000	\$0	\$501,500	\$0	\$501,500
Program Management	\$0	\$35,494	\$0	\$0	\$35,494
Construction Services	\$67,000	\$0	\$77,200	\$0	\$77,200
Interest / Financing	\$38,000	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$1,838,000</b>	<b>\$711,994</b>	<b>\$578,700</b>	<b>\$0</b>	<b>\$1,290,694</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$711,994	\$578,700	\$0	\$0	\$0	\$1,290,694

**Prior Legislation Action**  
 Jun 2011, Feb 2013, Jan 2014, May 2014



# 2017 Capital Budget and Capital Improvement Program

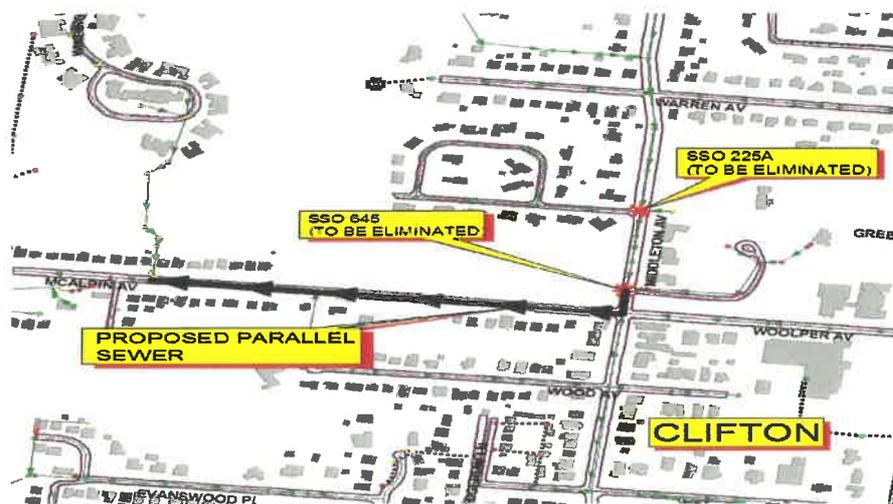
Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Ludlow and Lafayette Parallel Sewer		
<b>Project ID</b>	<b>10141080</b>	<b>CIP Number</b>	<b>10141080</b>
<b>Project Type</b>	<b>Sewer Separation</b>	<b>Sewer Number</b>	<b>6244</b>
<b>Purpose and Justification</b>	<p>This project is required by the Global Consent Decree to eliminate surcharges of SSOs 645 &amp; 225A for a design 2-year storm. By bypassing the downstream bottleneck, the parallel sewer will eliminate the overflows for SSOs 645 &amp; 225A for the 2-year storm. Coordinating with GCWW to minimize local disturbance and construction cost.</p>		
<b>Impact to Operating Budget</b>	<p>MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.</p>		
<b>Description and Location</b>	<p>This project will eliminate surcharges of SSOs 645 and 225A for a design 2 year storm by installation of approximately 1950 feet of a 24-inch parallel sewer along with 136 feet of 6' and 8" connections. Although June 2009 submittal project description calls for the construction of a new parallel sewer to follow original alignment -- 1700 feet of 15-inch sewer, MSD determined that a 24-inch parallel sewer was necessary to achieve the desired level of control. This project is in the Clifton neighborhood of the City of Cincinnati.</p>		

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$59,255	\$57,900	\$0	\$0	\$57,900
Design	\$59,255	\$228,900	\$0	\$0	\$228,900
Pre-Construction Services	\$24,613	\$91,500	\$0	\$0	\$91,500
Miscellaneous Expense	\$24,322	\$32,300	\$0	\$0	\$32,300
Right-of-Way	\$158,697	\$10,000	\$0	\$0	\$10,000
Construction	\$445,196	\$0	\$1,841,700	\$0	\$1,841,700
Program Management	\$0	\$16,622	\$0	\$0	\$16,622
Construction Services	\$72,029	\$0	\$193,100	\$0	\$193,100
Interest / Financing	\$36,482	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$879,849</b>	<b>\$437,222</b>	<b>\$2,034,800</b>	<b>\$0</b>	<b>\$2,472,022</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$437,222	\$0	\$0	\$0	\$0	\$2,472,022
	\$2,034,800	\$0	\$0	\$0	\$0	

**Prior Legislation Action**  
 Dec 2009, Mar 2011, May 2014, Aug 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title SSO 1000 Elimination

Project ID 10170080 CIP Number 10170080  
 Project Type SSO Improvement/Elim Sewer Number 6369

## Purpose and Justification

This project will eliminate SSO 1000. This Phase 1 Wet Weather Improvement Plan project is part of the Upper Duck Bundle and was included in the June 2009 submittal.

## Impact to Operating Budget

None

## Description and Location

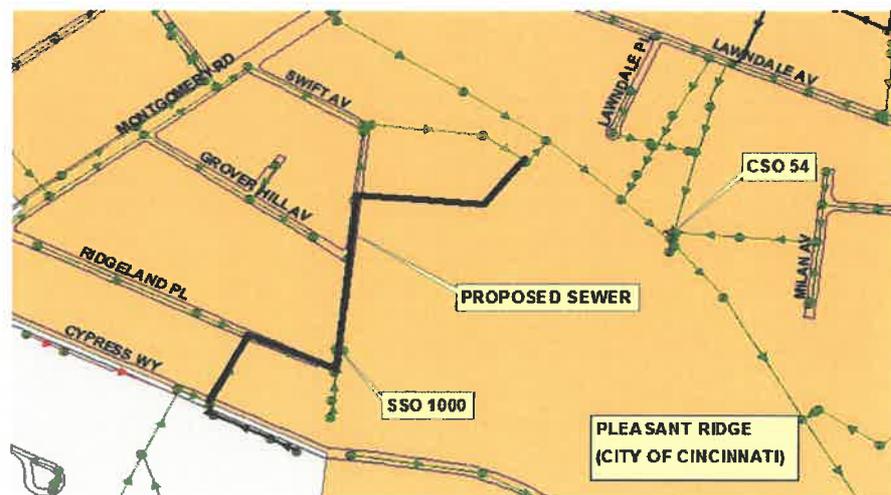
This project is intended to result in the elimination of SSO 1000. The improvements consist of installing approximately 950 feet of relief sewer that will allow would be overflows to be routed to the downstream sewer that has capacity. In addition, 550 feet of upstream sewer will be upsized. This project is in the Pleasant Ridge neighborhood of the City of Cincinnati.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$128,400	\$84,000	\$0	\$0	\$84,000
Pre-Construction Services	\$101,900	\$48,600	\$0	\$0	\$48,600
Miscellaneous Expense	\$55,800	\$25,000	\$0	\$0	\$25,000
Right-of-Way	\$63,800	\$63,800	\$0	\$0	\$63,800
Construction	\$1,449,500	\$0	\$815,600	\$0	\$815,600
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$143,500	\$0	\$110,200	\$0	\$110,200
Interest / Financing	\$71,800	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$2,014,700</b>	<b>\$221,400</b>	<b>\$925,800</b>	<b>\$0</b>	<b>\$1,147,200</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$221,400	\$0	\$0	\$0	\$0	\$1,147,200

## Prior Legislation Action

Jul 2013, Jan 2015, Aug 2015, Feb 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
Project Title SSO 228 Elimination

Project ID 10170100 CIP Number 10170100  
Project Type SSO Improvement/Elim Sewer Number 6368

## Purpose and Justification

This project will eliminate SSO 228. This Phase 1 Wet Weather Improvement Plan project is part of the Upper Duck Bundle and was included in the June 2009 submittal.

## Impact to Operating Budget

None

## Description and Location

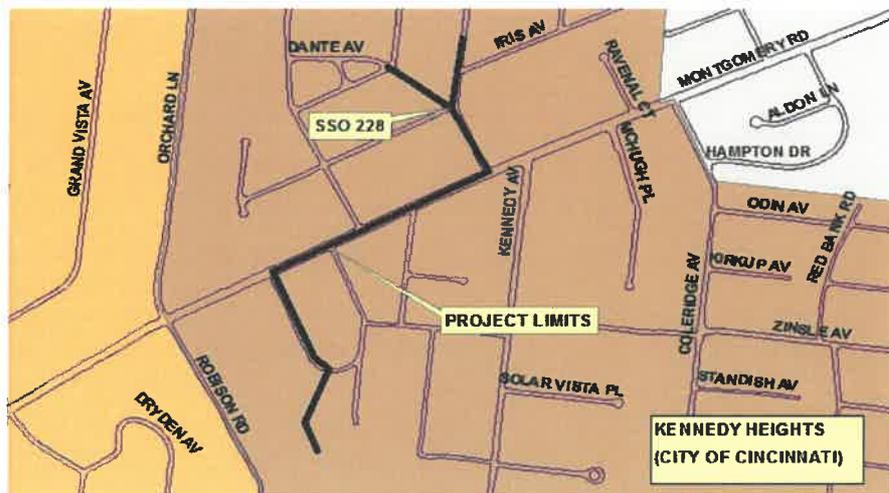
This project is intended to result in the elimination of SSO 228. The improvements consist of installing approximately 2,900 feet of relief sewer that will allow would be overflows to be routed to the downstream sewer that has capacity. In addition, 800 feet of upstream sewer will be upsized. This is in the Kennedy Heights neighborhood of the City of Cincinnati.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$97,700	\$136,000	\$0	\$0	\$136,000
Pre-Construction Services	\$113,400	\$49,200	\$0	\$0	\$49,200
Miscellaneous Expense	\$41,400	\$33,600	\$0	\$0	\$33,600
Right-of-Way	\$176,800	\$176,800	\$0	\$0	\$176,800
Construction	\$1,074,300	\$0	\$1,912,500	\$0	\$1,912,500
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$106,400	\$0	\$201,486	\$0	\$201,486
Interest / Financing	\$53,200	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$1,663,200</b>	<b>\$395,600</b>	<b>\$2,113,986</b>	<b>\$0</b>	<b>\$2,509,586</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$395,600	\$0	\$0	\$0	\$0	\$2,509,586
	\$2,113,986					

## Prior Legislation Action

Jul 2013, Aug 2015, Feb 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Stanley Ave Lateral Relocations

Project ID 10170176 CIP Number 10170176  
 Project Type Sewer Replacement Sewer Number 6451

## Purpose and Justification

This project will address the increased hydraulic grade line due to the Eastern and Delta Phase 3 project. To ensure that the Eastern and Delta projects meets the WWIP objective of 123.4 MG of planned remaining overflow, the proposed elevation of the weir is to be raised. From this increased elevation the System Wide Model indicated and increase in the potential for a sewer back up during a 10-year storm event. This project will address the increased risk of sewage backups at the affected properties by relocating the service laterals to a different trunk sewer.

## Impact to Operating Budget

None

## Description and Location

This project consists of approximately 120 lf of sanitary piping. The proposed improvements are located in the rear lot areas of 323 and 233 Stanley Avenue and in Butterfield Alley, in the Columbia Tusculum neighborhood of the City of Cincinnati, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$37,400	\$0	\$0	\$0	\$0
Pre-Construction Services	\$5,200	\$57,300	\$0	\$0	\$57,300
Miscellaneous Expense	\$34,400	\$37,600	\$0	\$0	\$37,600
Right-of-Way	\$50,000	\$50,000	\$0	\$0	\$50,000
Construction	\$171,800	\$0	\$135,400	\$0	\$135,400
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$13,000	\$0	\$20,000	\$0	\$20,000
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$311,800</b>	<b>\$144,900</b>	<b>\$155,400</b>	<b>\$0</b>	<b>\$300,300</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$144,900	\$155,400	\$0	\$0	\$0	\$300,300

**Prior Legislation Action**  
 Dec 2014, Dec 2015



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title CSO 54 Improvements

Project ID 10171580 CIP Number 10171580  
 Project Type CSO Improvement/Elim Sewer Number 6397

## Purpose and Justification

This Phase 1 Wet Weather Improvement Plan project is part of the Upper Duck Bundle. The project will increase the underflow capacity of the regulator to meet the Consent Decree goal.

## Impact to Operating Budget

None

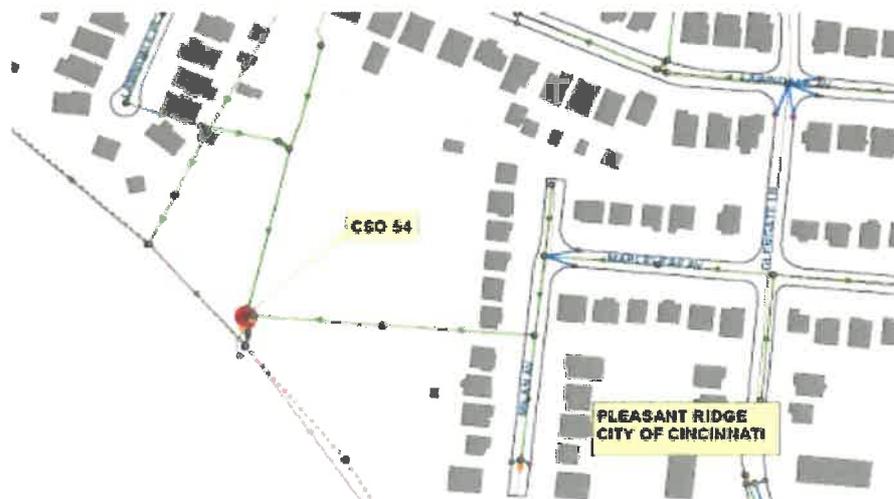
## Description and Location

This project is intended to make improvements to CSO 54. The improvements consist of replacing the regulator structure and raising the overflow weir height to increase the underflow capacity of the regulator. Also, vehicular access to the regulator will be provided. This project is located in the Pleasant Ridge neighborhood of the City of Cincinnati, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$18,900	\$49,000	\$0	\$0	\$49,000
Pre-Construction Services	\$12,800	\$24,400	\$0	\$0	\$24,400
Miscellaneous Expense	\$8,500	\$8,000	\$0	\$0	\$8,000
Right-of-Way	\$0	\$24,000	\$0	\$0	\$24,000
Construction	\$217,700	\$0	\$186,600	\$0	\$186,600
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$46,100	\$0	\$46,100
Interest / Financing	\$10,800	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$268,700</b>	<b>\$105,400</b>	<b>\$232,700</b>	<b>\$0</b>	<b>\$338,100</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$105,400	\$232,700	\$0	\$0	\$0	\$338,100

**Prior Legislation Action**  
 Apr 2015, Oct 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	CSO 551 Sewer Separation		
Project ID	10171740	CIP Number	10171740
Project Type	Sewer Separation	Sewer Number	6399

## Purpose and Justification

This project will separate sewers to reduce overflows at CSO 551. This Phase 1 Wet Weather Improvement Plan project is part of the Upper Duck Bundle and was included in the June 2009 submittal.

## Impact to Operating Budget

None

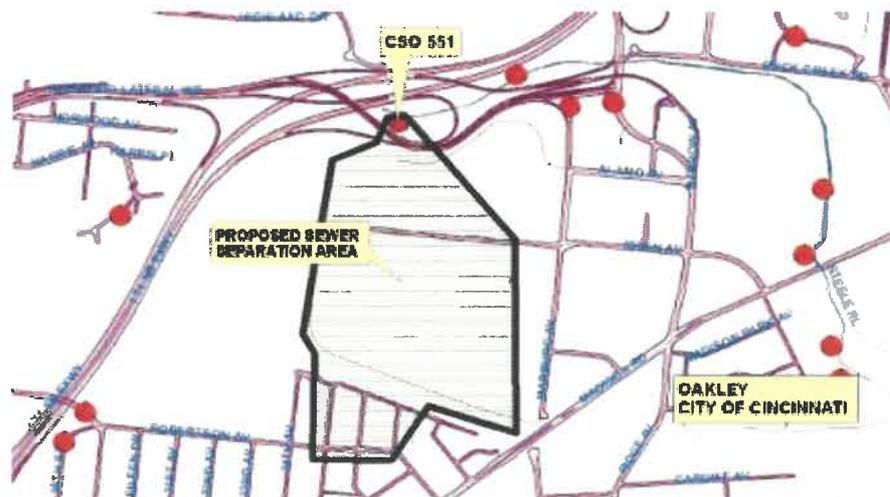
## Description and Location

This project is intended to result in the reduction of overflows at CSO 551. The June 2009 submittal Project Description Design calls for sewer separation. This project is located in the Oakley neighborhood of the City of Cincinnati.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$275,600	\$362,100	\$0	\$0	\$362,100
Pre-Construction Services	\$0	\$39,800	\$0	\$0	\$39,800
Miscellaneous Expense	\$116,600	\$54,500	\$0	\$0	\$54,500
Right-of-Way	\$59,800	\$30,500	\$274,600	\$0	\$305,100
Construction	\$3,074,900	\$0	\$1,212,500	\$0	\$1,212,500
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$93,800	\$0	\$93,800
Interest / Financing	\$154,000	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$3,680,900</b>	<b>\$486,900</b>	<b>\$1,580,900</b>	<b>\$0</b>	<b>\$2,067,800</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$486,900	\$0	\$0	\$0	\$0	\$2,067,800
	\$1,580,900	\$0	\$0	\$0	\$0	\$2,067,800

**Prior Legislation Action**  
May 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Main Sewer Renewal Program 2017		
Project ID	10180117	CIP Number	10180117
Project Type	Allowance	Sewer Number	

## Purpose and Justification

Formerly known as the "Trenchless Technology Sewer Rehabilitation Allowance", this program supports the cost-effective renewal of structurally deteriorated existing main sewers while improving the hydraulic performance of the wastewater collection system.

## Impact to Operating Budget

None

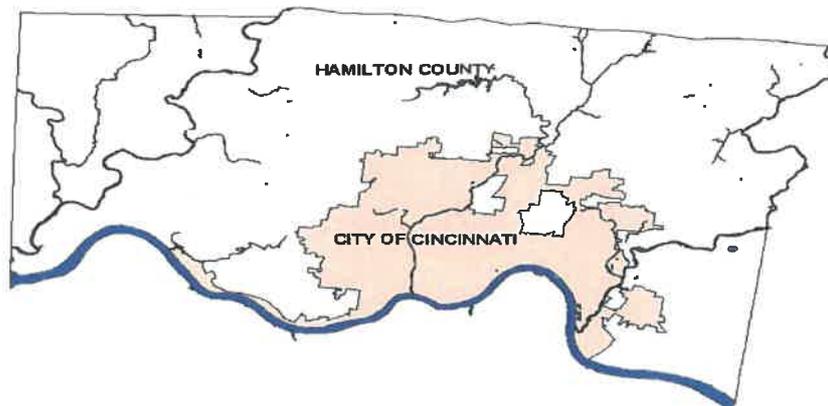
## Description and Location

This program supports internal rehabilitation and renewal of existing main sewers throughout the District as a cost effective alternative to open-cut (excavation) replacement. The scope of work for this program will include, but not limit itself to, cured-in-place lining, slip-lining, spin-casting, sprayed coatings, and carbon filament wrapping. The sewer segments to be addressed under this program are identified through standardized visual PACP condition assessments, and are prioritized by risk considering likelihood and consequence of failure as well as opportunities for construction coordination.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$10,000,000	\$0	\$10,000,000	\$0	\$10,000,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$2,000,000	\$0	\$2,000,000	\$0	\$2,000,000
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$12,000,000</b>	<b>\$0</b>	<b>\$12,000,000</b>	<b>\$0</b>	<b>\$12,000,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$0	\$0	\$0	\$0	\$12,000,000
	\$12,000,000	\$0	\$0	\$0	\$0	\$12,000,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title **Manhole Renewal Program 2017**

Project ID **10180217** CIP Number **10180217**  
 Project Type **Allowance** Sewer Number **6562**

## Purpose and Justification

Formerly known as the "Trenchless Technology Manhole Rehabilitation Allowance", this program supports the cost-effective renewal of structurally deficient manholes to mitigate risk, reduce inflow and infiltration, and the installation of new manholes to support operation and maintenance of the wastewater collection system.

## Impact to Operating Budget

None

## Description and Location

This program supports the renewal of structurally deficient manholes in the MSD wastewater collection system, and the installation of new manholes to support operation and maintenance of the wastewater collection system. Manhole renewal projects are identified by evaluating structural condition, consequence of failure, and opportunities for construction coordination. The scope of work for the program will include manhole repairs, replacement manholes, new manholes, and adjustments and chimney repairs completed in conjunction with paving projects.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$1,200,000	\$0	\$1,200,000	\$0	\$1,200,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$100,000	\$0	\$100,000	\$0	\$100,000
Interest / Financing	\$40,000	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$1,340,000</b>	<b>\$0</b>	<b>\$1,300,000</b>	<b>\$0</b>	<b>\$1,300,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$0	\$0	\$0	\$0	\$1,300,000

**Prior Legislation Action**



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	MPMP Development and Updates		
Project ID	10180415	CIP Number	
Project Type	Allowance	Sewer Number	

## Purpose and Justification

This allowance provides funding for updates to the Master Program Management Plan. The MPMP provides a working template to provide the process, activities, and procedures necessary to successfully manage and deliver CIP projects. Procedures need to be updated and added to take advantage of efficiencies and to remain current with changes to the organization. The MPMP is a live document that is accessed through Share Point. Updates to Share Point and changes to organizational roles and user permissions cause problems with user access to the MPMP files.

## Impact to Operating Budget

None

## Description and Location

Support, development and implementation associated the Master Program Management Plan (MPMP) including interviews, research, reporting and revising processes to meet organizational needs, facilitation of cross-functional teams, coaching, training sessions and e-learning development to promote and support buy-in and adoption. Procedure updates shall occur per the MPMP prioritization score and schedule and or at the direction of the Director.

Software upgrades to the MPMP platform that house the procedures.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$250,000	\$0	\$250,000
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	\$0	\$0	\$250,000	\$0	\$250,000

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$250,000	\$0	\$0	\$0	\$250,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
Project Title Phase 2 WWIP Planning

Project ID 10190216

CIP Number

Project Type Allowance

Sewer Number

## Purpose and Justification

Previously funded from Program Management and CIP planning, MSD will track work comprised of planning and preparation activities associated with Phase 2 of the District's Wet Weather Improvement Plan, including affordability under this fund.

## Impact to Operating Budget

None

## Description and Location

Per the WWIP, a schedule and plan is due from codefendants to the regulators in June 2017. Technical evaluations to prioritize and plan Phase 2 have been underway for two years with over 600 tasks completed by MSD. Results of the analysis have been shared with the County. This funding will provide ongoing support for the technical evaluations and support for the capital program, regulatory and affordability needs for the Phase 2A program.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$200,000	\$0	\$1,500,000	\$0	\$1,500,000
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$200,000</b>	<b>\$0</b>	<b>\$1,500,000</b>	<b>\$0</b>	<b>\$1,500,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$1,500,000	\$0	\$0	\$0	\$1,500,000

## Prior Legislation Action

Jan 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Home Sewer Treatment System Eliminations 2017		
Project ID	10190317	CIP Number	10190317
Project Type	Allowance	Sewer Number	6563

## Purpose and Justification

This program is identified in the Global Consent Decree. This program will provide public funding for planning and petition services in support of various local sewer projects and sewer lateral projects. The local sewer projects and sewer lateral projects will convert Home Sewage Treatment Systems (HSTS) to sewer service thereby reducing the discharge of pollutants to WWIP watersheds. Failing or improperly functioning HSTS are a source of pollutants that has been linked to dry weather bacterial exceedances.

## Impact to Operating Budget

None

## Description and Location

This program supports the overall HSTS Elimination program by funding planning and petition services for various local sewer projects and sewer lateral projects in all watersheds.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$290,000	\$0	\$290,000	\$0	\$290,000
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$290,000</b>	<b>\$0</b>	<b>\$290,000</b>	<b>\$0</b>	<b>\$290,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$290,000	\$0	\$0	\$0	\$290,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Wet Weather Program Management and Support Services 2017		
<b>Project ID</b>	<b>10199017</b>	<b>CIP Number</b>	<b>10199017</b>
<b>Project Type</b>	<b>Allowance</b>	<b>Sewer Number</b>	<b>6564</b>
<b>Purpose and Justification</b>		<b>Impact to Operating Budget</b>	
MSD CIP program management efforts have successfully assisted the District – both internal and external – to have access to up to date information as the end of Phase 1 is approached with regard to capital projects and the overall Consent Decree and Asset Management Program. MSD proposes to maintain this level of reporting for transparency of information to the stakeholders of the District to maintain the momentum required to complete Phase 1 of the Wet Weather Improvement Program, streamline the Asset Management Program, and while developing an optimized and affordable schedule for Phase 2 of the Wet Weather Improvement Program.		None	
<b>Description and Location</b>			
The MSD wet weather program management team includes both internal personnel and supplemental outside professional consultants to manage and report on the multiple projects in planning, design, and construction phases. Funding is necessary to encumber contracts for the program. Allocations of costs are done at the end of the year to applicable projects.			

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$5,300,000	\$0	\$3,100,000	\$0	\$3,100,000
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$5,300,000</b>	<b>\$0</b>	<b>\$3,100,000</b>	<b>\$0</b>	<b>\$3,100,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$3,100,000	\$0	\$0	\$0	\$3,100,000

**Prior Legislation Action**



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Hamilton County Utility Oversight and Coordination 2017		
<b>Project ID</b>	<b>10199117</b>	<b>CIP Number</b>	<b>10199117</b>
<b>Project Type</b>	<b>Allowance</b>	<b>Sewer Number</b>	<b>6565</b>
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
Hamilton County's continued use of County staff and outside consultants and attorneys is critical to ensure that MSD rate payers are funding only those projects that are necessary and cost effective to adhere to the terms of phase 1 of the Wet Weather Improvement Program "WWIP", as well as ongoing Asset Management projects and allowances. The Monitor Team will work closely with MSD employees and supplemental staff to ensure that projects are built on time and on budget to minimize risk to the County and MSDGC rate payers. The project funds the team responsible for this oversight function. Previous legislation for these services was funded under the Wet Weather Program Management and Support Services Allowance.			

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$2,700,000	\$0	\$2,700,000	\$0	\$2,700,000
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$2,700,000</b>	<b>\$0</b>	<b>\$2,700,000</b>	<b>\$0</b>	<b>\$2,700,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$2,700,000	\$0	\$0	\$0	\$2,700,000

**Prior Legislation Action**



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title CSO 125 Stream Separation

Project ID 10240018 CIP Number 10240018  
 Project Type Source Control Sewer Number 6108

## Purpose and Justification

As part of the West Fork source control projects for the LMCPR, this project will remove over 280 million gallons of stream flow annually from the combined sewer and over 100 million gallons of combined sewer overflow from CSO 125 sewershed. The two basins will control storm water originating from 890 acres of predominantly undeveloped land. The Basin Outlet Pipe will convey the storm water from the two basins at a controlled rate to the West Fork Channel. The West Fork source control projects in the LMCPR will reduce overflow volumes in the entire West Fork watershed by 173 million gallons in a typical year, based on model version 3.2 (LMCPR Study Report 2012).

## Impact to Operating Budget

None

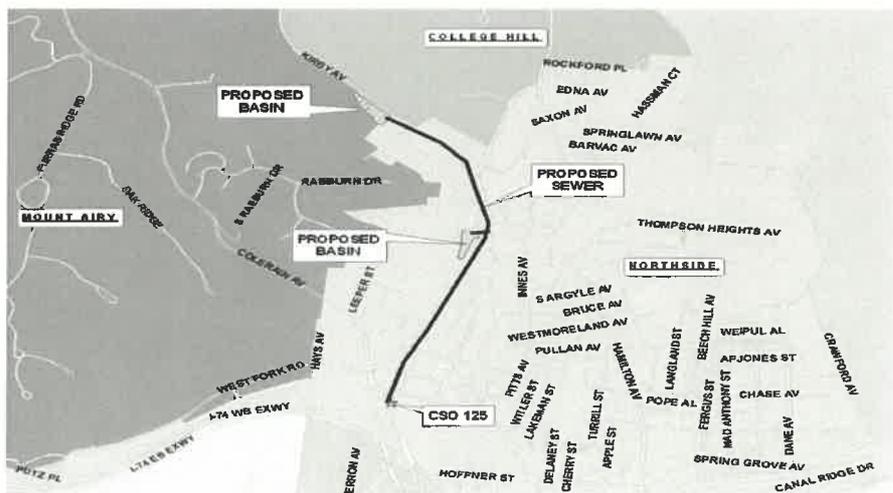
## Description and Location

This project consists of two stormwater detention basins, approximately 6,460 lf of basin outlet pipe, approximately 900 lf of sanitary sewer, and associated appurtenances. The project will separate a perennial stream and storm flows from the combined sewer system. This project is in the Northside neighborhood of the City of Cincinnati.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$326,113	\$0	\$0	\$326,113
Design	\$260,000	\$724,660	\$0	\$0	\$724,660
Pre-Construction Services	\$123,200	\$406,920	\$0	\$0	\$406,920
Miscellaneous Expense	\$12,000	\$127,300	\$0	\$0	\$127,300
Right-of-Way	\$320,000	\$2,201,337	\$0	\$0	\$2,201,337
Construction	\$3,060,000	\$109,100	\$9,226,400	\$0	\$9,335,500
Program Management	\$0	\$69,667	\$0	\$0	\$69,667
Construction Services	\$156,000	\$0	\$662,000	\$0	\$662,000
Interest / Financing	\$153,000	\$0	\$145,800	\$0	\$145,800
<b>Total</b>	<b>\$4,084,200</b>	<b>\$3,965,097</b>	<b>\$10,034,200</b>	<b>\$0</b>	<b>\$13,999,297</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$3,965,097	\$10,034,200	\$0	\$0	\$0	\$13,999,297

**Prior Legislation Action**  
 May 2010, Mar 2011, Jan 2013, May 2014, Jul 2015, Nov 2016



# 2017 Capital Budget and Capital Improvement Program

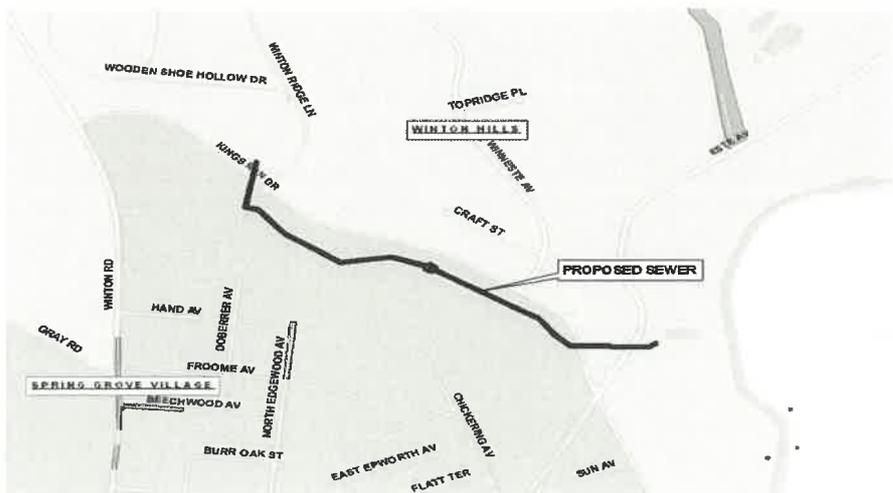
Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	CSO 217/483 Source Control - Phase C		
<b>Project ID</b>	<b>10240021</b>	<b>CIP Number</b>	<b>10240021</b>
<b>Project Type</b>	<b>Source Control</b>	<b>Sewer Number</b>	<b>6275</b>
<b>Purpose and Justification</b>	<p>The CSO 217 483 projects will eliminate approx. 113 MG of CSOs, and includes four detention basins (Phase A); sewer separation via installation of 2,700 lf combined, 1,150 lf sanitary and 1,050 lf storm sewers (Phase A2); a storage facility (Phase B); and sewer separation along Winton Rd via installation of 4,850 lf storm sewer, and 2,700 lf sanitary sewer (Phase C). Phase A2 (Project ID 11243142) had its scope and \$7.23M budget subdivided from Phase A due to design schedule, ROW acquisition and specialized construction of the basins of Phase A.</p>		
<b>Impact to Operating Budget</b>	None		
<b>Description and Location</b>	<p>This project includes approximately 2,700 lf of sanitary sewer along Winton Road to complete a portion of the separation of combined sewers in the CSO 483 drainage area. The project will begin near Wynbrook Apartments and reconnect to the existing combined sewer upstream of CSO 217. The project is located in Kings Run sewer shed in the Winton Hills neighborhood of the City of Cincinnati.</p>		

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$150,109	\$0	\$0	\$150,109
Design	\$712,500	\$722,767	\$0	\$0	\$722,767
Pre-Construction Services	\$190,000	\$334,807	\$0	\$0	\$334,807
Miscellaneous Expense	\$92,000	\$83,800	\$64,200	\$0	\$148,000
Right-of-Way	\$100,000	\$293,500	\$0	\$0	\$293,500
Construction	\$4,750,000	\$0	\$4,330,000	\$0	\$4,330,000
Program Management	\$0	\$94,756	\$0	\$0	\$94,756
Construction Services	\$156,000	\$0	\$508,340	\$0	\$508,340
Interest / Financing	\$237,500	\$0	\$60,800	\$0	\$60,800
<b>Total</b>	<b>\$6,238,000</b>	<b>\$1,679,739</b>	<b>\$4,963,340</b>	<b>\$0</b>	<b>\$6,643,079</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$1,679,739	\$4,963,340	\$0	\$0	\$0	\$6,643,079

**Prior Legislation Action**  
 Jun 2010, May 2014, Jan 2016



# 2017 Capital Budget and Capital Improvement Program

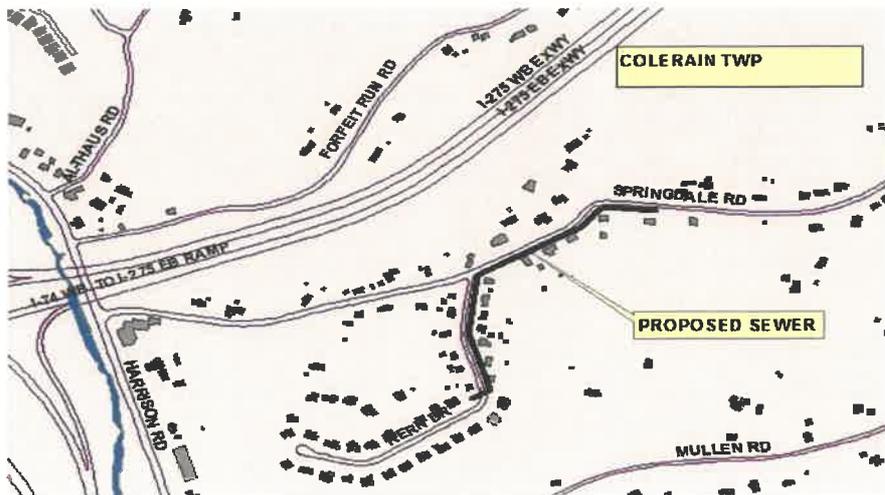
Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Kern Drive & Springdale Road Local Sewer		
<b>Project ID</b>	<b>10320058</b>	<b>CIP Number</b>	<b>10320058</b>
<b>Project Type</b>	<b>Local Sewer</b>	<b>Sewer Number</b>	<b>6145</b>
<b>Purpose and Justification</b>			
<p>The project was initiated by submittal of a petition, statement and waiver from the owner of the property to be benefited. The waiver, recorded with Hamilton County Recorder's Office, satisfies MSDs Rules and Regulations requirements for majority endorsement from benefited properties. Per MSD Rules and Regulations and Section 6117.28 of the ORC, when all the owners of all the lots and lands to be benefited by and assessed for a local sewer improvement consent to its cost and waive the public hearing notice and objection opportunity afforded under law, the County Commissioners may choose to proceed to construct without the public hearing.</p>			
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
<p>Kern Drive &amp; Springdale Road Local Sewer is an assessment sewer project that will benefit 24 parcels and eliminate 23 household sewage treatment systems. The Project involves construction of 1,918 linear feet of 8-inch diameter gravity sanitary sewer; 24- 6 inch diameter sewer laterals and other sewer appurtenances. The project is located in the Taylor Creek sewer shed of MSD's West Basin, Colerain Township, Hamilton County, Ohio. The project runs along Kern Drive between addresses 6811 and 6888 and along Springdale Road between addresses 6857 and 6924.</p>			

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$69,100	\$3,650	\$0	\$0	\$3,650
Pre-Construction Services	\$26,000	\$91,450	\$0	\$0	\$91,450
Miscellaneous Expense	\$3,700	\$6,000	\$0	\$0	\$6,000
Right-of-Way	\$87,400	\$87,400	\$0	\$0	\$87,400
Construction	\$432,000	\$0	\$986,055	\$0	\$986,055
Program Management	\$0	\$8,386	\$0	\$0	\$8,386
Construction Services	\$25,000	\$0	\$93,200	\$0	\$93,200
Interest / Financing	\$10,000	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$653,200</b>	<b>\$196,886</b>	<b>\$1,079,255</b>	<b>\$0</b>	<b>\$1,276,141</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$196,886	\$1,079,255	\$0	\$0	\$0	\$1,276,141

**Prior Legislation Action**  
 Mar 2011, Jan 2014, May 2014, Jun 2014, Nov 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Reemelin Road Local Sewer (HNs 3489-3860)

Project ID 10320065 CIP Number 10320065  
 Project Type Local Sewer Sewer Number 6177

## Purpose and Justification

Reemelin Road Local Sewer (HNs 3489-3860) will benefit 30 parcels, which are all single-family homes. The project will eliminate 30 household sewage treatment systems.

