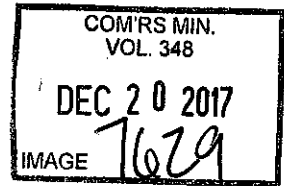


On the motion of Mr. Portune, seconded by Ms. Driehaus  
the following resolution was adopted...

**APPROVING AND ADOPTING THE  
2018 MSD OPERATING BUDGET,  
THE  
2018-2022 CAPITAL  
IMPROVEMENT PROGRAM, AND  
CRITICAL ASSET MANAGEMENT  
EXPENDITURES FOR THE  
THE METROPOLITAN SEWER DISTRICT OF GREATER  
CINCINNATI, HAMILTON COUNTY, OHIO,**



BE IT RESOLVED that the Board of Commissioners of Hamilton County, Ohio hereby adopts and approves the 2018-2022 Capital Improvement Program for the Metropolitan Sewer District of Greater Cincinnati in the amount of \$129,118,155; and

BE IT RESOLVED that the Board of Commissioners of Hamilton County, Ohio hereby adopts and approves the 2018 MSD Operating Budget in the amount of \$211,217,612; and

BE IT RESOLVED that the Board of County Commissioners of Hamilton County, Ohio hereby adopts legislation approving Project ID 10280717 authorizing Critical Asset Management Projects for 2017 in the amount of \$8,951,990 subject to additional terms in this resolution; and

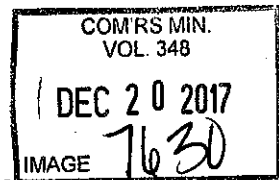
BE IT FURTHER RESOLVED that the BOCC ratifies and affirms that MSDGC shall comply with all MSD Rules and Regulations, including but not limited to those related to reporting and financial practices; and

BE IT FURTHER RESOLVED that MSD and the County shall meet during Quarter 1 of 2018 to resolve policy questions around the use of District funds for the repair, maintenance and renovation of building sewers including the use of allowance spending thereon; and

BE IT FURTHER RESOLVED that pending future discussions with Consent Decree Regulators and the US District Court, future project spending associated with this 5-year CIP, relating to asset management and WWIP shall be amended, as needed and directed, to reflect the policy position of the Board of County Commissioners; and

BE IT FURTHER RESOLVED that the appropriate capitalization of costs for 10130740 Werk & Westbourne EHRT, 10140417 LMCPR Monitoring and Modeling, and 10199018 Program Management and Support Services will be discussed in early 2018 and adjusted as needed; and

BE IT FURTHER RESOLVED that Project Number 10199118 "Hamilton County Utility Oversight and Coordination 2018" reflects a total of \$1,000,000 for 2018 an amount which is reduced from the 2017 CIP and which shall be tracked and amended on a quarterly basis, if needed and as directed by the Board of County Commissioners, in conjunction with the oversight needs of the County including but not limited to WWIP and Consent Decree negotiations with Federal Regulators; and



BE IT FURTHER RESOLVED that references in the attached legislation to Project 10280518 WWC High Risk Asset Renewal 2018 shall reference that "The scope of work does not include addressing building sewers as those are the legal responsibility of the building owner/operator and not MSDGC."; and

BE IT FURTHER RESOLVED that the funding allocated within the 2018 Operating Budget and Capital Improvement Program is consistent with advancing the recommendations of the Hamilton County/MSD Rate Affordability Task Force and that the County and MSD will continue to jointly advance those recommendations as expeditiously as possible; and

BE IT FURTHER RESOLVED that individual projects associated with the Critical Asset Management work of the Metropolitan Sewer District shall not commence until project description and cost detail is received, reviewed and approved by the County; and

BE IT FURTHER RESOLVED that the Clerk of the Board certify copies of this resolution to Jeff Aluotto, County Administrator; and Dusty Rhodes, County Auditor.

ADOPTED at a regularly adjourned meeting of the Board of Commissioners of Hamilton County, Ohio, in session this 20th day of December 2017.

Ms. Driehaus YES

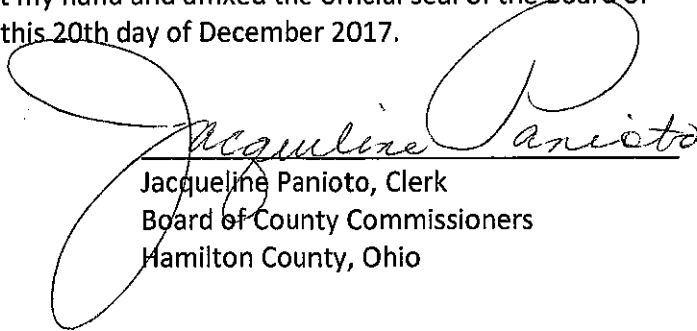
Mr. Monzel YES

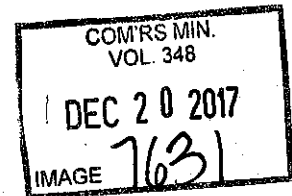
Mr. Portune YES

CERTIFICATE OF CLERK

IT IS HEREBY CERTIFIED that the foregoing is a true and correct transcript of a resolution adopted by the Board of Commissioners of Hamilton County, Ohio, the 20th day of December 2017.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the official seal of the Board of Commissioners of Hamilton County, Ohio, this 20th day of December 2017.

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



December 19, 2017

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

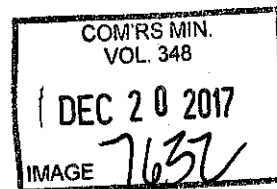
Honorable Commissioners:

Attached for your consideration are revised resolutions to effect the adoption of the Metropolitan Sewer District of Greater Cincinnati's ("MSD") 2018-2022 Capital Improvement Program (CIP). On November 8 and November 15, 2017, the Board of County Commissioners of Hamilton County, Ohio held public hearings on the MSD CIP.

The 2018 MSD CIP represents the final year of the Phase 1 Wet Weather Improvement Program (WWIP). While wrapping up the Phase 1 of the WWIP, MSD also worked to develop a schedule of projects for consideration and recommendation for the 5-Year CIP in anticipation of a future Phase 2 WWIP as required by the 2004 Global Consent Decree. Given the complexity, size, affordability constraints, lessons learned, innovation, and watershed evaluations, the Phase 2 Program must be implemented in phases. Therefore, this CIP encompasses both the WWIP, including sustainable infrastructure projects, as well as a comprehensive district-wide Asset Management (AM) program), and includes a number of "Early Action" projects, also referred to as a "Bridge Schedule," for WWIP work that will be completed through 2019, as well as Allowances. While still subject to pending discussions with the Consent Decree Regulators and U.S. District Court approval of a time extension for the filing of the Phase 2 schedule these "Bridge" projects are recommended to advance immediately after the Commissioners adoption of this 2018 CIP. If Regulator approval does not occur, then all or some of these projects may be reevaluated with the County Commissioners and MSD/City. For 2018, there are a total of **58** projects on the proposed capital plan, which include the WWIP Projects and Allowances; local and lateral sewers; Asset Management (AM) Projects and Allowances; and Program Contingency estimated at **\$129,118,155**.

MSD further details this cost in its 2018 Proposed Capital Budget and Capital Improvement Program book, dated December 19, 2017. The proposed CIP reflects the collaborative efforts between Hamilton County's Administration, Monitor, and MSD.

*...continued*



December 19, 2017

Page 2

MSD has conducted a thorough analysis of infrastructure assets to develop the capital plan and program for the District for the next 5 years. Due to the affordability limitations and challenges of its service area and its central cities, MSD has reprioritized the need to address known problems that reduce effectiveness and reliability of the collection and treatment system. The CIP focuses on necessary improvements and upgrades to wastewater treatment facilities, sewers and pump stations as well as allowances for each of the asset groups. MSD's plan will address the most critical and aging infrastructure assets as well as implementing projects to meet the requirements of the Consent Decree, NPDES permits and customer expectations.

The Phase 2A Schedule was due for submission to the Regulators on June 30, 2017; on June 27, 2017, the Consent Decree Regulators granted a four-month extension to the original June 2017 deadline. The Consent Decree Regulators and Co-Defendants are in discussion of an additional extension that would allow the parties to work toward a June 30, 2018 deadline. Therefore, **specific MSD capital projects and costs listed herein for 2019, 2020, 2021, and 2022 are subject to change**; the projects listed **are placeholders based on historical information**. The MSD capital projects to be advanced for legislation in 2019, 2020, 2021, and 2022 will be dependent upon future discussions with the Consent Decree Regulators.

Through the attached legislation, the City of Cincinnati requests the County Commissioners to consider, approve, and appropriate a total of **\$65,962,588** for the following actions:

- (1) Approve, in general, the submitted 2018-2022 MSD CIP; and
- (2) Order the commencement of planning, design, and easement acquisition activities (**Exhibit A**) for 32 projects contained in the 2018 MSD CIP and appropriate \$23,126,588 of the above-referenced \$65.9M for the same; and
- (3) Take all actions necessary for nine construction projects (**Exhibit B**) contained in the 2018 MSD CIP and appropriate \$28,536,000 of the above-referenced \$65.9M for the same. These nine projects encompass construction activities that are either essential to the continuous operation of MSD, or address wastewater system asset stabilizations or asset maintenance.
- (4) Approve, per the requirement of the 2018 CIP, the use of MSD Programmatic Contingency fund and appropriate **\$14,300,000** of the above-referenced \$65.9M for the same.

RECOMMENDED:

Gérald R. Checco  
Director, MSD

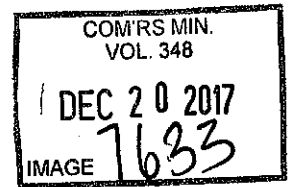
Approved:

Harry Black  
City Manager

Provided to the Hamilton County Clerk of the Board on 12/19/2017

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

On motion of Mr. Portune, seconded by Ms. Driehaus, the following resolutions were adopted....



MSD RESOLUTION

APPROVING AND ADOPTING THE  
2018-2022 CAPITAL IMPROVEMENT PROGRAM  
FOR THE  
THE METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI,  
HAMILTON COUNTY, OHIO,  
  
AND APPROPRIATING FUNDS THEREFOR

WHEREAS, the Director of the Metropolitan Sewer District of Greater Cincinnati ("MSD") is required to annually submit to the Board of County Commissioners of Hamilton County, Ohio (the "Board") a Capital Improvement Program ("CIP") and has done so for the program years 2018-2022; and

WHEREAS, after legal advertisement, this Board did conduct public hearings on November 8 and November 15, 2017 on the 2018-2022 MSD CIP, at which hearing all persons desiring to ask questions and make statements were afforded such opportunity; and

WHEREAS, this Board did, on November 15, 2017, conclude said public hearings on said 2018-2022 MSD CIP; and

WHEREAS, this Board of County Commissioners has reviewed said 2018-2022 MSD CIP; and

WHEREAS, by approving this 2018-2022 MSD CIP, the Board is **specifically** authorizing the preparation of detailed plans, specifications, estimates of cost, and/or other relevant documents for the 32 projects and allowances contained and outlined in **Exhibit A**, attached hereto, and by reference made a part hereof; and

WHEREAS, by approving this 2018-2022 MSD CIP, the Board is **specifically** approving the detailed plans, specifications and/or other relevant documents, and estimates of cost for the nine WWIP and Asset Management Allowance projects contained and outlined in **Exhibit B**, which are attached hereto, and by reference made a part hereof; and

WHEREAS, by approving this 2018-2022 MSD CIP, the Board is **specifically** approving the use of Programmatic Contingency to cover needed contingency for all projects legislated, consistent with the requirements of Section 2405-2(A)(3), "Contingency" in the MSD Rules and Regulations; and

WHEREAS, by approving this 2018-2022 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, on June 27, 2017, the Consent Decree Regulators granted a four-month extension to the original June 30, 2017 Phase 2 deadline, which was subsequently further extended, so therefore, by approving this 2018-2022 MSD CIP the Board is approving, *in concept only*, the submitted project lists and total project cost estimates *for projects listed in 2019, 2020, 2021, and 2022* which scope and budget will be dependent upon the outcome of on-going discussions with the Consent Decree Regulators. Additionally, the outlier years 2019-2022 represent a near 50-50 split between WWIP and Asset Management projects. As such, the cost and specific projects listed herein

are subject to change. When ordered designed or constructed, these projects will require specific authorization and appropriation of funds through legislation passed by the Board; and

WHEREAS, MSD uses best professional judgment and industry standards with regards to project planning, design construction, and performance evaluation (post construction monitoring); and

WHEREAS MSD provides monthly Enterprise Management Reports and quarterly Project Activity Reports, posting such reports at [www.projectgroundwork.org](http://www.projectgroundwork.org) and submitting the same to City and County Administrations, in order to report and track progress on program performance and health at the project level, reporting on cash flow, schedule, risks, regulatory and stakeholder engagement and various other key performance indicators; and

WHEREAS, the respective Project[s'] and Allowance[s'] activities as contained in **Exhibit A**, **Exhibit B**, or funds for use as Programmatic Contingency, are for the purpose of acquiring, constructing, and improving capital assets to be used in the operation and maintenance of the MSD, as operated by this Board under Chapter 6117 Revised Code of Ohio and in compliance with Section 133.01(Z) R.C.; and

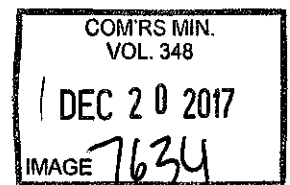
WHEREAS, it has been determined sufficient unappropriated funds are available for use by the Metropolitan Sewer District to temporarily finance construction costs prior to the issuance of long-term revenue bonds.

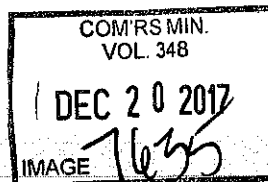
NOW, THEREFORE, BE IT RESOLVED, by the Board of County Commissioners of Hamilton County, Ohio, that the 2018-2022 Capital Improvement Program of the Metropolitan Sewer District of Greater Cincinnati for the period of January 1, 2018 – December 31, 2018, which is inclusive of **Exhibits A**, and **B**, and for use as Programmatic Contingency be and hereby is approved and adopted.

BE IT FURTHER RESOLVED that:

SECTION 1. By approving this 2018-2022 MSD CIP, the Board is **specifically** appropriating funds amounting to \$23,126,588.00 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 32 projects contained in and outlined in **Exhibit A**; and

SECTION 2. By approving this 2018-2022 MSD CIP, the Board is **specifically** appropriating funds amounting to \$28,536,000 for construction and authorizing the construction of the following projects, as identified in **Exhibit B**:





| Project Identifiers (ID / Name)  | Funds Requested        |
|--|------------------------|
| 10180118 Main Sewer Renewal Program 2018                                       | \$1,800,000.00         |
| 10180218 Manhole Renewal Program 2018  | \$700,000.00           |
| 10180250 Small Diameter Sewer Rehabilitation - Phase 1                         | \$2,500,000.00         |
| 10180260 Large Diameter Sewer Rehabilitation - Phase 1                         | \$2,500,000.00         |
| 10190418 Home Sewage Treatment System Eliminations 2018, Design & Construction | \$1,036,000.00         |
| 10280318 Emergency Sewer Repairs 2018  | \$6,000,000.00         |
| 10280518 WWC High Risk Asset Renewal 2018                                      | \$6,000,000.00         |
| 10280608 Building Sewer Renewal Program 2018                                   | \$2,000,000.00         |
| 10280718 Critical Asset Management Projects 2018                               | \$6,000,000.00         |
| <b>Grand Total</b>   | <b>\$28,536,000.00</b> |

SECTION 3. By approving this 2018-2022 MSD CIP, the Board is **specifically** appropriating funds amounting to **\$14,300,000** for Programmatic Contingency.

BE IT FURTHER RESOLVED that the sum of sixty five million, nine hundred sixty-two, five hundred eighty eight dollars (\$65,962,588.00) 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 2018-2022 MSD CIP as outlined in **Exhibit A**; and, the construction costs of projects as identified in **Exhibit B**; and Programmatic Contingency.

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** through **C**.

SECTION 2. The Board of County Commissioners hereby approves the use of the Obligations in the maximum principal amount of sixty five million, nine hundred sixty-two, five hundred eighty eight dollars (\$65,962,588.00) to finance the costs of the Projects contained in **Exhibits A, B**, and Programmatic Contingency, 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 Programmatic Contingency 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 Programmatic Contingency.

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 Programmatic Contingency 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.