## Impact to Operating Budget

None

## Description and Location

Reemelin Road Local Sewer (HNs 3489-3860) will benefit 30 parcels, which are all single-family homes. The project will eliminate 30 household sewage treatment systems. The project will outfall to existing 12-inch diameter sewer, No. 4706 and existing 15-inch diameter sewer, No. 3952. The concept plan for this project involves construction of approximately 2500 linear feet of 8-inch diameter gravity sanitary sewer; 30 - 6 inch diameter sewer laterals and other sewer appurtenances.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$130,000	\$130,000	\$0	\$0	\$130,000
Pre-Construction Services	\$35,000	\$17,500	\$0	\$0	\$17,500
Miscellaneous Expense	\$5,000	\$5,000	\$0	\$0	\$5,000
Right-of-Way	\$214,000	\$214,000	\$0	\$0	\$214,000
Construction	\$582,000	\$0	\$1,075,700	\$0	\$1,075,700
Program Management	\$0	\$13,745	\$0	\$0	\$13,745
Construction Services	\$73,000	\$0	\$40,400	\$0	\$40,400
Interest / Financing	\$22,000	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$1,061,000</b>	<b>\$380,245</b>	<b>\$1,116,100</b>	<b>\$0</b>	<b>\$1,496,345</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$380,245	\$1,116,100	\$0	\$0	\$0	\$0	\$1,496,345

## Prior Legislation Action

Mar 2012, May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Crestnoll Lane Local Sewer (HN 3491-3609)		
Project ID	10320070	CIP Number	10320070
Project Type	Local Sewer	Sewer Number	6222

## Purpose and Justification

The project was initiated by submittal of a petition, statement and waiver from the owner of the property to be benefited. The waiver, recorded with Ham County Recorders Office, satisfies MSDs Rules and Regulations requirements for majority endorsement from benefited properties. Per MSD Rules and Regulations and Section 6117.28 of the ORC, when all the owners of all the lots and lands to be benefited by and assessed for a local sewer improvement consent to its cost and waive the public hearing notice and objection opportunity afforded under law, the County Commissioners may choose to proceed to construct the improvement without the public hearing.

## Impact to Operating Budget

None

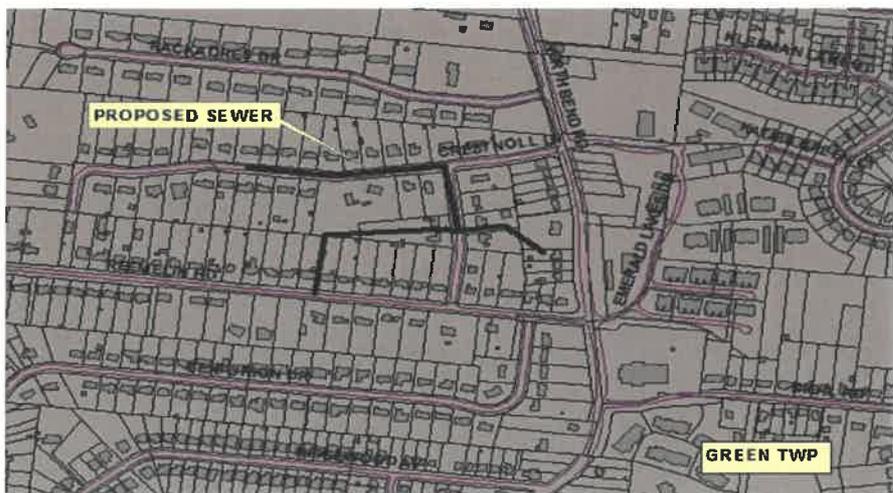
## Description and Location

Crestnoll Lane Local Sewer (Hns 3491-3609) is an assessment sewer project that will benefit 25 parcels and eliminate 25 household sewage treatment systems. The Project involves construction of 1,698 linear feet of 8-inch diameter gravity sanitary sewer; 25 - 6 inch diameter sewer laterals and other sewer appurtenances. The project was initiated by a citizen petition that received positive endorsement from a majority of benefited property owners and is therefore valid. The project is located in the Taylor Creek sewer shed of MSD's West Basin, Green Township, Hamilton County, Ohio. The project is located between 3491 to 3609 Crestnoll Lane, between 4778 to 4794 Crestpoint Drive and between 4739 to 4767 North Bend Road.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$104,000	\$104,000	\$0	\$0	\$104,000
Pre-Construction Services	\$42,000	\$21,000	\$0	\$0	\$21,000
Miscellaneous Expense	\$6,000	\$6,000	\$0	\$0	\$6,000
Right-of-Way	\$164,000	\$164,000	\$0	\$0	\$164,000
Construction	\$698,000	\$0	\$879,000	\$0	\$879,000
Program Management	\$0	\$11,868	\$0	\$0	\$11,868
Construction Services	\$73,000	\$0	\$28,800	\$0	\$28,800
Interest / Financing	\$22,000	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$1,109,000</b>	<b>\$306,868</b>	<b>\$907,800</b>	<b>\$0</b>	<b>\$1,214,668</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$306,868	\$0	\$0	\$0	\$0	\$1,214,668
	\$907,800	\$0	\$0	\$0	\$0	

**Prior Legislation Action**  
Mar 2012, May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Old Blue Rock Road Local Sewer (HN 5240-5327)

Project ID 10320075 CIP Number 10320075  
 Project Type Local Sewer Sewer Number 6232

## Purpose and Justification

A citizen's petition initiated this project. Property owners representing 4 properties expressed support for the petition during the polling process (57% level of support). Requirements of MSD Rules and Regulations Section 1805 have been met as the petition received positive endorsement from property owners representing a majority of benefited properties. The petition is therefore valid under Board policy. The project cost was reduced by moving the sewer to the rear yards during the design process.

## Impact to Operating Budget

None

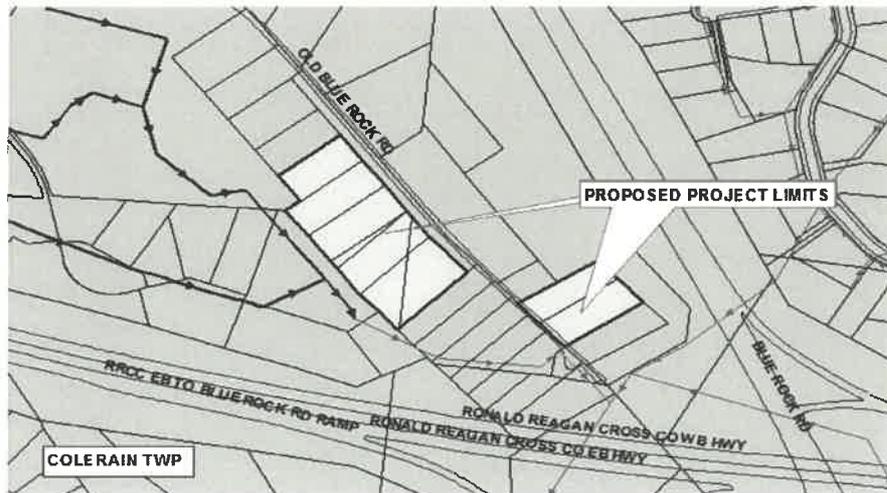
## Description and Location

The project will eliminate seven Home sewage treatment systems (HSTS). The local sewer plan proposes the construction of 840 linear feet of 8-inch diameter gravity sanitary sewer, 7 - 6 inch diameter sewer laterals, and other sewer appurtenances. The project is located In the Taylor Creek sewer shed of the Taylor Creek-Miamitown Basin, in Colerain Township, Hamilton County, Ohio. The project is located on Old Blue Rock Road from HN 5240 to 5327.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$60,000	\$69,620	\$0	\$0	\$69,620
Pre-Construction Services	\$7,000	\$31,138	\$0	\$0	\$31,138
Miscellaneous Expense	\$2,000	\$2,000	\$0	\$0	\$2,000
Right-of-Way	\$98,000	\$85,652	\$0	\$0	\$85,652
Construction	\$215,000	\$0	\$169,300	\$0	\$169,300
Program Management	\$0	\$10,494	\$0	\$0	\$10,494
Construction Services	\$23,100	\$0	\$12,800	\$0	\$12,800
Interest / Financing	\$3,000	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$408,100</b>	<b>\$198,904</b>	<b>\$182,100</b>	<b>\$0</b>	<b>\$381,004</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$198,904	\$182,100	\$0	\$0	\$0	\$381,004

**Prior Legislation Action**  
 Aug 2012, Jan 2014, May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Devils Backbone Road Sewer Local (HN 1234 & 1250)

Project ID 10330006 CIP Number 10330006  
 Project Type Local Sewer Sewer Number 6551

## Purpose and Justification

The project was initiated by submittal of a petition, statement and waiver from the owner of the property to be benefited. The waiver, recorded with Hamilton County Recorder's Office, satisfies MSD's Rules and Regulations' requirements for majority endorsement from benefited properties. Per Section 1805 (A)(1)(ii) of the MSD Rules and Regulations and Section 6117.28 of the ORC, when all the owners of all the lots and lands to be benefited by and assessed for a local sewer improvement consent to its cost and waive the public hearing notice and objection opportunity afforded under law, the County Commissioners may choose to proceed to construct the improvement without the public

## Impact to Operating Budget

None

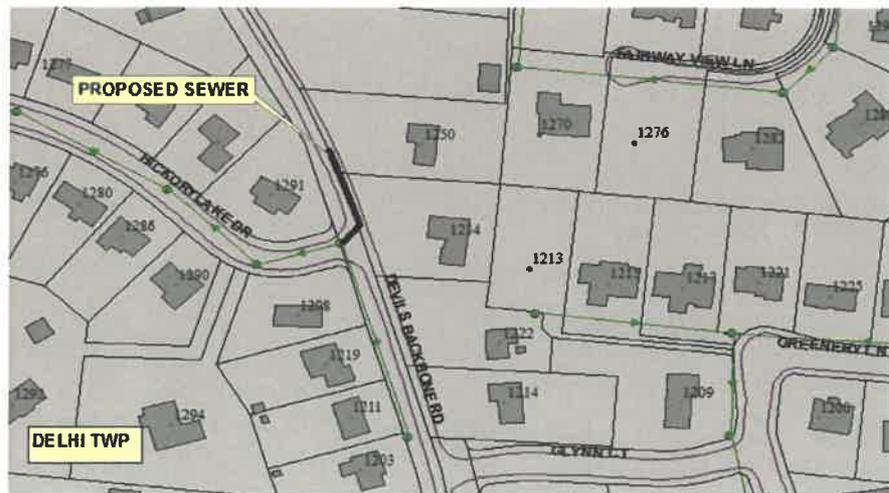
## Description and Location

Project consists of design and construction of 160 feet of 8-inch sanitary sewer to service HN 1234 and HN 1250 Devils Backbone Road in Delhi Township.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$30,700	\$0	\$30,700	\$0	\$30,700
Pre-Construction Services	\$3,700	\$0	\$3,700	\$0	\$3,700
Miscellaneous Expense	\$7,500	\$0	\$7,500	\$0	\$7,500
Right-of-Way	\$16,900	\$0	\$16,900	\$0	\$16,900
Construction	\$123,000	\$0	\$0	\$246,000	\$246,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$16,500	\$0	\$0	\$16,500	\$16,500
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$198,300</b>	<b>\$0</b>	<b>\$58,800</b>	<b>\$262,500</b>	<b>\$321,300</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$58,800	\$262,500	\$0	\$0	\$321,300

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Werk Road Local Sewer (HN 5544-5686)		
<b>Project ID</b>	<b>10330015</b>	<b>CIP Number</b>	
<b>Project Type</b>	<b>Local Sewer</b>	<b>Sewer Number</b>	<b>5894</b>

## Purpose and Justification

A citizen's petition initiated this project. Property owners representing 9 (out of 16) properties expressed support for the petition during the polling process (56% level of support), meeting MSD's Rules and Regulations' requirements for majority endorsement from benefited properties. The petition is therefore valid under Board policy.

## Impact to Operating Budget

None

## Description and Location

The proposed Werk Road Local Sewer (HNs 5544-5686) will benefit 14 properties, eliminating 11 home sewage treatment systems. MSD proposes to construct 1,466 linear feet of 8-inch diameter gravity sanitary sewer; 19, 6-inch diameter sewer laterals and other sewer appurtenances. Located in the Muddy Creek sewer shed of the West Basin, Green Township, Hamilton, County, Ohio. The project is located between 5544 Werk Road and 5686 Werk Road as well as between 3142 Andres Lane and 3162 Andres Lane.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$52,000	\$51,603	\$0	\$0	\$51,603
Pre-Construction Services	\$20,000	\$20,928	\$6,200	\$0	\$27,128
Miscellaneous Expense	\$4,000	\$86,257	\$0	\$0	\$86,257
Right-of-Way	\$0	\$6,611	\$0	\$0	\$6,611
Construction	\$498,000	\$0	\$645,300	\$0	\$645,300
Program Management	\$0	\$7,784	\$0	\$0	\$7,784
Construction Services	\$26,000	\$0	\$52,000	\$0	\$52,000
Interest / Financing	\$7,000	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$607,000</b>	<b>\$173,183</b>	<b>\$703,500</b>	<b>\$0</b>	<b>\$876,683</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$173,183	\$703,500	\$0	\$0	\$0	\$0	\$876,683

## Prior Legislation Action

Dec 2010, May 2013, Jan 2014, May 2014, Oct 2014, Jan 2015, Nov 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Upper Road Local Sewer (HNs 6340-6434)

Project ID 10330037 CIP Number 10330037  
 Project Type Local Sewer Sewer Number 6098

## Purpose and Justification

According to Hamilton County Public Health, the project will eliminate 4 onsite sewage treatment systems.

## Impact to Operating Budget

None

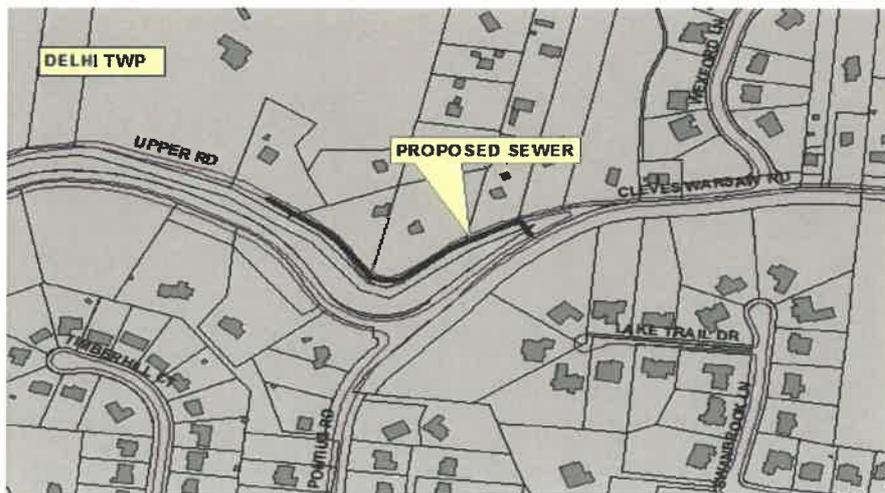
## Description and Location

The Upper Road Local Sewer (HNs 6340-6434) Project would benefit 4 parcels. The benefited parcels are 4 single family homes. According to Hamilton County Public Health, the project will eliminate 4 onsite sewage treatment systems. The project would outfall to SS# 2085 running on the south side of Cleves Warsaw Road. The Upper Road Local Sewer (HNs 6340-6434) involves the construction of 850 linear feet of 8-inch diameter gravity sanitary sewer; 4 - 6 inch diameter sewer laterals and other sewer appurtenances. The project is located near Addyston Township on Upper Road in Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$35,500	\$35,500	\$0	\$0	\$35,500
Pre-Construction Services	\$4,900	\$4,900	\$0	\$0	\$4,900
Miscellaneous Expense	\$1,500	\$1,500	\$0	\$0	\$1,500
Right-of-Way	\$56,000	\$56,000	\$0	\$0	\$56,000
Construction	\$0	\$0	\$225,335	\$0	\$225,335
Program Management	\$0	\$43	\$0	\$0	\$43
Construction Services	\$0	\$0	\$42,900	\$0	\$42,900
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$97,900</b>	<b>\$97,943</b>	<b>\$268,235</b>	<b>\$0</b>	<b>\$366,178</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$97,943	\$268,235	\$0	\$0	\$0	\$366,178

**Prior Legislation Action**  
 Mar 2013, May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title North Bend Road Local Sewer (HNs 504-565)

Project ID 10340024 CIP Number  
 Project Type Local Sewer Sewer Number 6096

## Purpose and Justification

A citizen's petition initiated this project. Property owners representing 5 properties expressed support for the petition during the polling process (71% level of support), meeting MSD's Rules and Regulations' requirements for majority endorsement from benefited properties. The petition is therefore valid under Board policy. The construction cost that increased because it was originally assumed the sewer alignment would be outside the roadway in the grass area, but it was located in the street due to utility and structural conflicts.

## Impact to Operating Budget

MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.

## Description and Location

The proposed North Bend Road Local Sewer (HNs 504-565) will benefit 7 properties, eliminating 6 household sewage treatment systems. MSD proposes to construct 1,327 linear feet of 8-inch diameter gravity sanitary sewer; 7, 6-inch diameter sewer laterals and other sewer appurtenances. The project is located in the Mill Creek sewer shed of the Central Basin, between 504 North Bend Road and 565 North Bend Road, Springfield Township, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$67,000	\$67,000	\$0	\$0	\$67,000
Pre-Construction Services	\$12,000	\$12,000	\$0	\$0	\$12,000
Miscellaneous Expense	\$1,700	\$3,481	\$1,600	\$0	\$5,081
Right-of-Way	\$119,600	\$118,959	\$0	\$0	\$118,959
Construction	\$205,000	\$0	\$411,100	\$0	\$411,100
Program Management	\$0	\$6,600	\$0	\$0	\$6,600
Construction Services	\$17,000	\$0	\$17,000	\$0	\$17,000
Interest / Financing	\$6,000	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$428,300</b>	<b>\$208,040</b>	<b>\$429,700</b>	<b>\$0</b>	<b>\$637,740</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$208,040	\$0	\$0	\$0	\$0	\$637,740
	\$429,700					

**Prior Legislation Action**  
 Feb 2011, Jan 2014, May 2014, Jul 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Stewart Road Local Sewer (HNs 5706 - 5710)

Project ID 10370050 CIP Number 10370050  
 Project Type Local Sewer Sewer Number 6560

## Purpose and Justification

The project will eliminate two household sewage treatment systems at 5706 and 5710 Stewart Road, which are failing according to Hamilton County Public Health. The proposed local sewer is the preferred method to resolve this STS nuisance situation. Owners of both benefited properties have expressed their support for the project by providing executed Petitions, Statements & Waivers meeting regulations governing the design, construction, maintenance, operation and use of sanitary and combined sewers ("MSD Rules and Regulations") requirements for majority endorsement from benefited properties. The petition is therefore valid under Board policy.

## Impact to Operating Budget

None

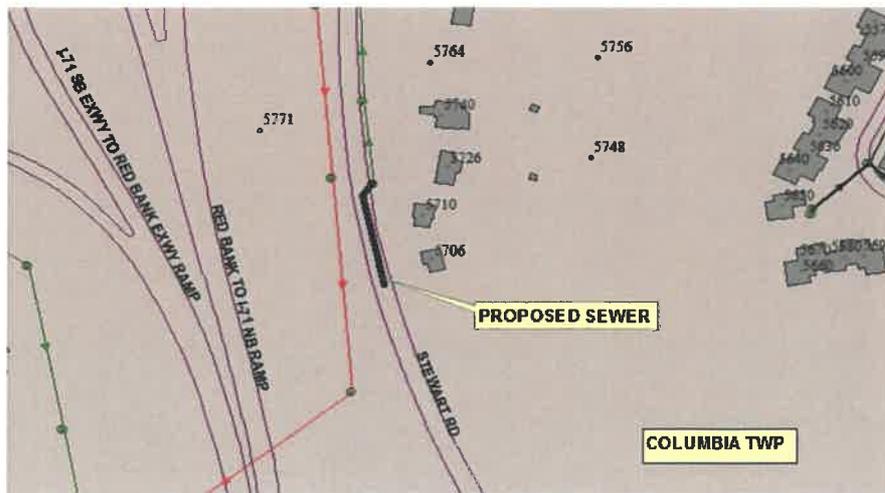
## Description and Location

The project will extend SS #905 along the eastside of Stewart Road to provide sanitary sewer service to the properties at 5706 and 5710 Stewart Road. The project involves construction of 110 linear feet of 8-inch diameter gravity sanitary sewer, two 6-inch diameter laterals and other sewer appurtenances. The proposed local sewer improvement is located in Columbia Township, Hamilton County, Ohio and is tributary to the Little Miami Wastewater Treatment Plant.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$30,100	\$0	\$30,100	\$0	\$30,100
Miscellaneous Expense	\$9,100	\$0	\$9,100	\$0	\$9,100
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$128,000	\$0	\$0	\$128,000	\$128,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$12,600	\$0	\$0	\$12,600	\$12,600
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$179,800</b>	<b>\$0</b>	<b>\$39,200</b>	<b>\$140,600</b>	<b>\$179,800</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$39,200	\$140,600	\$0	\$0	\$179,800

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Jessup Road Sewer Lateral Assessment (HN 5950)		
Project ID	10420035	CIP Number	10420035
Project Type	Lateral Sewer	Sewer Number	6568

## Purpose and Justification

The project was initiated by submittal of a petition, statement and waiver from the owner of the property to be benefited. The waiver satisfies requirements for majority endorsement from benefited properties. Per Section 1805 (A)(1)(ii) of the MSD Rules and Regulations and Section 6117.28 of the ORC, when all the owners of all the lots and lands to be benefited by and assessed for a local sewer improvement consent to its cost and waive the public hearing notice and objection opportunity afforded under law, the County Commissioners may choose to proceed to construct the improvement without the public hearing.

## Impact to Operating Budget

None

## Description and Location

The proposed assessment will benefit 1 single-family parcel by extending a sewer lateral to the boundary of the public right of way in front of the benefited property, eliminating 1 household sewage treatment system. MSD proposes to construct 1, 6-inch diameter sewer lateral 55 feet long that will connect to Sanitary Sewer #1663 running along the south side of Jessup Road. This proposed sewer lateral assessment project is located in the Taylor Creek sewer shed in Colerain Township, Hamilton County, Ohio at 5950 Jessup Road.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$2,000	\$0	\$2,000
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$27,699	\$0	\$30,000	\$0	\$30,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$15,000	\$0	\$15,000
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$27,699</b>	<b>\$0</b>	<b>\$47,000</b>	<b>\$0</b>	<b>\$47,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$0	\$0	\$0	\$0	\$0
	\$47,000	\$0	\$0	\$0	\$0	\$47,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	W Galbraith Road Sewer Lateral Assessment (HN 4198)		
Project ID	10420040	CIP Number	10420040
Project Type	Lateral Sewer	Sewer Number	6569

## Purpose and Justification

The project was initiated by submittal of a petition, statement and waiver from the owner of the property to be benefited. The waiver satisfies requirements for majority endorsement from benefited properties. Per Section 1805 (A)(1)(ii) of the MSD Rules and Regulations and Section 6117.28 of the ORC, when all the owners of all the lots and lands to be benefited by and assessed for a local sewer improvement consent to its cost and waive the public hearing notice and objection opportunity afforded under law, the County Commissioners may choose to proceed to construct the improvement without the public hearing.

## Impact to Operating Budget

None

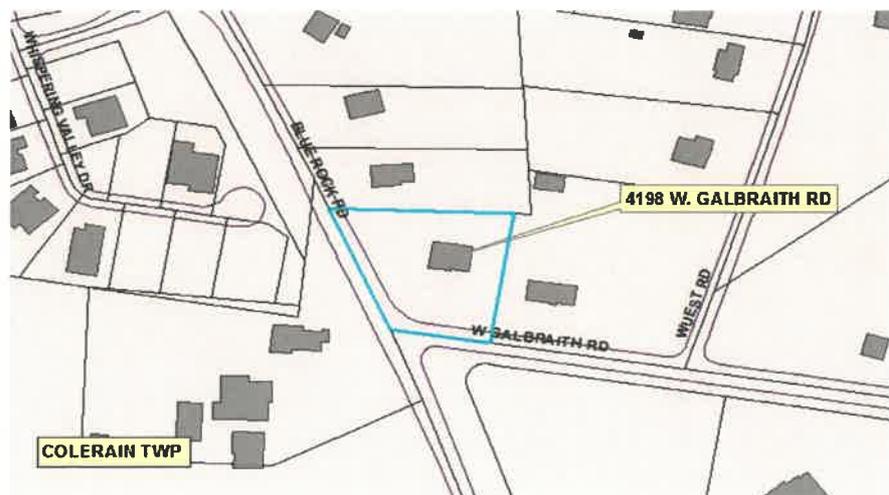
## Description and Location

The proposed assessment will benefit 1 single-family parcel by extending a sewer lateral to the boundary of the public right of way in front of the benefited property, eliminating 1 household sewage treatment system. MSD proposes to construct 1, 6-inch diameter sewer lateral 60 feet long that will connect to a gravity sewer. This proposed sewer lateral assessment project is located in the Taylor Creek sewer shed in Colerain Township, Hamilton County, Ohio at 4198 W Galbraith Road.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$2,000	\$0	\$2,000	\$0	\$2,000
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$35,000	\$0	\$35,000	\$0	\$35,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$15,000	\$0	\$15,000
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$37,000</b>	<b>\$0</b>	<b>\$52,000</b>	<b>\$0</b>	<b>\$52,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$0	\$0	\$0	\$0	\$0
	\$52,000	\$0	\$0	\$0	\$0	\$52,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	E. Galbraith Road Sewer Lateral Assessment (HN 4454)		
Project ID	10440055	CIP Number	10440055
Project Type	Lateral Sewer	Sewer Number	6572

## Purpose and Justification

The project was initiated by submittal of a petition, statement and waiver from the owner of the property to be benefited. The waiver, recorded with Hamilton County Recorder's Office, satisfies MSD's Rules and Regulations' requirements for majority endorsement from benefited properties. Per Section 1805 (A)(1)(ii) of the MSD Rules and Regulations and Section 6117.28 of the ORC, when all the owners of all the lots and lands to be benefited by and assessed for a local sewer improvement consent to its cost and waive the public hearing notice and objection opportunity afforded under law, the County Commissioners may choose to proceed to construct the improvement without the public

## Impact to Operating Budget

None

## Description and Location

The E. Galbraith Road Sewer Lateral Assessment (HN 4454) project will benefit 1 single-family parcel by extending a sewer lateral to the boundary of the public right of way in front of the benefited property, eliminating 1 household sewage treatment system. MSD proposes to construct 1 - 6 inch diameter sewer lateral 47 feet long that will connect to a gravity sewer. This sewer lateral assessment project is located in the Mill Creek sewer shed of the Central Basin in Sycamore Township, Hamilton County, Ohio at 4454 E. Galbraith Road.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$2,000	\$2,000	\$0	\$0	\$2,000
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$35,000	\$0	\$35,000	\$0	\$35,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$10,400	\$0	\$10,400	\$0	\$10,400
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$47,400</b>	<b>\$2,000</b>	<b>\$45,400</b>	<b>\$0</b>	<b>\$47,400</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$2,000	\$45,400	\$0	\$0	\$0	\$47,400

**Prior Legislation Action**  
Jan 2015



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Hopewell Road Sewer Lateral Assessment (HN 9283)		
<b>Project ID</b>	<b>10450035</b>	<b>CIP Number</b>	<b>10450035</b>
<b>Project Type</b>	<b>Lateral Sewer</b>	<b>Sewer Number</b>	<b>6575</b>
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
The proposed assessment will benefit 1 single-family parcel by extending a sewer lateral to the boundary of the public right of way in front of the benefited property, eliminating 1 household sewage treatment system. MSD proposes to construct 1, 6-inch diameter sewer lateral 80 feet long that will connect to a gravity sewer. This proposed sewer lateral assessment project is located in the Polk Run sewer shed in Symmes Township, Hamilton County, Ohio at 9283 Hopewell Road.			

**Purpose and Justification**  
 The project was initiated by submittal of a petition, statement and waiver from the owner of the property to be benefited. The waiver satisfies requirements for majority endorsement from benefited properties. Per Section 1805 (A)(1)(ii) of the MSD Rules and Regulations and Section 6117.28 of the ORC, when all the owners of all the lots and lands to be benefited by and assessed for a local sewer improvement consent to its cost and waive the public hearing notice and objection opportunity afforded under law, the County Commissioners may choose to proceed to construct the improvement without the public hearing.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$2,000	\$0	\$2,000	\$0	\$2,000
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$35,000	\$0	\$35,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$15,000	\$0	\$15,000	\$0	\$15,000
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$17,000</b>	<b>\$0</b>	<b>\$52,000</b>	<b>\$0</b>	<b>\$52,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$0	\$0	\$0	\$0	\$0
	\$52,000	\$0	\$0	\$0	\$0	\$52,000

**Prior Legislation Action**





# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Woodruff Road Sewer Lateral Assessment (HN 8237)		
Project ID	10470025	CIP Number	10470025
Project Type	Lateral Sewer	Sewer Number	6442

## Purpose and Justification

The project was initiated by submittal of a petition, statement and waiver from the owner of the property to be benefited. The waiver, recorded with Hamilton County Recorder's Office, satisfies MSD's Rules and Regulations' requirements for majority endorsement from benefited properties. Per MSD Rules and Regulations and Section 6117.28 of the ORC, when all the owners of all the lots and lands to be benefited by and assessed for a local sewer improvement consent to its cost and waive the public hearing notice and objection opportunity afforded under law, the County Commissioners may choose to proceed to construct the improvement without the public hearing.

## Impact to Operating Budget

None

## Description and Location

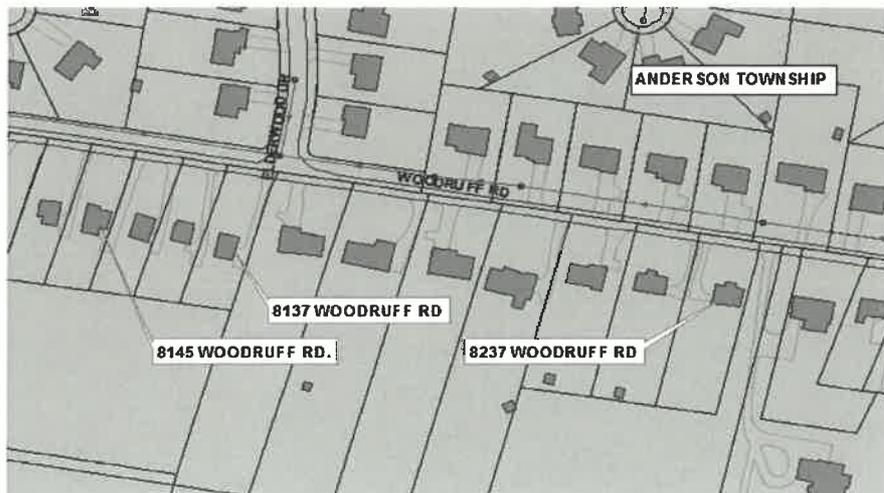
This proposed sewer lateral assessment project is located in the Little Miami sewer shed of the East Basin in Anderson Township, Hamilton County, Ohio at 8237 Woodruff Road. The current request is for design funding. The proposed Woodruff Road Sewer Lateral Assessment (HN 8237) will benefit 1 single-family parcels by extending a sewer lateral to the boundary of the public right of way in front of each benefited property, eliminating 1 household sewage treatment systems. MSD proposes to construct 1, 6-inch diameter sewer laterals having a approximate length of 60 feet. Each lateral will connect to a gravity sewer.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$22,600	\$20,000	\$0	\$0	\$20,000
Miscellaneous Expense	\$8,000	\$8,800	\$0	\$0	\$8,800
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$75,000	\$0	\$36,000	\$0	\$36,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$11,200	\$0	\$7,500	\$0	\$7,500
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$116,800</b>	<b>\$28,800</b>	<b>\$43,500</b>	<b>\$0</b>	<b>\$72,300</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$28,800	\$43,500	\$0	\$0	\$0	\$72,300

## Prior Legislation Action

Dec 2014, Nov 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Woodruff Road Sewer Lateral Assessment (HN 8217)		
Project ID	10470031	CIP Number	10470031
Project Type	Lateral Sewer	Sewer Number	6578

## Purpose and Justification

The project was initiated by submittal of a petition, statement and waiver from the owner of the property to be benefited. The waiver satisfies requirements for majority endorsement from benefited properties. Per Section 1805 (A)(1)(ii) of the MSD Rules and Regulations and Section 6117.28 of the ORC, when all the owners of all the lots and lands to be benefited by and assessed for a local sewer improvement consent to its cost and waive the public hearing notice and objection opportunity afforded under law, the County Commissioners may choose to proceed to construct the improvement without the public hearing.

## Impact to Operating Budget

None

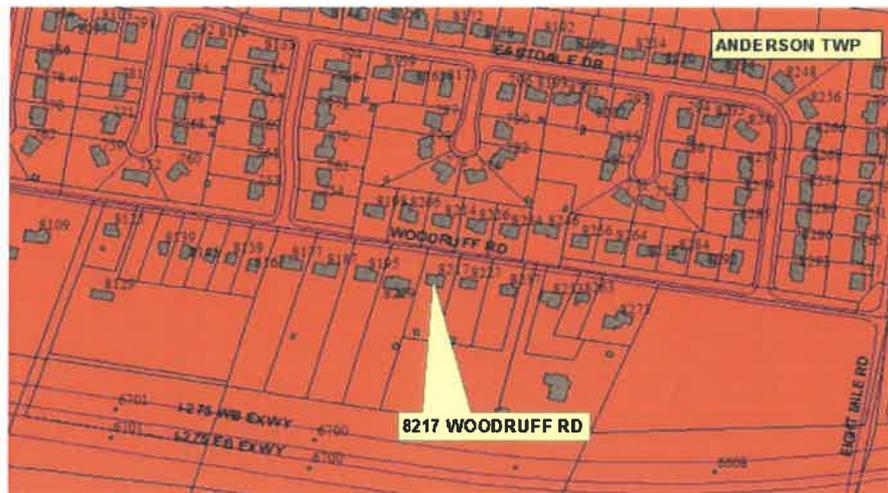
## Description and Location

The proposed assessment will benefit 1 single-family parcel by extending a sewer lateral to the boundary of the public right of way in front of the benefited property, eliminating 1 household sewage treatment system. MSD proposes to construct 1, 6-inch diameter sewer lateral 50 feet long that will connect to a gravity sewer. This proposed sewer lateral assessment project is located in the Little Miami sewer shed in Anderson Township, Hamilton County, Ohio at 8217 Woodruff Road.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$2,500	\$0	\$2,500
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$36,000	\$0	\$36,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$15,000	\$0	\$7,500	\$0	\$7,500
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$15,000</b>	<b>\$0</b>	<b>\$46,000</b>	<b>\$0</b>	<b>\$46,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$46,000	\$0	\$0	\$0	\$46,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Woodruff Road Sewer Lateral Assessment (HN 8263)		
Project ID	10470032	CIP Number	10470032
Project Type	Lateral Sewer	Sewer Number	6579

## Purpose and Justification

The project was initiated by submittal of a petition, statement and waiver from the owner of the property to be benefited. The waiver satisfies requirements for majority endorsement from benefited properties. Per Section 1805 (A)(1)(ii) of the MSD Rules and Regulations and Section 6117.28 of the ORC, when all the owners of all the lots and lands to be benefited by and assessed for a local sewer improvement consent to its cost and waive the public hearing notice and objection opportunity afforded under law, the County Commissioners may choose to proceed to construct the improvement without the public hearing.

## Impact to Operating Budget

None

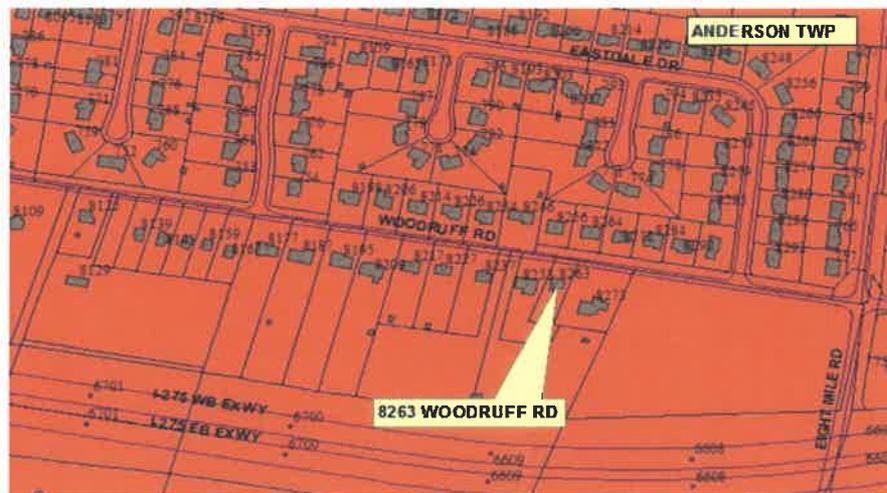
## Description and Location

The proposed assessment will benefit 1 single-family parcel by extending a sewer lateral to the boundary of the public right of way in front of the benefited property, eliminating 1 household sewage treatment system. MSD proposes to construct 1, 6-inch diameter sewer lateral 50 feet long that will connect to a gravity sewer. This proposed sewer lateral assessment project is located in the Little Miami sewer shed in Anderson Township, Hamilton County, Ohio at 8263 Woodruff Road.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$2,000	\$0	\$2,500	\$0	\$2,500
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$35,000	\$0	\$35,000	\$0	\$35,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$15,000	\$0	\$7,500	\$0	\$7,500
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$52,000</b>	<b>\$0</b>	<b>\$45,000</b>	<b>\$0</b>	<b>\$45,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$45,000	\$0	\$0	\$0	\$45,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

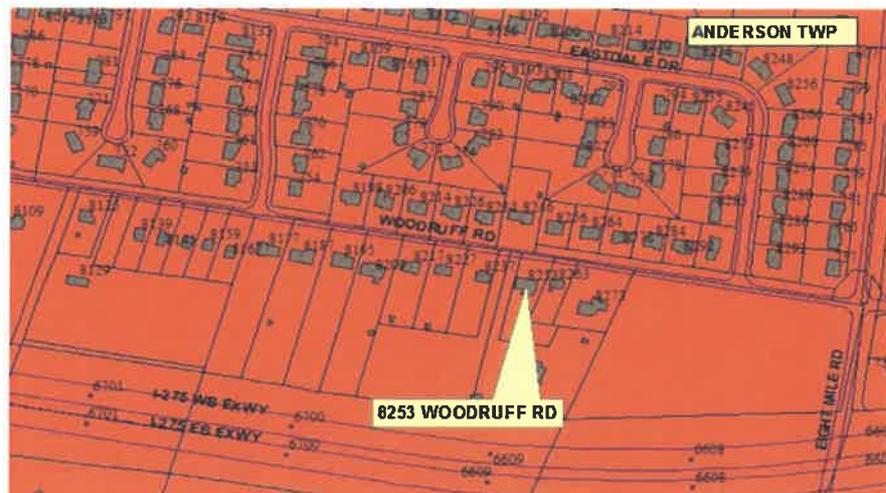
Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Woodruff Road Sewer Lateral Assessment (HN 8253)		
<b>Project ID</b>	<b>10470033</b>	<b>CIP Number</b>	<b>10470033</b>
<b>Project Type</b>	<b>Lateral Sewer</b>	<b>Sewer Number</b>	<b>6580</b>
<b>Purpose and Justification</b>			
The project was initiated by submittal of a petition, statement and waiver from the owner of the property to be benefited. The waiver satisfies requirements for majority endorsement from benefited properties. Per Section 1805 (A)(1)(ii) of the MSD Rules and Regulations and Section 6117.28 of the ORC, when all the owners of all the lots and lands to be benefited by and assessed for a local sewer improvement consent to its cost and waive the public hearing notice and objection opportunity afforded under law, the County Commissioners may choose to proceed to construct the improvement without the public hearing.			
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
The proposed assessment will benefit 1 single-family parcel by extending a sewer lateral to the boundary of the public right of way in front of the benefited property, eliminating 1 household sewage treatment system. MSD proposes to construct 1, 6-inch diameter sewer lateral 50 feet long that will connect to a gravity sewer. This proposed sewer lateral assessment project is located in the Little Miami sewer shed in Anderson Township, Hamilton County, Ohio at 8253 Woodruff Road.			

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$2,500	\$0	\$2,500
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$35,000	\$0	\$36,000	\$0	\$36,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$15,000	\$0	\$7,500	\$0	\$7,500
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$50,000</b>	<b>\$0</b>	<b>\$46,000</b>	<b>\$0</b>	<b>\$46,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$46,000	\$0	\$0	\$0	\$46,000

**Prior Legislation Action**



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Woodruff Road Sewer Lateral Assessment (HN 8273)		
Project ID	10470034	CIP Number	10470034
Project Type	Lateral Sewer	Sewer Number	6581

## Purpose and Justification

The project was initiated by submittal of a petition, statement and waiver from the owner of the property to be benefited. The waiver satisfies requirements for majority endorsement from benefited properties. Per Section 1805 (A)(1)(ii) of the MSD Rules and Regulations and Section 6117.28 of the ORC, when all the owners of all the lots and lands to be benefited by and assessed for a local sewer improvement consent to its cost and waive the public hearing notice and objection opportunity afforded under law, the County Commissioners may choose to proceed to construct the improvement without the public hearing.

## Impact to Operating Budget

None

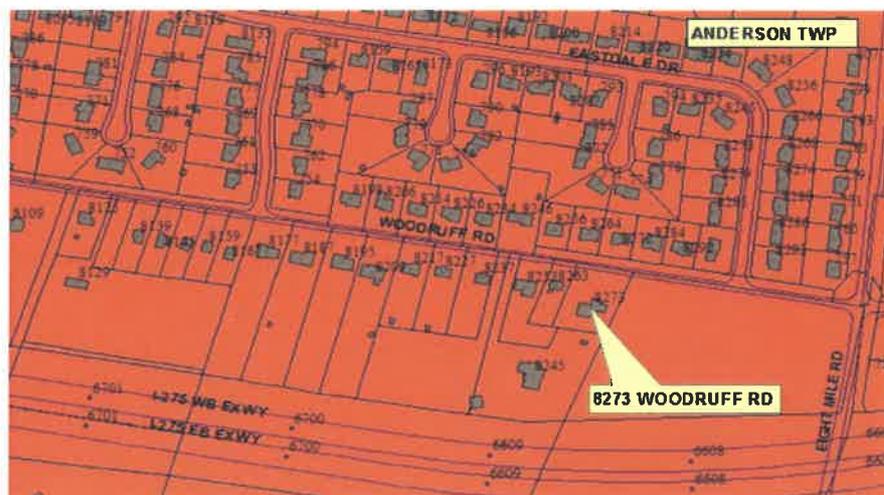
## Description and Location

The proposed assessment will benefit 1 single-family parcel by extending a sewer lateral to the boundary of the public right of way in front of the benefited property, eliminating 1 household sewage treatment system. MSD proposes to construct 1, 6-inch diameter sewer lateral 50 feet long that will connect to a gravity sewer. This proposed sewer lateral assessment project is located in the Little Miami sewer shed in Anderson Township, Hamilton County, Ohio at 8273 Woodruff Road.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$2,000	\$0	\$2,500	\$0	\$2,500
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$35,000	\$0	\$35,000	\$0	\$35,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$15,000	\$0	\$7,500	\$0	\$7,500
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$52,000</b>	<b>\$0</b>	<b>\$45,000</b>	<b>\$0</b>	<b>\$45,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$45,000	\$0	\$0	\$0	\$45,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	West Fork Creek Riparian Floodplain Restoration		
Project ID	11040190	CIP Number	11040190
Project Type	Source Control	Sewer Number	6385

## Purpose and Justification

This project is part of the West Fork watershed strategy. Specifically, this project will remove flow entering the combined system, manage stormwater runoff diverted from West Fork Road through the stormwater features to the Channel and incorporate native species of plants. This project will help reduce the amount of runoff that enters the combined sewer by approximately 510,000 gallons in a typical year. The modeled volume reduction (annual basis) at CSO 128 of 0.24 MG (5.9%) as a result of installing the bioretention basin. This project received a Clean Ohio Fund grant from the Ohio Public Works Commission which covers over 80% of the construction cost for the project.

## Impact to Operating Budget

None

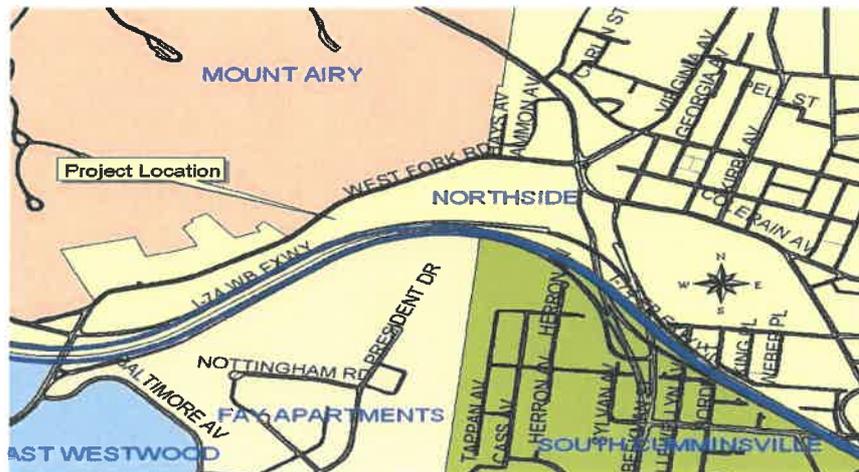
## Description and Location

The project is located on approximately 0.8 acres of vacant land, comprised of four parcels (1759, 1763, 1769 and 1773 West Fork Road), owned by the County purchased through a FEMA grant in 2011-12. This project lies within the drainage basin for CSO 128. Stormwater from catch basins in West Fork Road will be diverted from the combined sewer into the bioretention basin. The basin, which will be about 0.8 acres in size and 2-3 feet deep, will use native plant species, special soils and layers of gravel to absorb, cleanse and store stormwater during a rain event. Any stormwater that does not infiltrate into the basin will discharge to the West Fork Channel. The project includes a dual-purpose access trail and include educational signage for interpretive education and community outreach.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$7,300	\$0	\$7,300
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$256,800	\$0	\$256,800
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$31,200	\$0	\$31,200
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$295,300</b>	<b>\$0</b>	<b>\$295,300</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$295,300	\$0	\$0	\$0	\$295,300

**Prior Legislation Action**



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Muddy Creek Watershed IWAP

Project ID 11130015  
 Project Type Study

CIP Number  
 Sewer Number

## Purpose and Justification

Planning will result in integration of information to reduce CSOs, perform asset management, improve water quality, coordinate with communities, and position the service area for future growth. These evaluations are being coordinated with state and local transportation departments, City Departments, and neighborhood stakeholders. The preliminary watershed master plans developed in this process will provide the basis for future projects in the Wet Weather Improvement Program.

## Impact to Operating Budget

None

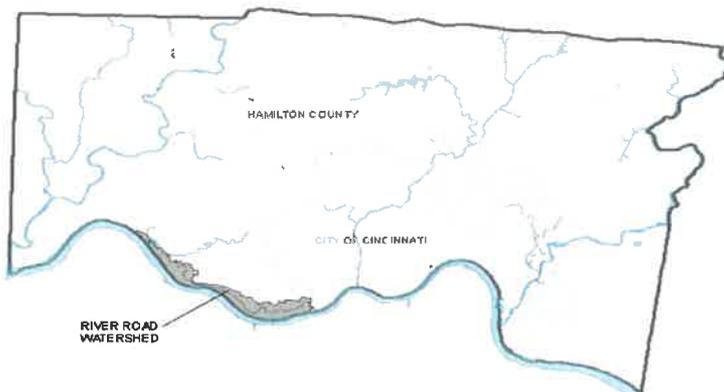
## Description and Location

The evaluation of watershed opportunities to reduce CSOs and make system improvements for future development. Significant planning work has already been completed. This work will supplement the IWAP process. This project will enable MSD to address future wet weather, asset management, and coordination efforts in a systematic and proactive manner. The Muddy Creek Integrated Watershed Action Plan will address the River Road, Lower Muddy Creek, Schiabel Creek, Upper Muddy Creek, North Rapid Run, and Wulff Run watersheds. This project is located in various jurisdictions within Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$1,000,000	\$0	\$1,000,000
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	\$0	\$0	\$1,000,000	\$0	\$1,000,000

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$1,000,000	\$0	\$0	\$0	\$1,000,000

**Prior Legislation Action**  
 Jan 2016, Nov 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	CSO 488 Strategic Sewer Separation Phase A		
<b>Project ID</b>	<b>11142745</b>	<b>CIP Number</b>	<b>11142745</b>
<b>Project Type</b>	<b>Sewer Separation</b>	<b>Sewer Number</b>	<b>6604</b>

## Purpose and Justification

ODOT is preparing for a widening project on I-75. The interstate in the area is too far for a direct discharge of storm flows in to the Mill Creek or tributary. Storm water from the interstate will discharge, after detention, into a tributary of CSO 488. The I-75 expansion is anticipated to increase overflows at CSO 488 by 4.2 million gallons year as well as increasing the risk for SBU's in the area. ODOT has offered to contribute the construction cost of the detention toward a regional storm water project to separate I-75 storm flows and other area storm connections from the combined sewer.

## Impact to Operating Budget

None

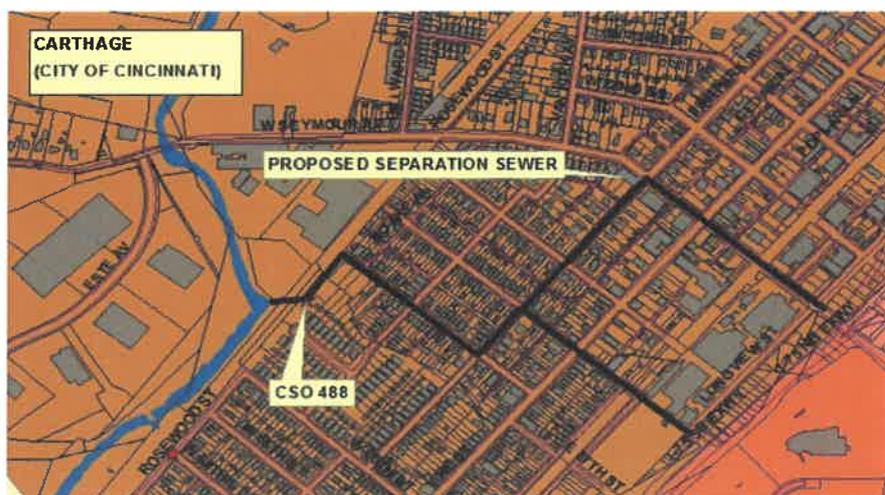
## Description and Location

The project consists of approximately 5,300 linear feet of storm sewer between 36 and 66-inches in diameter. The storm sewers will collect storm water from I-75, as well as, street load separation in the area and route the flows through a 1.6 million gallon bioretention pond before discharge into the Mill Creek. The project is estimated to reduce annual overflow volumes at CSO 488 by 25.3 million gallons. The project is located in the Carthage neighborhood of the City of Cincinnati, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$299,300	\$0	\$299,300	\$0	\$299,300
Design	\$479,700	\$0	\$479,700	\$0	\$479,700
Pre-Construction Services	\$112,300	\$0	\$112,300	\$0	\$112,300
Miscellaneous Expense	\$224,500	\$0	\$224,500	\$0	\$224,500
Right-of-Way	\$500,000	\$0	\$500,000	\$0	\$500,000
Construction	\$5,613,000	\$0	\$0	\$5,613,000	\$5,613,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$505,200	\$0	\$0	\$505,200	\$505,200
Interest / Financing	\$280,650	\$0	\$0	\$280,650	\$280,650
<b>Total</b>	<b>\$8,014,650</b>	<b>\$0</b>	<b>\$1,615,800</b>	<b>\$6,398,850</b>	<b>\$8,014,650</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$1,615,800	\$0	\$0	\$0	\$8,014,650

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	CSO 21 I-75 Reconstruction Coordination		
<b>Project ID</b>	11143260	<b>CIP Number</b>	11143260
<b>Project Type</b>	Sewer Separation	<b>Sewer Number</b>	6339

## Purpose and Justification

This project represents on-going collaborative planning between ODOT and MSD. ODOT is reconstructing I-75 at the I-74 interchange as part of their HAM-75-3.85 project. With this coordination, MSD has an opportunity to install infrastructure including relocation of the CSO 21 structure and sewer infrastructure to facilitate some immediate and more future separation to be bid as part of ODOT's project. ODOT will separate their stormwater from the combined system and will collaborate on the access drive and outfall to the Mill Creek.

## Impact to Operating Budget

None

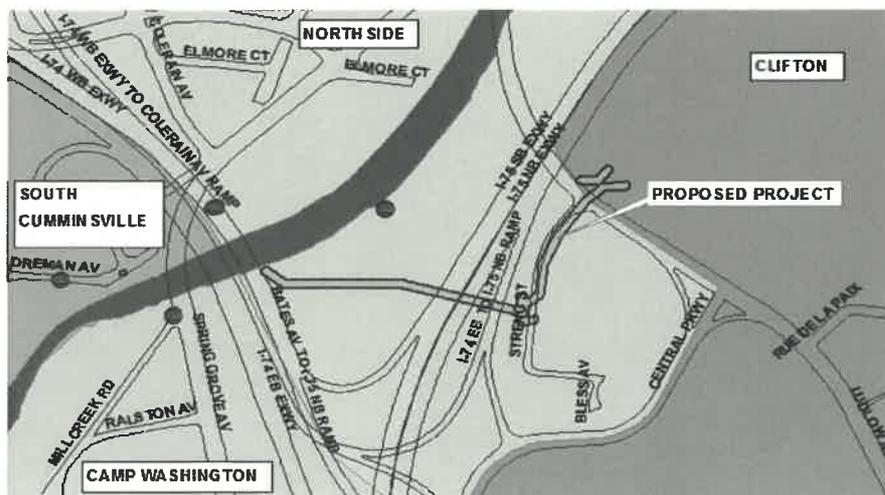
## Description and Location

This project is coordinated with ODOT's HAM-75-3.85 project to reconstruct I-75 in the vicinity of the I-74 interchange. This project includes the relocation of CSO 21 and related new 24 inch sanitary sewer and access drive and the installation of approximately 1200 feet of new sanitary sewer along Streng and Ludlow streets to facilitate abandonment of existing 30 inch combined sewer in ODOT's ROW. ODOT will abandon the 30 inch sewer with its project. The existing combined sewer located downstream of the relocated CSO structure will be repurposed as an outfall pipe. The existing 15" combined sewer north of Ludlow will be converted to a storm only sewer. This project is located in the Clifton neighborhood of the City of Cincinnati.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$93,916	\$0	\$0	\$93,916
Design	\$18,800	\$297,111	\$0	\$0	\$297,111
Pre-Construction Services	\$102,200	\$105,252	\$0	\$0	\$105,252
Miscellaneous Expense	\$67,000	\$59,100	\$0	\$0	\$59,100
Right-of-Way	\$258,600	\$271,000	\$0	\$0	\$271,000
Construction	\$3,074,200	\$0	\$2,885,000	\$0	\$2,885,000
Program Management	\$0	\$47,689	\$0	\$0	\$47,689
Construction Services	\$123,400	\$0	\$103,600	\$0	\$103,600
Interest / Financing	\$85,200	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$3,729,400</b>	<b>\$874,068</b>	<b>\$2,988,600</b>	<b>\$0</b>	<b>\$3,862,668</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$874,068	\$0	\$0	\$0	\$0	\$3,862,668
	\$2,988,600	\$0	\$0	\$0	\$0	

**Prior Legislation Action**  
May 2014, Jun 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati	
Project Title	Duck Creek IWAP	
Project ID	11170035	CIP Number
Project Type	Study	Sewer Number

## Purpose and Justification

Planning will result in reduced CSOs, perform asset management, improve water quality, coordinate with communities, and position the service area for future growth. These evaluations are being coordinated with state and local transportation departments, City Departments, and neighborhood stakeholders. The preliminary watershed master plans developed in this process will provide the basis for future projects in the Wet Weather Improvement Program.

## Impact to Operating Budget

None

## Description and Location

The evaluation of watershed opportunities to reduce CSOs and make system improvements for future development. This project will enable MSD to address future wet weather, asset management, and coordination efforts in a systematic and proactive manner. The Duck Creek Integrated Watershed Action Plan will address the Upper, Lower, and East Duck Creek watersheds. This project is located in various jurisdictions within Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$1,000,000	\$0	\$1,000,000
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	\$0	\$0	\$1,000,000	\$0	\$1,000,000

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$0	\$0	\$0	\$0	\$0
	\$1,000,000	\$0	\$0	\$0	\$0	\$1,000,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
Project Title Lick Run Valley Conveyance System

Project ID 11240000 CIP Number  
Project Type Source Control Sewer Number 6362

## Purpose and Justification

The project's purpose is to convey stormwater from the watershed to Mill Creek. This project is in the LMCPB Bundle and provides the opportunity to implement a sustainable solution to meet CSO volume reduction, improve water quality, create jobs, and lay groundwork for community revitalization.

The Miscellaneous Expense request of \$1,195,500 consists of the WPCLF loan fee and waterline relocation. The overall LMCPB Bundle estimate is currently under the original \$244M 2006 budget.

## Impact to Operating Budget

MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.

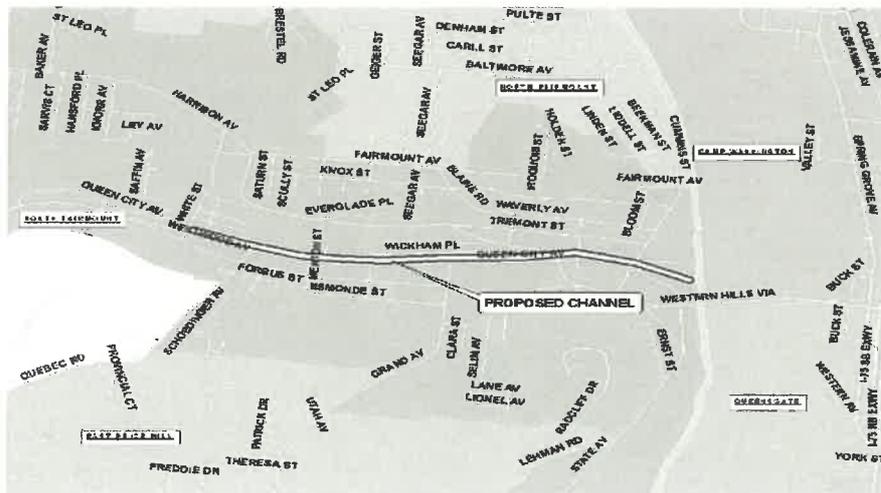
## Description and Location

The valley conveyance system is an approximately 8,000-foot hybrid stormwater conveyance system of open channel & subsurface box conduit, to convey natural drainage and stormwater removed from the combined sewer system. The installation includes a low-flow above ground bioengineered conveyance system paired with a closed box conduit to convey the 100 year flood flows to the Mill Creek safely. The project is located between Queen City and Westwood and between White Street and Mill Creek, in the South Fairmount neighborhood of the City of Cincinnati.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$1,319,480	\$0	\$0	\$1,319,480
Design	\$2,986,300	\$11,233,525	\$0	\$0	\$11,233,525
Pre-Construction Services	\$1,975,800	\$6,134,179	\$0	\$0	\$6,134,179
Miscellaneous Expense	\$307,900	\$3,264,455	\$0	\$0	\$3,264,455
Right-of-Way	\$20,341,600	\$26,364,744	\$0	\$0	\$26,364,744
Construction	\$107,123,600	\$4,922,600	\$96,583,090	\$0	\$101,505,690
Program Management	\$0	\$1,451,426	\$0	\$0	\$1,451,426
Construction Services	\$2,250,300	\$426,900	\$11,020,067	\$0	\$11,446,967
Interest / Financing	\$5,551,900	\$0	\$4,473,400	\$0	\$4,473,400
<b>Total</b>	<b>\$140,537,400</b>	<b>\$55,117,309</b>	<b>\$112,076,557</b>	<b>\$0</b>	<b>\$167,193,866</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$55,117,309	\$112,076,557	\$0	\$0	\$0	\$167,193,866

**Prior Legislation Action**  
Jan 2013, Jan 2014, May 2014, Aug 2014, Oct 2014, Nov 2014, Jan 2015, Jul 2015, Aug 2015, Dec





# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
Project Title Quebec Rd Sewer Separation

Project ID 11240110 CIP Number 11240110  
Project Type Sewer Separation Sewer Number 6125

## Purpose and Justification

This project is part of the Lower Mill Creek Partial Remedy (LMCPR Bundle) Lick Run Source Control. The Quebec Road project will capture storm water from approximately 197 drainage acres. The overall LMCPR Bundle estimate is currently under the original \$244M 2006 budget.

## Impact to Operating Budget

MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.

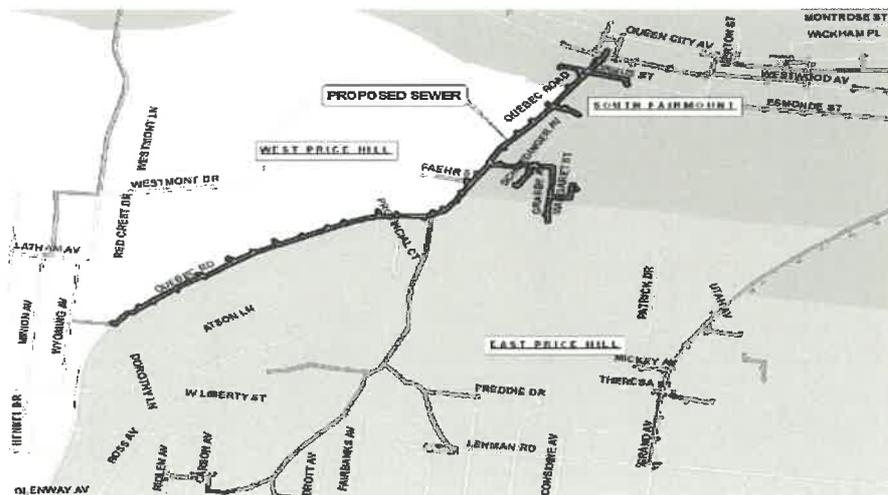
## Description and Location

This project consists of approximately 8,600 feet of storm sewer (12-inch to 60-inch) and water main relocation. The proposed improvements are located in the street right-of-way of Quebec Road, Thinnis Street, Forbus Street, Lierman Street, Jonte Avenue, Gracie Street, Lorna Lane, Margaret Street, and Schoedinger Avenue, as well as private properties that will need utility easements, in the South Fairmount neighborhood of the City of Cincinnati.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$145,843	\$0	\$0	\$145,843
Design	\$0	\$493,517	\$0	\$0	\$493,517
Pre-Construction Services	\$106,700	\$274,371	\$0	\$0	\$274,371
Miscellaneous Expense	\$74,100	\$137,857	\$0	\$0	\$137,857
Right-of-Way	\$1,318,800	\$1,224,700	\$0	\$0	\$1,224,700
Construction	\$5,576,100	\$0	\$6,074,500	\$0	\$6,074,500
Program Management	\$0	\$68,147	\$0	\$0	\$68,147
Construction Services	\$147,400	\$0	\$546,000	\$0	\$546,000
Interest / Financing	\$96,200	\$0	\$106,400	\$0	\$106,400
<b>Total</b>	<b>\$7,319,300</b>	<b>\$2,344,435</b>	<b>\$6,726,900</b>	<b>\$0</b>	<b>\$9,071,335</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$2,344,435	\$6,726,900	\$0	\$0	\$0	\$9,071,335

**Prior Legislation Action**  
Jan 2013, Jan 2014, May 2014, Mar 2015, Apr 2015, Jan 2016, Aug 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Queen City Ave Sewer Separation Phase 2		
Project ID	11240130	CIP Number	11240130
Project Type	Sewer Separation	Sewer Number	6126

## Purpose and Justification

This project is part of the Lower Mill Creek Partial Remedy (LMCPR Bundle) Lick Run Source Control. The Queen City Avenue Sewer Separation Phase 2 consists of separation of approximately 228 acres of the 463 acre sewershed. The current project estimate is higher than the original 2012 estimate due to the addition of a water quality unit and design refinement. The overall LMCPR Bundle estimate is currently under the original \$244M 2006 budget.

## Impact to Operating Budget

MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.

## Description and Location

This project consists of approximately 6,200 l.f. of storm and sanitary sewer (8-in to 60-in), 2,140 l.f. water relocation, 904 l.f. of 30-in sanitary, a water quality unit and detention pond improvements. The proposed improvements are located in the street right-of-way of Queen City Avenue and East Tower, as well as private properties that will need utility easements, in the Lick Run basin of the Mill Creek sewershed. This project is located in the Westwood neighborhood of the City of Cincinnati.

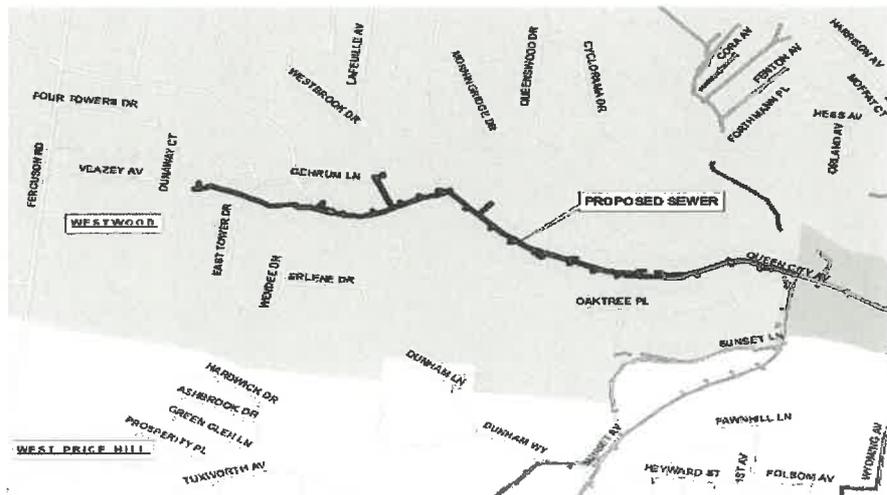
Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$152,376	\$0	\$0	\$152,376
Design	\$0	\$631,627	\$0	\$0	\$631,627
Pre-Construction Services	\$150,700	\$299,418	\$0	\$0	\$299,418
Miscellaneous Expense	\$75,400	\$840,653	\$0	\$0	\$840,653
Right-of-Way	\$714,300	\$714,300	\$0	\$0	\$714,300
Construction	\$7,836,900	\$1,390,000	\$11,402,300	\$0	\$12,792,300
Program Management	\$0	\$97,424	\$0	\$0	\$97,424
Construction Services	\$209,900	\$106,000	\$566,400	\$0	\$672,400
Interest / Financing	\$200,400	\$0	\$374,400	\$0	\$374,400
<b>Total</b>	<b>\$9,187,600</b>	<b>\$4,231,798</b>	<b>\$12,343,100</b>	<b>\$0</b>	<b>\$16,574,898</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$4,231,798	\$12,343,100	\$0	\$0	\$0	\$0	\$16,574,898

## Prior Legislation Action

Jan 2013, Jan 2014, May 2014, Jan 2015, Nov 2015, Jan 2016, May 2016, Sep 2016, Oct 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	CSO 217/483 Source Control Phase A		
Project ID	11243140	CIP Number	11243140
Project Type	Sewer Separation	Sewer Number	6393

## Purpose and Justification

The CSO 217 483 projects will eliminate approx. 113 MG of CSOs, and includes four detention basins (Phase A); sewer separation via installation of 2,700 lf combined, 1,150 lf sanitary and 1,050 lf storm sewers (Phase A2); a storage facility (Phase B); and sewer separation along Winton Rd via installation of 4,850 lf storm sewer, and 2,700 lf sanitary sewer (Phase C). Phase A2 (Project ID 11243142) had its scope and \$7.23M budget subdivided from Phase A due to design schedule, ROW acquisition and specialized construction of the basins of Phase A. The overall LMCPR Bundle estimate is currently under the original \$244M 2006 budget.

## Impact to Operating Budget

None

## Description and Location

This project consist of construction of two new storm water detention basins, enlargement of an existing basin, and modification of an existing basin to direct its flows to Kings Run stream, new storm sewers, and relocated combined sewers. This project is located in the Winton Hills neighborhood of the City of Cincinnati, in the Kings Run Basin of the Mill Creek sewer shed. This project also affects portions of the College Hill and Winton Place neighborhoods of the City of Cincinnati.

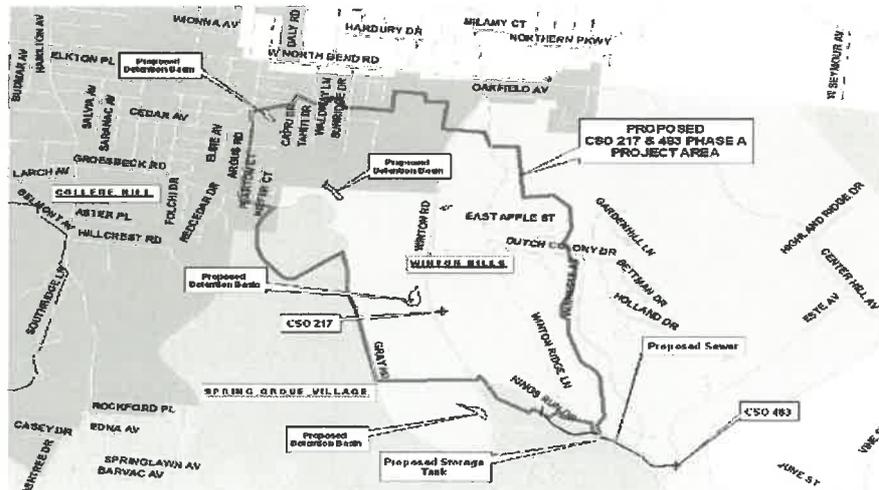
Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$142,270	\$0	\$0	\$142,270
Design	\$855,300	\$1,582,529	\$0	\$0	\$1,582,529
Pre-Construction Services	\$263,700	\$437,412	\$0	\$0	\$437,412
Miscellaneous Expense	\$143,900	\$330,032	\$0	\$0	\$330,032
Right-of-Way	\$2,284,000	\$2,284,000	\$0	\$0	\$2,284,000
Construction	\$13,883,400	\$0	\$3,392,700	\$0	\$3,392,700
Program Management	\$0	\$83,232	\$0	\$0	\$83,232
Construction Services	\$313,500	\$0	\$385,633	\$0	\$385,633
Interest / Financing	\$239,000	\$0	\$95,000	\$0	\$95,000
<b>Total</b>	<b>\$17,982,800</b>	<b>\$4,859,475</b>	<b>\$3,873,333</b>	<b>\$0</b>	<b>\$8,732,808</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$4,859,475	\$3,873,333	\$0	\$0	\$0	\$0	\$8,732,808

## Prior Legislation Action

Jan 2013, May 2014, Jan 2015, Jan 2016, Oct 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
Project Title CSO 217/483 Source Control Phase B

Project ID 11243141 CIP Number 11243141  
Project Type Source Control Sewer Number 6450

## Purpose and Justification

The CSO 217 483 projects will eliminate approx. 113 MG of CSOs, and includes four detention basins (Phase A); sewer separation via installation of 2,700 lf combined, 1,150 lf sanitary and 1,050 lf storm sewers (Phase A2); a storage facility (Phase B); and sewer separation along Winton Rd via installation of 4,850 lf storm sewer, and 2,700 lf sanitary sewer (Phase C). Phase A2 (Project ID 11243142) had its scope and \$7.23M budget subdivided from Phase A due to design schedule, ROW acquisition and specialized construction of the basins of Phase A. The overall LMCPB Bundle estimate is currently under the original \$244M 2006 budget.

## Impact to Operating Budget

None

## Description and Location

This project consists of construction of a CSO storage facility at CSO 217. This project is located in the Winton Hills neighborhood of the City of Cincinnati but affects portions of the College Hill and Winton Place neighborhoods as well.