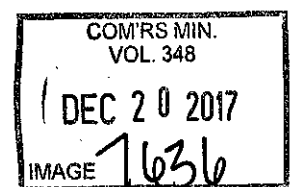
BE IT FURTHER RESOLVED, that the Board is requiring that any project contained in the 2018 CIP, exclusive of the WWIP or AM Allowances listed in Exhibit B, when ordered constructed, have specific authorization and appropriation of funds through legislation passed by this Board.

BE IT FURTHER RESOLVED, that Project 10180117, Main Sewer Renewal Program 2017, is authorized to continue use of appropriated 2017 funds in an amount not to exceed \$4,200,000 in order to complete contract requirements for renewal of assets identified in that contract and for which MSD has sufficient legal title.

BE IT FURTHER RESOLVED, that 10280608, Building Sewer Renewal Program 2018 is dedicated to addressing structurally failed privately owned sewers located within the public right-of-way in accordance with MSD Rules and Regulations, Section 2008.

BE IT FURTHER RESOLVED, 10280518 WWC High Risk Asset Renewal 2018 will allow MSD to replace entire high-risk assets or portions of system assets that are currently unable, or anticipated to be unable to meet their defined level of service. This project is necessary to cost effectively extend asset life while protecting and preserving public health and the environment. The scope of work does not include addressing building sewers as those are the legal responsibility of the building owner/operator and not MSDGC.

BE IT FURTHER RESOLVED, 10280318 Emergency Sewer Repairs 2018 will allow MSD to quickly respond to sudden, unexpected sewer system failures which may threaten public health, welfare or safety. Conditions that warrant emergency repairs include cave-ins, and structurally failed mainline sewers or manholes. The scope of work does not include addressing building sewers.





BE IT FURTHER RESOLVED, the 2018 CIP includes program related mandatory costs associated with the performance evaluation efforts of LMCPR and Werk and Westbourne EHRT projects. These projects are considered to be capital expenditures because of their applicability to future project planning and design, as well as multi-year compliance and performance evaluation of Consent Decree projects. If determined that any expenditures from these efforts are not contributing to the creation of an asset, MSD will reclassify the costs in the end-of-year Financial Statement.

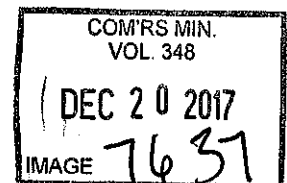
BE IT FURTHER RESOLVED, that as several allowances allow capitalization of staff time that cannot otherwise be allocated to a specific capital project, including the Hamilton County Utility Oversight allowance, the Hamilton County Transition allowance, Phase 2 WWIP Planning allowance, CIP Project Management allowance, and the Program Management and the Support Services 2018 allowance, capitalization of labor will follow standard GASB accounting procedures and costs will be allocated to capital assets on a pro-rated basis annually. This capitalization effort shall serve to reduce the burden on the MSD annual operating budget and on ratepayers.

BE IT FURTHER RESOLVED MSD provides monthly Enterprise Management Reports and quarterly Project Activity Reports, posting such reports at [www.projectgroundwork.org](http://www.projectgroundwork.org) and submits to City and County Administrations to report and track progress on program performance and health at the project level, reporting on cash flow, schedule, risks, regulatory and stakeholder engagement and various other key performance indicators.

BE IT FURTHER RESOLVED, that Early Action project schedules have been condensed, which may result in less than ideal time to implement. MSD uses best professional judgment and industry standards with regards to project planning, design and construction, and performance evaluation (post construction monitoring)..

BE IT FURTHER RESOLVED, that projects listed herein for 2019, 2020, 2021, and 2022 are subject to change and are approved *in concept only*; the submitted project lists and total project cost estimates are placeholders based on historical information. Additionally, the outlier years 2019-2022 represent a near 50-50 split between WWIP and Asset Management projects. Further, the outlier years 2019-2022 are subject to further refinement and Regulator negotiation. MSD will strive to achieve the desired 50-50 split given these aforementioned circumstances. The Phase 2A Schedule was due for submission to the Regulators on June 30, 2017; on June 27, 2017, the Consent Decree Regulators granted a four-month extension to the original June 2017 deadline. The Consent Decree Regulators and Co-Defendants are in discussion of additional extension that would allow parties to work toward a June 30, 2018 deadline. As such, the cost and specific projects listed herein are subject to change. When ordered designed or constructed, these projects will require specific authorization and appropriation of funds through legislation passed by the Board.

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; Harry Black, Cincinnati City Manager; 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.

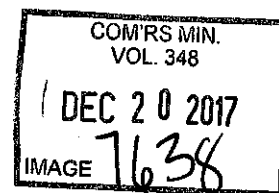
ADOPTED at a regularly adjourned meeting of the Board of County Commissioners of Hamilton County, Ohio, this

20th day of December, 2017

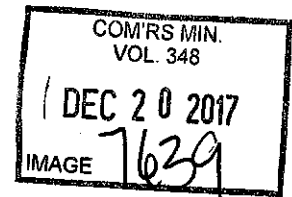
Ms. Driehaus YES

Mr. Monzel YES

Mr. Portune YES



OFFICE OF THE DIRECTOR  
THE METROPOLITAN SEWER DISTRICT  
OF GREATER CINCINNATI



December 19, 2017

2018 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 2018 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 Pittlinger, 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)

MSD RESOLUTION

AUTHORIZING THE PREPARATION OF DETAILED PLANS, SPECIFICATIONS,  
ESTIMATES OF COST, AND/OR OTHER RELEVANT DOCUMENTS  
2018-2022 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 2018-2022 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.

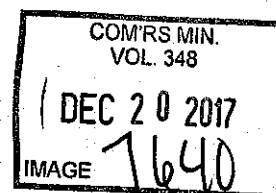
ADOPTED at a regularly adjourned meeting of the Board of County Commissioners of Hamilton County, Ohio, this

20th day of December, 2017.

Ms. Driehaus YES

Mr. Monzel YES

Mr. Portune YES



MSD RESOLUTION

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

2018 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 2018 - 2022 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 2018 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 by this Board under Chapter 6117 Revised Code of Ohio and in compliance with Section 133.01(Z) 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

20th day of December, 2017.

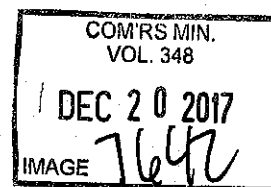
Ms. Driehaus YES

Mr. Monzel YES

Mr. Portune YES

MSD RESOLUTION

DECLARING THE NECESSITY TO CONSTRUCT  
SEWER PROJECTS IDENTIFIED IN  
EXHIBIT B  
2018 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 by this Board under Chapter 6117 Revised Code of Ohio and in compliance with Section 133.01(Z) 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" columns 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.

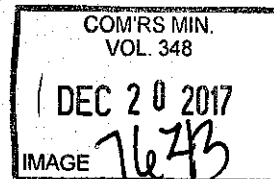
BE IT FURTHER RESOLVED, that this Board of County Commissioners hereby finds and determines that all formal actions relative to the adoption of this Resolution were taken in an open meeting of the Board of County Commissioners and that all deliberations of this Board of County Commissioners and of its 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  
20th day of December, 2017.

Ms. Driehaus YES

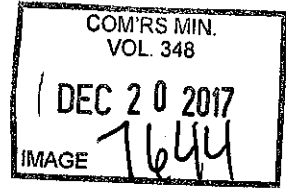
Mr. Monzel YES

Mr. Portune YES



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 by this Board under Chapter 6117 Revised Code of Ohio and in compliance with Section 133.01(Z) 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

20th day of December, 2017.

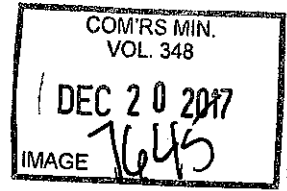
Ms. Driehaus YES

Mr. Monzel YES

Mr. Portune YES



CERTIFICATE OF CLERK

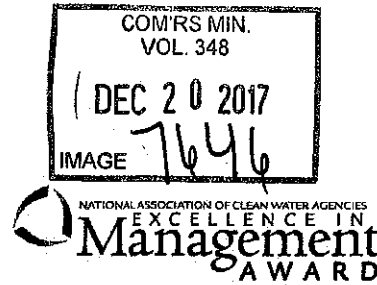


IT IS HEREBY CERTIFIED that the foregoing is a true and correct transcript of resolutions adopted by the Board of County Commissioners in session the 20th day of December, 2017.

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 20th day of December, 2017.

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

**MSD Legislative Fact Sheet**



Gérald R. Checco  
Director

12/7/2017

**PROJECT IDENTIFIERS:** 2018-2022 CAPITAL IMPROVEMENT PROGRAM  
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 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 2018-2022 MSD CIP and authorizing the preparation of detailed plans, specifications, and estimates of costs, and appropriating funds for the 2018 MSD CIP's Exhibits A projects and Exhibit C programmatic contingency; and 2) enabling the construction of the 2018 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. |   |

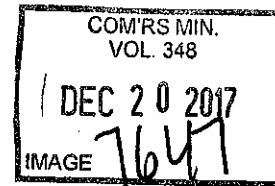
**PROJECT TYPE:**

|   |   |   |
|---|---|---|
| <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:**

The 2018 MSD CIP represents the final year of the Phase 1 Wet Weather Improvement Program (WWIP). While wrapping up the Phase 1 of the WWIP, MSD also worked to develop a schedule of projects for consideration and recommendation for the 5-Year CIP in anticipation of future WWIP priorities as required by the 2004 Global Consent Decree. Given the complexity, size, affordability constraints, lessons learned, innovation, and watershed evaluations, the Phase 2 Program must be implemented in phases. Therefore, this CIP encompasses both the WWIP, including sustainable infrastructure projects, as well as a comprehensive district-wide Asset Management (AM) program, and includes a number of "Early Action" projects, also referred to as a "Bridge Schedule," for WWIP work that will be completed through 2019. These "Bridge" projects are recommended to advance immediately after the Commissioners adoption of this 2018 CIP. For 2018, there are a total of 58 projects on the proposed capital plan, which includes the WWIP Projects and Allowances; local and lateral sewers; AM Projects and Allowances; and Program Contingency estimated at \$129,118,155.

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):**

Early Action 2018 - 2019 Projects

The following projects represent an Early Action WWIP capital spending scenario. These projects represent options that have been coordinated with and agreed upon with the County for advancement. The projects are WWIP projects defined in Attachment 2 of the Final WWIP. MSD has updated cost estimates for some of these WWIP projects – others will be further refined as design proceeds in 2018 and 2019.

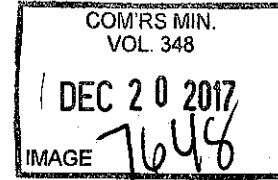
| Project ID/Name |  |
|-----------------|--|
| 10130042        | UMCI Replacement Phase B   |
| 10130850        | Muddy Creek @ Westbourne HRT Phase 1 Improvements                    |
| 10131021        | CSO 402-406 Wet Weather Improvements                                 |
| 10142200        | CSO 513 Sewer Separation   |
| 10142220        | CSO 514 Sewer Separation   |
| 10144886        | Mill Creek WWTP HRT Study  |
| 10144887        | Mill Creek WWTP High Rate Treatment Facility Diversion Structure     |
| 10170812        | Little Miami WWTP Electrical Improvements Phase A                    |
| 10170813        | LMWWTP Preliminary Treatment Improvements Phase A                    |
| 10171540        | CSO 135 Elimination  |
| 10171560        | CSO 43 Elimination   |
| 10171641        | CSO 214 Partial Separation   |
| 10230640        | CSO 408 and 413 HW DW Protection                                     |
| 10241820        | SSO 700 Facility Improvements  |
| 10270160        | Prospect Woods Pump Station Upgrade                                  |
| 10270170        | CSO 83 and 472 Dynamic Underflow Control                             |
| 10270190        | Columbia Square Development Separation                               |
| 11242846        | CSO 12 Sewer Separation Phase A.4b - Colerain to Spring Grove Avenue |

The Early Action 2018-2019 WWIP Program affords the City and County more time for negotiation and results with a slower spend rate than tentatively forecasted in 2017 to address affordability issues. Additionally, for years 2018-2019 the recommended budget represents a near 50-50 split between WWIP Asset Management projects, per the Commissioners direction.

Remaining Phase 1 Projects

2018 is the last full year of work prior to the end of Phase 1 – December 31, 2018. The following projects represent work that is included in this CIP with the assumption that the Phase 1 WWIP projects currently have a Consent Decree substantial completion deadline of December 31, 2018 and for non-WWIP related activity, work must be encumbered prior to 2019. These are the remaining and outstanding Final WWIP Attachment 1B Projects and Critical Asset Management priorities.

- Upper Duck Bundle WWIP Projects (SSO 1000, CSO 54 & CSO 551)
- Lower Mill Creek Partial Remedy WWIP Projects (CSO 125 and CSOs 217/483)
- Phase 1 WWIP Allowances (Trenchless Sewer, Manhole, and SBU)
- Ponderosa Woods Pump Station Asset Management
- Mill Creek, Taylor Creek, & Polk Run WWTP Asset Management Projects
- Wastewater Collection Sewer Replacement Projects
- Watershed Operations Projects
- Phase 1 Asset Management Allowances
- Program Contingency



**PROJECT PURPOSE (cont):**

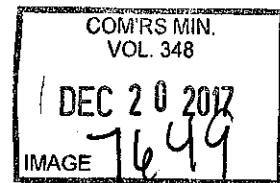
Status of Phase 1 WWIP

A summary of the WWIP milestones required in the Final WWIP, both achieved and planned, is shown below. MSDGC has currently met milestones as far ahead as 2018. In this table, it is noted that MSD has completed 79 of the required 100 milestones defined in Attachment 1A of the Final WWIP. MSD has constructed 104 of the 114 defined projects listed in Attachment 1B of the Final WWIP, which are being completed under 133 separate construction contracts, of which 112 have finished construction. Of the remaining 21 Phase 1 WWIP construction contracts six are under construction, six are in bidding, and nine are in design. As of this submission, 2017 MSD has completed 100% of the PTI submittal milestones, 94% of the construction start milestones, and 70% of the construction finish milestones.

|                             | Total      | 2009      | 2010      | 2011     | 2012     | 2013     | 2014     | 2015     | 2016     | 2017      | 2018      |
|-----------------------------|------------|-----------|-----------|----------|----------|----------|----------|----------|----------|-----------|-----------|
| <b>Required Milestones</b>  | <b>100</b> | <b>12</b> | <b>13</b> | <b>3</b> | <b>4</b> | <b>7</b> | <b>5</b> | <b>9</b> | <b>8</b> | <b>10</b> | <b>29</b> |
| <b>Completed Milestones</b> | <b>78</b>  | <b>12</b> | <b>13</b> | <b>3</b> | <b>4</b> | <b>7</b> | <b>5</b> | <b>9</b> | <b>8</b> | <b>8</b>  | <b>9</b>  |
|                             |            | 10120360  | 10120420  | 10120460 | 10120460 | 10120460 | 10131240 | 10142020 | 10130740 |           | 10131220  |
|                             |            | 10120420  | 10130560  | 10144441 | 10144441 | 10130740 | 10142020 | 10142240 | 10131220 | 10131180  | 10144080  |
|                             |            | 10141440  | 10130565  | 10170081 | 10170081 | 10131180 | 10142240 | 10143920 | 10142020 | 10131220  | 10143220  |
|                             |            | 10141520  | 10130680  |          | 10171840 | 10131240 | 10144884 | 10143940 | 10143220 | 10131240  | 10170080  |
|                             |            | 10142440  | 10141540  |          |          | 10142240 | 10145560 | 10143960 | 10143960 | 10143220  | 10170100  |
|                             |            | 10144884  | 10141560  |          |          | 10144880 |          | 10145500 | 10145560 | 10143920  | 10171580  |
|                             |            | 10145180  | 10144880  |          |          | 10171840 |          | 10145560 | 10171780 | 10143940  | 10171620  |
|                             |            | 10145280  | 10144884  |          |          | 10171860 |          | 10145580 | 11240050 | 10143960  | 10171740  |
|                             |            | 10145300  | 10145320  |          |          | 10171900 |          | 10171840 |          | 10171780  | 10171780  |
|                             |            | 10150012  | 10160005  |          |          | 10171920 |          | 10171860 |          | 11240050  | 10240018  |
|                             |            | 10170560  | 10160010  |          |          | 10171980 |          | 10171900 |          |           | 10240024  |
|                             |            | 10172090  | 10170780  |          |          |          |          | 10171920 |          |           | 11040010  |
|                             |            |           | 10180600  |          |          |          |          | 10171980 |          |           | 11240000  |
|                             |            |           |           |          |          |          |          |          |          |           | 11240001  |
|                             |            |           |           |          |          |          |          |          |          |           | 11240010  |
|                             |            |           |           |          |          |          |          |          |          |           | 10240020  |
|                             |            |           |           |          |          |          |          |          |          |           | 11240030  |
|                             |            |           |           |          |          |          |          |          |          |           | 11240050  |
|                             |            |           |           |          |          |          |          |          |          |           | 11240051  |
|                             |            |           |           |          |          |          |          |          |          |           | 11240090  |
|                             |            |           |           |          |          |          |          |          |          |           | 11240110  |
|                             |            |           |           |          |          |          |          |          |          |           | 10240130  |
|                             |            |           |           |          |          |          |          |          |          |           | 10240150  |
|                             |            |           |           |          |          |          |          |          |          |           | 11240170  |
|                             |            |           |           |          |          |          |          |          |          |           | 11240270  |
|                             |            |           |           |          |          |          |          |          |          |           | 11243140  |
|                             |            |           |           |          |          |          |          |          |          |           | 11243141  |
|                             |            |           |           |          |          |          |          |          |          |           | 11243142  |
|                             |            |           |           |          |          |          |          |          |          |           | 11243840  |

milestones completed  
 projects in design  
 projects under construction  
 projects in procurement

- Notes:
1. Planning for 10170080, 10170100, 10171580, and 10171620 completed under Upper Duck Bundle Planning (10170000).
  2. Design for 10171740 and 10171780 under Oakley Station Project (10171741).
  3. Project 10143920 includes sub-project 10143923 to accommodate right-of-way needs.
  4. Project 10143940 includes sub-projects 10143942 and 10143943 to accommodate right-of-way needs.
  5. Project 10143960 includes sub-projects 10143962 to accommodate right-of-way needs.
  6. Project 10171860 includes sub-projects 10171861, 10171862, and 10171863 to accommodate right-of-way needs.
  7. Projects 10131240 and 10131180 are within a defined bundle of work. Construction was started for the bundle in 2014. Construction finish milestone extended to June 2017.
  8. Projects 10171980, 10171920 and 10171900 are within a defined bundle of work. Construction was started for the bundle in 2012 and completed in 2015.
  9. Projects 10143920, 10143940 and 10143960 are within a defined bundle of work. Construction was started for the bundle in 2013.
  10. The PTI, construction start, and construction finish milestones for Project 10131220 were revised by the Regulators in 2013.
  11. The construction start milestone for Project 10130740 was extended by the Regulators to March 2016.
  12. Projects 10145500 and 10145580 were moved to coordinate with Phase 2 Project 10144882 during 2014 Adaptive Management discussions.
  13. Projects 10170080, 10170100, 10171580, 10171620, 10171740, and 10171780 are within a defined bundle of work. Construction was started for the bundle in 2013.
  14. All projects having a defined construction finish milestone are listed herein.
  15. Bundle projects have one PTI and Construction Start Milestone - however each project has a Construction Finish Milestone.



**PROJECT PURPOSE (cont):**

MSD's calculation of Program Contingency based on cash flow formulas (specified in the MSD Rules and Regulations), yields a \$14.3M contingency.

Through the attached legislation, the City of Cincinnati requests the County Commissioners to consider, approve, and appropriate a total of \$65,962,588 for the following actions:

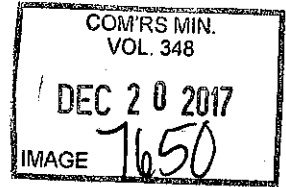
- (1) Approve, in general, the submitted 2018-2022 MSD CIP; and
- (2) Order the commencement of planning, design, and easement acquisition activities (**Exhibit A**) for 32 projects contained in the 2018 MSD CIP and appropriate \$23,126,588 of the above-referenced \$65.9M for the same; and
- (3) Take all actions necessary for nine continuing construction projects (**Exhibit B**) contained in the 2018 MSD CIP and appropriate \$28,536,000 of the above-referenced \$65.9M for the same. These nine projects encompass construction activities that are either essential to the continuous operation of MSD, or address wastewater system asset stabilizations or asset maintenance.
- (4) Approve, per the requirement of the 2018 CIP, the use of MSD Programmatic Contingency fund and appropriate **\$14,300,000** of the above-referenced \$65.9M for the same.

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

| Project Identifiers (ID / Name)  | Funds Requested        |
|--|------------------------|
| 10180118 Main Sewer Renewal Program 2018                                       | \$1,800,000.00         |
| 10180218 Manhole Renewal Program 2018  | \$700,000.00           |
| 10180250 Small Diameter Sewer Rehabilitation - Phase 1                         | \$2,500,000.00         |
| 10180260 Large Diameter Sewer Rehabilitation - Phase 1                         | \$2,500,000.00         |
| 10190418 Home Sewage Treatment System Eliminations 2018, Design & Construction | \$1,036,000.00         |
| 10280318 Emergency Sewer Repairs 2018  | \$6,000,000.00         |
| 10280518 WWC High Risk Asset Renewal 2018                                      | \$6,000,000.00         |
| 10280608 Building Sewer Renewal Program 2018                                   | \$2,000,000.00         |
| 10280718 Critical Asset Management Projects 2018                               | \$10,000,000.00        |
| <b>Grand Total</b>   | <b>\$28,536,000.00</b> |

These projects encompass construction activities that are either (1) essential to the continuous operation of MSD, or (2) address wastewater system asset stabilizations or continuous asset maintenance.

When 2018 MSD CIP projects (*not Allowances identified 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):**

Projects listed herein for 2019, 2020, 2021, and 2022 are subject to change and are approved *in concept only*; the submitted project lists and total project cost estimates are placeholders based on historical information. Additionally, the outlier years 2019-2022 represent a near 50-50 split between WWIP and Asset Management projects, per the Commissioners direction. Further, the outlier years 2019-2022 are subject to further refinement and Regulator negotiation. MSD will strive to achieve the desired 50-50 split given these aforementioned circumstances. The Phase 2A Schedule was due for submission to the Regulators on June 30, 2017; on June 27, 2017, the Consent Decree Regulators granted a four-month extension to the original June 2017 deadline. The Consent Decree Regulators and Co-Defendants are in discussion of additional extension that would allow parties to work toward a June 30, 2018 deadline. As such, the cost and specific projects listed herein are subject to change. When ordered designed or constructed, these projects will require specific authorization and appropriation of funds through legislation passed by the Board.

**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 checked="" 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 2018  
**ANTICIPATED END:**    December 2018

FUNDING REQUEST

|                                 |                              |  |
|---------------------------------|------------------------------|--|
| <b>Total Estimated Cost:</b>    | <b>\$129,118,155.00</b>      | <b>(2018 MSD CIP)</b>                                |
|                                 | \$65,962,588.00              | (for Exhibits A, B, & PC in 2018 MSD CIP)            |
| <b>Current Request:</b>         | <b>\$65,962,588.00</b>       | <b>(for Exhibits A, B, &amp; PC in 2018 MSD CIP)</b> |
| <b>Programmatic Contingency</b> | <input type="checkbox"/> YES | <input checked="" type="checkbox"/> NO               |

# Metropolitan Sewer District of Greater Cincinnati



## Capital Budget and Capital Improvement Program Year 2018

# PROPOSED

Tuesday, December 19, 2017

**Metropolitan Sewer District of Greater Cincinnati  
Capital Budget and Capital Improvement Program  
Year 2018**

PROPOSED 12/19/17



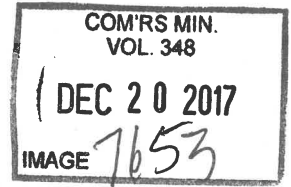
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# Glossary of Terms

PROPOSED 12/19/17



| <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   |

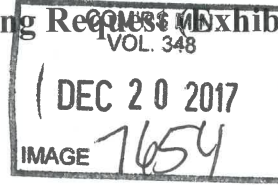


## 2018 CIP Projects

PROPOSED 12/19/17

### 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 |
|---|----------|--------------|---|-----------------------|
| 10130000  | WWIP     | TUN          | Muddy Creek Basin Storage and Conveyance Sewer (Planning)                               | \$1,595,988           |
| 10130042  | WWIP     | REP          | UMCI Replacement Phase B (Design,Easement)  | \$250,000             |
| 10130850  | WWIP     | CSO          | Muddy Creek Westbourne HRT Phase A Improvements (Design)                                | \$528,900             |
| 10131021  | WWIP     | CSO          | CSO 402-406 Wet Weather Improvements (Design,Easement)                                  | \$2,467,000           |
| 10140417  | WWIP     | ALW          | LMCPR Monitoring and Modeling (Design)  | \$300,000             |
| 10142200  | WWIP     | SEP          | CSO 513 Sewer Separation (Design,Easement)  | \$490,000             |
| 10142220  | WWIP     | SEP          | CSO 514 Sewer Separation (Design,Easement)  | \$267,100             |
| 10144886  | WWIP     | FAC          | Mill Creek WWTP HRT Study (Planning)  | \$750,000             |
| 10144887  | WWIP     | FAC          | Mill Creek WWTP High Rate Treatment Facility Diversion Structure (Design)               | \$400,000             |
| 10170812  | WWIP     | FAC          | Little Miami WWTP Electrical Improvements Phase A (Design)                              | \$328,900             |
| 10170813  | WWIP     | FAC          | LMWWTP Preliminary Treatment Improvements Phase A (Design)                              | \$1,392,700           |
| 10171540  | WWIP     | REG          | CSO 135 Elimination (Design,Easement)   | \$163,200             |
| 10171560  | WWIP     | REG          | CSO 43 Elimination (Design,Easement)  | \$160,800             |
| 10171641  | WWIP     | SEP          | CSO 214 Partial Separation (Design,Easement)  | \$980,200             |
| 10172030  | WWIP     | FAC          | LMWWTP HRT Study and Bundle Project Integration Planning (Planning)                     | \$1,450,000           |
| 10180415  | WWIP     | ALW          | MPMP Development and Updates (Design)   | \$160,000             |
| 10180417  | WWIP     | ALW          | Hamilton County Transition (Design)   | \$2,467,000           |
| 10190216  | WWIP     | ALW          | Phase 2 WWIP Planning (Planning)  | \$1,500,000           |
| 10190318  | WWIP     | ALW          | Home Sewer Treatment System Eliminations 2018 (Planning,Design,Easement)                | \$340,000             |
| 10190418  | WWIP     | ALW          | Home Sewage Treatment System Eliminations 2018, Design & Construction (Design,Easement) | \$482,000             |
| 10199018  | WWIP     | ALW          | Program Management and Support Services 2018 (Design)                                   | \$1,850,000           |
| 10199118  | WWIP     | ALW          | Hamilton County Utility Oversight and Coordination 2018 (Design)                        | \$1,000,000           |
| 10230640  | WWIP     | CSO          | CSO 408 and 413 HW DW Protection (Design,Easement)                                      | \$526,900             |
| 10240019  | WWIP     | CSO          | CSO 125 Stream Separation Ph C (Design)   | \$186,400             |
| 10241820  | WWIP     | FAC          | SSO 700 Facility Improvements (Design)  | \$600,000             |
| 10270190  | WWIP     | SEP          | Columbia Square Development Separation (Design)   | \$196,000             |
| 10240055  | ASSET    | FAC          | MCWWTP Liquid Sludge Storage Tank Covers and Odor Control (Design)                      | \$450,000             |
| 10240245  | ASSET    | FAC          | Mill Creek WWTP Service Water (NPW) Reliability and Service Upgrade (Design)            | \$19,300              |
| 10240320  | ASSET    | REP          | Wilder Avenue Sewer Replacement (Design)  | \$70,000              |
| 10280238  | ASSET    | ALW          | Hydraulic Modeling 2018 (Planning)  | \$700,000             |
| 10280505  | ASSET    | PSE          | Pump Station Telemetry System Upgrades (Design)   | \$54,200              |
| 10282018  | ASSET    | ALW          | CIP Project Planning 2018 (Planning)  | \$1,000,000           |
| <b>32 Planning/Design/Easement Projects in 2018</b> |          |              |   | <b>\$ 23,126,588</b>  |

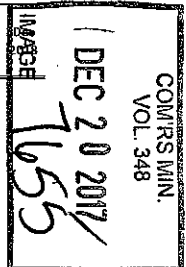
County Modified December 19, 2017

FY 2018 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 | Start    | Proj End |
|--------------|------|---|---------------------------------|---|------------------|-----------------------------------|--------------------|-------------------------------|-----------------|------|----|----------|----------|
| 10180118     | NA   | Main Sewer Renewal Program 2018                                       | 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, spinning, sprayed coatings, and carbon filament wrapping. The sewer segments to be addressed under this program will be identified as needed in accordance with our Gravity Sewer Asset Management program.<br>Add: The scope of work does not include addressing building sewers.  | Const            | Approve - plans/ specs/ cost est. | Necessity/ Proceed | Authorize - advertise and bid | \$ 1,800,000    | X    |    | Jan 2018 | Dec 2018 |
| 10180218     | NA   | Manhole Renewal Program 2018  | 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 | \$ 700,000      | X    |    | Jan 2018 | Dec 2018 |
| 10180250     | NA   | Small Diameter Sewer Rehabilitation - Phase 1                         | Throughout the MSD service area | MSD's operates an integrated application process to identify prioritized lists of existing main gravity sewers that are candidates for CIPP renewal as the best and most cost-effective way to extend useful life and reduce risk at the lowest life-cycle cost. The purpose of this project is to group substantial lists of assets prioritized by risk and rehabilitate the highest risk assets as part of a fixed scope CIP project, by reallocating funds from this allowance into a specific project, which will then not be limited by calendar year. The scope of this work does not include addressing building sewers.   | Const            | Approve - plans/ specs/ cost est. | Necessity/ Proceed | Authorize - advertise and bid | \$ 2,500,000    | X    |    | Jan 2018 | Dec 2018 |
| 10180260     | NA   | Large Diameter Sewer Rehabilitation - Phase 1                         | Throughout the MSD service area | MSD's operates an integrated application process to identify prioritized lists of existing main gravity sewers that are candidates for CIPP renewal as the best and most cost-effective way to extend useful life and reduce risk at the lowest life-cycle cost. The purpose of this project is to group substantial lists of assets prioritized by risk, and rehabilitate the highest risk assets as part of a fixed scope CIP project, by reallocating funds from this allowance into a specific project, which will then not be limited by calendar year. The scope of this work does not include addressing building sewers.  | Const            | Approve - plans/ specs/ cost est. | Necessity/ Proceed | Authorize - advertise and bid | \$ 2,500,000    | X    |    | Jan 2018 | Dec 2018 |
| 10190418     | NA   | Home Sewage Treatment System Eliminations 2018, Design & Construction | Throughout the MSD service area | This allowance supports the overall HSTS Elimination program by funding design and construction of various local sewer assessment projects and construction of various sewer lateral assessment projects in all district watersheds. Assessment sewer projects are initiated based on MSD Rules & 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. Design and construction of individual local sewer assessment projects and construction of individual sewer lateral assessment projects undergo public review and evaluation through legislative review and approval by the Board of County Commissioners. Funding of planning, petition services, and final assessment of local sewer and sewer lateral assessment projects as well as design of sewer lateral assessment projects is through a related allowance known as Home Sewage Treatment System Eliminations 2018. | Const            | Approve - plans/ specs/ cost est. | Necessity/ Proceed | Authorize - advertise and bid | \$ 1,035,000    | X    |    | Jan 2018 | Dec 2018 |
| 10280608     | NA   | Building Sewer Renewal Program 2018                                   | 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, cover 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            | plans/ specs/ cost est.           | Necessity/ Proceed | Authorize - advertise and bid | \$ 2,000,000    |      | X  | Jan 2018 | Dec 2018 |
| 10280318     | NA   | Emergency Sewer Repairs 2018  | Throughout the MSD service area | This project will allow MSDGC to quickly respond to sudden, unexpected sewer system failures which may threaten the public health, welfare, or safety. Conditions that warrant emergency sewer repairs include cave-ins, structurally failed mainline sewers, or manholes, building sewer sewer backups into private property, sewer overflows that may violate permits and regulations, and imminent danger to structures or real property.  | Const            | Approve - plans/ specs/ cost est. | Necessity/ Proceed | Authorize - advertise and bid | \$ 6,000,000    |      | X  | Jan 2018 | Dec 2018 |
| 10280518     | NA   | WWC High Risk Asset Renewal 2018                                      | Throughout the MSD service area | This program is a new allowance dedicated to addressing issues with privately owned building sewers located within the public right-of-way. The District's Rules and Regulations require MSDGC to take responsibility for the structural condition of private building sewers located within the public right-of-way. The program will allow the District to respond to sudden, unexpected building sewer failures as well as planned improvements to private building sewers.  | Const            | Approve - plans/ specs/ cost est. | Necessity/ Proceed | Authorize - advertise and bid | \$ 6,000,000    |      | X  | Jan 2018 | Dec 2018 |
| 10280718     | NA   | Critical Asset Management Projects 2018                               | Throughout the MSD service area | 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.  | Const            | Approve - plans/ specs/ cost est. | Necessity/ Proceed | Authorize - advertise and bid | \$ 6,000,000    |      | X  | Jan 2018 |          |
| <b>Total</b> |      |   |                                 |   |                  |                                   |                    |                               | \$ 28,536,000   |      |    |          |          |

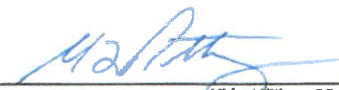
Replacement "Explanation/Description" text for 10280518 WWC High Risk Asset Renewal 2018, above.