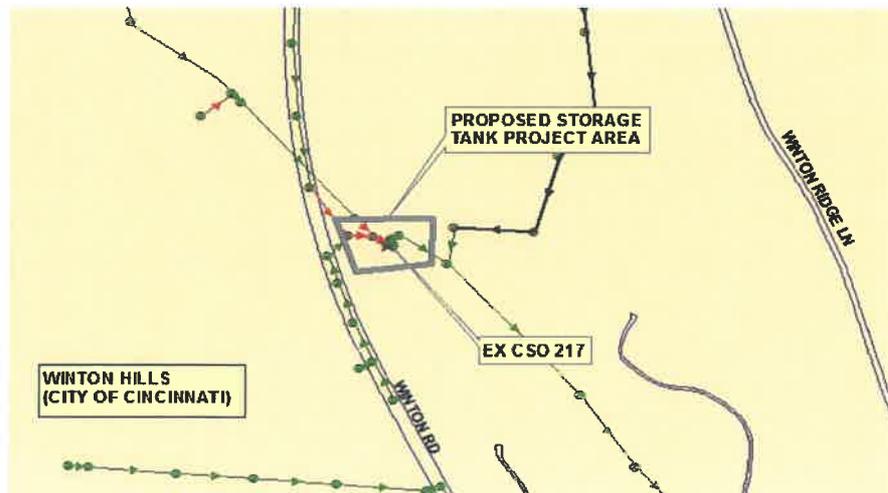
Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$313,400	\$472,400	\$0	\$0	\$472,400
Design	\$684,000	\$1,356,000	\$0	\$0	\$1,356,000
Pre-Construction Services	\$189,800	\$258,422	\$0	\$0	\$258,422
Miscellaneous Expense	\$129,900	\$135,600	\$61,100	\$0	\$196,700
Right-of-Way	\$384,700	\$1,042,900	\$0	\$0	\$1,042,900
Construction	\$10,546,600	\$0	\$10,440,000	\$0	\$10,440,000
Program Management	\$0	\$19,901	\$0	\$0	\$19,901
Construction Services	\$282,800	\$0	\$1,116,000	\$0	\$1,116,000
Interest / Financing	\$364,600	\$0	\$229,000	\$0	\$229,000
<b>Total</b>	<b>\$12,895,800</b>	<b>\$3,285,223</b>	<b>\$11,846,100</b>	<b>\$0</b>	<b>\$15,131,323</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$3,285,223	\$11,846,100	\$0	\$0	\$0	\$0	\$15,131,323

## Prior Legislation Action

Jan 2013, May 2014, Jan 2016, Jun 2016, Sep 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title CSO 217/483 Source Control Phase A2

Project ID 11243142 CIP Number 11243142  
 Project Type Source Control Sewer Number 6582

## Purpose and Justification

The CSO 217 483 projects will eliminate approx. 113 MG of CSOs, and includes four detention basins (Phase A); sewer separation via installation of 2,700 lf combined, 1,150 lf sanitary and 1,050 lf storm sewers (Phase A2); a storage facility (Phase B); and sewer separation along Winton Rd via installation of 4,850 lf storm sewer, and 2,700 lf sanitary sewer (Phase C). Phase A2 (Project ID 11243142) had its scope and \$7.23M budget subdivided from Phase A due to design schedule, ROW acquisition and specialized construction of the basins of Phase A. The overall LMCPR Bundle estimate is currently under the original \$244M 2006 budget.

## Impact to Operating Budget

None

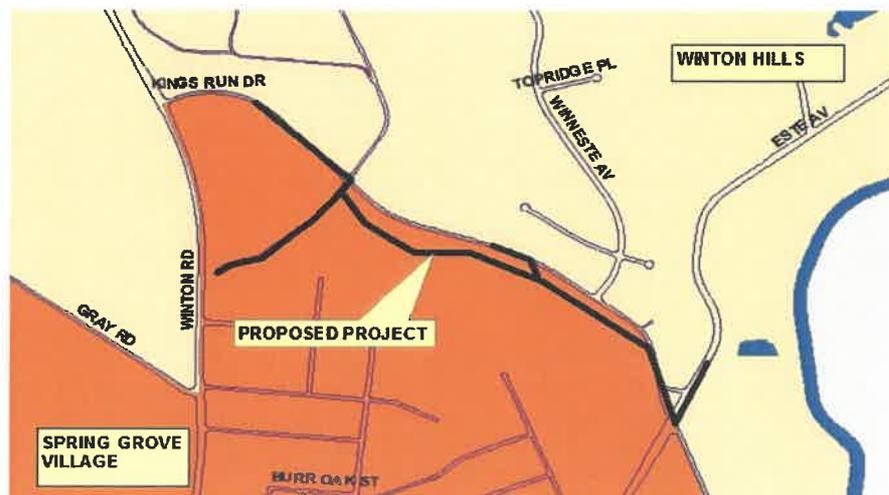
## Description and Location

This project consists of construction of new storm sewers, new combined sewers, and redirection of sanitary laterals. This project is located in the Winton Hills neighborhood of the City of Cincinnati, in the Kings Run Basin of the Mill Creek sewershed. This project also affects portions of the College Hill and Winton Place neighborhoods of the City of Cincinnati.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$19,000	\$0	\$0	\$19,000
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$5,209,000	\$0	\$6,662,100	\$0	\$6,662,100
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$250,700	\$0	\$487,700	\$0	\$487,700
Interest / Financing	\$98,000	\$0	\$133,200	\$0	\$133,200
<b>Total</b>	<b>\$5,557,700</b>	<b>\$19,000</b>	<b>\$7,283,000</b>	<b>\$0</b>	<b>\$7,302,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$19,000	\$7,283,000	\$0	\$0	\$0	\$7,302,000

**Prior Legislation Action**  
 Jan 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Upper Muddy Creek Interceptor Replacement Contract A		
<b>Project ID</b>	<b>11530001</b>	<b>CIP Number</b>	
<b>Project Type</b>	<b>Sewer Replacement</b>	<b>Sewer Number</b>	
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
The project is located in the Muddy Creek sewer shed of the West Basin in Green Township, Hamilton County, Ohio. The project begins near 2896 Westbourne Drive and proceeds north to a location on Werk Road just north of Westbourne Drive across the street from the Hamilton County property designated for the proposed Werk and Westbourne EHRT (WWEHRT).			
Contract A of the Upper Muddy Creek Interceptor Replacement (UMCI) project replaces the most upstream segment of the UMCI. The proposed segment consists of replacing the existing interceptor segment with approximately 1,200 linear feet of 30-inch diameter pipe, appurtenances, and flow controls.			

## Purpose and Justification

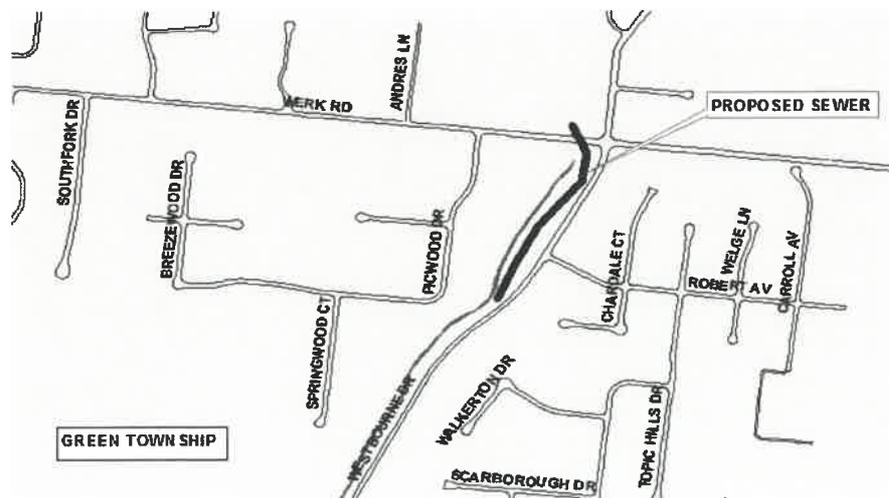
The overall UMCI Replacement is an urgent capacity sewer project that has been moved forward from the Phase II WWIP. The proposed UMCI Replacement will replace the upper portion of the Upper Muddy Creek Interceptor that was originally installed around 1929 to 1935. The existing sewer is aging and deteriorating and experiences overflows directly into Muddy Creek. There is a risk of collapse in as few as 5 years for many segments. The project will also increase capacity of the sewer to transport underflow from CSO 522, CSO 198, and CSO 518 to the future Muddy Creek Basin Storage and Conveyance Sewer. This project must precede Werk & Westbourne.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$902,700	\$0	\$1,274,100	\$0	\$1,274,100
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$78,000	\$0	\$78,000	\$0	\$78,000
Interest / Financing	\$15,800	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$996,500</b>	<b>\$0</b>	<b>\$1,352,100</b>	<b>\$0</b>	<b>\$1,352,100</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$0	\$1,352,100	\$0	\$0	\$0	\$0	\$1,352,100

## Prior Legislation Action



# **2017 ASSET Projects**

Draft



## 2017 Projects

### Metropolitan Sewer District of Greater Cincinnati

### ASSET Projects

Project ID	CIP Type	Project Type	Project Name	MSD	Other	Total	Page
10220054	ASSET	PSE	Bruestle Avenue Pump Station Elimination (Construction)	\$702,200	\$0	\$702,200	77
10220061	ASSET	SEW	Whitewater Township Regional Sewer District SR 128 Sewer Extension (Construction)	\$6,458,400	\$0	\$6,458,400	78
10230041	ASSET	PSE	Westport Village PS Elimination (Construction)	\$1,042,600	\$0	\$1,042,600	79
10230125	ASSET	PSE	East Branch Muddy Creek Pump Station Upgrades (Design,Easement)	\$411,300	\$0	\$411,300	80
10230155	ASSET	SEP	Darwin Avenue Sewer Backup Remediation (HN 3520) (Construction)	\$76,300	\$0	\$76,300	81
10240029	ASSET	REP	German Cemetery Sewer Replacement (Construction)	\$741,200	\$0	\$741,200	82
10240151	ASSET	FAC	Document Control Storage Enhancements (Design,Construction)	\$5,308,000	\$0	\$5,308,000	83
10240245	ASSET	FAC	Mill Creek WWTP Service Water (NPW) Reliability and Service Upgrade (Design,Construction)	\$3,812,200	\$0	\$3,812,200	84
10240275	ASSET	SSO	SSO 603 and 704 Improvements (Design,Construction)	\$1,729,900	\$0	\$1,729,900	85
10240291	ASSET	FAC	Mill Creek WWTP Solids Handling Improvements Phase 1 (Design,Construction)	\$19,468,300	\$0	\$19,468,300	86
10240320	ASSET	REP	Wilder Avenue Sewer Replacement (Design)	\$210,000	\$0	\$210,000	87
10240350	ASSET	REP	McKeone Avenue Sewer Replacement (Construction)	\$161,300	\$0	\$161,300	88
10240365	ASSET	REP	Quebec Road Sewer Replacement (Construction)	\$427,400	\$0	\$427,400	89
10240375	ASSET	PSE	Carpenters Run Pump Station Upgrade (Construction)	\$513,100	\$0	\$513,100	90
10240405	ASSET	PSE	Ponderosa Woods Pump Station Elimination (Construction)	\$299,900	\$0	\$299,900	91
10240420	ASSET	REP	Freeland Avenue Area Sewer Replacement (Design,Easement)	\$128,100	\$0	\$128,100	92
10240430	ASSET	REP	Berkley Avenue Sewer Replacement (Construction)	\$728,860	\$0	\$728,860	93
10240455	ASSET	REP	Spring Grove Avenue Sewer Replacement and Rehabilitation (Construction)	\$550,917	\$0	\$550,917	94
10240465	ASSET	REP	Hosea Street Sewer Replacement (Design,Easement)	\$429,900	\$0	\$429,900	95
10240475	ASSET	REP	Foraker Ave Sewer Replacement - Alms Pl to E. Terminus (Construction)	\$141,700	\$0	\$141,700	96
10240480	ASSET	FAC	MCWWTP Dewatering Polymer System Replacement (Design,Construction)	\$6,641,900	\$0	\$6,641,900	97
10240515	ASSET	REP	Mayhew and Leath Avenues Sewer Replacement (Construction)	\$533,700	\$0	\$533,700	98



## 2017 Projects

### Metropolitan Sewer District of Greater Cincinnati

### ASSET Projects

Project ID	CIP Type	Project Type	Project Name	MSD	Other	Total	Page
10240525	ASSET	REP	Victory Parkway Sewer Rehabilitation (Design)	\$106,400	\$0	\$106,400	99
10240526	ASSET	REP	Cypress St - Ashland Av to 250 feet east Sewer Replacement (Construction)	\$215,300	\$0	\$215,300	100
10240550	ASSET	REP	Pardee Alley Sewer Replacement-Oswald Al to 200' north (Construction)	\$209,900	\$0	\$209,900	101
10240555	ASSET	PSE	Kemper Mill Village Pump Station Upgrade (Construction)	\$687,323	\$0	\$687,323	102
10240565	ASSET	FAC	Overflow Parking lot for MSDGC Engineering and Administration Buildings (Construction)	\$527,500	\$0	\$527,500	103
10240590	ASSET	FAC	Mill Creek WWTP Main Substation Improvements (Design,Construction)	\$7,610,100	\$0	\$7,610,100	104
10240635	ASSET	FAC	Mill Creek WWTP Plant Influent and Headworks Odor Control (Construction)	\$1,259,000	\$0	\$1,259,000	105
10240645	ASSET	FAC	Mill Creek WWC Maintenance Shop Improvements (Construction)	\$1,681,665	\$0	\$1,681,665	106
10240655	ASSET	SEP	CSO 449 Sewer Separation (Design,Easement)	\$143,600	\$0	\$143,600	107
10240665	ASSET	FAC	Mill Creek WWTP Septage Receiving Station Odor Control Improvements (Design,Construction)	\$1,143,400	\$0	\$1,143,400	108
10241820	ASSET	FAC	SSO 700 Facility Improvements (Design,Easement)	\$660,300	\$0	\$660,300	109
10242017	ASSET	STY	Water Quality Program for Mill Creek (Planning)	\$150,000	\$0	\$150,000	110
10250030	ASSET	FAC	Polk Run UV System Post Aeration Improvements (Construction)	\$1,669,000	\$0	\$1,669,000	111
10250035	ASSET	FAC	Polk Run Non-Potable Water Upgrades (Construction)	\$278,000	\$0	\$278,000	112
10260025	ASSET	PSE	South Clippinger Force Main Replacement and Pump Station Upgrade (Design,Easement)	\$444,000	\$0	\$444,000	113
10270007	ASSET	SEW	Dry Run Area Sewers Phase 2 Contract RB (Design,Construction)	\$7,187,500	\$0	\$7,187,500	114
10270008	ASSET	SEW	Dry Run Sewers - Contract 8M (Design,Construction)	\$5,352,100	\$0	\$5,352,100	115
10270150	ASSET	REP	3981 Watterson Rd Sewer Replacement (Construction)	\$184,400	\$0	\$184,400	116
10270160	ASSET	PSE	Prospect Woods Pump Station Upgrade (Construction)	\$854,537	\$0	\$854,537	117
10270165	ASSET	REP	Delta and Greist Sewer Replacement (Design,Easement)	\$297,700	\$0	\$297,700	118
10270170	ASSET	CSO	CSO 83 and 472 Dynamic Underflow Control (Design,Easement)	\$379,000	\$0	\$379,000	119



**2017 Projects**  
**Metropolitan Sewer District of Greater Cincinnati**  
**ASSET Projects**

<b>Project ID</b>	<b>CIP Type</b>	<b>Project Type</b>	<b>Project Name</b>	<b>MSD</b>	<b>Other</b>	<b>Total</b>	<b>Page</b>
10270205	ASSET	SRC	Mt Washington Source Control Pilot (Planning)	\$300,000	\$0	\$300,000	120
10272017	ASSET	STY	Water Quality Program for Little Miami (Planning)	\$335,000	\$0	\$335,000	121
10280187	ASSET	ALW	WWT System Asset Renewal 2017 (Construction)	\$2,000,000	\$0	\$2,000,000	122
10280237	ASSET	ALW	Hydraulic Modeling 2017 (Planning)	\$715,000	\$0	\$715,000	123
10280607	ASSET	ALW	Building Sewer Renewal Program 2017 (Construction)	\$5,000,000	\$0	\$5,000,000	124
10280717	ASSET	ALW	Critical Asset Management Projects 2017 (Construction)	\$10,000,000	\$0	\$10,000,000	125
10280917	ASSET	ALW	Wet Weather Facilities Asset Renewal 2017 (Construction)	\$300,000	\$0	\$300,000	126
10281317	ASSET	ALW	Prioritized Wastewater Collection System Improvements 2017 (Construction)	\$12,000,000	\$0	\$12,000,000	127
10282017	ASSET	ALW	Minor CIP Project Planning 2017 (Planning)	\$1,200,000	\$0	\$1,200,000	128
10282117	ASSET	ALW	Major CIP Planning Allowance 2017 (Planning)	\$1,500,000	\$0	\$1,500,000	129
<b>Total Cost for 53 ASSET Projects</b>				<b>\$114,907,902</b>	<b>\$0</b>	<b>\$114,907,902</b>	

# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Bruestle Avenue Pump Station Elimination		
Project ID	10220054	CIP Number	10220054
Project Type	Pump Station Improvement/Elim	Sewer Number	6137

## Purpose and Justification

The Bruestle Ave. pump station was built in 1968, is near the end of its useful life and does not meet current pump station standards. Completion of this project will result in an annual O&M savings of over \$21K as compared to maintaining the existing pump station. The 100-year NPV for eliminating the pump station is \$2.82 M lower than the NPV for maintaining the current pump station. In addition to the savings, the gravity sewer will bring sewer service to existing homes on Robinhill Dr. and Harvest Ridge Dr. The pump station is among the district's top 10 to be upgraded or eliminated.

## Impact to Operating Budget

None

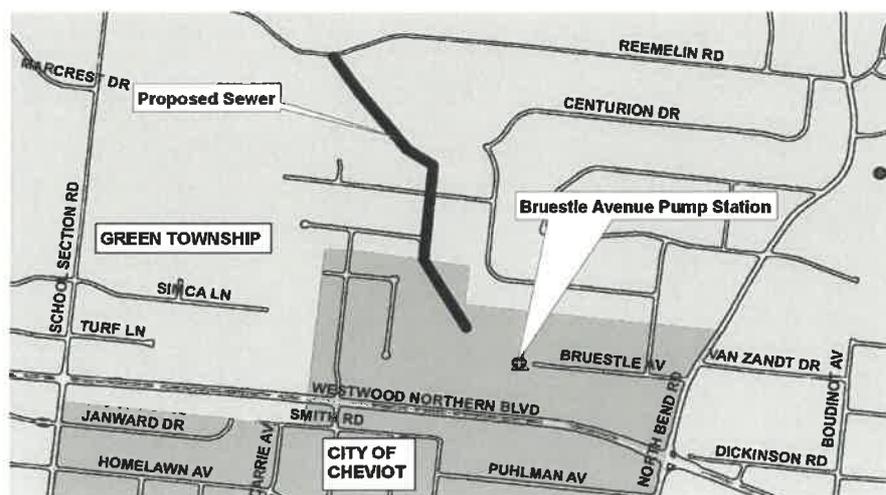
## Description and Location

The project starts near 3957 Reemelin Road and extends SE to the existing Bruestle Subdivision. This approximately 2,955 foot gravity sewer will allow for the elimination of the existing Bruestle Ave. pump station. The project is located in the City of Cheviot and Green Township.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$111	\$0	\$0	\$111
Design	\$78,300	\$0	\$0	\$0	\$0
Pre-Construction Services	\$27,600	\$105,900	\$0	\$0	\$105,900
Miscellaneous Expense	\$19,100	\$19,100	\$0	\$0	\$19,100
Right-of-Way	\$155,300	\$155,300	\$0	\$0	\$155,300
Construction	\$460,200	\$0	\$621,600	\$0	\$621,600
Program Management	\$0	\$5,473	\$0	\$0	\$5,473
Construction Services	\$83,600	\$0	\$80,600	\$0	\$80,600
Interest / Financing	\$11,500	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$835,600</b>	<b>\$285,884</b>	<b>\$702,200</b>	<b>\$0</b>	<b>\$988,084</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$285,884	\$702,200	\$0	\$0	\$0	\$988,084

**Prior Legislation Action**  
Feb 2011, Dec 2011, Jan 2014, May 2014, Nov 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Whitewater Township Regional Sewer District SR 128 Sewer Extension		
<b>Project ID</b>	10220061	<b>CIP Number</b>	10220061
<b>Project Type</b>	New Sewer	<b>Sewer Number</b>	6583

## Purpose and Justification

This project is a trunk sewer and will provide service to the residents along SR 128 and the adjoining area. It will eliminate two small package plants. This project was proposed by the Whitewater Township Regional Sewer District (WTRSD). According to Section IV of the Interdistrict agreement, WTRSD can propose projects to be funded by MSD.

## Impact to Operating Budget

None

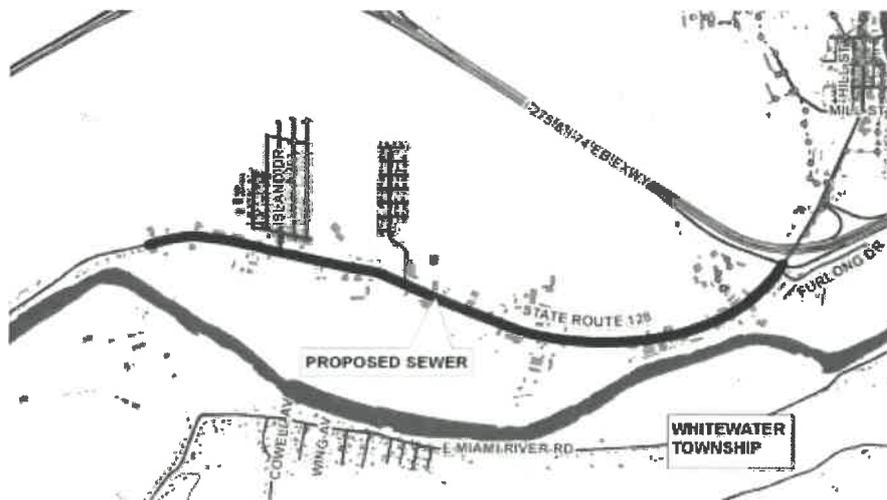
## Description and Location

This project will install force main and gravity sewer along State Route 128 from the intersection of State Route 128 and Furlong Dr. to a point 3400 feet east of the intersection of Morgan Rd and State Route 128. This project is in Whitewater Township.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$877,500	\$877,500	\$0	\$0	\$877,500
Pre-Construction Services	\$234,000	\$234,000	\$0	\$0	\$234,000
Miscellaneous Expense	\$46,000	\$46,000	\$0	\$0	\$46,000
Right-of-Way	\$280,000	\$280,000	\$0	\$0	\$280,000
Construction	\$5,850,000	\$0	\$5,850,000	\$0	\$5,850,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$214,500	\$0	\$608,400	\$0	\$608,400
Interest / Financing	\$292,500	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$7,794,500</b>	<b>\$1,437,500</b>	<b>\$6,458,400</b>	<b>\$0</b>	<b>\$7,895,900</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$1,437,500	\$6,458,400	\$0	\$0	\$0	\$7,895,900

**Prior Legislation Action**  
Mar 2011



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Westport Village PS Elimination		
<b>Project ID</b>	10230041	<b>CIP Number</b>	1999-77
<b>Project Type</b>	Pump Station Improvement/Elim	<b>Sewer Number</b>	6272

## Purpose and Justification

This project will eliminate the existing Westport Village pump station. The existing pump station was replaced in 1985 and is nearing the end of its design life (based on MSD's financial analysis manual of a 30 year lifespan of a pump station). The force main was constructed in 1968 and is also nearing the end of its design life (based on MSD's financial analysis manual of a 50 year lifespan of a force main). Elimination of the existing pump station will redirect flows from SSO 1012 to SSO 697. Credits are available at SSO 697 for the project. Elimination of the pump station would generate 22.53 credits at SSO 1012.

## Impact to Operating Budget

None

## Description and Location

This project will eliminate the existing Westport Village pump station by installing approximately 425 feet of new 12-inch diameter gravity sewer and replacing approximately 675 feet of existing 12-inch diameter gravity sewer at a deeper depth. The replacement of existing sewer will provide more adequate flushing velocity in order to minimize potential Water in Basement complaints. The proposed Westport Village pump station elimination project is located in Green Township, between Charity Drive and Sharlene Court.

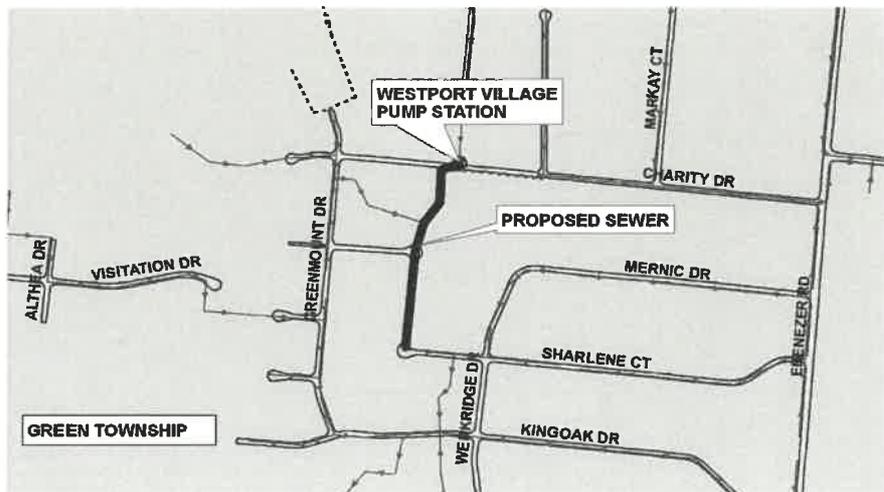
Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$190,100	\$167,123	\$0	\$0	\$167,123
Pre-Construction Services	\$103,700	\$103,700	\$0	\$0	\$103,700
Miscellaneous Expense	\$57,600	\$57,600	\$0	\$0	\$57,600
Right-of-Way	\$0	\$22,977	\$0	\$0	\$22,977
Construction	\$1,152,300	\$0	\$944,000	\$0	\$944,000
Program Management	\$0	\$22,562	\$0	\$0	\$22,562
Construction Services	\$73,200	\$0	\$98,600	\$0	\$98,600
Interest / Financing	\$24,400	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$1,601,300</b>	<b>\$373,962</b>	<b>\$1,042,600</b>	<b>\$0</b>	<b>\$1,416,562</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$373,962	\$1,042,600	\$0	\$0	\$0	\$0	\$1,416,562

## Prior Legislation Action

Dec 2011, Jan 2014, May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title East Branch Muddy Creek Pump Station Upgrades

Project ID 10230125 CIP Number 10230125  
 Project Type Pump Station Improvement/Elim Sewer Number 6584

## Purpose and Justification

The purpose of this project is the replacement of four can style pump stations with submersible style pump stations. The existing pump stations are in poor condition and require frequent maintenance. The project will eliminate the danger of workers needing to enter deteriorated can pump stations and elevate critical equipment such as generators and control panels above the 100-year flood elevation. These pump stations are among the district's top 10 to be upgraded or eliminated.

## Impact to Operating Budget

None

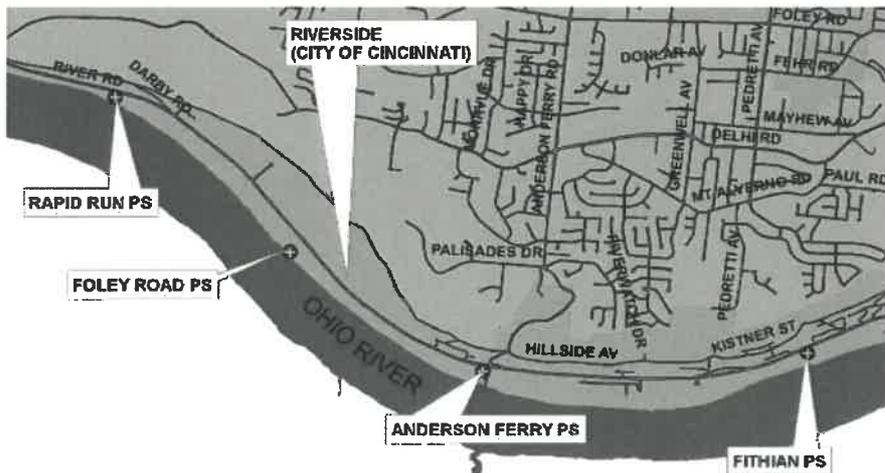
## Description and Location

The project will replace four existing pump stations (Fithian PS, Anderson Ferry PS, Foley Road PS, and Rapid Run PS) with new submersible style pump stations. The project will include new control panels and diesel powered generators elevated above the 100-year flood elevation, and necessary additions for connecting the new pump stations to the existing force mains. The project is located in the Riverside neighborhood of the City of Cincinnati.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$6,603	\$0	\$0	\$6,603
Design	\$197,200	\$0	\$230,700	\$0	\$230,700
Pre-Construction Services	\$48,800	\$48,800	\$68,900	\$0	\$117,700
Miscellaneous Expense	\$41,800	\$41,800	\$51,700	\$0	\$93,500
Right-of-Way	\$50,500	\$50,500	\$60,000	\$0	\$110,500
Construction	\$1,626,000	\$0	\$0	\$2,000,100	\$2,000,100
Program Management	\$0	\$738	\$0	\$0	\$738
Construction Services	\$69,500	\$0	\$0	\$308,000	\$308,000
Interest / Financing	\$40,600	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$2,074,400</b>	<b>\$148,441</b>	<b>\$411,300</b>	<b>\$2,308,100</b>	<b>\$2,867,841</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$148,441	\$411,300	\$0	\$0	\$2,308,100	\$0
						\$2,867,841

**Prior Legislation Action**  
 Jan 2013, Dec 2013, May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Darwin Avenue Sewer Backup Remediation (HN 3520)		
<b>Project ID</b>	<b>10230155</b>	<b>CIP Number</b>	<b>10230155</b>
<b>Project Type</b>	<b>Sewer Separation</b>	<b>Sewer Number</b>	<b>6490</b>

## Purpose and Justification

This project will eliminate the risk of sewer backup (SBU) at the property located at 3520 Darwin Avenue by acquiring the property and razing the structures. The house is constructed over a 36" sewer that was installed in 1925. The property has experienced multiple capacity related SBUs. The proposed solution allows MSD to avoid liability related to the deteriorating structural condition of the house that may eventually be linked to the 36" sewer. Section IV.C within Exhibit 6 of the Global Consent Decree permits MSD to consider property purchase as a building backup prevention solution "where no feasible cost-effective alternative exists to a building backup situation".

## Impact to Operating Budget

None

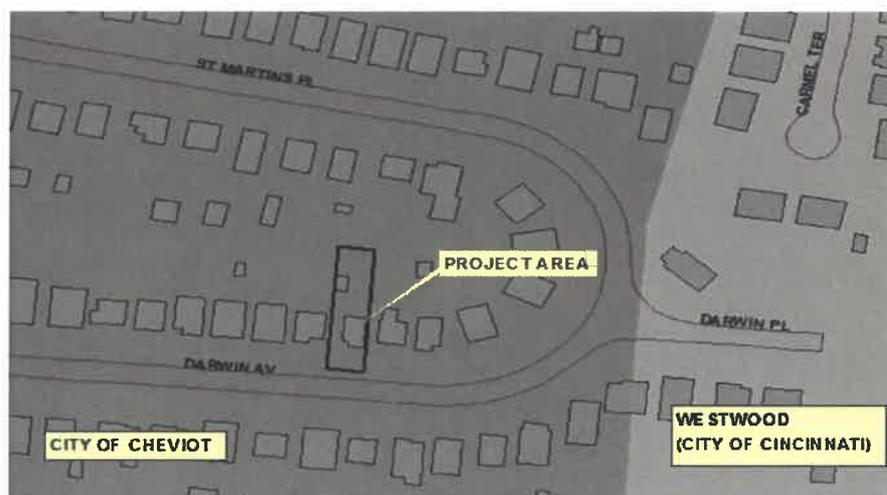
## Description and Location

This project will acquire the property located at 3520 Darwin Avenue with the purpose of razing the house and detached garage. The driveway and foundation will be removed, as well as the sewer lateral that connects to the existing 36" combined sewer. Prior to demolition, an environmental assessment needs to be performed on the structures for asbestos, lead paint, and any other potential hazardous materials. This project is located in the City of Cheviot.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$16,300	\$16,300	\$0	\$0	\$16,300
Miscellaneous Expense	\$6,800	\$6,800	\$0	\$0	\$6,800
Right-of-Way	\$121,900	\$121,900	\$0	\$0	\$121,900
Construction	\$50,600	\$0	\$54,300	\$0	\$54,300
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$22,000	\$0	\$22,000
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$195,600</b>	<b>\$145,000</b>	<b>\$76,300</b>	<b>\$0</b>	<b>\$221,300</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$145,000	\$76,300	\$0	\$0	\$0	\$221,300

**Prior Legislation Action**  
Nov 2015



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	German Cemetery Sewer Replacement		
<b>Project ID</b>	<b>10240029</b>	<b>CIP Number</b>	<b>10240029</b>
<b>Project Type</b>	<b>Sewer Replacement</b>	<b>Sewer Number</b>	<b>6106</b>

## Purpose and Justification

This combined sewer was built in 1914 and it is failing. This project will rehabilitate the combined sewer needed to prevent total failure of the sewer which would result in sewage backups in homes, a cemetery, or the public right of way. Since the sewer is required to relocate from beneath the Duke Energy tower footprint, Construction costs have increased.

## Impact to Operating Budget

None

## Description and Location

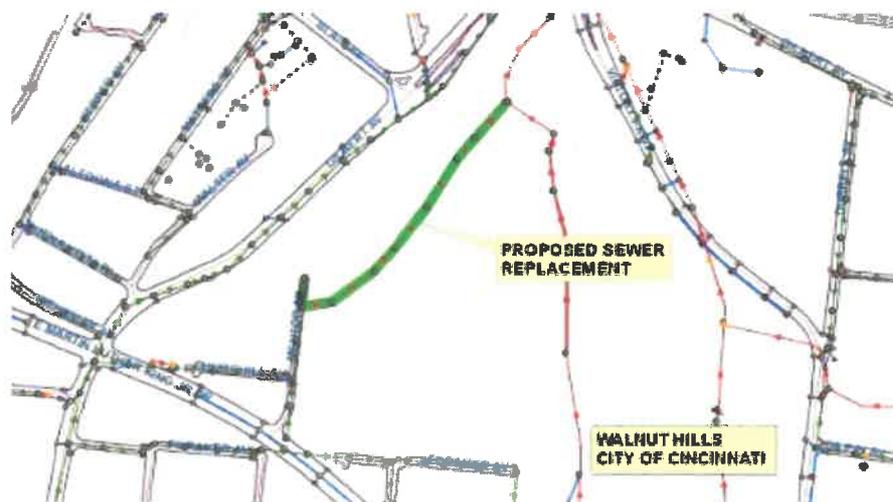
This project will rehabilitate 1,300 feet of failing 12, 18, and 24-inch combined sewer beginning at the North terminus of Mentor Street and continuing northeast towards Gilbert Avenue. This work will involve replacement sewer sections. This project is in the Walnut Hills neighborhood of the City of Cincinnati, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$78,100	\$96,875	\$0	\$0	\$96,875
Pre-Construction Services	\$31,200	\$103,000	\$0	\$0	\$103,000
Miscellaneous Expense	\$17,200	\$15,646	\$0	\$0	\$15,646
Right-of-Way	\$187,600	\$132,128	\$0	\$0	\$132,128
Construction	\$520,700	\$0	\$650,000	\$0	\$650,000
Program Management	\$0	\$17,644	\$0	\$0	\$17,644
Construction Services	\$37,700	\$0	\$91,200	\$0	\$91,200
Interest / Financing	\$6,500	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$879,000</b>	<b>\$365,293</b>	<b>\$741,200</b>	<b>\$0</b>	<b>\$1,106,493</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$365,293	\$0	\$0	\$0	\$0	\$1,106,493
	\$741,200	\$0	\$0	\$0	\$0	

## Prior Legislation Action

Dec 2010, Jan 2014, May 2014, Jun 2014, Sep 2014, Dec 2015



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Document Control Storage Enhancements		
Project ID	10240151	CIP Number	10240151
Project Type	Treatment Facility	Sewer Number	6153

## Purpose and Justification

The project will make necessary renovations to the Annex Building located on the Mill Creek WWTP Campus. The Annex Building was constructed in 1969. The Annex Building will receive renovations, including the necessary installation of a fire sprinkler system, to allow for it to become a centralized document storage facility to meet the document storage and control requirements of the consent decree.