This project will allow MSDGC to replace entire high risk assets or portions of system assets that are currently unable, or anticipated to be unable to meet their defined level of service. This project is necessary to cost effectively extend asset life while protecting and preserving public health and the environment. The scope of work does not include addressing building sewers.



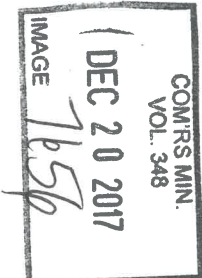
**FY 2018 MSD CIP Funding Request  
Metropolitan Sewer District of Greater Cincinnati  
Estimate of Construction  
Detailed Project Estimated Cost (Exhibit B)**

| ID#          | CIP# | Project Name  | Planning | Design | Pre-Construction Services | Miscellaneous Expense | Right Of Way | Construction    | Contingency | Construction Services | Interest / Financing | Total                |
|--------------|------|---|----------|--------|---------------------------|-----------------------|--------------|-----------------|-------------|-----------------------|----------------------|----------------------|
| 10180118     | NA   | Main Sewer Renewal Program 2018                                       | \$ -     | \$ -   | \$ -                      | \$ -                  | \$ -         | \$ 1,400,000.00 | \$ -        | \$ 400,000.00         | \$ -                 | \$ 1,800,000.00      |
| 10180218     | NA   | Manhole Renewal Program 2018  | \$ -     | \$ -   | \$ -                      | \$ -                  | \$ -         | \$ 650,000.00   | \$ -        | \$ 50,000.00          | \$ -                 | \$ 700,000.00        |
| 10180250     | NA   | Small Diameter Sewer Rehabilitation - Phase 1                         | \$ -     | \$ -   | \$ -                      | \$ -                  | \$ -         | \$ 2,300,000.00 | \$ -        | \$ 200,000.00         | \$ -                 | \$ 2,500,000.00      |
| 10180260     | NA   | Large Diameter Sewer Rehabilitation - Phase 1                         | \$ -     | \$ -   | \$ -                      | \$ -                  | \$ -         | \$ 2,300,000.00 | \$ -        | \$ 200,000.00         | \$ -                 | \$ 2,500,000.00      |
| 10190418     | NA   | Home Sewage Treatment System Eliminations 2018, Design & Construction | \$ -     | \$ -   | \$ -                      | \$ -                  | \$ -         | \$ 898,000.00   | \$ -        | \$ 138,000.00         | \$ -                 | \$ 1,036,000.00      |
| 10280608     | NA   | Building Sewer Renewal Program 2018                                   | \$ -     | \$ -   | \$ -                      | \$ -                  | \$ -         | \$ 2,000,000.00 | \$ -        | \$ -                  | \$ -                 | \$ 2,000,000.00      |
| 10280318     | NA   | Emergency Sewer Repairs 2018  | \$ -     | \$ -   | \$ -                      | \$ -                  | \$ -         | \$ 5,000,000.00 | \$ -        | \$ 1,000,000.00       | \$ -                 | \$ 6,000,000.00      |
| 10280518     | NA   | WWC High Risk Asset Renewal 2018                                      | \$ -     | \$ -   | \$ -                      | \$ -                  | \$ -         | \$ 5,000,000.00 | \$ -        | \$ 1,000,000.00       | \$ -                 | \$ 6,000,000.00      |
| 10280718     | NA   | Critical Asset Management Projects 2018                               | \$ -     | \$ -   | \$ -                      | \$ -                  | \$ -         | \$ 6,000,000.00 | \$ -        | \$ -                  | \$ -                 | \$ 6,000,000.00      |
| <b>Total</b> |      |   |          |        |                           |                       |              |                 |             |                       | \$                   | <b>28,536,000.00</b> |



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

Approved this \_\_\_\_\_ day of \_\_\_\_\_, 2017  
Board of County Commissioners  
Hamilton County, Ohio

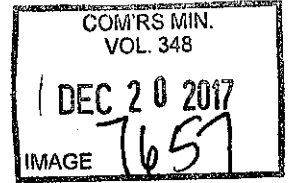




2018 CIP Projects

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Metropolitan Sewer District of Greater Cincinnati



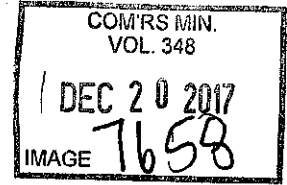
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2018 CIP Projects

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Metropolitan Sewer District of Greater Cincinnati



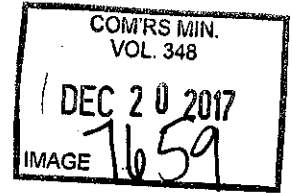
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2018 CIP Projects

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Metropolitan Sewer District of Greater Cincinnati



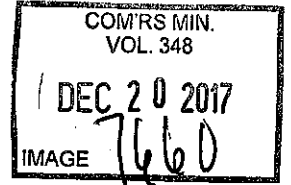
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2018 CIP Projects

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Metropolitan Sewer District of Greater Cincinnati



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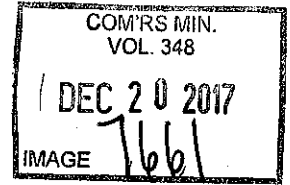




2018 CIP Projects

PROPOSED 12/19/17

Metropolitan Sewer District of Greater Cincinnati



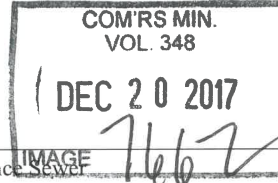
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## 2018 CIP Projects

PROPOSED 12/19/17

### Metropolitan Sewer District of Greater Cincinnati



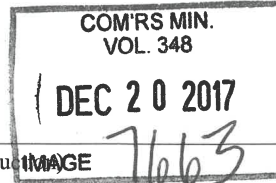
| Project ID | Project Category | Project Type | Project Name   | 2018 Total Requested | Total Project Cost |
|------------|------------------|--------------|--|----------------------|--------------------|
| 10130000   | WWIP             | TUN          | Muddy Creek Basin Storage and Conveyance (Planning)                                    | \$1,595,988          | \$152,345,377      |
| 10130042   | WWIP             | REP          | UMCI Replacement Phase B (Design,Easement,Construction)                                | \$6,818,000          | \$6,818,000        |
| 10130740   | WWIP             | FAC          | Werk & Westbourne EHRT Facility (Construction)   | \$1,428,123          | \$43,526,222       |
| 10130850   | WWIP             | CSO          | Muddy Creek Westbourne HRT Phase A Improvements (Design,Easement)                      | \$528,900            | \$5,700,200        |
| 10131021   | WWIP             | CSO          | CSO 402-406 Wet Weather Improvements (Design,Easement)                                 | \$2,467,000          | \$17,105,100       |
| 10140417   | WWIP             | ALW          | LMCPR Monitoring and Modeling (Design)   | \$300,000            | \$6,900,000        |
| 10142200   | WWIP             | SEP          | CSO 513 Sewer Separation (Design,Easement)   | \$490,000            | \$3,227,000        |
| 10142220   | WWIP             | SEP          | CSO 514 Sewer Separation (Design,Easement)   | \$267,100            | \$1,612,200        |
| 10144886   | WWIP             | FAC          | Mill Creek WWTP HRT Study (Planning)   | \$750,000            | \$750,000          |
| 10144887   | WWIP             | FAC          | Mill Creek WWTP High Rate Treatment Facility Diversion Structure (Design,Construction) | \$8,550,000          | \$8,550,000        |
| 10170080   | WWIP             | SSO          | SSO 1000 Elimination (Construction)  | \$925,800            | \$1,147,200        |
| 10170812   | WWIP             | FAC          | Little Miami WWTP Electrical Improvements Phase A (Design,Construction)                | \$3,382,900          | \$3,382,900        |
| 10170813   | WWIP             | FAC          | LMWWTP Preliminary Treatment Improvements Phase A (Design)                             | \$1,392,700          | \$15,988,300       |
| 10170816   | WWIP             | FAC          | Little Miami WWTP Main Outfall Improvements (Construction)                             | \$240,800            | \$328,500          |
| 10171540   | WWIP             | REG          | CSO 135 Elimination (Design,Easement)  | \$163,200            | \$543,600          |
| 10171560   | WWIP             | REG          | CSO 43 Elimination (Design,Easement)   | \$160,800            | \$537,000          |
| 10171580   | WWIP             | CSO          | CSO 54 Improvements (Construction)   | \$242,100            | \$347,500          |
| 10171641   | WWIP             | SEP          | CSO 214 Partial Separation (Design,Easement)   | \$980,200            | \$3,698,200        |
| 10171740   | WWIP             | SEP          | CSO 551 Sewer Separation (Construction)  | \$1,475,800          | \$2,237,300        |
| 10172030   | WWIP             | FAC          | LMWWTP HRT Study and Bundle Project Integration Planning (Planning)                    | \$1,450,000          | \$1,450,000        |
| 10180118   | WWIP             | ALW          | Main Sewer Renewal Program 2018 (Construction)   | \$1,800,000          | \$1,800,000        |



## 2018 CIP Projects

PROPOSED 12/19/17

### Metropolitan Sewer District of Greater Cincinnati



| Project ID | Project Category | Project Type | Project Name   | 2018 Total Requested | Total Project Cost |
|------------|------------------|--------------|--|----------------------|--------------------|
| 10180218   | WWIP             | ALW          | Manhole Renewal Program 2018 (Construction)  | \$700,000            | \$700,000          |
| 10180250   | WWIP             | REP          | Small Diameter Sewer Rehabilitation - Phase 1 (Construction)   | \$2,500,000          | \$2,500,000        |
| 10180260   | WWIP             | REP          | Large Diameter Sewer Rehabilitation - Phase 1 (Construction)   | \$2,500,000          | \$2,500,000        |
| 10180415   | WWIP             | ALW          | MPMP Development and Updates (Design)  | \$160,000            | \$410,000          |
| 10180417   | WWIP             | ALW          | Hamilton County Transition (Design)  | \$2,467,000          | \$2,467,000        |
| 10190216   | WWIP             | ALW          | Phase 2 WWIP Planning (Planning)   | \$1,500,000          | \$3,000,000        |
| 10190318   | WWIP             | ALW          | Home Sewer Treatment System Eliminations 2018 (Planning,Design,Easement)                             | \$340,000            | \$340,000          |
| 10190418   | WWIP             | ALW          | Home Sewage Treatment System Eliminations 2018, Design & Construction (Design,Easement,Construction) | \$1,518,000          | \$1,518,000        |
| 10199018   | WWIP             | ALW          | Program Management and Support Services 2018 (Design)  | \$1,850,000          | \$1,850,000        |
| 10199118   | WWIP             | ALW          | Hamilton County Utility Oversight and Coordination 2018 (Design)                                     | \$1,000,000          | \$1,000,000        |
| 10230640   | WWIP             | CSO          | CSO 408 and 413 HW DW Protection (Design,Easement)   | \$526,900            | \$2,265,500        |
| 10240019   | WWIP             | CSO          | CSO 125 Stream Separation Ph C (Design,Construction)   | \$6,872,000          | \$6,872,000        |
| 10241820   | WWIP             | FAC          | SSO 700 Facility Improvements (Design,Construction)  | \$12,323,184         | \$13,354,590       |
| 10270160   | WWIP             | PSE          | Prospect Woods Pump Station Upgrade (Construction)   | \$854,600            | \$1,185,099        |
| 10270190   | WWIP             | SEP          | Columbia Square Development Separation (Design)  | \$196,000            | \$813,100          |
| 11243142   | WWIP             | SRC          | CSO 217 483 Source Control Phase A2 (Construction)   | \$3,685,400          | \$3,704,400        |
| 13090000   | OTHER            | PRG          | Programmatic Contingency (Design)  | \$14,300,000         | \$60,226,663       |
| 10221245   | ASSET            | FAC          | Taylor Creek WWTP Disinfection Upgrade (Construction)  | \$1,530,000          | \$1,713,000        |
| 10230155   | ASSET            | SEP          | Darwin Avenue Sewer Backup Remediation (HN 3520) (Construction)                                      | \$60,200             | \$215,900          |
| 10240055   | ASSET            | FAC          | MCWWTP Liquid Sludge Storage Tank Covers and Odor Control (Design,Construction)                      | \$4,668,000          | \$4,668,000        |
| 10240245   | ASSET            | FAC          | Mill Creek WWTP Service Water (NPW) Reliability and Service Upgrade (Design,Construction)            | \$7,057,300          | \$7,803,113        |

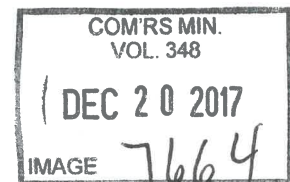


## 2018 CIP Projects

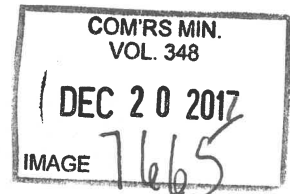
PROPOSED 12/19/17

# Metropolitan Sewer District of Greater Cincinnati

| Project ID                      | Project Category | Project Type | Project Name   | 2018 Total Requested | Total Project Cost   |
|---------------------------------|------------------|--------------|--|----------------------|----------------------|
| 10240320                        | ASSET            | REP          | Wilder Avenue Sewer Replacement (Design)   | \$70,000             | \$1,081,218          |
| 10240405                        | ASSET            | PSE          | Ponderosa Woods Pump Station Elimination (Construction)                            | \$512,000            | \$724,545            |
| 10240430                        | ASSET            | REP          | Berkley Avenue Sewer Replacement (Construction)                                    | \$728,860            | \$956,681            |
| 10240455                        | ASSET            | REP          | Spring Grove Avenue Sewer Replacement and Rehabilitation (Construction)            | \$550,900            | \$703,346            |
| 10240526                        | ASSET            | REP          | Cypress St - Ashland Av to 250 feet east Sewer Replacement (Construction)          | \$58,800             | \$328,000            |
| 10240550                        | ASSET            | REP          | Pardee Alley Sewer Replacement-Oswald Al to 200' north (Construction)              | \$209,900            | \$428,553            |
| 10240590                        | ASSET            | FAC          | Mill Creek WWTP Main Substation Improvements (Construction)                        | \$1,208,900          | \$7,929,200          |
| 10240665                        | ASSET            | FAC          | Mill Creek WWTP Septage Receiving Station Odor Control Improvements (Construction) | \$1,506,000          | \$1,688,188          |
| 10270145                        | ASSET            | REP          | Columbia Parkway at Delta Sewer Replacement (Construction)                         | \$500,600            | \$672,088            |
| 10280238                        | ASSET            | ALW          | Hydraulic Modeling 2018 (Planning)   | \$700,000            | \$700,000            |
| 10280318                        | ASSET            | ALW          | Emergency Sewer Repairs 2018 (Construction)  | \$6,000,000          | \$6,000,000          |
| 10280505                        | ASSET            | PSE          | Pump Station Telemetry System Upgrades (Design)                                    | \$54,200             | \$5,998,351          |
| 10280518                        | ASSET            | ALW          | WWC High Risk Asset Renewal 2018 (Construction)                                    | \$6,000,000          | \$6,000,000          |
| 10280608                        | ASSET            | ALW          | Building Sewer Renewal Program 2018 (Construction)                                 | \$2,000,000          | \$2,000,000          |
| 10280718                        | ASSET            | ALW          | Critical Asset Management Projects 2018 (Construction)                             | \$6,000,000          | \$6,000,000          |
| 10282018                        | ASSET            | ALW          | CIP Project Planning 2018 (Planning)   | \$1,000,000          | \$1,000,000          |
| <b>58 CIP Projects for 2018</b> |                  |              |  | <b>\$129,118,155</b> | <b>\$439,311,134</b> |



**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:

- a. Escalation = 3.5%
- b. Inflation = 2.1%
- 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 detailed design during the design phase either 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 are have a prospective borrowing, such as the projects financed through the OEPA low interest loan program.