## Impact to Operating Budget

MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.

## Description and Location

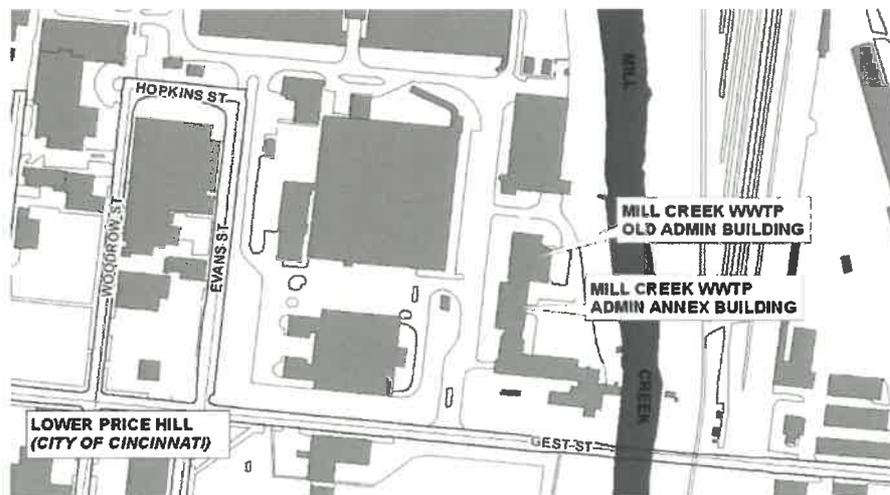
This project will renovate the Annex Building and allow for the Annex Building to become a centralized document storage facility for MSD. This building is located on the Mill Creek WWTP Campus in the Lower Price Hill neighborhood of the City of Cincinnati.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$195,000	\$219,990	\$100,000	\$0	\$319,990
Pre-Construction Services	\$3,000	\$13,070	\$20,000	\$0	\$33,070
Miscellaneous Expense	\$30,000	\$5,010	\$10,000	\$0	\$15,010
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$3,267,800	\$0	\$4,627,000	\$0	\$4,627,000
Program Management	\$0	\$19,341	\$0	\$0	\$19,341
Construction Services	\$213,100	\$0	\$416,400	\$0	\$416,400
Interest / Financing	\$122,500	\$0	\$134,600	\$0	\$134,600
<b>Total</b>	<b>\$3,831,400</b>	<b>\$257,411</b>	<b>\$5,308,000</b>	<b>\$0</b>	<b>\$5,565,411</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$257,411	\$0	\$0	\$0	\$0	\$5,565,411
	\$5,308,000	\$0	\$0	\$0	\$0	

## Prior Legislation Action

Aug 2010, Jan 2014, May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

**Department** Metropolitan Sewer District of Greater Cincinnati  
**Project Title** Mill Creek WWTP Service Water (NPW) Reliability and Service Upgrade

**Project ID** 10240245 **CIP Number** 10240245  
**Project Type** Treatment Facility **Sewer Number** 6214

## Purpose and Justification

The purpose of the project is to provide upgrades to the non-potable water (NPW) system in use at the Mill Creek Wastewater Treatment Plant to meet projected flow and pressure demands. It is critical that the NPW system provide satisfactory and reliable performance in order to ensure the optimum operation of treatment process equipment. In February 2011, MSD committed to evaluating the water feed system and to make adjustments as necessary to provide adequate NPW flow, as part of an agreement with the Hamilton County Department of Environmental Services.

## Impact to Operating Budget

None

## Description and Location

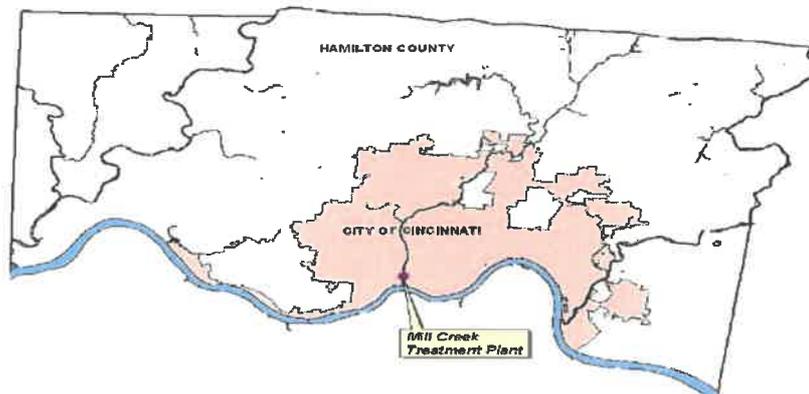
The project will provide upgrades to the Mill Creek WWTP NPW system to meet projected flow and pressure demands and to ensure an adequate level of service and reliability for treatment processes at the plant to ensure their optimum operation. The project is located at the Mill Creek WWTP in the Lower Price Hill neighborhood of the City of Cincinnati, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$5,125	\$0	\$0	\$5,125
Design	\$457,000	\$481,954	\$0	\$0	\$481,954
Pre-Construction Services	\$125,000	\$125,000	\$0	\$0	\$125,000
Miscellaneous Expense	\$16,000	\$16,000	\$19,300	\$0	\$35,300
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$4,159,000	\$0	\$2,860,000	\$0	\$2,860,000
Program Management	\$0	\$45,664	\$0	\$0	\$45,664
Construction Services	\$175,000	\$0	\$714,900	\$0	\$714,900
Interest / Financing	\$218,000	\$0	\$218,000	\$0	\$218,000
<b>Total</b>	<b>\$5,150,000</b>	<b>\$673,743</b>	<b>\$3,812,200</b>	<b>\$0</b>	<b>\$4,485,943</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$673,743	\$0	\$0	\$0	\$0	\$4,485,943

## Prior Legislation Action

Dec 2011, May 2014, May 2016, Jun 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	SSO 603 and 704 Improvements		
<b>Project ID</b>	<b>10240275</b>	<b>CIP Number</b>	<b>2008-28</b>
<b>Project Type</b>	<b>SSO Improvement/Elim</b>	<b>Sewer Number</b>	<b>5968</b>

## Purpose and Justification

The purpose of this project is to improve two SSO's. SSO 603 is active about 9 times per year, and SSO 704 is active about 8 times per year.

## Impact to Operating Budget

None

## Description and Location

This project will replace 6000 feet of 15" and 18" sewer with 21" through 36" sewer in order to increase capacity and eliminate SSO's 603 and 704. This project is located near a stream south of Trebor Drive in Sycamore Township.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$126,100	\$446,100	\$0	\$0	\$446,100
Pre-Construction Services	\$33,600	\$297,200	\$0	\$0	\$297,200
Miscellaneous Expense	\$10,300	\$27,800	\$30,000	\$0	\$57,800
Right-of-Way	\$5,000	\$1,011,200	\$0	\$0	\$1,011,200
Construction	\$892,200	\$5,300,000	\$1,498,900	\$0	\$6,798,900
Program Management	\$0	\$35,681	\$0	\$0	\$35,681
Construction Services	\$139,400	\$182,000	\$201,000	\$0	\$383,000
Interest / Financing	\$37,700	\$222,600	\$0	\$0	\$222,600
<b>Total</b>	<b>\$1,244,300</b>	<b>\$7,522,581</b>	<b>\$1,729,900</b>	<b>\$0</b>	<b>\$9,252,481</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$7,522,581	\$1,729,900	\$0	\$0	\$0	\$0	\$9,252,481

## Prior Legislation Action

Dec 2007, Aug 2008, Dec 2011, Aug 2012, May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Mill Creek WWTP Solids Handling Improvements Phase 1

Project ID 10240291 CIP Number 10240291  
 Project Type Treatment Facility Sewer Number 6146

## Purpose and Justification

The purpose of this project is to improve solids handling facilities at the Mill Creek WWTP. In particular it is important to ensure solids processing capacity over the useful life of the incinerators is maintained. MSDGC proposes a phased approach for the improvements so the most immediate upstream solids handling needs can be addressed first. The first phase of this project will include the following improvements: construction of larger sludge feed wells, upgrade of sludge feed piping and pumps, and upgrade of support structures and equipment.

## Impact to Operating Budget

MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.

## Description and Location

The scope of the project is to convert the basement area formerly occupied by multiple hearth incinerators 5 and 6 into new dewatering sludge feed well. The project will replace the dewatering centrifugal feed pumps, grinders, associated piping and valves, and construct a dewatering feed well odor control system. The scope also includes upgrades of sludge feed pipes and pumps at the two southern most digesters (A1 and A2). This project is located in the Lower Price Hill neighborhood of the City of Cincinnati, Hamilton County, Ohio.

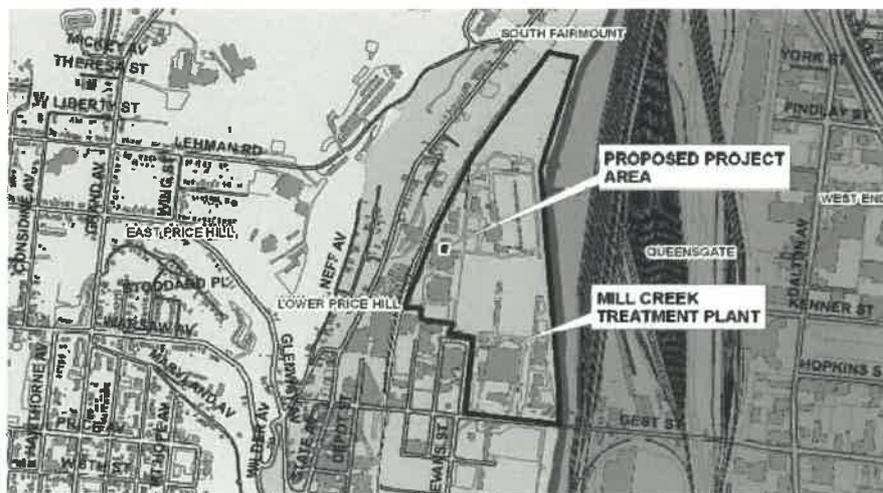
Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$250,000	\$212,804	\$0	\$0	\$212,804
Design	\$1,340,000	\$1,550,651	\$0	\$0	\$1,550,651
Pre-Construction Services	\$245,000	\$245,000	\$0	\$0	\$245,000
Miscellaneous Expense	\$50,000	\$102,900	\$52,900	\$0	\$155,800
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$16,350,000	\$0	\$16,395,400	\$0	\$16,395,400
Program Management	\$0	\$163,503	\$0	\$0	\$163,503
Construction Services	\$1,840,000	\$0	\$2,440,000	\$0	\$2,440,000
Interest / Financing	\$580,000	\$0	\$580,000	\$0	\$580,000
<b>Total</b>	<b>\$20,655,000</b>	<b>\$2,274,858</b>	<b>\$19,468,300</b>	<b>\$0</b>	<b>\$21,743,158</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$2,274,858	\$19,468,300	\$0	\$0	\$0	\$0	\$21,743,158

## Prior Legislation Action

Mar 2011, Jan 2014, May 2014, May 2015, Jan 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Wilder Avenue Sewer Replacement		
<b>Project ID</b>	<b>10240320</b>	<b>CIP Number</b>	<b>2008-44</b>
<b>Project Type</b>	<b>Sewer Replacement</b>	<b>Sewer Number</b>	<b>6041</b>

## Purpose and Justification

This project will replace and or rehabilitate the existing sewer. The existing sewer was installed around 1900 and several portions are cracked, deformed, or collapsed. It is currently located on a steep hillside with many retaining walls. The sewer was initially built to carry flow from a ravine that is no longer connected to the sewer.

## Impact to Operating Budget

None

## Description and Location

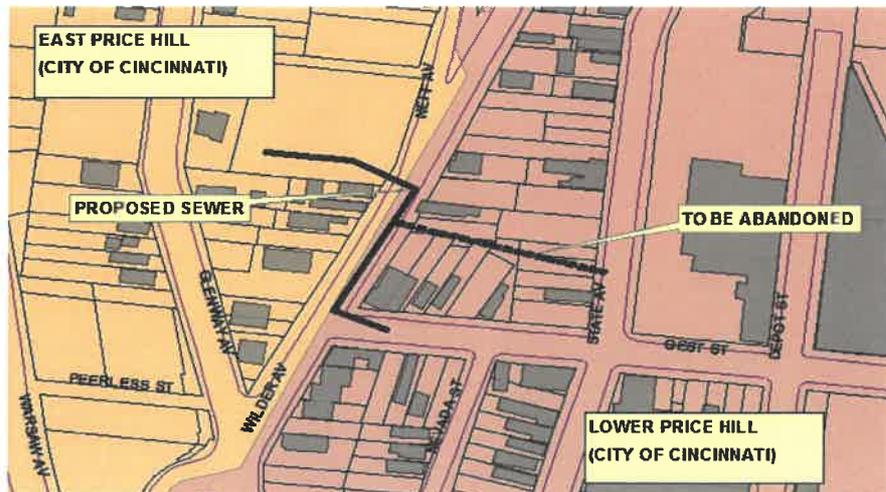
This project will replace and or rehabilitate 549 feet of existing stone combined sewer. A new sewer section may be built on a slope that is less steep and located off private property. This project is located in the Lower Price Hill neighborhood of the City of Cincinnati. The project crosses Wilder Avenue and ends in State Avenue.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$35,000	\$81,305	\$150,000	\$0	\$231,305
Pre-Construction Services	\$7,000	\$70,095	\$60,000	\$0	\$130,095
Miscellaneous Expense	\$5,000	\$29,000	\$0	\$0	\$29,000
Right-of-Way	\$47,000	\$47,000	\$0	\$0	\$47,000
Construction	\$171,000	\$0	\$0	\$314,500	\$314,500
Program Management	\$0	\$13,818	\$0	\$0	\$13,818
Construction Services	\$29,000	\$0	\$0	\$28,400	\$28,400
Interest / Financing	\$2,000	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$296,000</b>	<b>\$241,218</b>	<b>\$210,000</b>	<b>\$342,900</b>	<b>\$794,118</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$241,218	\$210,000	\$0	\$342,900	\$0	\$0
						\$794,118

## Prior Legislation Action

Dec 2008, May 2010, Dec 2011, Jan 2014, May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	McKeone Avenue Sewer Replacement		
<b>Project ID</b>	<b>10240350</b>	<b>CIP Number</b>	<b>10240350</b>
<b>Project Type</b>	<b>Sewer Replacement</b>	<b>Sewer Number</b>	<b>6207</b>
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
The project includes the construction of 125 linear feet of 18-inch diameter sanitary sewer and abandonment of 122 linear feet of 15-inch existing sanitary sewer. The project is located in the West Price Hill neighborhood of the City of Cincinnati, Hamilton County, Ohio.			

## Purpose and Justification

The purpose of the project is to replace 122 linear feet of 15-inch existing sewer with 147 linear feet of 18-inch conduit in a new alignment. The existing 15-inch sewer, installed in 1929, has significant deformation and is not a candidate for pipe lining. The new alignment and larger size will eliminate both the water main interference which was constructed over top the sanitary sewer and upstream water-in-basement issues on McKeone Avenue.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$361	\$0	\$0	\$361
Design	\$9,850	\$0	\$0	\$0	\$0
Pre-Construction Services	\$4,400	\$36,700	\$0	\$0	\$36,700
Miscellaneous Expense	\$32,700	\$32,700	\$0	\$0	\$32,700
Right-of-Way	\$6,000	\$6,000	\$0	\$0	\$6,000
Construction	\$73,000	\$0	\$137,400	\$0	\$137,400
Program Management	\$0	\$3,844	\$0	\$0	\$3,844
Construction Services	\$13,500	\$0	\$23,900	\$0	\$23,900
Interest / Financing	\$1,500	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$140,950</b>	<b>\$79,605</b>	<b>\$161,300</b>	<b>\$0</b>	<b>\$240,905</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$79,605	\$161,300	\$0	\$0	\$0	\$0	\$240,905

## Prior Legislation Action

Oct 2012, May 2014, Jul 2014, Nov 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Quebec Road Sewer Replacement		
<b>Project ID</b>	<b>10240365</b>	<b>CIP Number</b>	<b>10240365</b>
<b>Project Type</b>	<b>Sewer Replacement</b>	<b>Sewer Number</b>	<b>6252</b>
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
This project consists of approximately 300 feet of 12-inch diameter sanitary sewer and 500 feet of 15-inch storm sewer along Quebec Rd in the West Price Hill neighborhood of the City of Cincinnati.			

## Purpose and Justification

The purpose of this project is to replace failing segments of a sewer along Quebec Road. The segments in question are cracking, being pulled apart by root intrusion, and in generally poor shape. Replacement is required to reduce the likelihood of collapse and failure of the pipe and to reduce the frequency of sewage backups and emergency repairs. This project will be coordinated with the downstream Quebec Road Sewer Separation Project 11240110. This will ensure that phasing and construction coordination of the work minimizes construction congestion on Quebec Road and reduces the need to construct temporary structures.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$1,997	\$0	\$0	\$1,997
Design	\$61,700	\$0	\$0	\$0	\$0
Pre-Construction Services	\$11,500	\$73,200	\$0	\$0	\$73,200
Miscellaneous Expense	\$36,100	\$36,100	\$0	\$0	\$36,100
Right-of-Way	\$9,800	\$9,800	\$0	\$0	\$9,800
Construction	\$381,900	\$0	\$381,900	\$0	\$381,900
Program Management	\$0	\$5,959	\$0	\$0	\$5,959
Construction Services	\$45,500	\$0	\$45,500	\$0	\$45,500
Interest / Financing	\$4,800	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$551,300</b>	<b>\$127,056</b>	<b>\$427,400</b>	<b>\$0</b>	<b>\$554,456</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$127,056	\$427,400	\$0	\$0	\$0	\$0	\$554,456

## Prior Legislation Action

Jan 2013, May 2014, Nov 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Carpenters Run Pump Station Upgrade		
<b>Project ID</b>	10240375	<b>CIP Number</b>	10240375
<b>Project Type</b>	Pump Station Improvement/Elim	<b>Sewer Number</b>	6303

## Purpose and Justification

The purpose of this project is to upgrade the Carpenters Run Pump Station. The station was constructed in 1980 and has reached the end of its useful life. With the exception of minor maintenance issues, a condition assessment revealed the pump station functions as designed. The pump station will be upgraded to meet current standards. This project includes replacing the generator with an above ground generator, replacing the wet well, valve chamber and force main. This pump station is among the district's top 15 for upgrade and replacement.

## Impact to Operating Budget

None

## Description and Location

This project includes construction of upgrades to the existing Carpenters Run Pump Station to extend the facility's useful life. The pump station is located along Trailbridge Court in the City of Blue Ash in Hamilton County, Ohio.

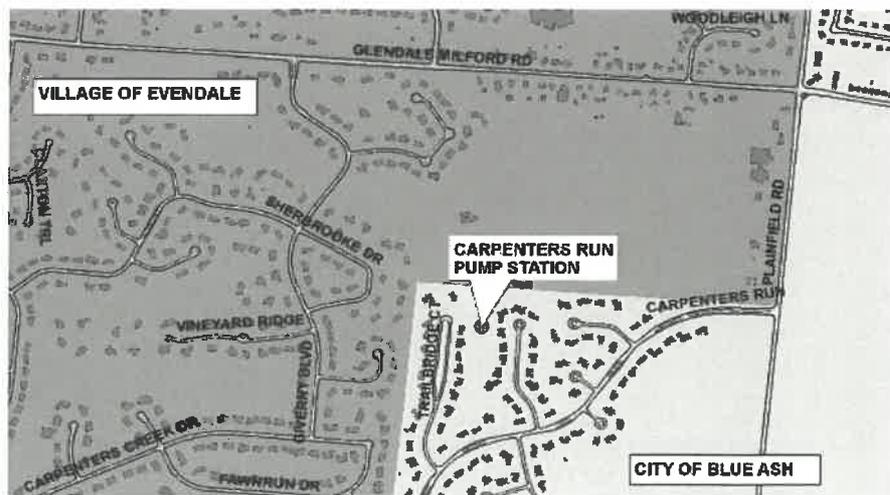
Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$3,516	\$0	\$0	\$3,516
Design	\$87,000	\$108,482	\$0	\$0	\$108,482
Pre-Construction Services	\$17,500	\$44,500	\$0	\$0	\$44,500
Miscellaneous Expense	\$30,900	\$22,471	\$0	\$0	\$22,471
Right-of-Way	\$78,400	\$78,400	\$0	\$0	\$78,400
Construction	\$582,700	\$0	\$454,800	\$0	\$454,800
Program Management	\$0	\$10,470	\$0	\$0	\$10,470
Construction Services	\$48,700	\$0	\$58,300	\$0	\$58,300
Interest / Financing	\$7,200	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$852,400</b>	<b>\$267,839</b>	<b>\$513,100</b>	<b>\$0</b>	<b>\$780,939</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$267,839	\$513,100	\$0	\$0	\$0	\$0	\$780,939

## Prior Legislation Action

Jan 2013, Jan 2014, May 2014, Sep 2014, Sep 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Ponderosa Woods Pump Station Elimination		
<b>Project ID</b>	<b>10240405</b>	<b>CIP Number</b>	<b>99-38</b>
<b>Project Type</b>	<b>Pump Station Improvement/Elim</b>	<b>Sewer Number</b>	<b>5063</b>

## Purpose and Justification

Purpose of the project is to eliminate an aging pump station by installing a gravity sewer from the south terminus of Westonridge Drive and 5346 Edger Drive. The pump station requires more reliable pumps and back-up power. The pump station has numerous operational and maintenance issues, including water-in-basement complaints, clogging and overflows, all needing attention. This pump station is among the district's top 10 for upgrade or elimination.

## Impact to Operating Budget

None

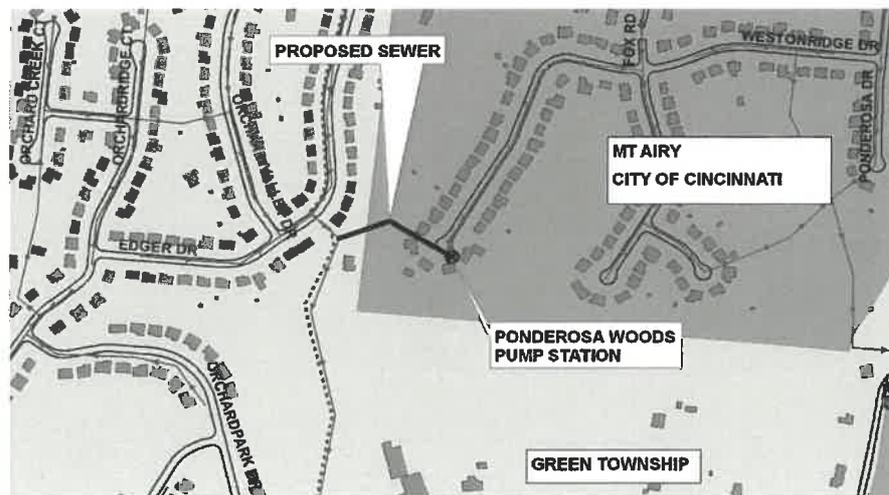
## Description and Location

The project includes construction of 400 feet of 12-inch diameter sanitary sewer and the elimination of the Ponderosa Woods Pump Station. The project is located between the cul-de-sac of Westonridge Drive and 5344 Edger Drive in the Mill Creek sewershed of the Central basin in the City of Cincinnati's Mt. Airy neighborhood, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$22,767	\$0	\$0	\$22,767
Design	\$45,100	\$45,100	\$0	\$0	\$45,100
Pre-Construction Services	\$7,600	\$15,200	\$0	\$0	\$15,200
Miscellaneous Expense	\$36,300	\$36,300	\$0	\$0	\$36,300
Right-of-Way	\$90,600	\$90,600	\$0	\$0	\$90,600
Construction	\$253,200	\$0	\$253,200	\$0	\$253,200
Program Management	\$0	\$2,578	\$0	\$0	\$2,578
Construction Services	\$42,100	\$0	\$46,700	\$0	\$46,700
Interest / Financing	\$3,200	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$478,100</b>	<b>\$212,545</b>	<b>\$299,900</b>	<b>\$0</b>	<b>\$512,445</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$212,545	\$0	\$0	\$0	\$0	\$512,445

**Prior Legislation Action**  
Jan 2014, May 2014, Aug 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Freeland Avenue Area Sewer Replacement		
<b>Project ID</b>	<b>10240420</b>	<b>CIP Number</b>	<b>10240420</b>
<b>Project Type</b>	<b>Sewer Replacement</b>	<b>Sewer Number</b>	<b>6585</b>

## Purpose and Justification

The existing 21-inch sewer segment, installed in approximately 1900, shows extensive cracking, fracturing, joint separation, and shape loss, and approximately 36-feet of the segment is located under the structure at 2028 Breen Street. The project will install approximately 160 linear feet of 8-inch sewer, manholes, cleanouts, fill, seal, and abandon the sewer under the structure. Install manhole in rear of 2025 Freeland Avenue, install 160' ~ 8" sewer for laterals. Fill, seal & abandon existing sewer under 2028 Breen St. This project is located in Hyde Park near Madison Road and Grandin Road.

## Impact to Operating Budget

None

## Description and Location

Install manhole in rear of 2025 Freeland Avenue, install 160' ~ 8" sewer for laterals. Fill, seal & abandon existing sewer under 2028 Breen St. This project is located in Hyde Park near Madison Road and Grandin Road.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$17,510	\$0	\$0	\$17,510
Design	\$17,400	\$0	\$35,000	\$0	\$35,000
Pre-Construction Services	\$4,000	\$0	\$15,000	\$0	\$15,000
Miscellaneous Expense	\$33,700	\$0	\$33,700	\$0	\$33,700
Right-of-Way	\$44,400	\$0	\$44,400	\$0	\$44,400
Construction	\$66,100	\$0	\$0	\$66,100	\$66,100
Program Management	\$0	\$1,956	\$0	\$0	\$1,956
Construction Services	\$30,300	\$0	\$0	\$30,300	\$30,300
Interest / Financing	\$600	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$196,500</b>	<b>\$19,466</b>	<b>\$128,100</b>	<b>\$96,400</b>	<b>\$243,966</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$19,466	\$128,100	\$0	\$96,400	\$0	\$0
						\$243,966

**Prior Legislation Action**  
May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Berkley Avenue Sewer Replacement		
<b>Project ID</b>	<b>10240430</b>	<b>CIP Number</b>	<b>10240430</b>
<b>Project Type</b>	<b>Sewer Replacement</b>	<b>Sewer Number</b>	<b>6586</b>

## Purpose and Justification

The purpose of this project is to rehabilitate four combined sewer segments, abandon one segment, and replace one segment of a deteriorated combined sewer originally constructed in 1926 and 1938. MSD conducted a condition assessment of the existing combined sewer segments and found some of the pipes to have shape loss, longitudinal cracks at the crown of the sewer, and broken tiles.

## Impact to Operating Budget

None

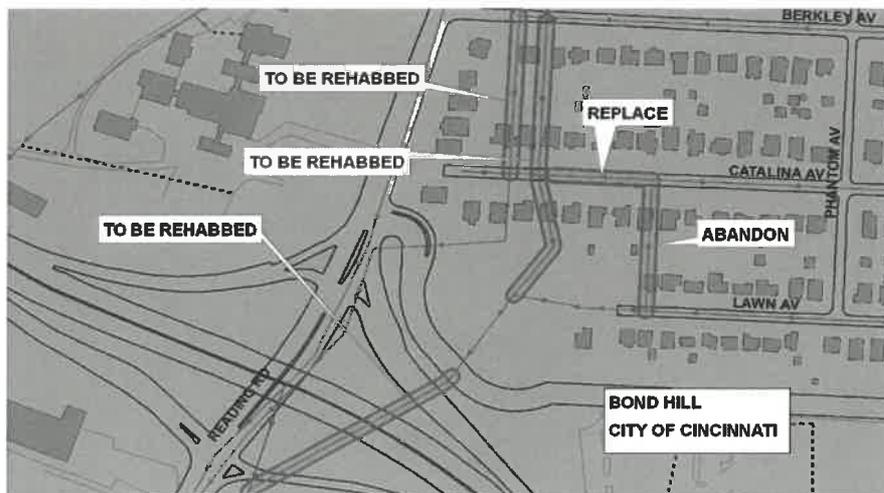
## Description and Location

The project includes lining of existing 10-inch, 30-inch and 36-inch combined sewers; coating of deteriorated reinforcing bars within a 48-inch sewer; replacement of an 18-inch sewer with a 24-inch segment; and abandonment of an existing 8-inch sewer segment. The project is located along Berkley, Catalina, and Lane Avenues in the Mill Creek sewershed in the City of Cincinnati's Bond Hill neighborhood, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$21,565	\$0	\$0	\$21,565
Design	\$84,100	\$90,308	\$0	\$0	\$90,308
Pre-Construction Services	\$16,600	\$56,600	\$0	\$0	\$56,600
Miscellaneous Expense	\$35,900	\$34,250	\$0	\$0	\$34,250
Right-of-Way	\$15,000	\$15,000	\$0	\$0	\$15,000
Construction	\$553,100	\$0	\$660,200	\$0	\$660,200
Program Management	\$0	\$10,098	\$0	\$0	\$10,098
Construction Services	\$23,700	\$0	\$68,660	\$0	\$68,660
Interest / Financing	\$3,400	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$731,800</b>	<b>\$227,821</b>	<b>\$728,860</b>	<b>\$0</b>	<b>\$956,681</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$227,821	\$728,860	\$0	\$0	\$0	\$956,681

**Prior Legislation Action**  
 Jan 2013, Jan 2014, Mar 2014, May 2014, Oct 2015, Feb 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title **Spring Grove Avenue Sewer Replacement and Rehabilitation**

Project ID **10240455** CIP Number **10240455**  
 Project Type **Sewer Replacement** Sewer Number **6587**

## Purpose and Justification

The combined sewer in the location described experiences overflows during 2-year storms. The sewer itself was installed around 1900, in poor condition, and has reached the end of its useful life. This project will replace this combined sewer in order to mitigate the overflows and prevent total collapse of the sewer.

## Impact to Operating Budget

None

## Description and Location

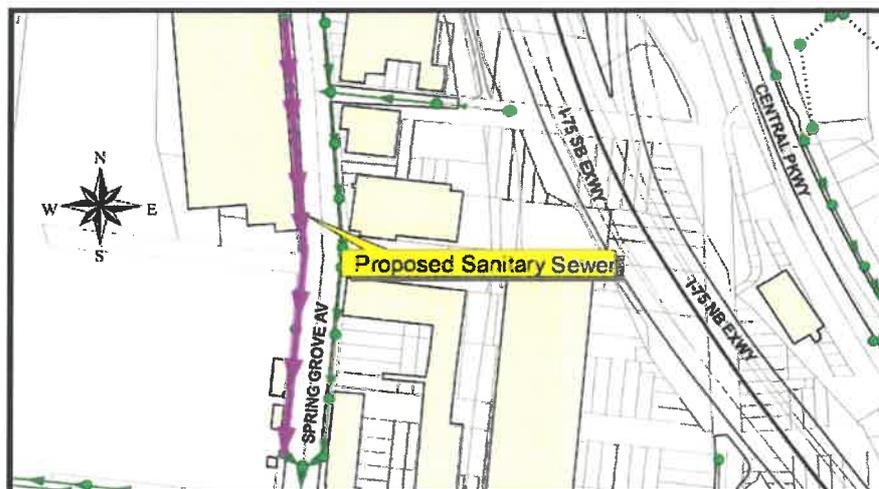
The project includes approximately 740 linear feet of 12-24 inch combined sewer and appurtenances. The project is located along the west side of Spring Grove Avenue between Brashears Street and Arlington Street in the Camp Washington Neighborhood of the City of Cincinnati, Hamilton County.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$14,991	\$0	\$0	\$14,991
Design	\$81,400	\$81,400	\$0	\$0	\$81,400
Pre-Construction Services	\$30,400	\$30,400	\$0	\$0	\$30,400
Miscellaneous Expense	\$15,900	\$15,900	\$0	\$0	\$15,900
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$506,200	\$0	\$506,200	\$0	\$506,200
Program Management	\$0	\$1,704	\$0	\$0	\$1,704
Construction Services	\$34,700	\$0	\$44,717	\$0	\$44,717
Interest / Financing	\$4,400	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$673,000</b>	<b>\$144,395</b>	<b>\$550,917</b>	<b>\$0</b>	<b>\$695,312</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$144,395	\$550,917	\$0	\$0	\$0	\$695,312

## Prior Legislation Action

Jan 2014, May 2014, Sep 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Hosea Street Sewer Replacement		
Project ID	10240465	CIP Number	10240465
Project Type	Sewer Replacement	Sewer Number	6588

## Purpose and Justification

The purpose of this project is fix the flat sewer segment along Hosea Street. The segment currently requires excessive repairs and maintenance. In order to change the segment slope, several sewer segments will be required to be replaced resulting in the elimination of SSO 1010 and SSO 1045. This Sewer was constructed between 1907 and 1915.

## Impact to Operating Budget

None

## Description and Location

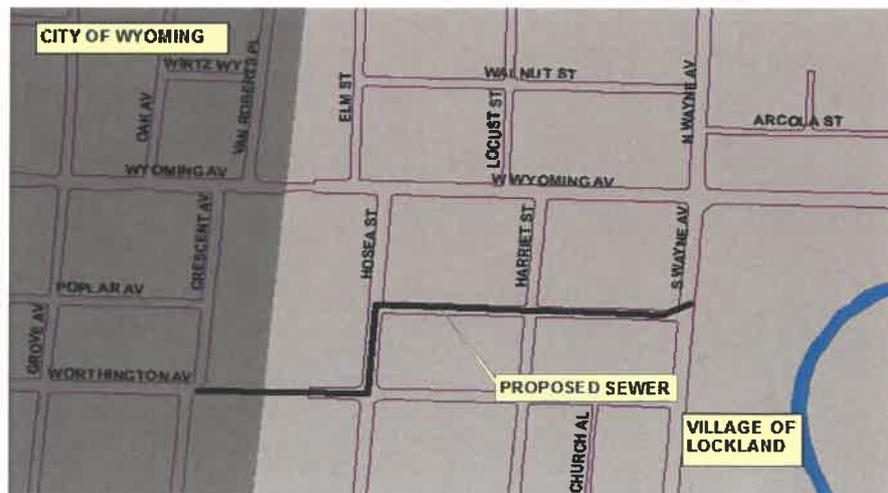
This project proposed the replacement and realignment of up to 1,600 feet of 8- and 12-inch sanitary sewer in and near Hosea Street. This project is located in the Village of Lockland and the City of Wyoming.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$5,786	\$0	\$0	\$5,786
Design	\$222,300	\$0	\$237,700	\$0	\$237,700
Pre-Construction Services	\$125,500	\$0	\$70,200	\$0	\$70,200
Miscellaneous Expense	\$84,200	\$0	\$90,000	\$0	\$90,000
Right-of-Way	\$0	\$0	\$32,000	\$0	\$32,000
Construction	\$2,091,400	\$0	\$0	\$2,338,800	\$2,338,800
Program Management	\$0	\$646	\$0	\$0	\$646
Construction Services	\$105,800	\$0	\$0	\$114,600	\$114,600
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$2,629,200</b>	<b>\$6,432</b>	<b>\$429,900</b>	<b>\$2,453,400</b>	<b>\$2,889,732</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$6,432	\$429,900	\$0	\$0	\$2,453,400	\$0
						\$2,889,732

## Prior Legislation Action

May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Foraker Ave Sewer Replacement - Alms Pl to E. Terminus		
Project ID	10240475	CIP Number	10240475
Project Type	Sewer Replacement	Sewer Number	6439

## Purpose and Justification

The purpose of the project is to restore a combined sewer that was constructed in 1891. The sewer is in poor condition with multiple fractures, deformations, and has a shape loss greater than ten percent. The structural integrity of portions of the sewer can be restored via lining. Segments severely deteriorated require replacement.