**2019 - 2022 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 or affordability considerations. Due to the evolving nature of these evaluations and their direct impact on future regulatory compliance, the high level information is presented herein is for order of magnitude budget forecasting purposes only.

**Legislated Costs**

Legislated costs include costs that have been previously legislated and legislation anticipated to be approved during 2017. Not all legislation may have been approved at the time of drafting this document.

**Programmatic Contingency**

Programmatic Contingency is legislated with this 2018 CIP per Section 2405-2 (A)(3) of the MSD Rules and Regulations to cover needed contingency for all Projects legislated. The amount appropriated for 2018 is \$14,300,000.00

# 2018 WWIP Projects





## 2018 Projects

PROPOSED 12/19/17

# Metropolitan Sewer District of Greater Cincinnati WWIP Projects



| Project ID | CIP Type | Project Type | Project Name   | MSD         | Other | Total       | Page |
|------------|----------|--------------|--|-------------|-------|-------------|------|
| 10130000   | WWIP     | TUN          | Muddy Creek Basin Storage and Conveyance Sewer (Planning)                              | \$1,595,988 | \$0   | \$1,595,988 | 19   |
| 10130042   | WWIP     | REP          | UMCI Replacement Phase B (Design,Easement,Construction)                                | \$6,818,000 | \$0   | \$6,818,000 | 20   |
| 10130740   | WWIP     | FAC          | Werk & Westbourne EHRT Facility (Construction)   | \$1,428,123 | \$0   | \$1,428,123 | 21   |
| 10130850   | WWIP     | CSO          | Muddy Creek Westbourne HRT Phase A Improvements (Design,Easement)                      | \$528,900   | \$0   | \$528,900   | 22   |
| 10131021   | WWIP     | CSO          | CSO 402-406 Wet Weather Improvements (Design,Easement)                                 | \$2,467,000 | \$0   | \$2,467,000 | 23   |
| 10140417   | WWIP     | ALW          | LMCPR Monitoring and Modeling (Design)   | \$300,000   | \$0   | \$300,000   | 24   |
| 10142200   | WWIP     | SEP          | CSO 513 Sewer Separation (Design,Easement)   | \$490,000   | \$0   | \$490,000   | 25   |
| 10142220   | WWIP     | SEP          | CSO 514 Sewer Separation (Design,Easement)   | \$267,100   | \$0   | \$267,100   | 26   |
| 10144886   | WWIP     | FAC          | Mill Creek WWTP HRT Study (Planning)   | \$750,000   | \$0   | \$750,000   | 27   |
| 10144887   | WWIP     | FAC          | Mill Creek WWTP High Rate Treatment Facility Diversion Structure (Design,Construction) | \$8,550,000 | \$0   | \$8,550,000 | 28   |
| 10170080   | WWIP     | SSO          | SSO 1000 Elimination (Construction)  | \$925,800   | \$0   | \$925,800   | 29   |
| 10170812   | WWIP     | FAC          | Little Miami WWTP Electrical Improvements Phase A (Design,Construction)                | \$3,382,900 | \$0   | \$3,382,900 | 30   |
| 10170813   | WWIP     | FAC          | LMWWTP Preliminary Treatment Improvements Phase A (Design)                             | \$1,392,700 | \$0   | \$1,392,700 | 31   |
| 10170816   | WWIP     | FAC          | Little Miami WWTP Main Outfall Improvements (Construction)                             | \$240,800   | \$0   | \$240,800   | 32   |
| 10171540   | WWIP     | REG          | CSO 135 Elimination (Design,Easement)  | \$163,200   | \$0   | \$163,200   | 33   |
| 10171560   | WWIP     | REG          | CSO 43 Elimination (Design,Easement)   | \$160,800   | \$0   | \$160,800   | 34   |
| 10171580   | WWIP     | CSO          | CSO 54 Improvements (Construction)   | \$242,100   | \$0   | \$242,100   | 35   |
| 10171641   | WWIP     | SEP          | CSO 214 Partial Separation (Design,Easement)   | \$980,200   | \$0   | \$980,200   | 36   |
| 10171740   | WWIP     | SEP          | CSO 551 Sewer Separation (Construction)  | \$1,475,800 | \$0   | \$1,475,800 | 37   |
| 10172030   | WWIP     | FAC          | LMWWTP HRT Study and Bundle Project Integration Planning (Planning)                    | \$1,450,000 | \$0   | \$1,450,000 | 38   |
| 10180118   | WWIP     | ALW          | Main Sewer Renewal Program 2018 (Construction)   | \$1,800,000 | \$0   | \$1,800,000 | 39   |
| 10180218   | WWIP     | ALW          | Manhole Renewal Program 2018 (Construction)  | \$700,000   | \$0   | \$700,000   | 40   |
| 10180250   | WWIP     | REP          | Small Diameter Sewer Rehabilitation - Phase 1 (Construction)                           | \$2,500,000 | \$0   | \$2,500,000 | 41   |
| 10180260   | WWIP     | REP          | Large Diameter Sewer Rehabilitation - Phase 1 (Construction)                           | \$2,500,000 | \$0   | \$2,500,000 | 42   |
| 10180415   | WWIP     | ALW          | MPMP Development and Updates (Design)  | \$160,000   | \$0   | \$160,000   | 43   |
| 10180417   | WWIP     | ALW          | Hamilton County Transition (Design)  | \$2,467,000 | \$0   | \$2,467,000 | 44   |



## 2018 Projects

PROPOSED 12/19/17

# Metropolitan Sewer District of Greater Cincinnati WWIP Projects

| Project ID                                 | CIP Type | Project Type | Project Name   | MSD                 | Other      | Total               | Page |
|--|----------|--------------|--|---------------------|------------|---------------------|------|
| 10190216                                   | WWIP     | ALW          | Phase 2 WWIP Planning (Planning)   | \$1,500,000         | \$0        | \$1,500,000         | 45   |
| 10190318                                   | WWIP     | ALW          | Home Sewer Treatment System Eliminations 2018 (Planning,Design,Easement)                             | \$340,000           | \$0        | \$340,000           | 46   |
| 10190418                                   | WWIP     | ALW          | Home Sewage Treatment System Eliminations 2018, Design & Construction (Design,Easement,Construction) | \$1,518,000         | \$0        | \$1,518,000         | 47   |
| 10199018                                   | WWIP     | ALW          | Program Management and Support Services 2018 (Design)  | \$1,850,000         | \$0        | \$1,850,000         | 48   |
| 10199118                                   | WWIP     | ALW          | Hamilton County Utility Oversight and Coordination 2018 (Design)                                     | \$1,000,000         | \$0        | \$1,000,000         | 49   |
| 10230640                                   | WWIP     | CSO          | CSO 408 and 413 HW DW Protection (Design,Easement)   | \$526,900           | \$0        | \$526,900           | 50   |
| 10240019                                   | WWIP     | CSO          | CSO 125 Stream Separation Ph C (Design,Construction)   | \$6,872,000         | \$0        | \$6,872,000         | 51   |
| 10241820                                   | WWIP     | FAC          | SSO 700 Facility Improvements (Design,Construction)  | \$12,323,184        | \$0        | \$12,323,184        | 52   |
| 10270160                                   | WWIP     | PSE          | Prospect Woods Pump Station Upgrade (Construction)   | \$854,600           | \$0        | \$854,600           | 53   |
| 10270190                                   | WWIP     | SEP          | Columbia Square Development Separation (Design)  | \$196,000           | \$0        | \$196,000           | 54   |
| 11243142                                   | WWIP     | SRC          | CSO 217 483 Source Control Phase A2 (Construction)   | \$3,685,400         | \$0        | \$3,685,400         | 55   |
| <b>Total Cost for 37 WWIP CIP Projects</b> |          |              |  | <b>\$74,402,495</b> | <b>\$0</b> | <b>\$74,402,495</b> |      |





# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |         |
|---------------|---|--------------|---------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |         |
| Project Title | Muddy Creek Basin Storage and Conveyance Sewer    |              |         |
| Project ID    | 10130000  | CIP Number   | 2007-12 |
| Project Type  | Tunnel  | Sewer Number | 6645    |

## Purpose and Justification

This project is to manage the wet weather flow in the Muddy Creek Drainage Basin to prevent overflows into Muddy Creek and associated tributaries. This project will size conveyance system improvements and high rate treatment systems in the basin. The default WWIP project is a tunnel and other options may be evaluated. The default project was included in the West Branch Muddy Bundle and the current effort is a part of the Muddy Creek Basin Planning Bundle.

## Impact to Operating Budget

None.

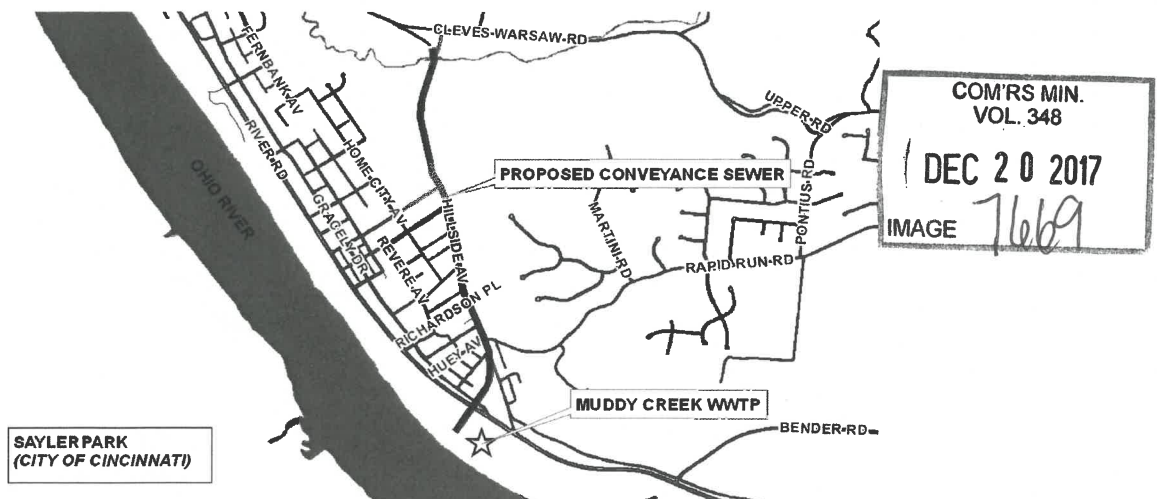
## Description and Location

This project will manage, treat, or store wet weather flows from the upper Muddy Creek Interceptor and the Bender Road Express Sewer. Planning activities will complement and coordinate with the Muddy Creek Integrated Watershed Action Plan (11130015), which will consider community input in future construction. Conveyance, HRT, or other treatment and storage systems will be sized and alternatives to the default project will be considered. The default WWIP project would consist of an 8.5 foot diameter, 7,830 foot long storage and conveyance tunnel that would be located on Hillside Avenue in Delhi Township and in the Sayler Park neighborhood in the City of Cincinnati.

| Cost Description          | Original Project Estimate | Prior Legislation  | Current Legislation | Future Legislation   | Current Project Estimate |
|---------------------------|---------------------------|--------------------|---------------------|----------------------|--------------------------|
| Planning                  | \$7,988,796               | \$2,193,940        | \$1,595,988         | \$0                  | \$3,789,928              |
| Design                    | \$7,988,796               | \$0                | \$0                 | \$0                  | \$0                      |
| Pre-Construction Services | \$4,793,278               | \$0                | \$0                 | \$0                  | \$0                      |
| Miscellaneous Expense     | \$3,195,519               | \$0                | \$0                 | \$0                  | \$0                      |
| Right-of-Way              | \$0                       | \$0                | \$0                 | \$761,600            | \$761,600                |
| Construction              | \$79,887,969              | \$0                | \$0                 | \$115,306,400        | \$115,306,400            |
| Program Management        | \$0                       | \$209,149          | \$0                 | \$0                  | \$209,149                |
| Construction Services     | \$7,988,796               | \$0                | \$0                 | \$13,541,000         | \$13,541,000             |
| Interest / Financing      | \$3,994,398               | \$0                | \$0                 | \$18,737,300         | \$18,737,300             |
| <b>Total</b>              | <b>\$115,837,552</b>      | <b>\$2,403,089</b> | <b>\$1,595,988</b>  | <b>\$148,346,300</b> | <b>\$152,345,377</b>     |

| Projected Legislation Dates | 2018        | 2019        | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-------------|-------------|------|------|------|---------------|
| Prior Legislation           | \$2,403,089 | \$1,595,988 | \$0  | \$0  | \$0  | \$3,999,077   |

**Prior Legislation Action**  
Feb 2007, Apr 2010, Mar 2011, May 2014, Aug 2017

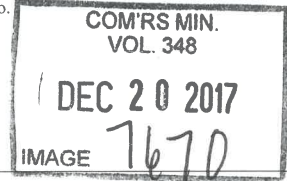


# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

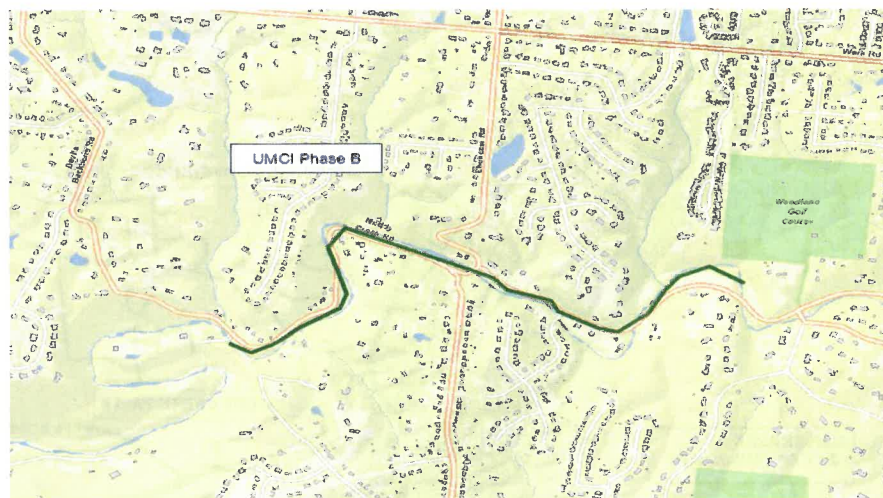
|   |   |                     |          |
|---|---|---------------------|----------|
| <b>Department</b>   | Metropolitan Sewer District of Greater Cincinnati |                     |          |
| <b>Project Title</b>  | UMCI Replacement Phase B                          |                     |          |
| <b>Project ID</b>   | 10130042  | <b>CIP Number</b>   | 10130042 |
| <b>Project Type</b>   | Sewer Replacement                                 | <b>Sewer Number</b> | 6717     |
| <b>Purpose and Justification</b>  |   |                     |          |
| The project will replace the a portion of the Upper Muddy Creek Interceptor that was originally installed between 1929 to 1935. The existing sewer is aging and deteriorating and needs to be rehabilitated or replaced. The existing sewer allows an excessive amount of creek infiltration into the sewer system This project is being designed in accordance with Index 234 of Attachment 2 of the Final WWIP. The project was designed during Phase 1 under project 11530000 – Upper Muddy Creek Interceptor Replacement. |   |                     |          |
| <b>Impact to Operating Budget</b>   |   |                     |          |
| None.   |   |                     |          |
| <b>Description and Location</b>   |   |                     |          |
| The project will replace strategic sections of the Upper Muddy Creek Interceptor from the Oxbow (MH 1600211) to Werk and Westbourne EHRT. This work was planned and designed under the parent project ID 11530000. This project is located in the Muddy Creek Basin 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                    | \$50,000                  | \$0               | \$100,000           | \$0                | \$100,000                |
| Pre-Construction Services | \$20,000                  | \$0               | \$50,000            | \$0                | \$50,000                 |
| Miscellaneous Expense     | \$50,000                  | \$0               | \$50,000            | \$0                | \$50,000                 |
| Right-of-Way              | \$0                       | \$0               | \$50,000            | \$0                | \$50,000                 |
| Construction              | \$7,000,000               | \$0               | \$5,850,000         | \$0                | \$5,850,000              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$980,000                 | \$0               | \$608,000           | \$0                | \$608,000                |
| Interest / Financing      | \$350,000                 | \$0               | \$110,000           | \$0                | \$110,000                |
| <b>Total</b>              | <b>\$8,450,000</b>        | <b>\$0</b>        | <b>\$6,818,000</b>  | <b>\$0</b>         | <b>\$6,818,000</b>       |

| <b>Projected Legislation Dates</b> |             |      |      |      |      |               |             |
|------------------------------------|-------------|------|------|------|------|---------------|-------------|
| Prior Legislation                  | 2018        | 2019 | 2020 | 2021 | 2022 | Project Total |             |
| \$0                                | \$6,818,000 | \$0  | \$0  | \$0  | \$0  | \$0           | \$6,818,000 |

**Prior Legislation Action**



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

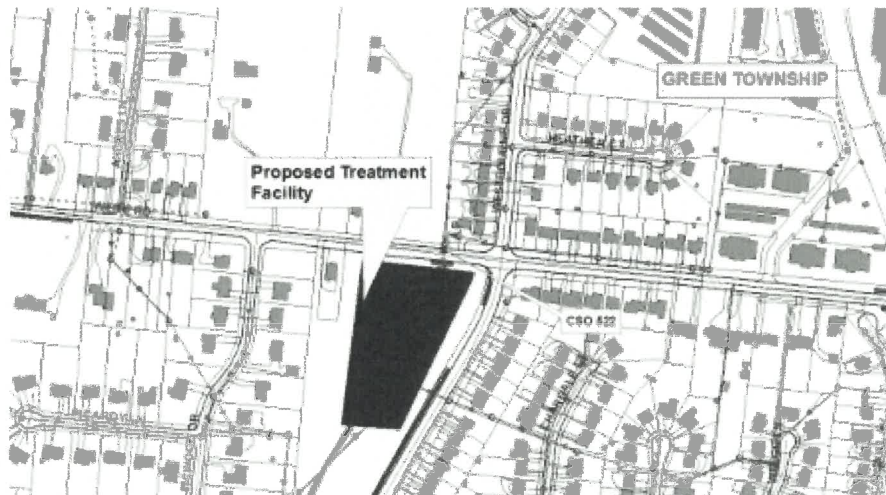
|  |   |   |         |
|--|---|---|---------|
| Department   | Metropolitan Sewer District of Greater Cincinnati |   |         |
| Project Title  | Werk & Westbourne EHRT Facility                   |   |         |
| Project ID   | 10130740  | CIP Number  | 1995-47 |
| Project Type   | Treatment Facility                                | Sewer Number  | 3834    |
| <b>Purpose and Justification</b>   |   |   |         |
| 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. |   | <b>Impact to Operating Budget</b>   |         |
|  |   | 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. |         |
| <b>Description and Location</b>  |   |   |         |
| 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               | \$7,276,228         | \$0                 | \$0                | \$7,276,228              |
| Pre-Construction Services | \$1,189,742               | \$305,541           | \$0                 | \$0                | \$305,541                |
| 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              | \$25,496,000        | \$0                 | \$0                | \$25,496,000             |
| Program Management        | \$0                       | \$597,214           | \$0                 | \$0                | \$597,214                |
| Construction Services     | \$2,070,037               | \$4,689,090         | \$1,428,123         | \$400,000          | \$6,517,213              |
| Interest / Financing      | \$1,035,013               | \$1,207,900         | \$0                 | \$0                | \$1,207,900              |
| <b>Total</b>              | <b>\$29,973,945</b>       | <b>\$41,698,098</b> | <b>\$1,428,123</b>  | <b>\$400,000</b>   | <b>\$43,526,221</b>      |

| Projected Legislation Dates |             |           |      |      |      |               |              |
|-----------------------------|-------------|-----------|------|------|------|---------------|--------------|
| Prior Legislation           | 2018        | 2019      | 2020 | 2021 | 2022 | Project Total |              |
| \$41,698,098                | \$1,428,123 | \$400,000 | \$0  | \$0  | \$0  | \$0           | \$43,526,221 |

**Prior Legislation Action**  
 Oct 2000, Dec 2006, Jan 2007, Dec 2009, Dec 2010, Mar 2011, Jan 2014, May 2014, Mar 2015, Jul



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | Muddy Creek @ Westbourne HRT Phase A Improvements |              |          |
| Project ID    | 10130850  | CIP Number   | 10130850 |
| Project Type  | CSO Improvement/Elim                              | Sewer Number |          |

## Purpose and Justification

This project provides for initial improvements to the Muddy Creek at Westbourne HRT facility. This CSO High Rate Treatment facility was originally constructed as a gravity settling, screening and disinfection system with passive diversion into the facility via fixed wall and stop logs. As part of the WWIP this facility is to be upgraded to Enhanced High Rate Settling. The City of Cincinnati and Hamilton County have committed to make initial improvements to this facility to advance this WWIP project. In addition, improvements to the diversion chamber will be installed to reduce potential upstream impacts to residents. Refer to index 236 of Attachment 2 of the Final WWIP.

## Impact to Operating Budget

None.

## Description and Location

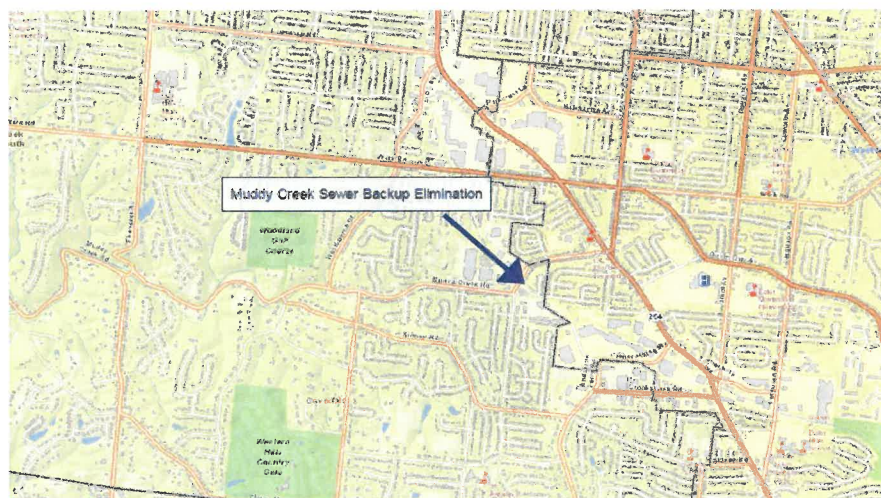
This project consists of the installation of regulating diversion device in the existing diversion chamber and new fine screening system upstream of the settling tanks along with necessary conveyance channels, odor control, isolation gates and screenings washing, conveying and handling systems. This project is located at 5723 Muddy Creek Road in Green 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               | \$330,100           | \$0                | \$330,100                |
| Pre-Construction Services | \$0                       | \$0               | \$123,800           | \$0                | \$123,800                |
| Miscellaneous Expense     | \$0                       | \$0               | \$75,000            | \$0                | \$75,000                 |
| Right-of-Way              | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction              | \$0                       | \$0               | \$0                 | \$4,125,500        | \$4,125,500              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$0                       | \$0               | \$0                 | \$845,800          | \$845,800                |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$200,000          | \$200,000                |
| <b>Total</b>              | \$0                       | \$0               | \$528,900           | \$5,171,300        | \$5,700,200              |

## Projected Legislation Dates

| Prior Legislation | 2018      | 2019        | 2020 | 2021 | 2022 | Project Total |
|-------------------|-----------|-------------|------|------|------|---------------|
| \$0               | \$528,900 | \$5,171,300 | \$0  | \$0  | \$0  | \$5,700,200   |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | CSO 402-406 Wet Weather Improvements              |              |          |
| Project ID    | 10131021  | CIP Number   | 10131021 |
| Project Type  | CSO Improvement/Elim                              | Sewer Number | 6746     |

## Purpose and Justification

This project is required by the Wet Weather Consent Decree. It is listed in Index 218-222 of Attachment 2 to the Final WWIP as part of the West Branch Muddy Creek Bundle. The project will improve compliance with the Ohio EPA's Nine Minimum Controls Program whereby MSD is required to prevent river water from entering the collection system to the greatest extent possible.

## Impact to Operating Budget

None.

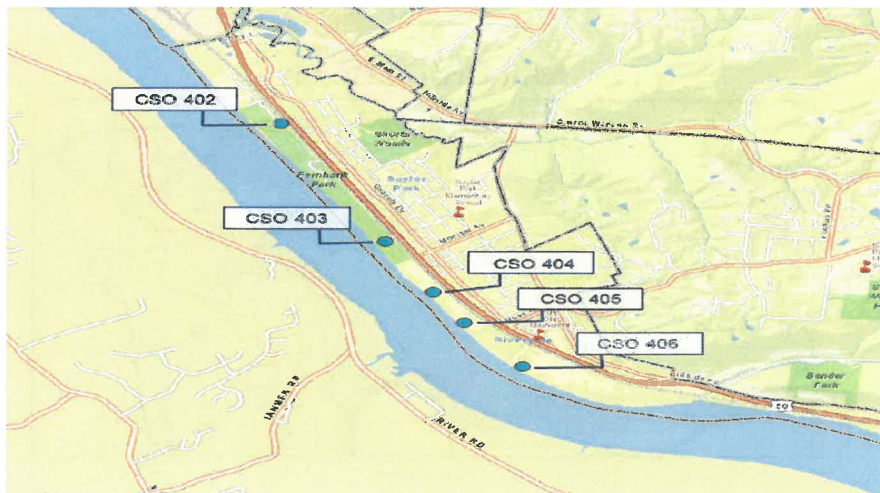
## Description and Location

This project will provide the design and construction of improvements to existing CSO 402-406. The five CSO projects(10131020,10131040,10131060,10131080,and 10131100) have been combined into one project. Improvements include backflow prevention and regulator control modifications. This project is located in the Saylor Park 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                    | \$737,200                 | \$0               | \$1,327,800         | \$0                 | \$1,327,800              |
| Pre-Construction Services | \$393,400                 | \$0               | \$710,100           | \$0                 | \$710,100                |
| Miscellaneous Expense     | \$138,100                 | \$0               | \$212,000           | \$0                 | \$212,000                |
| Right-of-Way              | \$122,000                 | \$0               | \$217,100           | \$0                 | \$217,100                |
| Construction              | \$10,452,700              | \$0               | \$0                 | \$12,730,600        | \$12,730,600             |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                 | \$0                      |
| Construction Services     | \$1,041,300               | \$0               | \$0                 | \$1,324,000         | \$1,324,000              |
| Interest / Financing      | \$563,200                 | \$0               | \$0                 | \$583,500           | \$583,500                |
| <b>Total</b>              | <b>\$13,447,900</b>       | <b>\$0</b>        | <b>\$2,467,000</b>  | <b>\$14,638,100</b> | <b>\$17,105,100</b>      |

| Projected Legislation Dates | 2018 | 2019        | 2020 | 2021         | 2022 | Project Total |
|-----------------------------|------|-------------|------|--------------|------|---------------|
| Prior Legislation           | \$0  | \$2,467,000 | \$0  | \$14,638,100 | \$0  | \$0           |
|                             |      |             |      |              |      | \$17,105,100  |

## Prior Legislation Action



COM'RS MIN.  
VOL. 348  
DEC 20 2017  
IMAGE 7673

# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | LMCPR Monitoring and Modeling                     |              |          |
| Project ID    | 10140417  | CIP Number   | 10140417 |
| Project Type  | Allowance   | Sewer Number | 6740     |

## Purpose and Justification

This is a consent decree requirement as agreed to in the submitted PCMP required by the WWIP.

## Impact to Operating Budget

None.

## Description and Location

MSDGC will complete the construction of the projects for the revised original Lower Mill Creek Partial Remedy (LMCPR) by the end of 2018. MSDGC must demonstrate compliance with the Wet Weather Improvement Program's (WWIP's) Performance Criteria applicable to combined sewer overflows (CSOs) by post-construction monitoring and modeling as part of the Post Construction Monitoring Plan (PCMP). This CIP is for the planning, flow monitoring, hydraulic modeling, and assistance with regulatory negotiations for that project.

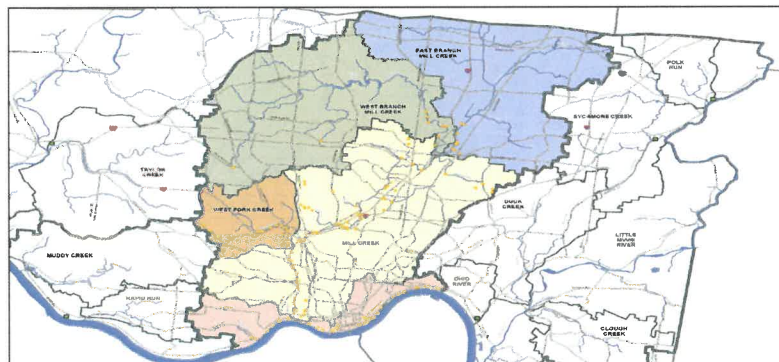
| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Design                    | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Pre-Construction Services | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Miscellaneous Expense     | \$0                       | \$0               | \$300,000           | \$6,600,000        | \$6,900,000              |
| 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           | \$6,600,000        | \$6,900,000              |

## Projected Legislation Dates

| Prior Legislation | 2018      | 2019        | 2020        | 2021        | 2022      | Project Total |
|-------------------|-----------|-------------|-------------|-------------|-----------|---------------|
| \$0               | \$300,000 | \$1,700,000 | \$2,100,000 | \$1,950,000 | \$850,000 | \$6,900,000   |

## Prior Legislation Action

## Mill Creek Basin



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

Department Metropolitan Sewer District of Greater Cincinnati  
Project Title CSO 513 Sewer Separation

Project ID 10142200  
Project Type Sewer Separation

CIP Number  
Sewer Number

## Purpose and Justification

This project is required by the Wet Weather Consent Decree. It is listed in Index 231 of Attachment 2 to the Final WWIP. The project is necessary reduce overflows tributary to CSO 513.

## Impact to Operating Budget

None.

## Description and Location

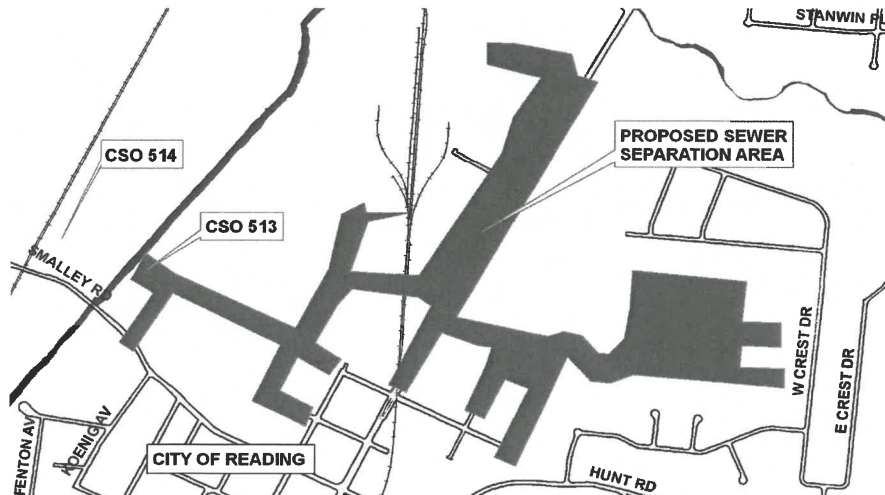
This project will reduce overflows from CSO 513 by removing storm water from the upstream combined sewers that are tributary to CSO 513. This project is located in the Mill Creek Basin in the City of Reading, Hamilton County, Ohio.



| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$198,900                 | \$0               | \$0                 | \$0                | \$0                      |
| Design                    | \$210,400                 | \$0               | \$230,000           | \$0                | \$230,000                |
| Pre-Construction Services | \$146,300                 | \$0               | \$160,000           | \$0                | \$160,000                |
| Miscellaneous Expense     | \$97,500                  | \$0               | \$50,000            | \$0                | \$50,000                 |
| Right-of-Way              | \$0                       | \$0               | \$50,000            | \$0                | \$50,000                 |
| Construction              | \$2,568,700               | \$0               | \$0                 | \$2,488,182        | \$2,488,182              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$254,300                 | \$0               | \$0                 | \$248,818          | \$248,818                |
| Interest / Financing      | \$127,200                 | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$3,603,300</b>        | <b>\$0</b>        | <b>\$490,000</b>    | <b>\$2,737,000</b> | <b>\$3,227,000</b>       |

| Projected Legislation Dates | 2018 | 2019      | 2020        | 2021 | 2022 | Project Total |
|-----------------------------|------|-----------|-------------|------|------|---------------|
| Prior Legislation           | \$0  | \$490,000 | \$2,737,000 | \$0  | \$0  | \$0           |
|                             | \$0  | \$490,000 | \$2,737,000 | \$0  | \$0  | \$0           |
|                             | \$0  | \$490,000 | \$2,737,000 | \$0  | \$0  | \$3,227,000   |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title CSO 514 Sewer Separation

Project ID 10142220  
 Project Type Sewer Separation

CIP Number  
 Sewer Number

## Purpose and Justification

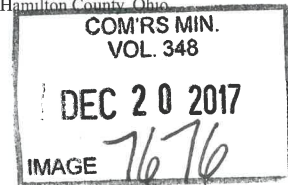
This project is required by the Wet Weather Consent Decree. It is listed in Index 232 of Attachment 2 to the Final WWIP. The project is necessary reduce overflows tributary to CSO 514.