## Impact to Operating Budget

None

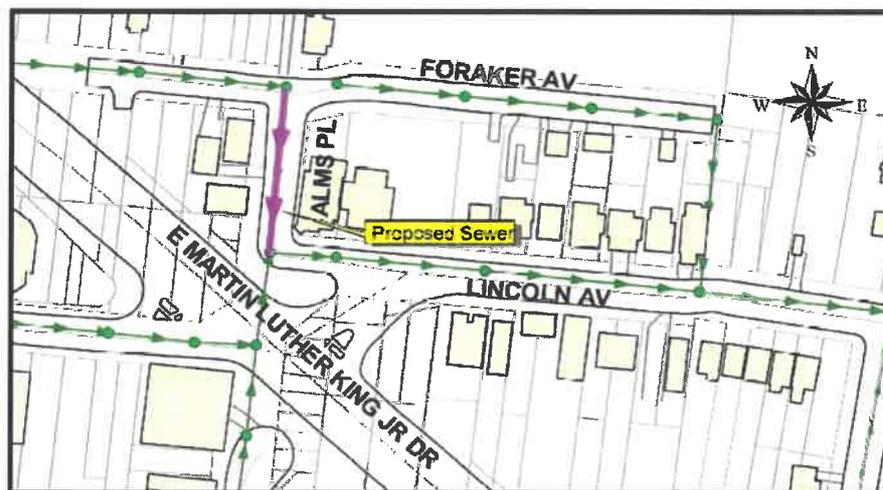
## Description and Location

This project includes replacement of 25 feet of 12-inch diameter failing sewer. A spiral-wound liner will be installed along approximately 570 feet of existing 12-inch diameter sewer. This project is located along Foraker Avenue from Alms Place to Lincoln Avenue in the city of Cincinnati, Walnut Hills neighborhood, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$14,578	\$0	\$0	\$14,578
Design	\$16,200	\$0	\$0	\$0	\$0
Pre-Construction Services	\$3,300	\$19,500	\$0	\$0	\$19,500
Miscellaneous Expense	\$32,100	\$32,100	\$0	\$0	\$32,100
Right-of-Way	\$19,900	\$19,900	\$0	\$0	\$19,900
Construction	\$55,100	\$0	\$124,300	\$0	\$124,300
Program Management	\$0	\$1,655	\$0	\$0	\$1,655
Construction Services	\$28,800	\$0	\$17,400	\$0	\$17,400
Interest / Financing	\$500	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$155,900</b>	<b>\$87,733</b>	<b>\$141,700</b>	<b>\$0</b>	<b>\$229,433</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$141,700	\$0	\$0	\$0	\$0	\$229,433
	\$87,733					

Prior Legislation Action
Jan 2014, May 2014, Nov 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	MCWWTP Dewatering Polymer System Replacement		
Project ID	10240480	CIP Number	10240480
Project Type	Treatment Facility	Sewer Number	6436

## Purpose and Justification

The dewatering polymer system is integral to the successful operation of the dewatering and incineration facilities at Mill Creek WWTP. Over the last several years, the reliability of the dewatering and incineration facilities and causing operations staff to rely more on the former digesters for standby sludge storage capacity. Much of the polymer system equipment is beyond its useful service life and is no longer supported by the system manufacturer, making maintenance repairs increasingly more frequent, difficult, and expensive. This is a critical asset need.

## Impact to Operating Budget

Without replacement, operational issues may impact budget.

## Description and Location

This project will replace the dewatering polymer system at the Mill Creek WWTP. This project is located at the Mill Creek Treatment Plant in the Lower Price Hill neighborhood of the City of Cincinnati.

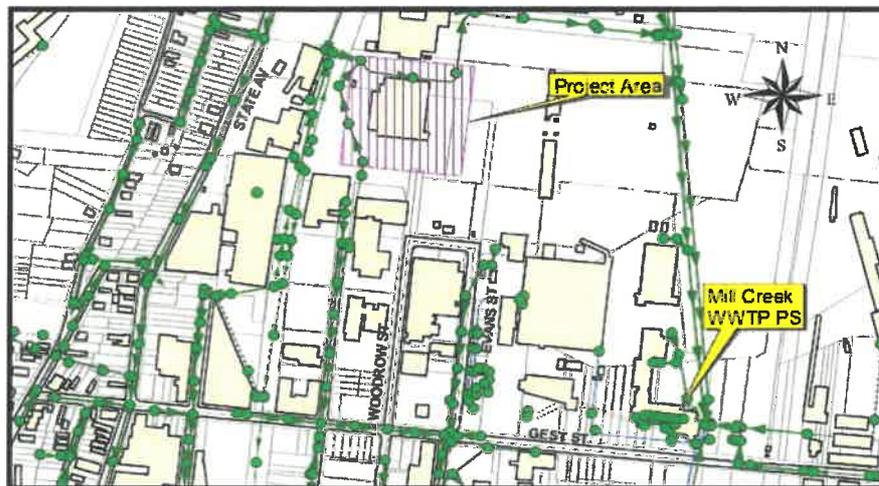
PDE was accomplished under 10280180.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$65,000	\$0	\$0	\$65,000
Pre-Construction Services	\$0	\$10,000	\$0	\$0	\$10,000
Miscellaneous Expense	\$0	\$0	\$47,700	\$0	\$47,700
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$4,900,600	\$0	\$5,343,000	\$0	\$5,343,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$141,300	\$0	\$1,095,300	\$0	\$1,095,300
Interest / Financing	\$117,800	\$0	\$155,900	\$0	\$155,900
<b>Total</b>	<b>\$5,159,700</b>	<b>\$75,000</b>	<b>\$6,641,900</b>	<b>\$0</b>	<b>\$6,716,900</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$75,000	\$0	\$0	\$0	\$0	\$6,716,900
	\$6,641,900	\$0	\$0	\$0	\$0	\$6,716,900

## Prior Legislation Action

Feb 2015



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Mayhew and Leath Avenues Sewer Replacement		
<b>Project ID</b>	<b>10240515</b>	<b>CIP Number</b>	<b>10240515</b>
<b>Project Type</b>	<b>Sewer Replacement</b>	<b>Sewer Number</b>	<b>6331</b>

## Purpose and Justification

The project is to address pipe segments from MH 24313025 to MH 24312024 that is reported to be in poor condition, and has several material changes in a few of the pipe segments.

## Impact to Operating Budget

None

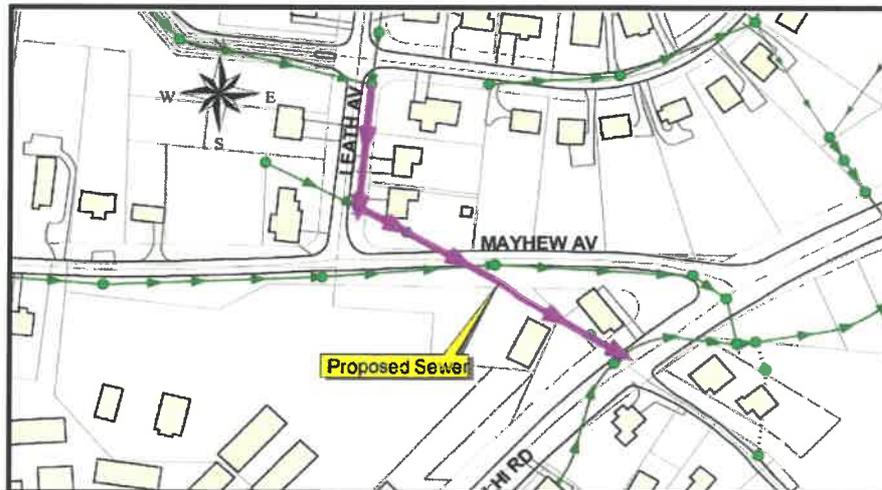
## Description and Location

The project is to realign and replace the existing sewer from MH 24312016 to MH 24312017. This moves the sewer away from the residence at 420 Leath. The project results in an alignment that extends from MH 24312016 to the South along the right-of-way of Leath to Mayhew. The proposed alignment turns to the East along the right-of-way of Mayhew to the existing alignment and follow the existing alignment to MH 24312017. The project will abandon approximately 240 feet of sewer and the removal of 3 manholes and a special chamber. The project is in Delhi Township, just West of Joseph Bruening Park, in Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$28,210	\$0	\$0	\$28,210
Design	\$42,200	\$53,527	\$0	\$0	\$53,527
Pre-Construction Services	\$12,400	\$29,500	\$0	\$0	\$29,500
Miscellaneous Expense	\$32,300	\$20,973	\$0	\$0	\$20,973
Right-of-Way	\$20,600	\$20,600	\$0	\$0	\$20,600
Construction	\$205,900	\$0	\$459,400	\$0	\$459,400
Program Management	\$0	\$2,565	\$0	\$0	\$2,565
Construction Services	\$41,200	\$0	\$74,300	\$0	\$74,300
Interest / Financing	\$2,600	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$357,200</b>	<b>\$155,375</b>	<b>\$533,700</b>	<b>\$0</b>	<b>\$689,075</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$155,375	\$533,700	\$0	\$0	\$0	\$689,075

**Prior Legislation Action**  
Jan 2014, May 2014, Nov 2014, May 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Victory Parkway Sewer Rehabilitation		
Project ID	10240525	CIP Number	10240525
Project Type	Sewer Replacement	Sewer Number	6589

## Purpose and Justification

The pipe segment from MH 27002032 to MH 270020252, which generally follows the alignment of Victory Parkway, is a stone 36-inch sewer that was constructed prior to 1912. The stone sewer is experiencing some deformation in the crown area primarily due to slippage of the crown stones. In addition, there are several areas where the stones have come loose and are missing. As a result of the deterioration of the mortar, there are several locations where there is infiltration in to the pipe.

## Impact to Operating Budget

None

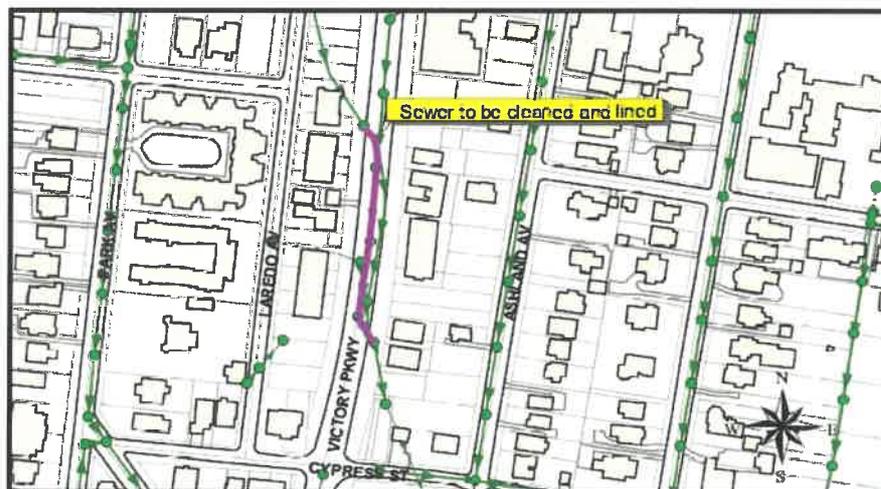
## Description and Location

The project extends the sewer from MH 37002032 to MH 37002025 and consists of cleaning and lining of approximately 450 linear feet of existing 36-inch stone sewers. The project is located in the Walnut Hills neighborhood, approximately 400 feet south of McMillian to approximately 825 feet south of McMillian, in the City of Cincinnati, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$17,049	\$0	\$0	\$17,049
Design	\$56,900	\$0	\$56,900	\$0	\$56,900
Pre-Construction Services	\$18,600	\$0	\$18,600	\$0	\$18,600
Miscellaneous Expense	\$30,900	\$0	\$30,900	\$0	\$30,900
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$310,600	\$0	\$0	\$310,600	\$310,600
Program Management	\$0	\$1,958	\$0	\$0	\$1,958
Construction Services	\$32,700	\$0	\$0	\$32,700	\$32,700
Interest / Financing	\$2,700	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$452,400</b>	<b>\$19,007</b>	<b>\$106,400</b>	<b>\$343,300</b>	<b>\$468,707</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$19,007	\$106,400	\$0	\$0	\$343,300	\$0
						\$468,707

**Prior Legislation Action**  
May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Cypress St - Ashland Av to 250 feet east Sewer Replacement		
Project ID	10240526	CIP Number	10240526
Project Type	Sewer Replacement	Sewer Number	6440

## Purpose and Justification

The pipe segment from MH 37114013 to MH 37115042 is experiencing deformation that has reached or exceeded 10% deformation and is considered to be at the point where lining the pipe segment may not be possible. There is a blind manhole at approximately the mid-point of the pipe segment.

## Impact to Operating Budget

None

## Description and Location

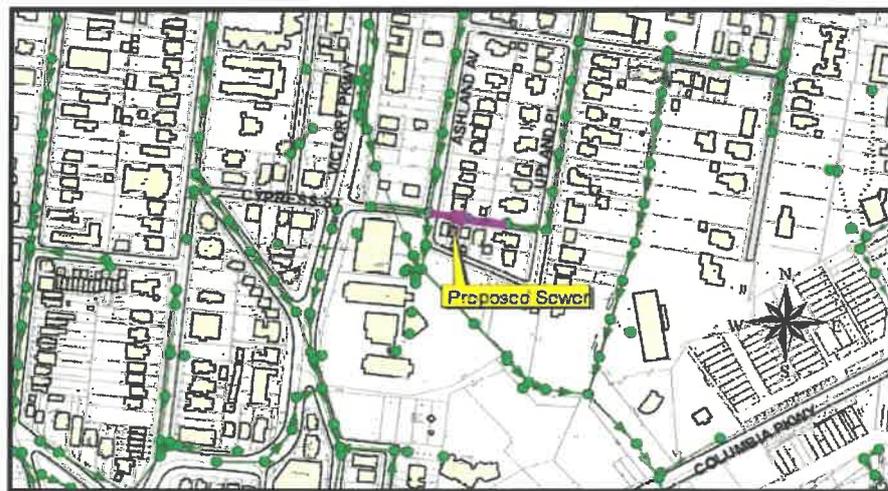
The project is to replace 250 feet of 15-inch diameter sewer with the same size pipe along the same horizontal and vertical alignments. The pipe segments are located approximately 290 feet east of the intersection of Cypress Street and Victory Parkway and extends for approximately 250 feet to the East. The project is located in the Walnut Hills neighborhood, in the City of Cincinnati, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$27,600	\$0	\$0	\$0	\$0
Pre-Construction Services	\$7,100	\$34,700	\$0	\$0	\$34,700
Miscellaneous Expense	\$32,300	\$32,300	\$0	\$0	\$32,300
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$118,500	\$0	\$176,700	\$0	\$176,700
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$28,800	\$0	\$38,600	\$0	\$38,600
Interest / Financing	\$1,000	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$215,300</b>	<b>\$67,000</b>	<b>\$215,300</b>	<b>\$0</b>	<b>\$282,300</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$67,000	\$215,300	\$0	\$0	\$0	\$282,300

## Prior Legislation Action

Jan 2014, Nov 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Pardee Alley Sewer Replacement-Oswald Al to 200' north

Project ID 10240550 CIP Number 10240550  
 Project Type Sewer Replacement Sewer Number 6454

## Purpose and Justification

There are several pipe segments near Hatmaker Street and downstream collection system to the north that are in poor condition. Portion of the downstream sewer are stone sewers that were built around the turn of the century. Currently, one of the pipe segments has experienced a collapse and it is likely more collapses will occur. The project is to re-align the service connections for the three locations served by the subject sewer to the sewer in W. Eighth Street. The plumbing in the Health Clinic basement will need to be re-aligned. Then existing will be abandon in-place.

## Impact to Operating Budget

None

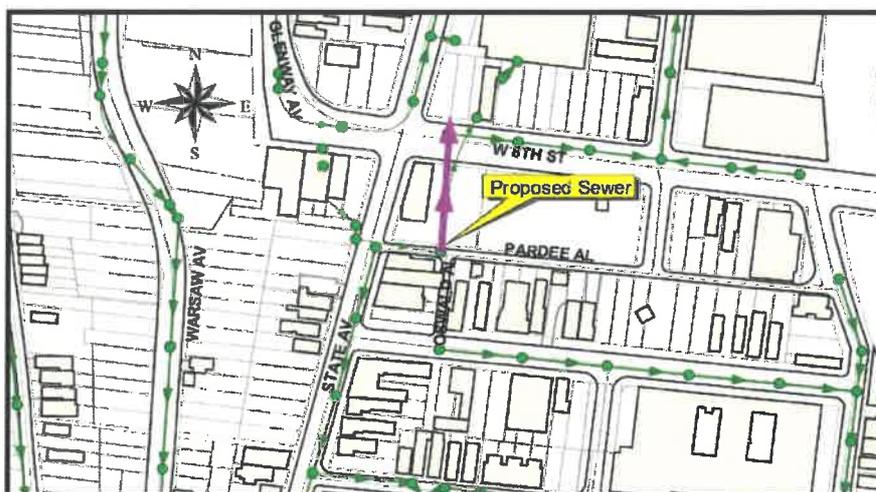
## Description and Location

The project will construct approximately 185 feet of 12-inch diameter sewer, connect a lateral, a trench drain, and a roof drain to the sewer and re-direct two laterals to existing sewer. The project includes abandonment of 730 feet of 18-inch, 24-inch, and 36-inch sewer. The project is located in Lower East Price Hill, in the Mill Creek Valley, in the City of Cincinnati, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$25,727	\$0	\$0	\$25,727
Design	\$34,300	\$52,464	\$0	\$0	\$52,464
Pre-Construction Services	\$4,500	\$6,500	\$0	\$0	\$6,500
Miscellaneous Expense	\$57,700	\$47,120	\$0	\$0	\$47,120
Right-of-Way	\$33,600	\$33,600	\$0	\$0	\$33,600
Construction	\$137,100	\$0	\$184,000	\$0	\$184,000
Program Management	\$0	\$2,942	\$0	\$0	\$2,942
Construction Services	\$17,500	\$0	\$25,900	\$0	\$25,900
Interest / Financing	\$300	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$285,000</b>	<b>\$168,353</b>	<b>\$209,900</b>	<b>\$0</b>	<b>\$378,253</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$209,900	\$0	\$0	\$0	\$0	\$378,253
	\$168,353					

**Prior Legislation Action**  
 Jan 2014, May 2014, Sep 2014, Nov 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Kemper Mill Village Pump Station Upgrade		
Project ID	10240555	CIP Number	10240555
Project Type	Pump Station Improvement/Elim	Sewer Number	6437

## Purpose and Justification

The pump station, originally installed in 1972, is located in a residential neighborhood in close proximity to houses. The existing 4-inch force main was constructed in 1967. The pump station consists of 2 dry pit centrifugal pumps with a total pumping capacity of 100 gallons per minute and is nearing the end of its 30 year expected life.

## Impact to Operating Budget

None

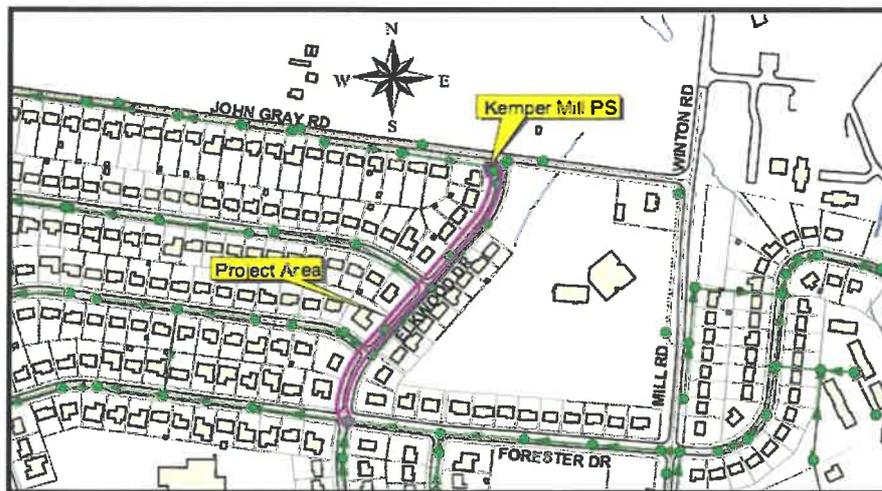
## Description and Location

The project includes construction of approximately 1,000 feet of 4-inch force main, below grade diesel generator, and new dry pit centrifugal pumps installed in parallel alignment with the existing force main. The Kemper Mill Village Pump Station is located at 1683 John Gray Road in the Mill Creek Basin.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$56,812	\$0	\$0	\$56,812
Design	\$0	\$99,200	\$0	\$0	\$99,200
Pre-Construction Services	\$31,600	\$31,600	\$0	\$0	\$31,600
Miscellaneous Expense	\$159,700	\$159,700	\$0	\$0	\$159,700
Right-of-Way	\$15,000	\$15,000	\$0	\$0	\$15,000
Construction	\$526,400	\$0	\$595,600	\$0	\$595,600
Program Management	\$0	\$6,406	\$0	\$0	\$6,406
Construction Services	\$70,000	\$0	\$91,723	\$0	\$91,723
Interest / Financing	\$5,100	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$807,800</b>	<b>\$368,718</b>	<b>\$687,323</b>	<b>\$0</b>	<b>\$1,056,041</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$368,718	\$687,323	\$0	\$0	\$0	\$1,056,041

Prior Legislation Action
Jan 2014, May 2014, Mar 2015



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Overflow Parking lot for MSDGC Engineering and Administration Buildings		
<b>Project ID</b>	<b>10240565</b>	<b>CIP Number</b>	<b>10240565</b>
<b>Project Type</b>	<b>Treatment Facility</b>	<b>Sewer Number</b>	

## Purpose and Justification

The Parking lot will accommodate 115 spaces for MSD staff and visitors. The design maximizes parking stalls, while minimizing cost per total stalls; includes sustainable LED lighting and reduces the operating maintenance and operating costs of the system; includes green infrastructure elements to achieve the required post-construction stormwater peak flow reduction, therefore reducing stormwater discharge to the existing combined sewer system. Currently, 70% of MSD staff and visitors are using the Kroger parking lot, located south of the WEEC building, or securing public on-street parking. This action will result in MSD abandoning the current Kroger-owned parking lot.

## Impact to Operating Budget

None

## Description and Location

The current request is to fund construction of a supplemental and overflow parking lot serving MSD visitors and workforce at the Gest Street campus of the Mill Creek Wastewater Treatment Plant. MSD has commissioned a parking lot design for a vacant and blighted property owned by the County Commissioners. The parking lot will serve as a supplemental and overflow lot to the main parking lots for the MSD Wastewater Engineering and Education Center (WEEC) at 1035 Woodrow Street and Administration HQ building at 1081 Woodrow Street at the Mill Creek Wastewater Treatment Plant facility, in the City of Cincinnati's Lower Price Hill Neighborhood.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$5,000	\$5,000	\$0	\$0	\$5,000
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$450,000	\$0	\$501,600	\$0	\$501,600
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$25,000	\$0	\$25,900	\$0	\$25,900
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$480,000</b>	<b>\$5,000</b>	<b>\$527,500</b>	<b>\$0</b>	<b>\$532,500</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$5,000	\$0	\$0	\$0	\$0	\$5,000
	\$527,500	\$0	\$0	\$0	\$0	\$532,500

## Prior Legislation Action

Jan 2015



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Mill Creek WWTP Main Substation Improvements		
Project ID	10240590	CIP Number	10240590
Project Type	Treatment Facility	Sewer Number	6484

## Purpose and Justification

To ensure long term reliability of high and medium voltage electrical assets the assets were assessed and evaluated. Needed upgrades to the high and medium voltage electrical distribution system at MCWWTP were identified and prioritized. This equipment was identified as the first priority level based on the Maximo criticality rating for the main distribution transformers of 5700, which is the highest criticality value within the rating system.

## Impact to Operating Budget

MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.

## Description and Location

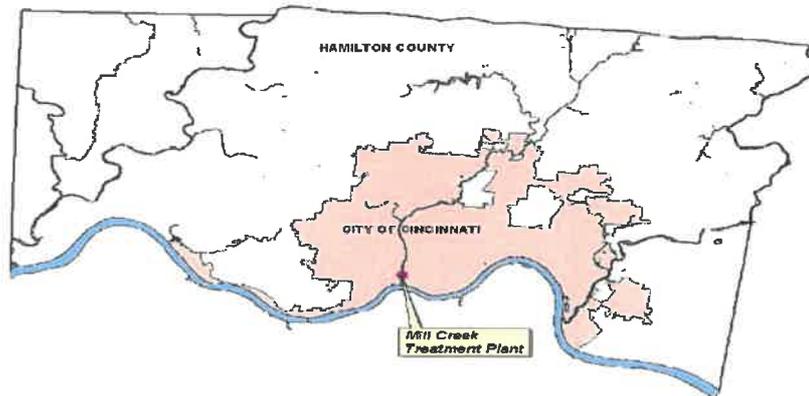
This project will provide improvements for the main substation transformers, power bus and switches, along with revising the electric service entrance, adding power monitoring and transformer isolation wall. Power Building Switchgear will be demolished with feeders extended from the new substation to equipment currently fed from this gear. The Project is located at the Mill Creek Wastewater Treatment Plant facility, in the City of Cincinnati's Lower Price Hill Neighborhood.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$220,000	\$0	\$0	\$0	\$0
Design	\$306,000	\$200,000	\$0	\$0	\$200,000
Pre-Construction Services	\$52,000	\$83,000	\$0	\$0	\$83,000
Miscellaneous Expense	\$67,100	\$36,100	\$22,500	\$0	\$58,600
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$2,560,000	\$0	\$6,699,600	\$0	\$6,699,600
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$231,000	\$0	\$700,000	\$0	\$700,000
Interest / Financing	\$70,000	\$0	\$188,000	\$0	\$188,000
<b>Total</b>	<b>\$3,506,100</b>	<b>\$319,100</b>	<b>\$7,610,100</b>	<b>\$0</b>	<b>\$7,929,200</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$319,100	\$0	\$0	\$0	\$0	\$7,929,200
	\$7,610,100	\$0	\$0	\$0	\$0	\$7,929,200

## Prior Legislation Action

Jan 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Mill Creek WWTP Plant Influent and Headworks Odor Control		
<b>Project ID</b>	<b>10240635</b>	<b>CIP Number</b>	<b>10240635</b>
<b>Project Type</b>	<b>Treatment Facility</b>	<b>Sewer Number</b>	<b>6474</b>
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
This project will replace existing chemical feed equipment for the headworks chemical scrubber and the ferrous chloride feed system bulk tanks, containment area, piping, and valves. The Project is located at the Mill Creek Wastewater Treatment Plant facility, in the City of Cincinnati's Lower Price Hill Neighborhood.			

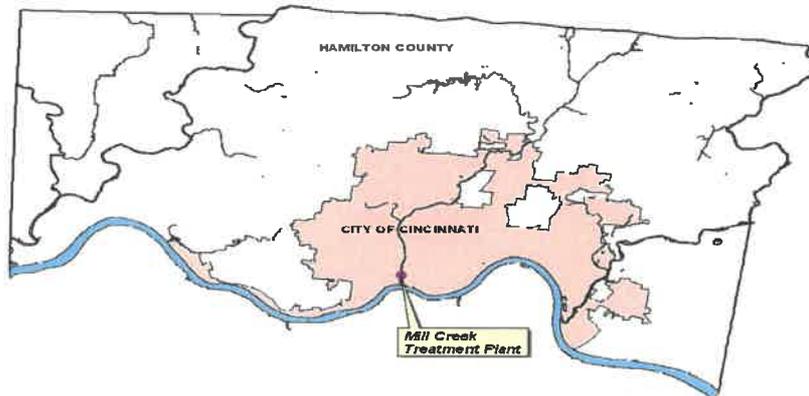
## Purpose and Justification

The chemical feed system equipment as well as the piping, valves, and tanks for the headworks chemical scrubbers is beyond its useful life. The containment area surrounding the chemical feed system has failed, resulting in severe corrosion. The deteriorating piping and tanks located within the containment have not been replaced since the system became operational in the mid-1980s should be replaced. The deteriorating sodium hydroxide tank is showing signs of potential failure and the piping and valves should be replaced. The containment areas for both the chemical tanks and the hypochlorite pumping system have failed and needs to be replaced or rehabilitated.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$72,300	\$155,000	\$0	\$0	\$155,000
Pre-Construction Services	\$30,100	\$30,100	\$0	\$0	\$30,100
Miscellaneous Expense	\$24,100	\$24,100	\$0	\$0	\$24,100
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$717,800	\$0	\$1,045,000	\$0	\$1,045,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$129,200	\$0	\$214,000	\$0	\$214,000
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$973,500</b>	<b>\$209,200</b>	<b>\$1,259,000</b>	<b>\$0</b>	<b>\$1,468,200</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$209,200	\$0	\$0	\$0	\$0	\$1,468,200
	\$1,259,000					

**Prior Legislation Action**  
Nov 2015



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Mill Creek WWC Maintenance Shop Improvements

Project ID 10240645 CIP Number 10240645  
 Project Type Treatment Facility Sewer Number

## Purpose and Justification

The Maintenance Shop roof is leaking in several places and is in urgent need of a long term solution. An air conditioning unit would be ideal to achieve a more stable and humid free environment for materials and personnel in hot weather conditions.

## Impact to Operating Budget

MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.

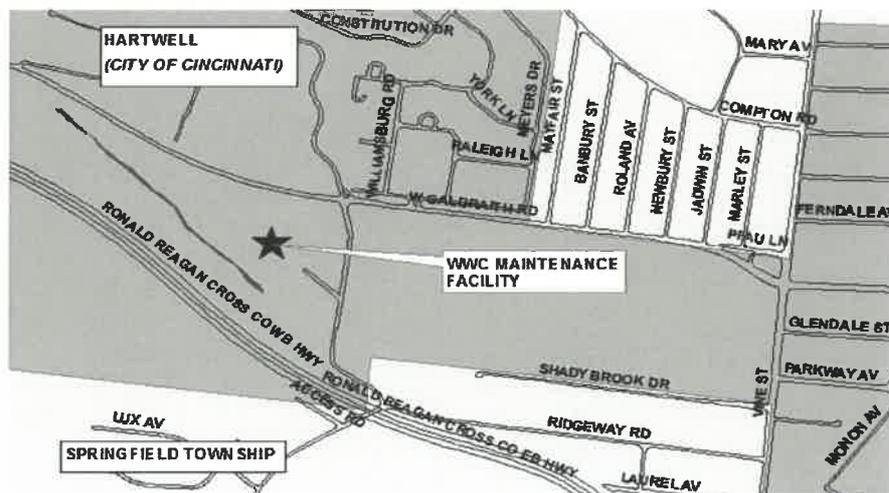
## Description and Location

The purposes of the WWC Maintenance Shop Improvements are to provide additional office and shop space for current and future staffing levels. This added space will also provide an area for maintenance personnel to access a computerized maintenance management system for improved asset management. The Location is in the Hartwell community of the City of Cincinnati.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$115,850	\$119,756	\$0	\$0	\$119,756
Pre-Construction Services	\$14,500	\$14,500	\$0	\$0	\$14,500
Miscellaneous Expense	\$14,500	\$14,500	\$0	\$0	\$14,500
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$965,390	\$0	\$1,598,565	\$0	\$1,598,565
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$53,100	\$0	\$83,100	\$0	\$83,100
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$1,163,340</b>	<b>\$148,756</b>	<b>\$1,681,665</b>	<b>\$0</b>	<b>\$1,830,421</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$148,756	\$1,681,665	\$0	\$0	\$0	\$1,830,421

**Prior Legislation Action**  
 Jan 2015, Jan 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	CSO 449 Sewer Separation		
Project ID	10240655	CIP Number	10240655
Project Type	Sewer Separation	Sewer Number	6590
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
<p>There is frequent street flooding along Riverside Drive in the vicinity of the railroad bridge near 1725 Riverside Drive. CSO 449 activated 54 times during the period of 2010 to 2013. The recommended alternative would remove the stormwater entering the combined sewer system near CSO 449 by installing four new storm sewer segments to transport the water directly to the outfall pipe. This alternative would also install a new 18-inch diameter storm sewer to serve the area east of CSO 449 to remove additional flow from the combined system.</p>			

**Purpose and Justification**  
 The recommendation is Stormwater Removal. The recommended alternative provides the lowest risk and maximum benefit to SMU and DOTE. Alternatives 1 and 2 will require additional infrastructure improvements in the future to eliminate street flooding under larger wet weather events.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$62,000	\$0	\$62,000	\$0	\$62,000
Pre-Construction Services	\$13,300	\$0	\$13,300	\$0	\$13,300
Miscellaneous Expense	\$66,300	\$0	\$66,300	\$0	\$66,300
Right-of-Way	\$2,000	\$0	\$2,000	\$0	\$2,000
Construction	\$522,800	\$0	\$0	\$522,800	\$522,800
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$27,100	\$27,100
Interest / Financing	\$0	\$0	\$0	\$5,500	\$5,500
<b>Total</b>	<b>\$666,400</b>	<b>\$0</b>	<b>\$143,600</b>	<b>\$555,400</b>	<b>\$699,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$0	\$0	\$0	\$0	\$0
	\$143,600	\$0	\$0	\$555,400	\$0	\$699,000

**Prior Legislation Action**



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Mill Creek WWTP Septage Receiving Station Odor Control Improvements

Project ID 10240665 CIP Number 10240665  
 Project Type Treatment Facility Sewer Number 6477

## Purpose and Justification

Currently, the Mill Creek WWTP Septage Receiving Station building space (truck bays) does not have an odor control system and it may represent a safety issue inside the building. Preliminary sampling results indicate the truck bays are an odor source and may contribute to offsite odor impacts. The existing odor control system at the Septage Receiving Station only ventilates the air from the channels below ground in the building. There can be significant odors from the truck bays that are released without treatment. This project will provide an odor control system to treat the odorous air from the truck bays.

## Impact to Operating Budget

None

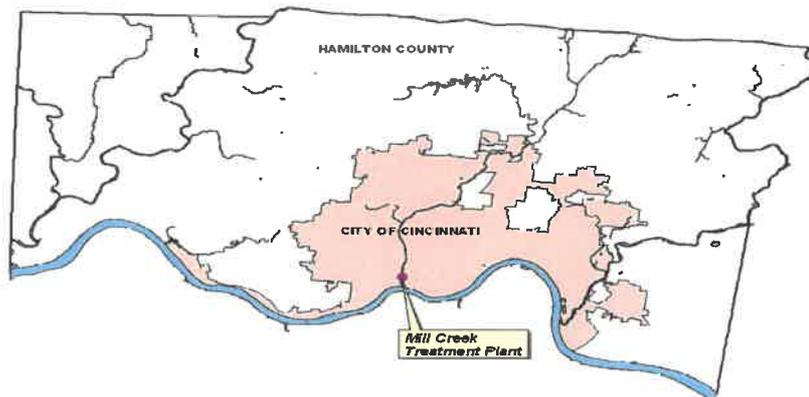
## Description and Location

Two new carbon adsorption units will treat odorous air from the Mill Creek WWTP Septage Receiving Station truck bays. The units will provide a ventilation rate of 12 air changes per hour. New ductwork will be installed in the Septage Receiving Station to convey airflow to the new activated carbon units. This project is in the Lower Price Hill neighborhood of the City of Cincinnati.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$116,900	\$0	\$116,900	\$0	\$116,900
Pre-Construction Services	\$34,400	\$0	\$34,400	\$0	\$34,400
Miscellaneous Expense	\$27,500	\$0	\$27,500	\$0	\$27,500
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$859,800	\$0	\$809,800	\$0	\$809,800
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$154,800	\$0	\$154,800	\$0	\$154,800
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$1,193,400</b>	<b>\$0</b>	<b>\$1,143,400</b>	<b>\$0</b>	<b>\$1,143,400</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$0	\$0	\$0	\$0	\$0
	\$1,143,400	\$0	\$0	\$0	\$0	\$1,143,400

Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title SSO 700 Facility Improvements

Project ID 10241820 CIP Number 10241820  
 Project Type Treatment Facility Sewer Number

## Purpose and Justification

This project provides improvements for the SSO 700 Storage & Treatment Facility. MSDGC commissioned the SSO 700 in 2006 to demonstrate technology and mitigate the impacts of sanitary sewer overflows in the upper reaches of the Mill Creek watershed. This project addresses facility reliability and safety concerns. The project includes construction of an additional storage tank to attenuate peak flows, store solids when the downstream interceptor is full, and protect the existing interceptor from heavy surcharging upstream of the SSO 700 facility. Safety improvements are needed to address operational issues with the HVAC, valves, electrical, and instrumentation and controls systems.

## Impact to Operating Budget

MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.