## Impact to Operating Budget

None.

## Description and Location

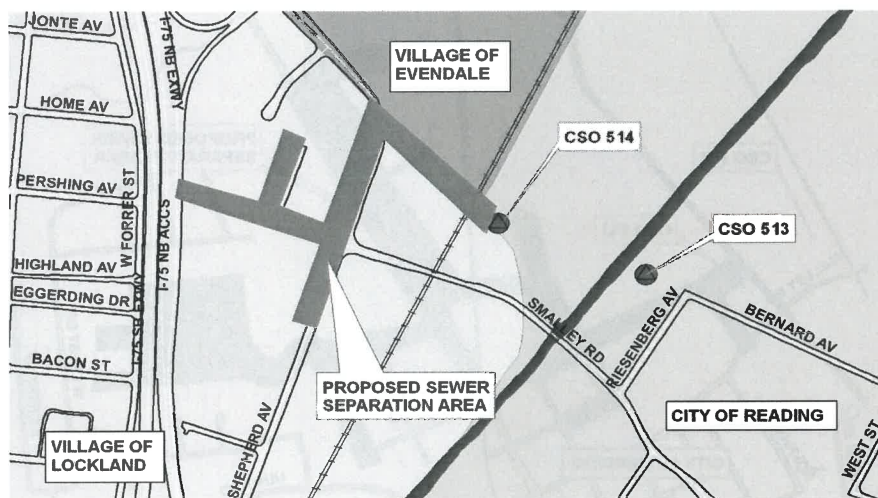
This project will remove storm flow from combined sewers tributary to CSO 514 to reduce overflows. This project is located in the Mill Creek Basin in the City of Reading, Hamilton County, Ohio.



| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$105,300                 | \$0               | \$0                 | \$0                | \$0                      |
| Design                    | \$111,500                 | \$0               | \$152,600           | \$0                | \$152,600                |
| Pre-Construction Services | \$76,500                  | \$0               | \$45,900            | \$0                | \$45,900                 |
| Miscellaneous Expense     | \$51,000                  | \$0               | \$62,100            | \$0                | \$62,100                 |
| Right-of-Way              | \$0                       | \$0               | \$6,500             | \$0                | \$6,500                  |
| Construction              | \$1,357,600               | \$0               | \$0                 | \$1,218,400        | \$1,218,400              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$134,400                 | \$0               | \$0                 | \$126,700          | \$126,700                |
| Interest / Financing      | \$67,200                  | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$1,903,500</b>        | <b>\$0</b>        | <b>\$267,100</b>    | <b>\$1,345,100</b> | <b>\$1,612,200</b>       |

| Projected Legislation Dates | 2018 | 2019      | 2020        | 2021 | 2022 | Project Total |
|-----------------------------|------|-----------|-------------|------|------|---------------|
| Prior Legislation           | \$0  | \$267,100 | \$1,345,100 | \$0  | \$0  | \$1,612,200   |

## Prior Legislation Action





# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | Mill Creek WWTP HRT Study                         |              |          |
| Project ID    | 10144886  | CIP Number   | 10144886 |
| Project Type  | Treatment Facility                                | Sewer Number | 6737     |

## Purpose and Justification

During wet weather events, the Mill Creek Interceptor and Auxiliary Mill Creek Interceptor surcharge and create a significant tailwater. The construction of a High Rate Treatment Facility (HRT) could potentially reduce the surcharge and lower the hydraulic grade line by pumping more volume out of the interceptors. The study will also coordinate with the influent pump station asset management needs.

## Impact to Operating Budget

None.

## Description and Location

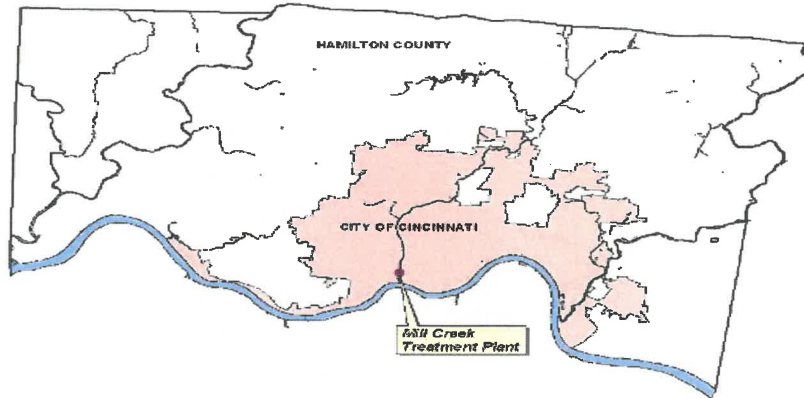
This planning study will evaluate options for and feasibility of construction of a high rate facility to treat excess wet weather flow tributary to the Mill Creek WWTP. This study will include the option for chemically enhanced primary treatment.



| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$0                       | \$0               | \$750,000           | \$0                | \$750,000                |
| 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>\$0</b>                | <b>\$0</b>        | <b>\$750,000</b>    | <b>\$0</b>         | <b>\$750,000</b>         |

| Projected Legislation Dates | 2018 | 2019      | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|------|-----------|------|------|------|---------------|
| Prior Legislation           | \$0  | \$750,000 | \$0  | \$0  | \$0  | \$750,000     |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |  |              |          |
|---------------|--|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati                |              |          |
| Project Title | Mill Creek WWTP High Rate Treatment Facility Diversion Structure |              |          |
| Project ID    | 10144887   | CIP Number   | 10144887 |
| Project Type  | Treatment Facility   | Sewer Number |          |

## Purpose and Justification

The current WWTP pump station dates to the 1950's and the lack of ability to isolate the influent diversion chamber and wet well is a known risk. Also, in order to construct a high rate treatment facility at the Mill Creek WWTP site, a new pump station must be constructed. Recent physical scale model and CFD studies have shown that there is no other way to increase plant pumping capacity. A BCE completed in 2016 recommending a new pump station and additional pumping capacity for an HRTF identified the need for a new diversion chamber. In addition, the BCE indicates a new pump station that can serve the treatment plant as well as a future HRTF would be more cost effective per gallon pumped.

## Impact to Operating Budget

None

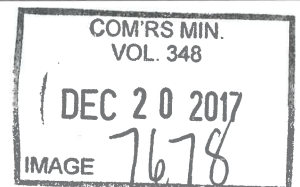
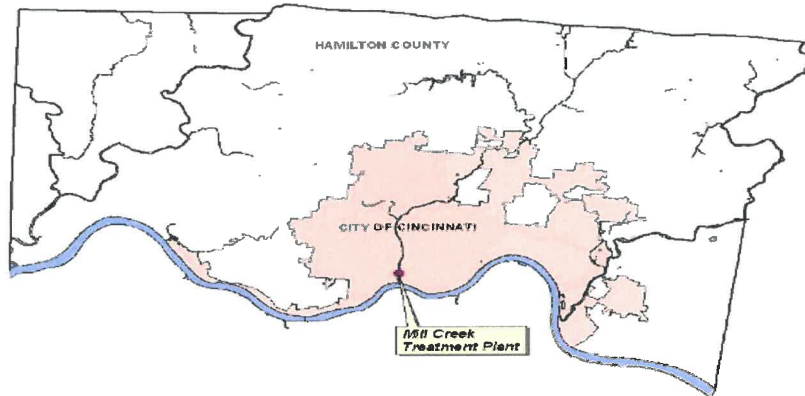
## Description and Location

This project will construct a new diversion chamber to be connected to the Mill Creek Interceptor and Auxiliary Interceptor. This is the first phase of construction necessary to construct a new pump station with the ability to service the WWTP and a high rate treatment facility (HRTF) at the Mill Creek WWTP. Construction will require rerouting of plant utilities and possible demolition of structures. Design and construction of the future phases, i.e. the pump station and HRTF, will proceed in separate capital projects.

| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Design                    | \$250,000                 | \$0               | \$250,000           | \$0                | \$250,000                |
| Pre-Construction Services | \$70,000                  | \$0               | \$70,000            | \$0                | \$70,000                 |
| Miscellaneous Expense     | \$80,000                  | \$0               | \$80,000            | \$0                | \$80,000                 |
| Right-of-Way              | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction              | \$7,400,000               | \$0               | \$7,150,000         | \$0                | \$7,150,000              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$750,000                 | \$0               | \$700,000           | \$0                | \$700,000                |
| Interest / Financing      | \$0                       | \$0               | \$300,000           | \$0                | \$300,000                |
| <b>Total</b>              | <b>\$8,550,000</b>        | <b>\$0</b>        | <b>\$8,550,000</b>  | <b>\$0</b>         | <b>\$8,550,000</b>       |

| Projected Legislation Dates | 2018        | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-------------|------|------|------|------|---------------|
| Prior Legislation           | \$0         | \$0  | \$0  | \$0  | \$0  | \$0           |
|                             | \$8,550,000 | \$0  | \$0  | \$0  | \$0  | \$8,550,000   |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| 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 is required by the Wet Weather Consent Decree. It is listed in Index 119 of Attachment 1B to the Final WWIP. The project is necessary eliminate SSO 1000 located in the Upper Duck Bundle.

## Impact to Operating Budget

None.

## Description and Location

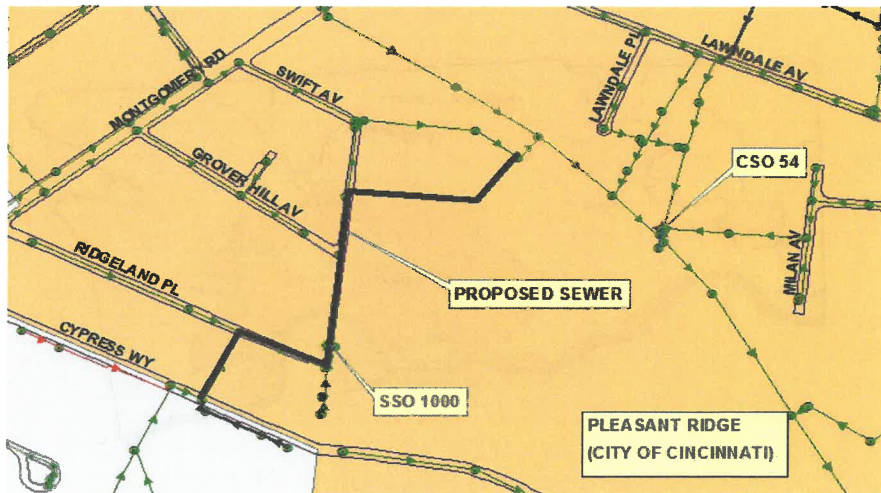
This project is intended to result in the elimination of SSO 1000. The improvements consist of installing approximately 950 feet of relief sewer that will allow would be overflows to be routed to the downstream sewer that has capacity. In addition, 550 feet of upstream sewer will be upsized. This project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



| 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 | 2018      | 2019      | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-----------|-----------|------|------|------|---------------|
| Prior Legislation           | \$221,400 | \$925,800 | \$0  | \$0  | \$0  | \$1,147,200   |

**Prior Legislation Action**  
Jul 2013, Jan 2015, Aug 2015, Feb 2016, Nov 2017



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | Little Miami WWTP Electrical Improvements Phase A |              |          |
| Project ID    | 10170812  | CIP Number   | 10170812 |
| Project Type  | Treatment Facility                                | Sewer Number |          |

## Purpose and Justification

The existing medium-voltage electrical equipment has exceeded its useful life and needs to be replaced. Replacement of this electrical equipment will also establish an electrical backbone for the implementation of the subsequent projects that come out of the Little Miami WWTP Bundle. Reference index 195 of Attachment 2 of the Final WWIP.

## 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.

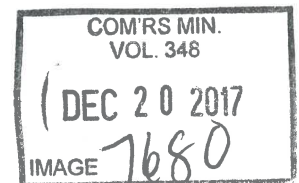
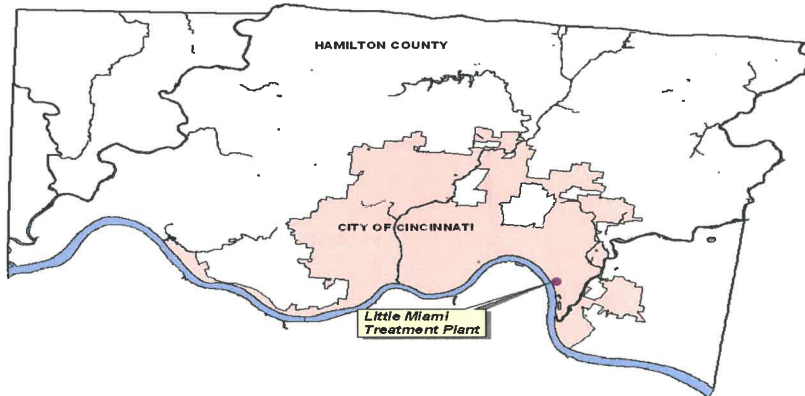
## Description and Location

This project involves the replacement of existing medium-voltage electrical equipment at the Four Mile PS to increase capacity and reliability. The Little Miami WWTP is located in the East End neighborhood in 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                    | \$987,000                 | \$0               | \$152,100           | \$0                | \$152,100                |
| Pre-Construction Services | \$296,900                 | \$0               | \$126,800           | \$0                | \$126,800                |
| Miscellaneous Expense     | \$0                       | \$0               | \$50,000            | \$0                | \$50,000                 |
| Right-of-Way              | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction              | \$14,843,000              | \$0               | \$2,534,400         | \$0                | \$2,534,400              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$1,335,900               | \$0               | \$519,600           | \$0                | \$519,600                |
| Interest / Financing      | \$565,800                 | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$18,028,600</b>       | <b>\$0</b>        | <b>\$3,382,900</b>  | <b>\$0</b>         | <b>\$3,382,900</b>       |

| Projected Legislation Dates | 2018        | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-------------|------|------|------|------|---------------|
| Prior Legislation           | \$0         | \$0  | \$0  | \$0  | \$0  | \$0           |
|                             | \$3,382,900 | \$0  | \$0  | \$0  | \$0  | \$3,382,900   |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title LMWWTP Preliminary Treatment Improvements Phase A

Project ID 10170813 CIP Number  
 Project Type Treatment Facility Sewer Number

## Purpose and Justification

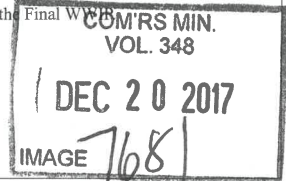
The ex. screens need to be replaced to reduce O&M associated with blinding issues. The ex. grit tanks need to be replaced due to antiquated technology and difficulty in obtaining parts. An improved grit removal facility will also better protect downstream assets.

## 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

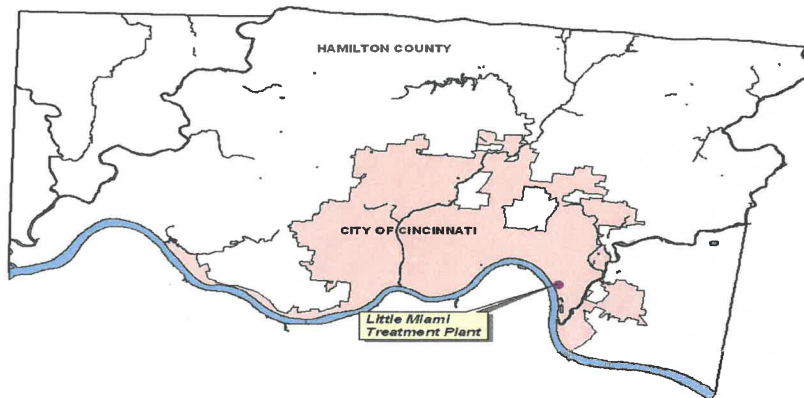
This project includes improvements to the medium screens downstream of the influent pumps and replacement of the grit tanks with tray type grit removal facilities. The Little Miami WWTP is located in the East End neighborhood in the City of Cincinnati. Reference Index 197 of Attachment 2 of the Final W



| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Design                    | \$0                       | \$0               | \$705,100           | \$0                | \$705,100                |
| Pre-Construction Services | \$0                       | \$0               | \$587,600           | \$0                | \$587,600                |
| Miscellaneous Expense     | \$0                       | \$0               | \$100,000           | \$0                | \$100,000                |
| Right-of-Way              | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction              | \$0                       | \$0               | \$0                 | \$11,751,500       | \$11,751,500             |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$0                       | \$0               | \$0                 | \$2,409,100        | \$2,409,100              |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$435,000          | \$435,000                |
| <b>Total</b>              | \$0                       | \$0               | \$1,392,700         | \$14,595,600       | \$15,988,300             |

| Projected Legislation Dates | 2018 | 2019        | 2020         | 2021 | 2022 | Project Total |
|-----------------------------|------|-------------|--------------|------|------|---------------|
| Prior Legislation           | \$0  | \$1,392,700 | \$14,595,600 | \$0  | \$0  | \$0           |
|                             |      |             |              |      |      | \$15,988,300  |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | Little Miami WWTP Main Outfall Improvements       |              |          |
| Project ID    | 10170816  | CIP Number   | 10170816 |
| Project Type  | Treatment Facility                                | Sewer Number | 6629     |

## Purpose and Justification

This project will provide the necessary 100 MGD capacity in the main outfall at the Little Miami WWTP under varying Ohio River levels (up to the 25-year flood elevation). This project is necessary to help the Little Miami WWTP Bundle (10170789, Phase 2 WWIP Bundle) meet its main objective of increasing the treatment capacity to 100 MGD.