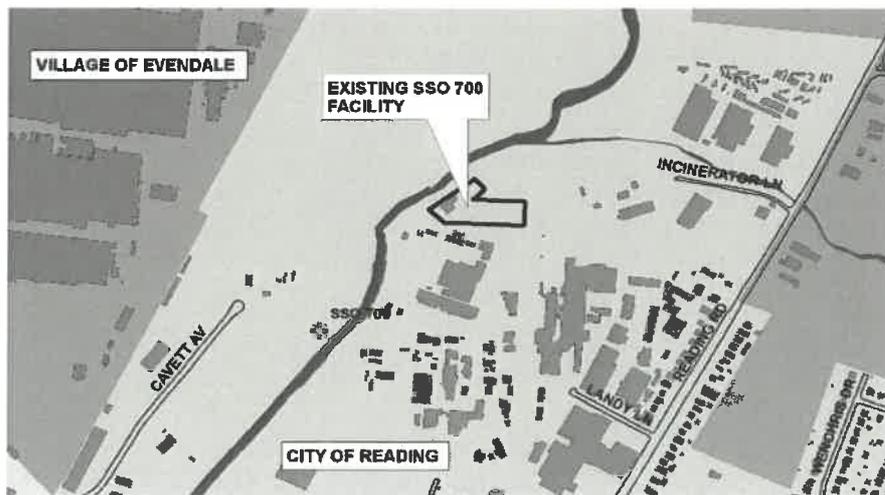
## Description and Location

This project consists of the installation of sluice gates, bulk storage tank, sludge storage tank with force main piping and other yard piping upgrades, influent valve and drain valve vault, control panel room in the UV area, HVAC upgrades to existing CEHRS UV building, NPW break tank, NPW booster station, addition of NPW to various systems, instrument and control system improvements, electrical system improvements, upgrades to existing flush gate system, and other various system and site upgrades. This project is located at 420 Cavett Drive Street in the City of Reading, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$635,300	\$0	\$635,300
Pre-Construction Services	\$221,000	\$221,000	\$0	\$0	\$221,000
Miscellaneous Expense	\$100,000	\$100,000	\$0	\$0	\$100,000
Right-of-Way	\$50,000	\$50,000	\$25,000	\$0	\$75,000
Construction	\$7,380,200	\$0	\$0	\$6,171,400	\$6,171,400
Program Management	\$0	\$106	\$0	\$0	\$106
Construction Services	\$664,300	\$0	\$0	\$1,337,100	\$1,337,100
Interest / Financing	\$465,000	\$0	\$0	\$388,800	\$388,800
<b>Total</b>	<b>\$8,880,500</b>	<b>\$371,106</b>	<b>\$660,300</b>	<b>\$7,897,300</b>	<b>\$8,928,706</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$371,106	\$660,300	\$7,897,300	\$0	\$0	\$8,928,706

**Prior Legislation Action**  
 Jan 2013, May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Water Quality Program for Mill Creek		
<b>Project ID</b>	<b>10242017</b>	<b>CIP Number</b>	<b>10242017</b>
<b>Project Type</b>	<b>Study</b>	<b>Sewer Number</b>	
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
An important part of MSDGC's Water Quality Program is completing the development of water quality models to include additional upstream coverage and resolution. The upgraded models will be able to simulate the fate and transport of a suite of pollutants of concerns including E.Coli, species of nitrogen and phosphorus, algae, and dissolved oxygen. Limnotech has prepared the water quality model for the Mill Creek Basin.			

## Purpose and Justification

The purpose of this project is to facilitate implementation of a comprehensive water quality program for the Mill Creek Basin of MSDGC. The water quality program activities determine the water quality conditions in streams, creeks, and rivers; identify potential sources for pollutants of concern; identify how pollutants are transported to water bodies; and refine the assumptions used for design of green infrastructure best management practices (BMPs).

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$150,000	\$100,000	\$250,000
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	\$0	\$0	\$150,000	\$100,000	\$250,000

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$0	\$150,000	\$100,000	\$0	\$0	\$0	\$250,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Polk Run UV System/Post Aeration Improvements

Project ID 10250030 CIP Number 10250030  
 Project Type Treatment Facility Sewer Number 6591

## Purpose and Justification

These projects are needed to maintain compliance with NPDES permit requirements. The existing Ultraviolet Disinfection equipment was designed to meet fecal coliform requirements. Greater disinfection energy is required to meet the current more stringent E. coli permit requirements. The existing UV disinfection process also lacks redundancy required by 10 States Standards and needed to ensure compliance. When the plant effluent channel backs up due to high receiving stream conditions, the drop over the effluent weir plate is eliminated and Dissolved Oxygen NPDES permit violations occur. Post-aeration is required.

## Impact to Operating Budget

MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.

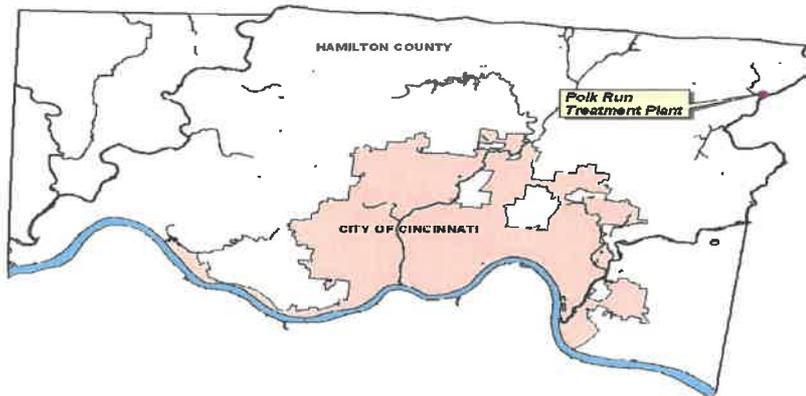
## Description and Location

This project consists of relocation of the existing UV equipment, the addition of new UV equipment, two parallel disinfection channels, protective covering and other appurtenances. This project is located in Symmes Township, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$172,000	\$188,956	\$0	\$0	\$188,956
Pre-Construction Services	\$28,000	\$28,000	\$0	\$0	\$28,000
Miscellaneous Expense	\$25,000	\$25,000	\$0	\$0	\$25,000
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$1,385,000	\$0	\$1,385,000	\$0	\$1,385,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$125,000	\$0	\$284,000	\$0	\$284,000
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$1,735,000</b>	<b>\$241,956</b>	<b>\$1,669,000</b>	<b>\$0</b>	<b>\$1,910,956</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$241,956	\$1,669,000	\$0	\$0	\$0	\$1,910,956

**Prior Legislation Action**  
 Jan 2015, Sep 2016



# 2017 Capital Budget and Capital Improvement Program

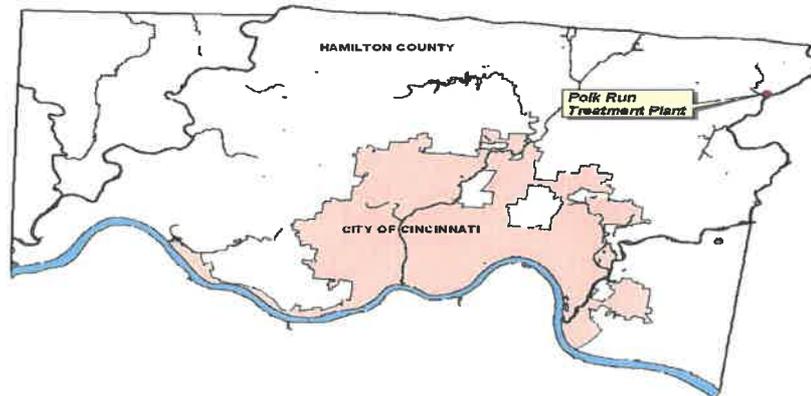
Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Polk Run Non-Potable Water Upgrades		
<b>Project ID</b>	<b>10250035</b>	<b>CIP Number</b>	<b>10250035</b>
<b>Project Type</b>	<b>Treatment Facility</b>	<b>Sewer Number</b>	<b>6592</b>
<b>Purpose and Justification</b>	<p>The existing "City" water system is not separated for plant use and domestic use and does not have a system to prevent potential backflow from the wastewater treatment processes to the potable water system. The Great Lakes-Upper Mississippi River Board (GLUMRB) 10 States Standards requires that where a potable water supply is to be used for any purpose in a plant other than domestic use (lavatory, sink, shower, drinking fountain, etc.) a break tank, pressure pump, and pressure tank shall be provided.</p>		
<b>Impact to Operating Budget</b>	<p>MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.</p>		
<b>Description and Location</b>	<p>This project consists of a new Non-Potable Water pump station located adjacent to the UV channels utilizing treated effluent for uses other than domestic. This project is located in Symmes Township, Hamilton County, Ohio.</p>		

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$47,000	\$51,663	\$0	\$0	\$51,663
Pre-Construction Services	\$5,000	\$5,000	\$0	\$0	\$5,000
Miscellaneous Expense	\$50,000	\$50,000	\$0	\$0	\$50,000
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$231,000	\$0	\$231,000	\$0	\$231,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$24,000	\$0	\$47,000	\$0	\$47,000
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$357,000</b>	<b>\$106,663</b>	<b>\$278,000</b>	<b>\$0</b>	<b>\$384,663</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$278,000	\$0	\$0	\$0	\$0	\$384,663
	\$106,663					

**Prior Legislation Action**  
Jan 2015-Sep 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title **South Clippinger Force Main Replacement and Pump Station Upgrade**

Project ID **10260025** CIP Number **10260025**  
 Project Type **Pump Station Improvement/Elim** Sewer Number **6205**

## Purpose and Justification

This project will replace the existing, deteriorating force main sewer that was constructed in the 1960s and upgrade modernize the pump station on South Clippinger Drive. The force main and several components within the pump station are beyond their useful lives and need to be replaced. This pump station is among the top 10 of the district's for upgrade or elimination.

## Impact to Operating Budget

None

## Description and Location

This project will replace approximately 835 ft of 6in. force main sewer for the South Clippinger Pump Station. The project will also replace several aging systems within the South Clippinger Pump Station. This project is located on the intersection of South Clippinger Dr and Shadyglen Rd in the Village of Indian Hill.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$176,000	\$0	\$176,000
Pre-Construction Services	\$0	\$0	\$69,500	\$0	\$69,500
Miscellaneous Expense	\$0	\$0	\$70,500	\$0	\$70,500
Right-of-Way	\$0	\$0	\$128,000	\$0	\$128,000
Construction	\$247,000	\$0	\$0	\$929,400	\$929,400
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$106,400	\$0	\$0	\$51,300	\$51,300
Interest / Financing	\$4,000	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$357,400</b>	<b>\$0</b>	<b>\$444,000</b>	<b>\$980,700</b>	<b>\$1,424,700</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$444,000	\$0	\$0	\$0	\$1,424,700

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Dry Run Area Sewers Phase 2 Contract RB

Project ID 10270007 CIP Number 10270007  
 Project Type New Sewer Sewer Number 6354

## Purpose and Justification

The Dry Run Area Sewers are MSD's long range master plan to provide trunk sewers to areas in the Village of Newtown, Anderson Township, and other nearby areas that currently do not have sewers. Contract Round Bottom is one of a series of contracts required to complete the Dry Run Area Sewers. Contract A was constructed first and provides connection to the existing interceptor sewer that conveys sewage to the Little Miami Wastewater Treatment Plant. Contract RB provides the trunk sewer from the terminus of Contract A to areas north and east.

## Impact to Operating Budget

MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.

## Description and Location

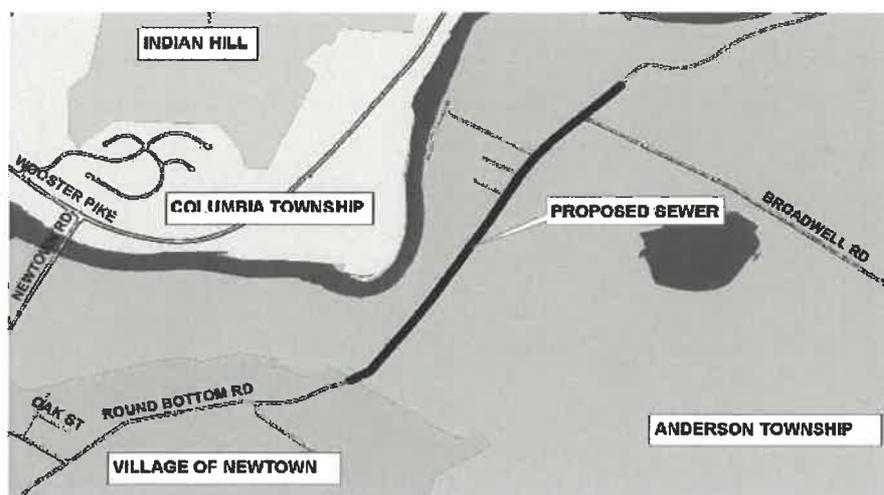
The project consists of constructing approximately 5,968 linear feet of 42-inch sanitary sewer, along with manholes and other appurtenances. The project is entirely along Roundbottom Road, starting at a point approximately 1,150 feet northeast of the intersection of Roundbottom and Edwards Roads at the terminus of Contract A and ending at point approximately 970 feet northeast of the intersection with Broadwell Road. The project is located in Anderson Township, Hamilton County, Ohio.

PDE was accomplished under 10270005.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$30,000	\$0	\$30,000
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$6,677,000	\$0	\$6,654,500	\$0	\$6,654,500
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$170,100	\$0	\$170,100	\$0	\$170,100
Interest / Financing	\$334,000	\$0	\$332,900	\$0	\$332,900
<b>Total</b>	<b>\$7,181,100</b>	<b>\$0</b>	<b>\$7,187,500</b>	<b>\$0</b>	<b>\$7,187,500</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$0	\$0	\$0	\$0	\$0
	\$7,187,500	\$0	\$0	\$0	\$0	\$7,187,500

Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Dry Run Sewers - Contract 8M

Project ID 10270008 CIP Number 10270008  
 Project Type New Sewer Sewer Number 3608

## Purpose and Justification

The purpose of this project is to provide sewer service to the Anderson Township Dry Run Area via a trunk sewer. The project will eliminate the Ivy Trails Flush Station and the Dry Run Pump Station, and could eliminate two other pump stations by subsequent construction of local sewers.

## Impact to Operating Budget

None

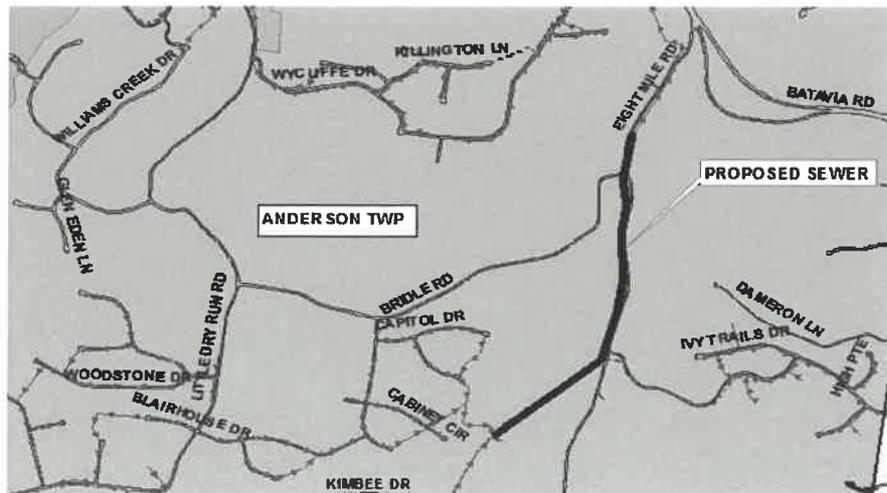
## Description and Location

The project includes construction of 4,400 feet of 15-inch to 30-inch diameter sanitary sewer. The project is located between 3100 Eight Mile Road and 2623 Eight Mile Road. This project is located in Anderson Township, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$20,600	\$0	\$20,600
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$4,620,000	\$0	\$4,620,000	\$0	\$4,620,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$365,000	\$0	\$365,000	\$0	\$365,000
Interest / Financing	\$346,500	\$0	\$346,500	\$0	\$346,500
<b>Total</b>	<b>\$5,331,500</b>	<b>\$0</b>	<b>\$5,352,100</b>	<b>\$0</b>	<b>\$5,352,100</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$0	\$0	\$0	\$0	\$0
	\$5,352,100	\$0	\$0	\$0	\$0	\$5,352,100

Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title 3981 Watterson Rd Sewer Replacement

Project ID 10270150 CIP Number 10270150  
 Project Type Sewer Replacement Sewer Number 6326

## Purpose and Justification

The purpose of the project is to connect the sewer on Watterson Road to the newer 36-inch sewer on Bancroft Street, line the 20-inch sewer between Simpson Avenue and Watterson Road, and fill-seal-abandon the existing sewer to eliminate the 20-inch sewer that runs through backyards and under existing structures.

## Impact to Operating Budget

None

## Description and Location

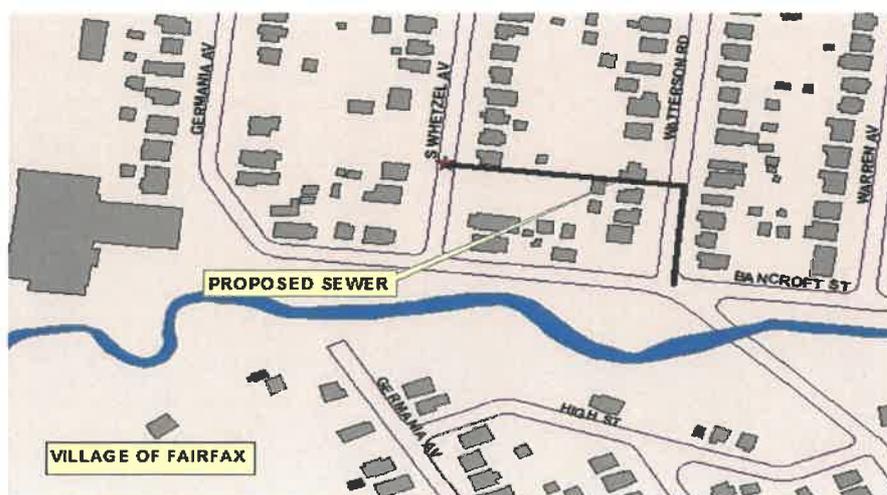
The project will connect to the sewer on Watterson Road to the newer 36-inch sewer on Bancroft Street by lining 575 lf of the 20-inch sewer between Simpson Avenue and Watterson Road, and fill-seal-abandon the existing sewer between Watterson Road and S. Whetsel Avenue.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$21,265	\$0	\$0	\$21,265
Design	\$38,200	\$38,200	\$0	\$0	\$38,200
Pre-Construction Services	\$5,300	\$5,300	\$0	\$0	\$5,300
Miscellaneous Expense	\$32,600	\$32,600	\$0	\$0	\$32,600
Right-of-Way	\$41,000	\$41,000	\$0	\$0	\$41,000
Construction	\$178,000	\$0	\$178,000	\$0	\$178,000
Program Management	\$0	\$4,803	\$0	\$0	\$4,803
Construction Services	\$6,400	\$0	\$6,400	\$0	\$6,400
Interest / Financing	\$1,900	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$303,400</b>	<b>\$143,168</b>	<b>\$184,400</b>	<b>\$0</b>	<b>\$327,568</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$143,168	\$184,400	\$0	\$0	\$0	\$327,568

## Prior Legislation Action

Jun 2013.May 2014.Oct 2016



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Prospect Woods Pump Station Upgrade		
Project ID	10270160	CIP Number	10270160
Project Type	Pump Station Improvement/Elim	Sewer Number	6335

## Purpose and Justification

The existing pump station does not have redundant pumping or back up power, and the wet well is deteriorated with the valves and wet well located in the same structure. The pump station experiences overflows due to the lack of back up power and redundant pumping. The force main and pump station were built in 1968, and have experienced failures twice over the past four years, requiring emergency repairs. This is a Consent Decree required project.

## Impact to Operating Budget

None

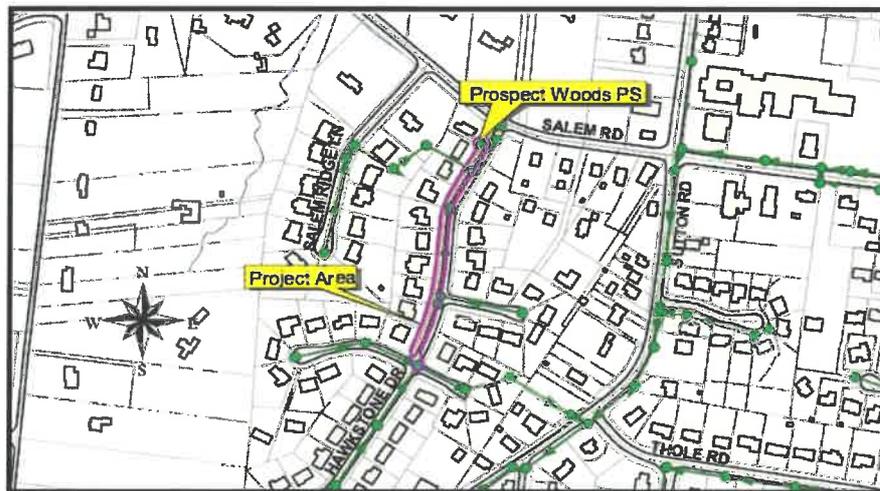
## Description and Location

The project consists of the installation of approximately 810 feet of new force main with the installation of a submersible pump station with back up power, redundant pumping, separate valve vault, pump float disconnect box, and a wet well. The pump station is to be moved across the street from the existing location to an open space owned by Anderson Township, as there is not space with in the existing easement. The project is located on Hawk Stone Drive in Anderson Township, within the California watershed and drainage basin served by the Little Miami WWTP.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$28,943	\$0	\$0	\$28,943
Design	\$102,500	\$102,500	\$0	\$0	\$102,500
Pre-Construction Services	\$45,200	\$45,200	\$0	\$0	\$45,200
Miscellaneous Expense	\$0	\$41,300	\$0	\$0	\$41,300
Right-of-Way	\$106,400	\$106,400	\$0	\$0	\$106,400
Construction	\$740,500	\$0	\$740,500	\$0	\$740,500
Program Management	\$0	\$3,356	\$0	\$0	\$3,356
Construction Services	\$114,037	\$0	\$114,037	\$0	\$114,037
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$1,108,637</b>	<b>\$327,699</b>	<b>\$854,537</b>	<b>\$0</b>	<b>\$1,182,236</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$327,699	\$0	\$0	\$0	\$0	\$1,182,236
Current Legislation	\$854,537	\$0	\$0	\$0	\$0	\$1,182,236

**Prior Legislation Action**  
Jan 2014-May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Delta and Greist Sewer Replacement		
Project ID	10270165	CIP Number	10270165
Project Type	Sewer Replacement	Sewer Number	6593
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
The project will replace 1,297 feet of pipe in the area of Delta Avenue and Grist Avenue. The project is located in the Mount Lookout area of Cincinnati in the Duck Creek watershed, in the City of Cincinnati, Hamilton County, Ohio			

## Purpose and Justification

The project is to replace pipe segments installed between 1895 and 1928, having served their useful life. The segments have fracturing and longitudinal cracking. The structural risk factors vary from medium to extreme and are not candidates for lining due to the structural condition and or capacity issues.

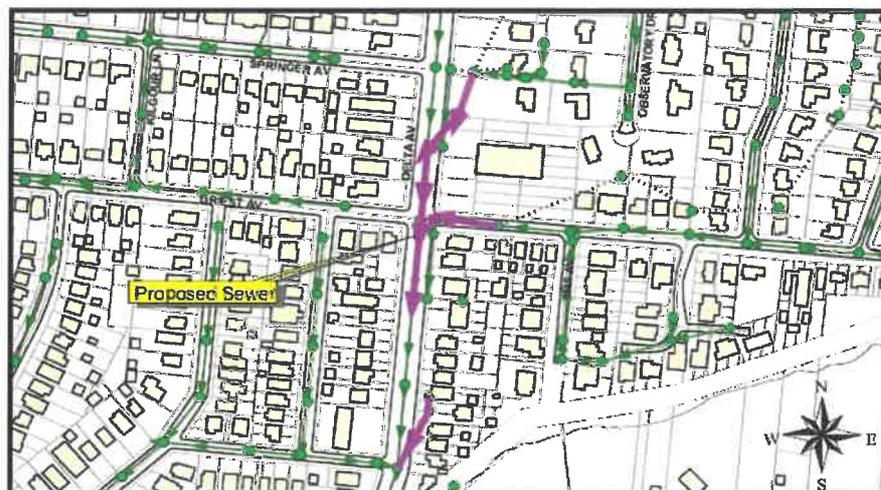
Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$34,576	\$0	\$0	\$34,576
Design	\$145,500	\$0	\$145,500	\$0	\$145,500
Pre-Construction Services	\$68,500	\$0	\$68,500	\$0	\$68,500
Miscellaneous Expense	\$40,000	\$0	\$40,000	\$0	\$40,000
Right-of-Way	\$43,700	\$0	\$43,700	\$0	\$43,700
Construction	\$1,142,000	\$0	\$0	\$1,142,000	\$1,142,000
Program Management	\$0	\$3,939	\$0	\$0	\$3,939
Construction Services	\$51,600	\$0	\$0	\$51,600	\$51,600
Interest / Financing	\$14,300	\$0	\$0	\$14,300	\$14,300
<b>Total</b>	<b>\$1,505,600</b>	<b>\$38,515</b>	<b>\$297,700</b>	<b>\$1,207,900</b>	<b>\$1,544,115</b>

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$38,515	\$297,700	\$0	\$0	\$1,207,900	\$0	\$1,544,115

## Prior Legislation Action

May 2014



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
Project Title CSO 83 and 472 Dynamic Underflow Control

Project ID 10270170 CIP Number 10270170  
Project Type CSO Improvement/Elim Sewer Number 6594

## Purpose and Justification

This project will provide a cost effective strategy to reduce combined sewer overflows through operational controls. Additionally, this project will provide information to be used to support MSD's needs to collect data to provide cost effective and innovative solutions for the Federal Consent Decree. It offers the opportunity to demonstrate water quality management at the lowest cost to rate payers, and a goal to be on the forefront of water management practices.

## Impact to Operating Budget

MSD utilizes 0.75% of the construction budget to estimate annual operating costs for future revenue requirement projections. This impact is considered to begin two years after construction legislation.

## Description and Location

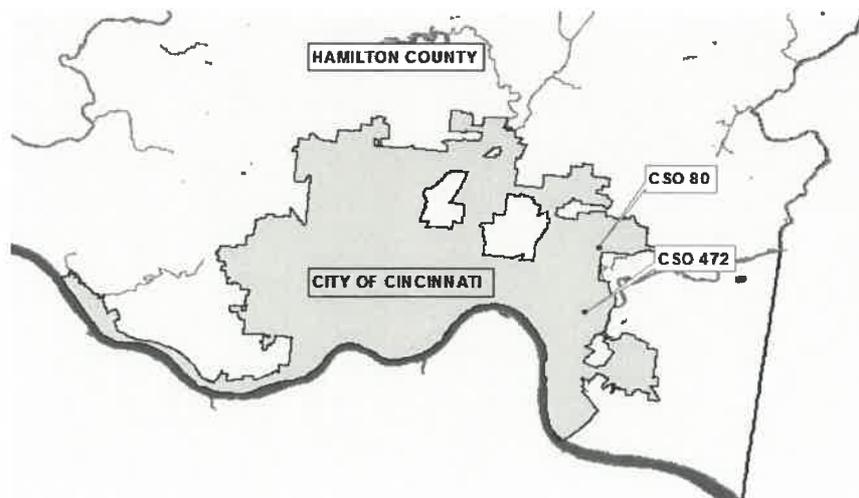
The project consists of modifications to CSO 83 and CSO 472 that will provide for an automated control of flow into the interceptor sewer. The proposed improvements consist of replacement of the underflow pipe, replacement of the regulator, addition of level sensors, and telemetry equipment. The project is located in the Little Miami basin in Linwood and Madisonville neighborhoods of the City of Cincinnati, Hamilton County, Ohio.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$267,000	\$392,025	\$77,000	\$0	\$469,025
Pre-Construction Services	\$72,000	\$0	\$72,000	\$0	\$72,000
Miscellaneous Expense	\$65,000	\$0	\$65,000	\$0	\$65,000
Right-of-Way	\$0	\$0	\$165,000	\$0	\$165,000
Construction	\$2,377,310	\$0	\$0	\$2,377,310	\$2,377,310
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$58,500	\$0	\$0	\$58,500	\$58,500
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$2,839,810</b>	<b>\$392,025</b>	<b>\$379,000</b>	<b>\$2,435,810</b>	<b>\$3,206,835</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total	
Prior Legislation	\$392,025	\$379,000	\$0	\$2,435,810	\$0	\$0	\$3,206,835

## Prior Legislation Action

Jan 2015, Mar 2015, Oct 2015, Dec 2015



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department	Metropolitan Sewer District of Greater Cincinnati		
Project Title	Mt Washington Source Control Pilot		
Project ID	10270205	CIP Number	10270205
Project Type	Source Control	Sewer Number	6612
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
The project will provide assessments of properties, along Mayland, Woodlark, and Lusanne, that have experienced significant sewage backups and require a source control solution. The affected properties are located in the Mt Washington neighborhood, City of Cincinnati, Hamilton County Ohio.			

## Purpose and Justification

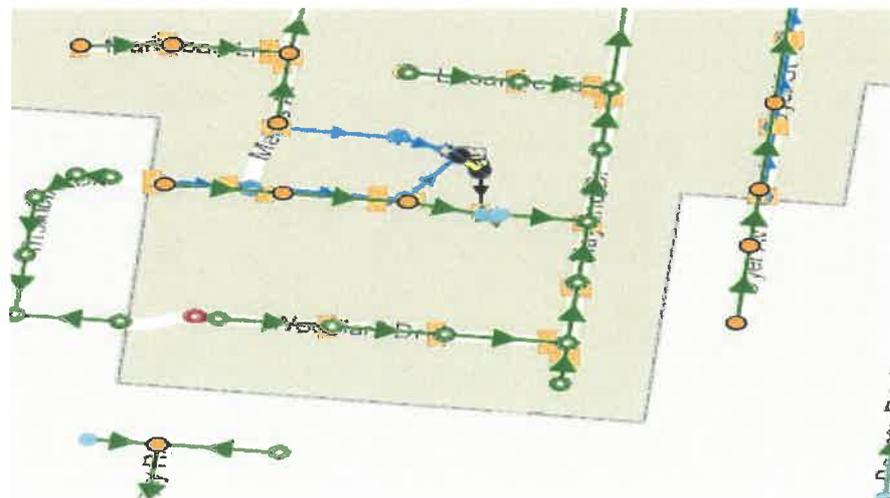
The purpose of this project is to evaluate localized green infrastructure solution to assess and identify where the storm water is entering the combined system from individual properties and where re-routing me be beneficial to control the source of the water contributing to the CSO 182 basin specifically from Mayland, Woodlark, and Lusanne, as well as a larger basin study of CSO 182.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$300,000	\$0	\$300,000
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	\$0	\$0	\$300,000	\$0	\$300,000

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$0	\$300,000	\$0	\$0	\$0	\$0	\$300,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Water Quality Program for Little Miami		
<b>Project ID</b>	<b>10272017</b>	<b>CIP Number</b>	<b>10272017</b>
<b>Project Type</b>	<b>Study</b>	<b>Sewer Number</b>	
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
An important part of MSDGC's Water Quality Program is completing the development of water quality models to include additional upstream coverage and resolution. The upgraded models will be able to simulate the fate and transport of a suite of pollutants of concerns including E.Coli, species of nitrogen and phosphorus, algae, and dissolved oxygen. Limnotech has prepared the water quality model for Little Miami Basin.			

## Purpose and Justification

The purpose of this project is to facilitate implementation of a comprehensive water quality program for the Little Miami Basin of MSDGC. The water quality program activities determine the water quality conditions in streams, creeks, and rivers; identify potential sources for pollutants of concern; identify how pollutants are transported to water bodies; and refine the assumptions used for design of green infrastructure best management practices (BMPs).

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$335,000	\$220,000	\$555,000
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	\$0	\$0	\$335,000	\$220,000	\$555,000

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$0	\$335,000	\$120,000	\$100,000	\$0	\$0	\$555,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title WWT System Asset Renewal 2017

Project ID 10280187 CIP Number 10280187  
 Project Type Allowance Sewer Number 6595

## Purpose and Justification

This project will allow MSDGC to replace entire assets or portions of assets within the treatment facilities that are failed or approaching failure, or anticipated to be unable to meet their defined levels of service, such as pumps, motors, or other equipment that require renewal with little knowledge prior to failure. This project is necessary to cost-effectively extend asset life while protecting and preserving public health and the environment and maintain operational performance.

## Impact to Operating Budget

None

## Description and Location

This project provides appropriated funds to replace improve wastewater treatment facility assets throughout the District using standardized condition assessment and reliability tools and methodologies. Defective assets, or portions of assets, will be discovered throughout the year either through preventive maintenance and the above mentioned condition assessment activities or after a failure.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$2,000,000	\$0	\$2,000,000	\$0	\$2,000,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$2,000,000</b>	<b>\$0</b>	<b>\$2,000,000</b>	<b>\$0</b>	<b>\$2,000,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$0	\$0	\$0	\$0	\$0
	\$2,000,000	\$0	\$0	\$0	\$0	\$2,000,000

Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Hydraulic Modeling 2017		
<b>Project ID</b>	10280237	<b>CIP Number</b>	10280237
<b>Project Type</b>	Allowance	<b>Sewer Number</b>	6596
<b>Purpose and Justification</b>		<b>Impact to Operating Budget</b>	
This project will provide hydraulic, hydrologic, and treatment process modeling services to be used to support MSD's long-range planning needs, and to meet MSD's SSO and CSO monitoring requirements.		None	
<b>Description and Location</b>			
Sewer modeling is used to assist in the planning and design process and is required as part of the Global Consent Decree and MSD's CSO NPDES permit. MSD is committed to ensuring its system-wide model meets the latest standards and provides the best available tool for assessing, planning, and designing MSD's infrastructure. Work completed for specific projects will be charged to project IDs. This allowance will be used to incorporate project specific model changes into the System-Wide Model for each of MSD's seven sewersheds.			
Prior legislation was funded for the Hydraulic Model Program under various Project IDs.			

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$715,000	\$0	\$715,000	\$0	\$715,000
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$715,000</b>	<b>\$0</b>	<b>\$715,000</b>	<b>\$0</b>	<b>\$715,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$715,000	\$0	\$0	\$0	\$715,000

Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Building Sewer Renewal Program 2017		
<b>Project ID</b>	<b>10280607</b>	<b>CIP Number</b>	<b>10280607</b>
<b>Project Type</b>	<b>Allowance</b>	<b>Sewer Number</b>	<b>6598</b>
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
This program is necessary to cost effectively extend asset life while protecting and preserving public health and the environment. This program allows MSD to quickly and efficiently restore and maintain interrupted service while mitigating the risk of additional damages or losses. The scope of work for the program will include resolving emergency sewer repairs such as cave-ins, structurally failed building sewers, sewer overflows that may violate permits and regulations, and imminent danger to structures or real property. The scope of this project will also include all planned work associated with inspection port installations and rehabilitation of privately-owned building sewers within the public right-of-way or dedicated public sewer easements.			

## Purpose and Justification

The Building Sewer Renewal Program allowance is intended to fund the structural renewal and repair of the portion of privately owned building sewers located within the public right-of-way or within dedicated main sewer easements consistent with Section 2008 of MSD's Rules and Regulations.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$4,750,000	\$0	\$4,750,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$250,000	\$0	\$250,000
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	\$0	\$0	\$5,000,000	\$0	\$5,000,000

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$0	\$5,000,000	\$0	\$0	\$0	\$0	\$5,000,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

<b>Department</b>	Metropolitan Sewer District of Greater Cincinnati		
<b>Project Title</b>	Critical Asset Management Projects 2017		
<b>Project ID</b>	<b>10280717</b>	<b>CIP Number</b>	<b>10280717</b>
<b>Project Type</b>	<b>Allowance</b>	<b>Sewer Number</b>	<b>6600</b>
<b>Impact to Operating Budget</b>			
None			
<b>Description and Location</b>			
This allowance is to address critical asset management projects and equipment for the collection system, treatment plants, pumping stations, and wet weather facilities. This allowance fund is for projects that are larger asset renewal projects than those funded under 10280187 WWT Asset Renewal .			

## Purpose and Justification

Provides MSD with a rapid means of addressing urgent situations caused by unforeseen equipment or process failures as well as those detected by predictive maintenance methods and address other short-term capital needs with little or no design. This allowance will facilitate timely replacement of assets and will continue to improve the reliability of process systems while extending the remaining useful life of system assets. It will utilize data from the MSD maintenance program to prevent catastrophic failure when possible and reduce outages and associated costs. This allowance is part of MSD's long term asset management strategy.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$10,000,000	\$0	\$10,000,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	\$0	\$0	\$10,000,000	\$0	\$10,000,000

## Projected Legislation Dates

Prior Legislation	2017	2018	2019	2020	2021	Project Total
\$0	\$10,000,000	\$0	\$0	\$0	\$0	\$10,000,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title Wet Weather Facilities Asset Renewal 2017

Project ID 10280917 CIP Number 10280917  
 Project Type Allowance Sewer Number 6601

## Purpose and Justification

The funding provided by this project will allow MSDGC to replace entire assets or portions of assets such as equipment, pumps, motors, gates, etc. within the wet weather facilities that are failed or approaching failure or anticipated to be unable to meet their defined operational goals. This project is necessary to cost-effectively extend asset life while protecting and preserving public health and the environment.

## Impact to Operating Budget

None

## Description and Location

This project provides appropriated funds to replace or improve wet weather facility assets such as SSO 700, Daly Road, RTC's, etc. throughout the District using condition assessment and reliability tools and methodologies. Defective assets, or portions of assets, will be discovered throughout the year either through preventative maintenance, condition assessment activities, or after a failure.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$300,000	\$0	\$300,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	\$0	\$0	\$300,000	\$0	\$300,000

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$300,000	\$0	\$0	\$0	\$300,000

Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title **Prioritized Wastewater Collection System Improvements 2017**

Project ID **10281317** CIP Number **10281317**  
 Project Type **Allowance** Sewer Number **6602**

## Purpose and Justification

This Prioritized WWC System Improvements allowance will allow the District to consistently and effectively respond to sudden, unexpected wastewater collection system failures, complete planned repairs and improvements to high risk utility-owned assets, and complete prioritized system improvements through construction coordination projects to maintain acceptable levels of service at the lowest asset life-cycle cost.

## Impact to Operating Budget

None

## Description and Location

This program will allow the District to respond to sudden, unexpected wastewater collection system failures, complete planned repairs and improvements to high risk utility-owned assets, and complete prioritized system improvements through construction coordination projects to maintain acceptable levels of service at the lowest asset life-cycle cost. This program represents a consolidation of the former "Emergency Sewer" and "High Risk Asset Renewal" Asset Management allowances.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$0	\$0	\$0
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$12,000,000	\$0	\$11,500,000	\$0	\$11,500,000
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$500,000	\$0	\$500,000
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$12,000,000</b>	<b>\$0</b>	<b>\$12,000,000</b>	<b>\$0</b>	<b>\$12,000,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$12,000,000	\$0	\$0	\$0	\$12,000,000

## Prior Legislation Action



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title **Minor CIP Project Planning 2017**

Project ID **10282017** CIP Number **10282017**  
 Project Type **Allowance** Sewer Number **6603**

## Purpose and Justification

This project will provide capital funding to support planning CIP projects, and will involve those minor planning efforts estimated at less than \$75,000.

## Impact to Operating Budget

None

## Description and Location

This project provides appropriated funds for the resources necessary for the planning of capital projects for advancement to the design phase.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$3,300,000	\$0	\$1,200,000	\$0	\$1,200,000
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$3,300,000</b>	<b>\$0</b>	<b>\$1,200,000</b>	<b>\$0</b>	<b>\$1,200,000</b>

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$1,200,000	\$0	\$0	\$0	\$1,200,000

**Prior Legislation Action**



# 2017 Capital Budget and Capital Improvement Program

Tuesday, November 22, 2016

Department Metropolitan Sewer District of Greater Cincinnati  
Project Title Major CIP Planning Allowance 2017

Project ID 10282117 CIP Number 10282117  
Project Type Allowance Sewer Number

## Purpose and Justification

This project will provide capital funding to support planning CIP projects, and will involve those minor planning efforts estimated at greater than \$75,000.

## Impact to Operating Budget

None

## Description and Location

This project provides appropriated funds for the resources necessary for the planning of capital projects for advancement to the design phase.

Cost Description	Original Project Estimate	Prior Legislation	Current Legislation	Future Legislation	Current Project Estimate
Planning	\$0	\$0	\$1,500,000	\$0	\$1,500,000
Design	\$0	\$0	\$0	\$0	\$0
Pre-Construction Services	\$0	\$0	\$0	\$0	\$0
Miscellaneous Expense	\$0	\$0	\$0	\$0	\$0
Right-of-Way	\$0	\$0	\$0	\$0	\$0
Construction	\$0	\$0	\$0	\$0	\$0
Program Management	\$0	\$0	\$0	\$0	\$0
Construction Services	\$0	\$0	\$0	\$0	\$0
Interest / Financing	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	\$0	\$0	\$1,500,000	\$0	\$1,500,000

Projected Legislation Dates	2017	2018	2019	2020	2021	Project Total
Prior Legislation	\$0	\$1,500,000	\$0	\$0	\$0	\$1,500,000

Prior Legislation Action





2018 CIP

Metropolitan Sewer District of Greater Cincinnati  
 WWIP Projects

Project ID	CIP Type	Project Type	Project Name	MSD	Other	Total
10140400	WWIP	SEP	Lockland Sewer Separation (Design,Easement)	\$2,011,000	\$0	\$2,011,000
10141160	WWIP	SSO	Reading Rd & Losantiville Rd (Design)	\$449,000	\$0	\$449,000
10170810	WWIP	FAC	LMWWTP Electrical Feeders (Design)	\$859,000	\$0	\$859,000
10170812	WWIP	FAC	Little Miami WWTP Electrical and Disinfection Improvements (Design)	\$1,575,900	\$0	\$1,575,900
10180118	WWIP	ALW	Main Sewer Renewal Program2018 (Construction)	\$12,000,000	\$0	\$12,000,000
10180218	WWIP	ALW	Manhole Renewal Program 2018 (Construction)	\$1,300,000	\$0	\$1,300,000
10190318	WWIP	ALW	Home Sewer Treatment System Eliminations 2018 (Planning)	\$220,000	\$0	\$220,000
10199018	WWIP	ALW	Wet Weather Program Management and Support Services 2018 (Design)	\$3,500,000	\$0	\$3,500,000
10199118	WWIP	ALW	Hamilton County Utility Oversight and Coordination 2018 (Design)	\$2,700,000	\$0	\$2,700,000
10310005	WWIP	LOC	Bridgetown Road Local Sewer (HNs 8477-8647) (Construction)	\$501,100	\$0	\$501,100
10320080	WWIP	LOC	Russell Heights Drive Local Sewer (Construction)	\$1,147,842	\$0	\$1,147,842
10320085	WWIP	LOC	Brierly Creek Road Local Sewer (HNs 6040-6100) (Construction)	\$181,900	\$0	\$181,900
10330006	WWIP	LOC	Devils Backbone Road Sewer Local (HN 1234 & 1250) (Construction)	\$262,500	\$0	\$262,500
10370032	WWIP	LOC	Coldstream Drive & Asbury Road Local Sewer (Construction)	\$3,316,900	\$0	\$3,316,900
10370050	WWIP	LOC	Stewart Road Local Sewer (HNs 5706 - 5710) (Construction)	\$140,600	\$0	\$140,600
10430020	WWIP	LAT	Foley Road Sewer Laterals (HNS 5579, 5583 - 5599, 5602) (Construction)	\$31,400	\$0	\$31,400
10430030	WWIP	LAT	Werk Road Sewer Lateral Assessment (HN 6052) (Construction)	\$40,300	\$0	\$40,300
10440036	WWIP	LAT	Springdale Road Sewer Lateral Assessment (HN 4081) (Design,Construction)	\$52,000	\$0	\$52,000
10450016	WWIP	LAT	Enyart Road Sewer Lateral Assessment (HN 11328) (Construction)	\$40,300	\$0	\$40,300
10450018	WWIP	LAT	Enyart Road Sewer Lateral Assessment (HN 11336) (Design,Construction)	\$57,000	\$0	\$57,000
10470026	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8145) (Design,Construction)	\$45,000	\$0	\$45,000
10470027	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8167) (Design,Construction)	\$41,000	\$0	\$41,000
10470030	WWIP	LAT	Woodruff Road Sewer Lateral Assessment (HN 8109) (Design,Construction)	\$41,000	\$0	\$41,000



**2018 CIP**  
**Metropolitan Sewer District of Greater Cincinnati**  
**WWIP Projects**

<b>Project ID</b>	<b>CIP Type</b>	<b>Project Type</b>	<b>Project Name</b>	<b>MSD</b>	<b>Other</b>	<b>Total</b>
10470040	WWIP	LAT	Rambling Hills Drive Sewer Lateral Assessment (HN 1307) (Design,Construction)	\$52,000	\$0	\$52,000
10470045	WWIP	LAT	Pine Street Sewer Lateral Assessment (HN 3312) (Design,Construction)	\$57,000	\$0	\$57,000
11042801	WWIP	SRC	North Fairmount Bioswale Project (Construction)	\$381,000	\$0	\$381,000
11142745	WWIP	SEP	CSO 488 Strategic Sewer Separation Phase A (Construction)	\$6,398,850	\$0	\$6,398,850
<b>Total Cost for 27 WWIP Projects in 2018</b>				<b>\$37,402,592</b>	<b>\$0</b>	<b>\$37,402,592</b>

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**2018 CIP**  
**Metropolitan Sewer District of Greater Cincinnati**  
**OTHER Projects**

<b>Project ID</b>	<b>CIP Type</b>	<b>Project Type</b>	<b>Project Name</b>	<b>MSD</b>	<b>Other</b>	<b>Total</b>
13090000	OTHER	PRG	Programmatic Contingency (Design)	\$10,000,000	\$0	\$10,000,000
<b>Total Cost for 1 OTHER Projects in 2018</b>				<b>\$10,000,000</b>	<b>\$0</b>	<b>\$10,000,000</b>

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**2018 CIP**  
**Metropolitan Sewer District of Greater Cincinnati**  
**ASSET Projects**

<b>Project ID</b>	<b>CIP Type</b>	<b>Project Type</b>	<b>Project Name</b>	<b>MSD</b>	<b>Other</b>	<b>Total</b>
10221245	AM	FAC	Taylor Creek WWTP Disinfection Upgrade (Construction)	\$1,172,000	\$0	\$1,172,000
10230130	AM	REP	Dry Weather Channel for SS 937 (Construction)	\$3,534,000	\$0	\$3,534,000
10230135	AM	SSO	Lower Muddy Creek Interceptor SSO Remediation (Construction)	\$6,101,600	\$0	\$6,101,600
10230150	AM	REP	Addyston Creek and Sewer Rehab (Construction)	\$474,200	\$0	\$474,200
10240325	AM	PSE	Glen Landing Pump Station Improvements (Construction)	\$182,200	\$0	\$182,200
10240360	AM	PSE	Timbers Pump Station Elimination (Construction)	\$606,500	\$0	\$606,500
10240470	AM	PSE	Bahama Gardens Pump Station Upgrade and Force Main Replacement (Construction)	\$519,100	\$0	\$519,100
10240610	AM	FAC	MCWWTP Primary Sludge Pumping Improvements (Design)	\$1,494,300	\$0	\$1,494,300
10240625	AM	FAC	MCWWTP Standby Power Distribution System Improvements (Design)	\$357,100	\$0	\$357,100
10240660	AM	FAC	Mill Creek WWTP Gravity Thickeners Odor Control (Design,Construction)	\$926,803	\$0	\$926,803
10240697	AM	FAC	Mill Creek 4.16 kV & 13.2 kV Loop Improvements (Design)	\$164,000	\$0	\$164,000
10241820	AM	FAC	SSO 700 Facility Improvements (Construction)	\$7,897,300	\$0	\$7,897,300
10242017	AM	STY	Water Quality Program for Mill Creek (Planning)	\$100,000	\$0	\$100,000
10260025	AM	PSE	South Clippinger Force Main Replacement and Pump Station Upgrade (Construction)	\$980,700	\$0	\$980,700
10270110	AM	REP	Linwood Avenue Sewer Replacement (Construction)	\$799,422	\$0	\$799,422
10270155	AM	REP	Paxton Avenue Sewer Rehabilitation (Design,Easement)	\$332,600	\$0	\$332,600
10270175	AM	REP	East Hill Ave Sewer Replacement (Construction)	\$1,465,500	\$0	\$1,465,500
10272017	AM	STY	Water Quality Program for Little Miami (Planning)	\$120,000	\$0	\$120,000
10280188	AM	ALW	WWT System Asset Renewal 2018 (Construction)	\$2,060,000	\$0	\$2,060,000
10280238	AM	ALW	Hydraulic Modeling 2018 (Planning)	\$1,000,000	\$0	\$1,000,000
10280608	AM	ALW	Building Sewer Renewal Program 2018 (Construction)	\$5,000,000	\$0	\$5,000,000
10280618	AM	ALW	Water Quality Program 2018 (Planning)	\$555,000	\$0	\$555,000
10280718	AM	ALW	Facilities Asset Management Projects 2018 (Construction)	\$2,580,000	\$0	\$2,580,000



**2018 CIP**  
**Metropolitan Sewer District of Greater Cincinnati**  
**ASSET Projects**

<b>Project ID</b>	<b>CIP Type</b>	<b>Project Type</b>	<b>Project Name</b>	<b>MSD</b>	<b>Other</b>	<b>Total</b>
10280918	AM	ALW	Wet Weather Facilities Asset Renewal 2018 (Construction)	\$1,000,000	\$0	\$1,000,000
10281318	AM	ALW	Prioritized Wastewater Collection System Improvements 2018 (Construction)	\$12,000,000	\$0	\$12,000,000
10282018	AM	ALW	CIP Project Planning 2018 (Planning)	\$3,400,000	\$0	\$3,400,000
12230045	AM	STY	Stonebridge Apartments Sewer Replacement (Design,Easement)	\$244,300	\$0	\$244,300
<b>Total Cost for 27 ASSET Projects in 2018</b>				<b>\$55,066,625</b>	<b>\$0</b>	<b>\$55,066,625</b>
<b>Grand Totals for 55 Projects in 2018</b>				<b>\$102,469,217</b>	<b>\$0</b>	<b>\$102,469,217</b>

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## 2019 CIP

### Metropolitan Sewer District of Greater Cincinnati

#### WWIP Projects

Project ID	CIP Type	Project Type	Project Name	MSD	Other	Total
10130161	WWIP	PSE	Muddy creek PSU & Force Main (Design)	\$606,500	\$0	\$606,500
10131001	WWIP	STY	East Branch Muddy Creek Bundle Planning (Planning)	\$5,000,000	\$0	\$5,000,000
10170816	WWIP	FAC	Little Miami WWTP Main Outfall Improvements (Construction)	\$138,300	\$0	\$138,300
10171540	WWIP	REG	CSO 135 Elimination (Design,Easement)	\$88,000	\$0	\$88,000
10171560	WWIP	REG	CSO 43 Elimination (Design)	\$80,900	\$0	\$80,900
10171641	WWIP	SEP	CSO 214 Partial Separation (Design,Easement)	\$1,112,800	\$0	\$1,112,800
10171761	WWIP	SEP	CSO 552 Stormwater Removal (Design,Easement)	\$889,100	\$0	\$889,100
10180119	WWIP	ALW	Main Sewer Renewal Program 2019 (Construction)	\$13,000,000	\$0	\$13,000,000
10180219	WWIP	ALW	Manhole Renewal Program 2019 (Construction)	\$1,300,000	\$0	\$1,300,000
10190319	WWIP	ALW	Home Sewer Treatment System Eliminations 2019 (Planning)	\$230,000	\$0	\$230,000
10199019	WWIP	ALW	Wet Weather Program Management and Support Services 2019 (Design)	\$3,500,000	\$0	\$3,500,000
10199119	WWIP	ALW	Hamilton County Utility Oversight and Coordination 2019 (Design)	\$2,700,000	\$0	\$2,700,000
10320012	WWIP	LOC	Parrakeet Drive Local Sewer (HNs 6002-6068) (Construction)	\$554,819	\$0	\$554,819
10320056	WWIP	LOC	Ramblingridge Drive & Twinwillow Lane Local Sewer (Construction)	\$3,243,000	\$0	\$3,243,000
10320060	WWIP	LOC	Mapleknoll Drive Local Sewer (HNs 9420-9562) (Construction)	\$578,000	\$0	\$578,000
10420015	WWIP	LAT	Boomer Road Sewer Lateral Assessment (Design,Construction)	\$44,507	\$0	\$44,507
10420020	WWIP	LAT	Hanley Road Sewer Lateral Assessment (HN 4040) (Design,Construction)	\$74,500	\$0	\$74,500
10420025	WWIP	LAT	Althaus Road Sewer Lateral Assessment (HN 7146) (Design,Construction)	\$79,470	\$0	\$79,470
10420030	WWIP	LAT	Blue Rock Road Sewer Lateral Assessment (HN 4300) (Design,Construction)	\$127,000	\$0	\$127,000
10440075	WWIP	LAT	Compton Road Sewer Lateral Assessment (HN 2526) (Design,Construction)	\$52,000	\$0	\$52,000
11142741	WWIP	SEP	CSO 488 490 I-75 Reconstruction Coordination (Construction)	\$1,613,000	\$0	\$1,613,000
11242846	WWIP	SEP	CSO 12 Sewer Separation Phase A.4b - Colerain to Spring Grove Avenue (Construction)	\$7,085,100	\$0	\$7,085,100
11530000	WWIP	REP	Upper Muddy Creek Interceptor Replacement (Construction)	\$13,352,000	\$0	\$13,352,000

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**2019 CIP**  
**Metropolitan Sewer District of Greater Cincinnati**  
**WWIP Projects**

Project ID	CIP Type	Project Type	Project Name	MSD	Other	Total
<b>Total Cost for 23 WWIP Projects in 2019</b>				<b>\$55,448,996</b>	<b>\$0</b>	<b>\$55,448,996</b>

Draft

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**2019 CIP**  
**Metropolitan Sewer District of Greater Cincinnati**  
**OTHER Projects**

<b>Project ID</b>	<b>CIP Type</b>	<b>Project Type</b>	<b>Project Name</b>	<b>MSD</b>	<b>Other</b>	<b>Total</b>
13090000	OTHER	PRG	Programmatic Contingency (Design)	\$10,000,000	\$0	\$10,000,000
<b>Total Cost for 1 OTHER Projects in 2019</b>				<b>\$10,000,000</b>	<b>\$0</b>	<b>\$10,000,000</b>

Draft

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## 2019 CIP

# Metropolitan Sewer District of Greater Cincinnati ASSET Projects

Project ID	CIP Type	Project Type	Project Name	MSD	Other	Total
10230090	AM	PSE	Barrington Hills, Barrington Hills BLK. F, Gil Volz, and Kirkridge Acres P.S. Eliminations (Design,Construction)	\$7,531,900	\$0	\$7,531,900
10240180	AM	REP	3934 Winding Way Sewer Replacement (Design,Construction)	\$319,500	\$0	\$319,500
10240320	AM	REP	Wilder Avenue Sewer Replacement (Construction)	\$342,900	\$0	\$342,900
10240330	AM	REP	Otte Avenue Sewer Replacement (Construction)	\$485,700	\$0	\$485,700
10240380	AM	CSO	CSO 005 Water Connection (Construction)	\$71,000	\$0	\$71,000
10240420	AM	REP	Freeland Avenue Area Sewer Replacement (Construction)	\$96,400	\$0	\$96,400
10240426	AM	PSE	Pleasant Run Central Force Main Improvements (Planning,Design,Easement)	\$1,087,300	\$0	\$1,087,300
10240445	AM	REP	Colton Lane Sewer Replacement (Design)	\$88,100	\$0	\$88,100
10240500	AM	REP	Yoast Avenue Sewer Improvements (Construction)	\$134,300	\$0	\$134,300
10240560	AM	REP	Schulte Drive Sewer Replacement (Construction)	\$409,100	\$0	\$409,100
10240610	AM	FAC	MCWWTP Primary Sludge Pumping Improvements (Construction)	\$22,519,200	\$0	\$22,519,200
10240625	AM	FAC	MCWWTP Standby Power Distribution System Improvements (Construction)	\$2,790,000	\$0	\$2,790,000
10240630	AM	FAC	MCWWTP Raw Sewage Pump Station Pump Replacement (Design)	\$4,307,000	\$0	\$4,307,000
10240640	AM	FAC	MCWWTP Biosolids Dewatering Facility Addition (Planning,Design)	\$4,297,100	\$0	\$4,297,100
10240697	AM	FAC	Mill Creek 4.16 kV & 13.2 kV Loop Improvements (Construction)	\$670,000	\$0	\$670,000
10241900	AM	REG	Mill Creek CSO Dynamic Underflow Control Improvements (Planning,Design)	\$881,000	\$0	\$881,000
10250040	AM	FAC	Polk Run WWTP Effluent Pumping Improvements (Design)	\$259,600	\$0	\$259,600
10270026	AM	PSE	Camargo Canyon Pump Station Elimination (Construction)	\$611,600	\$0	\$611,600
10270145	AM	REP	Columbia Parkway at Delta Sewer Replacement (Construction)	\$1,098,704	\$0	\$1,098,704
10270170	AM	CSO	CSO 83 and 472 Dynamic Underflow Control (Construction)	\$2,435,810	\$0	\$2,435,810
10270185	AM	REP	Paxton Ave at Linwood Ave Sewer Replacement (Construction)	\$275,100	\$0	\$275,100
10270195	AM	FAC	Little Miami WWTP Incineration Improvements (Construction)	\$19,243,400	\$0	\$19,243,400

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## 2019 CIP

### Metropolitan Sewer District of Greater Cincinnati

### ASSET Projects

Project ID	CIP Type	Project Type	Project Name	MSD	Other	Total
10272017	AM	STY	Water Quality Program for Little Miami (Planning)	\$100,000	\$0	\$100,000
10280122.38	AM	REP	Morrison Avenue Sewer Replacement (Design)	\$75,000	\$0	\$75,000
10280189	AM	ALW	WWT System Asset Renewal 2019 (Construction)	\$2,120,000	\$0	\$2,120,000
10280239	AM	ALW	Hydraulic Modeling 2019 (Planning)	\$1,000,000	\$0	\$1,000,000
10280502	AM	REG	District-Wide Regulator Control Enhancements (Design)	\$500,000	\$0	\$500,000
10280505	AM	PSE	Pump Station Telemetry System Upgrades (Construction)	\$3,000,000	\$0	\$3,000,000
10280510	AM	FAC	Centralized Grit Handling & Processing Facility (Planning,Design,Easement)	\$2,684,700	\$0	\$2,684,700
10280609	AM	ALW	Building Sewer Renewal Program 2019 (Construction)	\$6,000,000	\$0	\$6,000,000
10280619	AM	ALW	Water Quality Program 2019 (Planning)	\$200,000	\$0	\$200,000
10280719	AM	ALW	Facilities Asset Management Projects 2019 (Construction)	\$2,650,000	\$0	\$2,650,000
10280919	AM	ALW	Wet Weather Facilities Asset Renewal 2019 (Construction)	\$1,000,000	\$0	\$1,000,000
10281319	AM	ALW	Prioritized Wastewater Collection System Improvements 2019 (Construction)	\$13,000,000	\$0	\$13,000,000
10282019	AM	ALW	CIP Project Planning 2019 (Planning)	\$3,400,000	\$0	\$3,400,000
12240010	AM	REP	Ledgewood Ave Sewer Replacement (Design)	\$75,000	\$0	\$75,000
12240035	AM	REP	911 McPherson Avenue Sewer Replacement (Design)	\$330,000	\$0	\$330,000
12240060	AM	REP	Davey Avenue Sewer Replacement (Design)	\$225,000	\$0	\$225,000
12240345	AM	REP	Mandarin Court Sewer Replacement (Design)	\$270,000	\$0	\$270,000
<b>Total Cost for 39 ASSET Projects in 2019</b>				<b>\$106,584,414</b>	<b>\$0</b>	<b>\$106,584,414</b>
<b>Grand Totals for 63 Projects in 2019</b>				<b>\$172,033,410</b>	<b>\$0</b>	<b>\$172,033,410</b>

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**2020 CIP**  
**Metropolitan Sewer District of Greater Cincinnati**  
**WWIP Projects**

Project ID	CIP Type	Project Type	Project Name	MSD	Other	Total
10130020	WWIP	REP	Muddy Creek Interceptor Rehabilitation (Planning)	\$300,000	\$0	\$300,000
10130280	WWIP	PSE	Addyston Pump Station Elimination (Design,Easement)	\$483,200	\$0	\$483,200
10142640	WWIP	SEP	Vine St Div Dam (Planning,Design,Easement)	\$464,000	\$0	\$464,000
10142720	WWIP	SEP	64th Street Div Dam (Planning,Design,Easement)	\$443,700	\$0	\$443,700
10142980	WWIP	SEP	Clifton Ave West Grating (Planning,Design,Easement)	\$299,400	\$0	\$299,400
10170812	WWIP	FAC	Little Miami WWTP Electrical and Disinfection Improvements (Construction)	\$16,744,700	\$0	\$16,744,700
10171010	WWIP	STY	Middle Duck Creek Area Watershed Planning (Planning)	\$5,000,000	\$0	\$5,000,000
10171261	WWIP	SEP	CSO 61 Partial Separation (Planning,Design,Easement)	\$738,500	\$0	\$738,500
10171521	WWIP	SEP	CSO 503 Partial Separation (Planning,Design)	\$606,000	\$0	\$606,000
10180120	WWIP	ALW	Main Sewer Renewal Program 2020 (Construction)	\$13,000,000	\$0	\$13,000,000
10180220	WWIP	ALW	Manhole Renewal Program 2020 (Construction)	\$1,300,000	\$0	\$1,300,000
10190320	WWIP	ALW	Home Sewer Treatment System Eliminations 2020 (Planning)	\$240,000	\$0	\$240,000
10199020	WWIP	ALW	Wet Weather Program Management and Support Services 2020 (Design)	\$3,500,000	\$0	\$3,500,000
10199120	WWIP	ALW	Hamilton County Utility Oversight and Coordination 2020 (Design)	\$2,700,000	\$0	\$2,700,000
10340021	WWIP	LOC	Carpol Avenue, Honeywell Avenue & E. Kemper Road Local Sewer (Construction)	\$2,044,700	\$0	\$2,044,700
10370025	WWIP	LOC	Kenwood Hills Local Sewer (Construction)	\$3,552,301	\$0	\$3,552,301
11142750	WWIP	SEP	Brent Spence Bridge I-75 Reconstruction Coordination (Design)	\$500,000	\$0	\$500,000
<b>Total Cost for 17 WWIP Projects in 2020</b>				<b>\$51,916,501</b>	<b>\$0</b>	<b>\$51,916,501</b>

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**2020 CIP**  
**Metropolitan Sewer District of Greater Cincinnati**  
**OTHER Projects**

<b>Project ID</b>	<b>CIP Type</b>	<b>Project Type</b>	<b>Project Name</b>	<b>MSD</b>	<b>Other</b>	<b>Total</b>
13090000	OTHER	PRG	Programmatic Contingency (Design)	\$10,000,000	\$0	\$10,000,000
<b>Total Cost for 1 OTHER Projects in 2020</b>				<b>\$10,000,000</b>	<b>\$0</b>	<b>\$10,000,000</b>

Draft

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## 2020 CIP

# Metropolitan Sewer District of Greater Cincinnati ASSET Projects

Project ID	CIP Type	Project Type	Project Name	MSD	Other	Total
10221255	AM	PSE	TCWWTP (Wesselman) PS Improvements (Planning,Design)	\$397,100	\$0	\$397,100
10221260	AM	PSE	TCWWTP Main Drain PS Improvements (Planning,Design)	\$661,100	\$0	\$661,100
10230051	AM	FAC	Muddy Creek WWTP Influent Pumping (Planning,Design)	\$6,013,800	\$0	\$6,013,800
10230125	AM	PSE	East Branch Muddy Creek Pump Station Upgrades (Construction)	\$2,308,100	\$0	\$2,308,100
10230140	AM	SEP	Addyston Extraneous Stormwater Removal (Design,Easement)	\$748,800	\$0	\$748,800
10230625	AM	REG	Muddy Creek CSO Dynamic Underflow Control Improvements (Planning,Design)	\$897,500	\$0	\$897,500
10240271	AM	CSO	Lower Mill Creek HW DW Protection (Construction)	\$1,427,000	\$0	\$1,427,000
10240445	AM	REP	Colton Lane Sewer Replacement (Construction)	\$218,200	\$0	\$218,200
10240465	AM	REP	Hosea Street Sewer Replacement (Construction)	\$2,453,400	\$0	\$2,453,400
10240495	AM	REP	Wahl Terrace Sewer Replacement (Construction)	\$484,100	\$0	\$484,100
10240525	AM	REP	Victory Parkway Sewer Rehabilitation (Construction)	\$343,300	\$0	\$343,300
10240545	AM	REP	Central Parkway Sewer Replacement (HN 2402) (Construction)	\$342,300	\$0	\$342,300
10240655	AM	SEP	CSO 449 Sewer Separation (Construction)	\$555,400	\$0	\$555,400
10240675	AM	FAC	Mill Creek WWTP Thickening Chemical Feed Improvements (Planning,Design)	\$352,700	\$0	\$352,700
10250042	AM	FAC	Polk Run WWTP Admin Bldg Improvements (Planning,Design)	\$173,700	\$0	\$173,700
10260030	AM	PSE	Kugler Mill Pump Station Upgrade and Force Main Replacement (Design,Easement)	\$300,700	\$0	\$300,700
10270165	AM	REP	Delta and Greist Sewer Replacement (Construction)	\$1,207,900	\$0	\$1,207,900
10270190	AM	SEP	Columbia Square Development Separation (Construction)	\$280,700	\$0	\$280,700
10270200	AM	CSO	Little Miami CSO Dynamic Underflow Control Improvements (Planning,Design)	\$897,500	\$0	\$897,500
10280190	AM	ALW	WWT System Asset Renewal 2020 (Construction)	\$2,190,000	\$0	\$2,190,000
10280240	AM	ALW	Hydraulic Modeling 2020 (Planning)	\$1,000,000	\$0	\$1,000,000
10280610	AM	ALW	Building Sewer Renewal Program 2020 (Construction)	\$6,000,000	\$0	\$6,000,000
10280620	AM	ALW	Water Quality Program 2020 (Planning)	\$500,000	\$0	\$500,000

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**2020 CIP**  
**Metropolitan Sewer District of Greater Cincinnati**  
**ASSET Projects**

<b>Project ID</b>	<b>CIP Type</b>	<b>Project Type</b>	<b>Project Name</b>	<b>MSD</b>	<b>Other</b>	<b>Total</b>
10280720	AM	ALW	Facilities Asset Management Projects 2020 (Construction)	\$2,730,000	\$0	\$2,730,000
10280920	AM	ALW	Wet Weather Facilities Asset Renewal 2020 (Construction)	\$1,000,000	\$0	\$1,000,000
10281320	AM	ALW	Prioritized Wastewater Collection System Improvements 2020 (Construction)	\$13,000,000	\$0	\$13,000,000
10282020	AM	ALW	CIP Project Planning 2020 (Planning)	\$3,400,000	\$0	\$3,400,000
12230045	AM	STY	Stonebridge Apartments Sewer Replacement (Construction)	\$806,600	\$0	\$806,600
12240500	AM	REP	Depot Street Sewer Evaluation (Design)	\$300,000	\$0	\$300,000
<b>Total Cost for 29 ASSET Projects in 2020</b>				<b>\$50,989,900</b>	<b>\$0</b>	<b>\$50,989,900</b>
<b>Grand Totals for 47 Projects in 2020</b>				<b>\$112,906,401</b>	<b>\$0</b>	<b>\$112,906,401</b>

Draft

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## 2021 CIP

### Metropolitan Sewer District of Greater Cincinnati

### WWIP Projects

Project ID	CIP Type	Project Type	Project Name	MSD	Other	Total
10130002	WWIP	REP	Muddy Creek Conveyance Improvements (Design,Easement)	\$14,087,403	\$0	\$14,087,403
10130161	WWIP	PSE	Muddy creek PSU & Force Main (Construction)	\$5,049,761	\$0	\$5,049,761
10141010	WWIP	STY	Winton Lake Area Watershed Planning (Planning)	\$1,500,000	\$0	\$1,500,000
10142380	WWIP	REG	CSO 539 Improvements (Design,Easement)	\$700,000	\$0	\$700,000
10170813	WWIP	FAC	LMWWTP Preliminary Treatment Improvements (Design)	\$2,631,500	\$0	\$2,631,500
10171120	WWIP	REG	CSO 74 Improvements (Design)	\$80,000	\$0	\$80,000
10171540	WWIP	REG	CSO 135 Elimination (Construction)	\$380,500	\$0	\$380,500
10171560	WWIP	REG	CSO 43 Elimination (Construction)	\$380,500	\$0	\$380,500
10180121	WWIP	ALW	Main Sewer Renewal Program 2021 (Construction)	\$13,000,000	\$0	\$13,000,000
10180221	WWIP	ALW	Manhole Renewal Program 2021 (Construction)	\$1,300,000	\$0	\$1,300,000
10190321	WWIP	ALW	Home Sewer Treatment Systems Eliminations 2021 (Planning)	\$250,000	\$0	\$250,000
10199021	WWIP	ALW	Wet Weather Program Management and Support Services 2021 (Design)	\$3,500,000	\$0	\$3,500,000
10199121	WWIP	ALW	Hamilton County Utility Oversight and Coordination 2021 (Design)	\$2,700,000	\$0	\$2,700,000
11142750	WWIP	SEP	Brent Spence Bridge I-75 Reconstruction Coordination (Construction)	\$10,000,000	\$0	\$10,000,000
<b>Total Cost for 14 WWIP Projects in 2021</b>				<b>\$55,559,664</b>	<b>\$0</b>	<b>\$55,559,664</b>

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**2021 CIP**  
**Metropolitan Sewer District of Greater Cincinnati**  
**OTHER Projects**

<b>Project ID</b>	<b>CIP Type</b>	<b>Project Type</b>	<b>Project Name</b>	<b>MSD</b>	<b>Other</b>	<b>Total</b>
13090000	OTHER	PRG	Programmatic Contingency (Design)	\$10,000,000	\$0	\$10,000,000
<b>Total Cost for 1 OTHER Projects in 2021</b>				<b>\$10,000,000</b>	<b>\$0</b>	<b>\$10,000,000</b>

Draft

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## 2021 CIP

### Metropolitan Sewer District of Greater Cincinnati

### ASSET Projects

Project ID	CIP Type	Project Type	Project Name	MSD	Other	Total
10230054	AM	FAC	Muddy Creek WWTP Disinfection Upgrades (Planning, Design)	\$407,500	\$0	\$407,500
10240035	AM	FAC	Mill Creek WWTP Primary Grit Improvements (Design)	\$299,400	\$0	\$299,400
10240185	AM	PSE	Legends of Carpenters Run Pump Station Elimination (Construction)	\$294,500	\$0	\$294,500
10240630	AM	FAC	MCWWTP Raw Sewage Pump Station Pump Replacement (Construction)	\$86,552,800	\$0	\$86,552,800
10250040	AM	FAC	Polk Run WWTP Effluent Pumping Improvements (Construction)	\$1,742,500	\$0	\$1,742,500
10280191	AM	ALW	WWT System Asset Renewal 2021 (Construction)	\$2,250,000	\$0	\$2,250,000
10280241	AM	ALW	Hydraulic Modeling 2021 (Planning)	\$1,000,000	\$0	\$1,000,000
10280502	AM	REG	District-Wide Regulator Control Enhancements (Construction)	\$5,000,000	\$0	\$5,000,000
10280611	AM	ALW	Building Sewer Renewal Program 2021 (Construction)	\$7,000,000	\$0	\$7,000,000
10280621	AM	ALW	Water Quality Program 2021 (Planning)	\$500,000	\$0	\$500,000
10280721	AM	ALW	Facilities Asset Management Projects 2021 (Construction)	\$2,810,000	\$0	\$2,810,000
10280921	AM	ALW	Wet Weather Facilities Asset Renewal 2021 (Construction)	\$1,000,000	\$0	\$1,000,000
10281321	AM	ALW	Prioritized Wastewater Collection System Improvements 2021 (Construction)	\$14,000,000	\$0	\$14,000,000
10282021	AM	ALW	CIP Project Planning 2021 (Planning)	\$3,400,000	\$0	\$3,400,000
12240025	AM	REP	McHenry Avenue Sewer Replacement (Design)	\$250,000	\$0	\$250,000
12240265	AM	REP	Old Ludlow Ave R W Sewer Replacement (Design)	\$90,000	\$0	\$90,000
12240295	AM	REP	Reading Road - 12th St to E. Liberty St (Design)	\$60,000	\$0	\$60,000
<b>Total Cost for 17 ASSET Projects in 2021</b>				<b>\$126,656,700</b>	<b>\$0</b>	<b>\$126,656,700</b>
<b>Grand Totals for 32 Projects in 2021</b>				<b>\$192,216,364</b>	<b>\$0</b>	<b>\$192,216,364</b>

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