## Impact to Operating Budget

None.

## Description and Location

This project will provide four improvements to the Little Miami WWTP Main Outfall. 1.) A water-tight manhole cover and frame will be provided for MH 42101005 2.) The storm sewer connections at the intersection of Kellogg Avenue and Lumsden Street and the storm sewer connection on Lumsden Street will have check valves installed to prevent treated effluent and Ohio River backwater from exiting the Little Miami WWTP Main Outfall onto the surrounding streets. 3.) The Shore Box on the bank of the Ohio River will be reconstructed due to the current, deteriorated condition. 4.) The existing sampling and metering chamber will be sealed by removing the existing concrete lid and replacement with a precast unit. This project is located in the East End neighborhood of the City of Cincinnati.

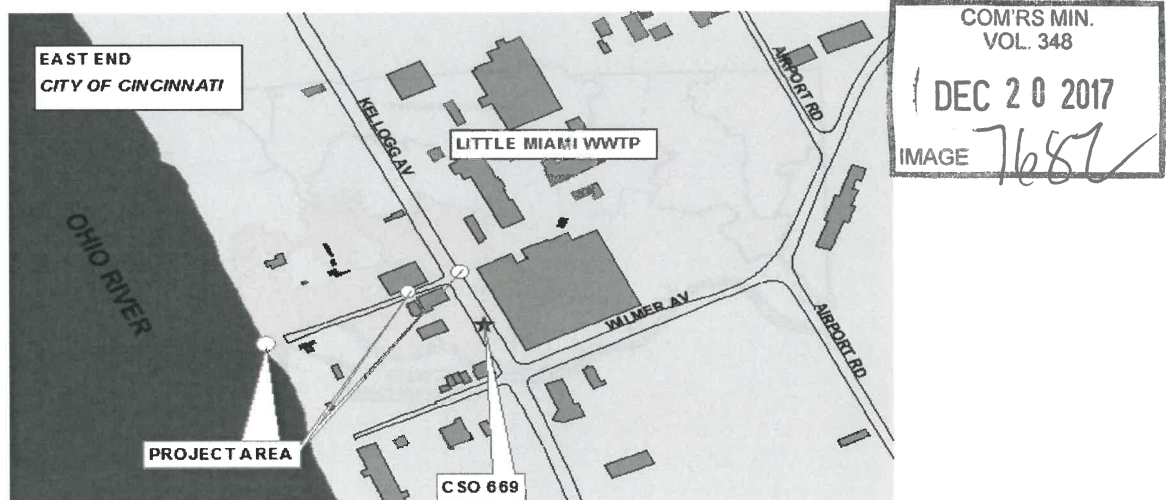
| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Design                    | \$33,800                  | \$33,800          | \$0                 | \$0                | \$33,800                 |
| Pre-Construction Services | \$16,000                  | \$20,400          | \$0                 | \$0                | \$20,400                 |
| Miscellaneous Expense     | \$29,500                  | \$29,500          | \$0                 | \$0                | \$29,500                 |
| Right-of-Way              | \$8,400                   | \$4,000           | \$0                 | \$0                | \$4,000                  |
| Construction              | \$128,000                 | \$0               | \$199,800           | \$0                | \$199,800                |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$10,300                  | \$0               | \$41,000            | \$0                | \$41,000                 |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$226,000</b>          | <b>\$87,700</b>   | <b>\$240,800</b>    | <b>\$0</b>         | <b>\$328,500</b>         |

## Projected Legislation Dates

| Prior Legislation | 2018      | 2019 | 2020 | 2021 | 2022 | Project Total |
|-------------------|-----------|------|------|------|------|---------------|
| \$87,700          | \$240,800 | \$0  | \$0  | \$0  | \$0  | \$328,500     |

## Prior Legislation Action

Jan 2016, Jul 2017



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | CSO 135 Elimination                               |              |          |
| Project ID    | 10171540  | CIP Number   | 10171540 |
| Project Type  | Regulator Improvement                             | Sewer Number | 6742     |

## Purpose and Justification

This project will make regulator improvements to CSO 135. The existing regulatory has maintenance issues associated with its grating and the CSO outfall pipe is in disrepair and a portion of the pipe is collapsed. This project is required by the Wet Weather Consent Decree. It is listed in Index 185 of Attachment 2 to the Final WWIP as part of the Upper Duck Bundle.

## Impact to Operating Budget

None.

## Description and Location

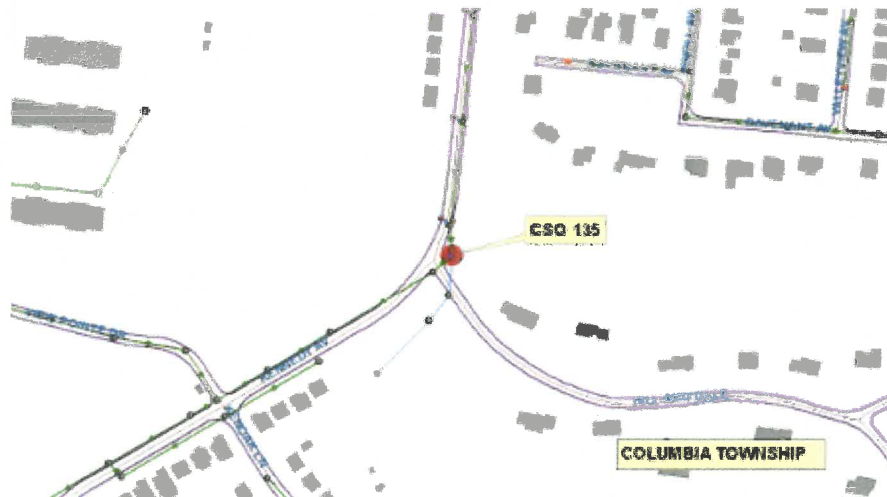
This project is intended to make improvements to CSO 135. The June 2009 submittal Project Description Design calls for regulator improvements. This project will replace the 265-foot of 24-inch outfall pipe and install a new headwall with a riprap lined outlet. This project is located in Columbia Township.



| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Design                    | \$18,900                  | \$0               | \$75,000            | \$0                | \$75,000                 |
| Pre-Construction Services | \$14,700                  | \$0               | \$32,000            | \$0                | \$32,000                 |
| Miscellaneous Expense     | \$9,800                   | \$0               | \$36,200            | \$0                | \$36,200                 |
| Right-of-Way              | \$0                       | \$0               | \$20,000            | \$0                | \$20,000                 |
| Construction              | \$257,700                 | \$0               | \$0                 | \$340,000          | \$340,000                |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$25,500                  | \$0               | \$0                 | \$40,400           | \$40,400                 |
| Interest / Financing      | \$12,800                  | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$339,400</b>          | <b>\$0</b>        | <b>\$163,200</b>    | <b>\$380,400</b>   | <b>\$543,600</b>         |

| Projected Legislation Dates | 2018 | 2019      | 2020      | 2021 | 2022 | Project Total |
|-----------------------------|------|-----------|-----------|------|------|---------------|
| Prior Legislation           | \$0  | \$163,200 | \$380,400 | \$0  | \$0  | \$0           |
|                             |      |           |           |      |      | \$543,600     |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | CSO 43 Elimination                                |              |          |
| Project ID    | 10171560  | CIP Number   | 10171560 |
| Project Type  | Regulator Improvement                             | Sewer Number | 6743     |

## Purpose and Justification

This project will make improvements to CSO 43. This project is required by the Wet Weather Consent Decree. It is listed in Index 186 of Attachment 2 to the Final WWIP as part of the Upper Duck Bundle.

## Impact to Operating Budget

None.

## Description and Location

This project is intended to make improvements to CSO 43. The June 2009 submittal Project Description Design calls for regulator improvements. MSD will examine this and other alternatives to address this problem. This project is located on Charloe St. just east of Saguin St. in the Madisonville neighborhood of the City of Cincinnati, Hamilton County, Ohio. Reference Index #186 of Attachment 2 of final WWIP

| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Design                    | \$18,900                  | \$0               | \$75,000            | \$0                | \$75,000                 |
| Pre-Construction Services | \$15,300                  | \$0               | \$32,000            | \$0                | \$32,000                 |
| Miscellaneous Expense     | \$10,200                  | \$0               | \$30,800            | \$0                | \$30,800                 |
| Right-of-Way              | \$6,000                   | \$0               | \$23,000            | \$0                | \$23,000                 |
| Construction              | \$266,700                 | \$0               | \$0                 | \$330,000          | \$330,000                |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$26,400                  | \$0               | \$0                 | \$46,200           | \$46,200                 |
| Interest / Financing      | \$13,200                  | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$356,700</b>          | <b>\$0</b>        | <b>\$160,800</b>    | <b>\$376,200</b>   | <b>\$537,000</b>         |

| Projected Legislation Dates | 2018 | 2019      | 2020      | 2021 | 2022 | Project Total |
|-----------------------------|------|-----------|-----------|------|------|---------------|
| Prior Legislation           | \$0  | \$160,800 | \$376,200 | \$0  | \$0  | \$537,000     |

## Prior Legislation Action





# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| 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

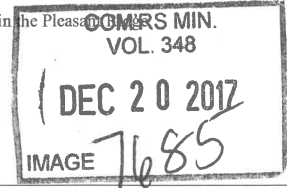
This project is required by the Wet Weather Consent Decree. It is listed in Index 116 of Attachment 1B to the Final WWIP as part of the Upper Duck Bundle. The project will increase the underflow capacity of the regulator to meet the Consent Decree remaining overflow volume requirements.

## Impact to Operating Budget

None.

## Description and Location

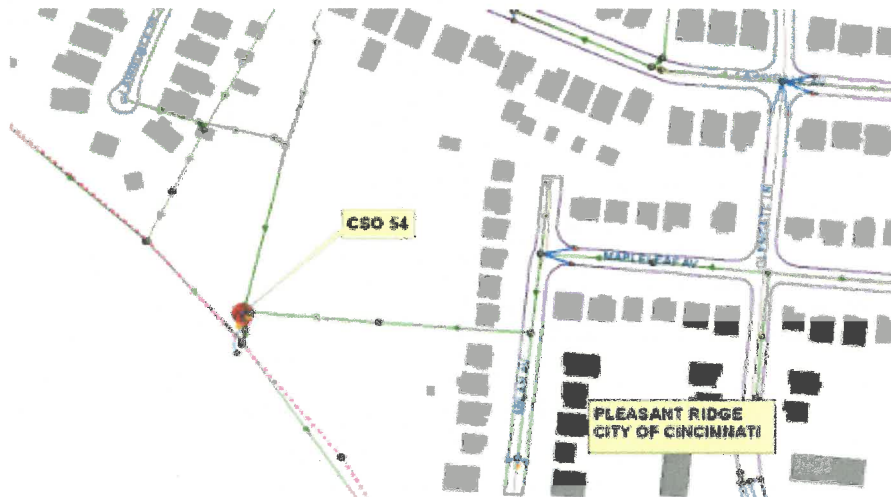
This project is intended to make improvements to CSO 54. The improvements consist of replacing the regulator structure and raising the overflow weir height to increase the underflow capacity of the regulator. Also, vehicular access to the regulator will be provided. This project is located in the Pleasant 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               | \$196,000           | \$0                | \$196,000                |
| 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>\$242,100</b>    | <b>\$0</b>         | <b>\$347,500</b>         |

| Projected Legislation Dates | 2018      | 2019      | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-----------|-----------|------|------|------|---------------|
| Prior Legislation           | \$105,400 | \$242,100 | \$0  | \$0  | \$0  | \$347,500     |

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



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | CSO 214 Partial Separation                        |              |          |
| Project ID    | 10171641  | CIP Number   | 10171641 |
| Project Type  | Sewer Separation                                  | Sewer Number | 6744     |

## Purpose and Justification

The project is required by the Wet Weather Consent Decree.

## Impact to Operating Budget

None.

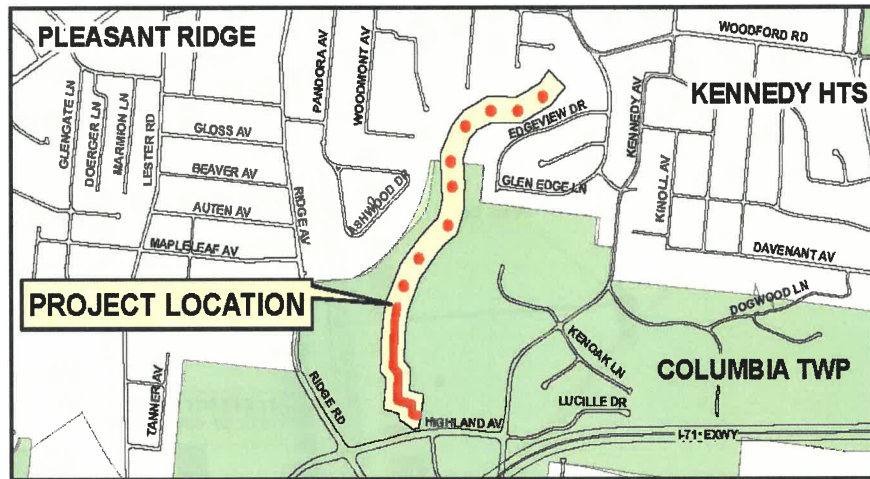
## Description and Location

This project involves strategic separation of approximately 55 acres of CSO 214 sewer shed. Existing inlets in a ravine to the CSO sewer will be plugged or elevated to allow large flows to enter the combined sewers for events greater than the Typical Year. The existing storm outlet will be improved to convey storm flow from CSO 214 directly to Yononte Creek, which is a tributary to Duck Creek. This project is located in Columbia 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               | \$278,000           | \$0                | \$278,000                |
| Pre-Construction Services | \$0                       | \$0               | \$110,000           | \$0                | \$110,000                |
| Miscellaneous Expense     | \$0                       | \$0               | \$112,200           | \$0                | \$112,200                |
| Right-of-Way              | \$0                       | \$0               | \$480,000           | \$0                | \$480,000                |
| Construction              | \$0                       | \$0               | \$0                 | \$2,403,000        | \$2,403,000              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$0                       | \$0               | \$0                 | \$315,000          | \$315,000                |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | \$0                       | \$0               | \$980,200           | \$2,718,000        | \$3,698,200              |

| Projected Legislation Dates | 2018 | 2019      | 2020        | 2021 | 2022 | Project Total |
|-----------------------------|------|-----------|-------------|------|------|---------------|
| Prior Legislation           | \$0  | \$980,200 | \$2,718,000 | \$0  | \$0  | \$0           |
|                             | \$0  | \$980,200 | \$2,718,000 | \$0  | \$0  | \$0           |
|                             | \$0  | \$980,200 | \$2,718,000 | \$0  | \$0  | \$3,698,200   |

**Prior Legislation Action**



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

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

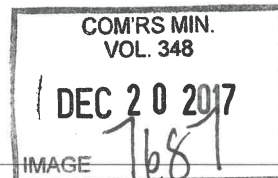
This project will separate sewers to reduce overflows at CSO 551. This project is required by the Wet Weather Consent Decree. It is listed in Index 118 of Attachment 1B to the Final WWIP as part of the Upper Duck Bundle.

## Impact to Operating Budget

None.

## Description and Location

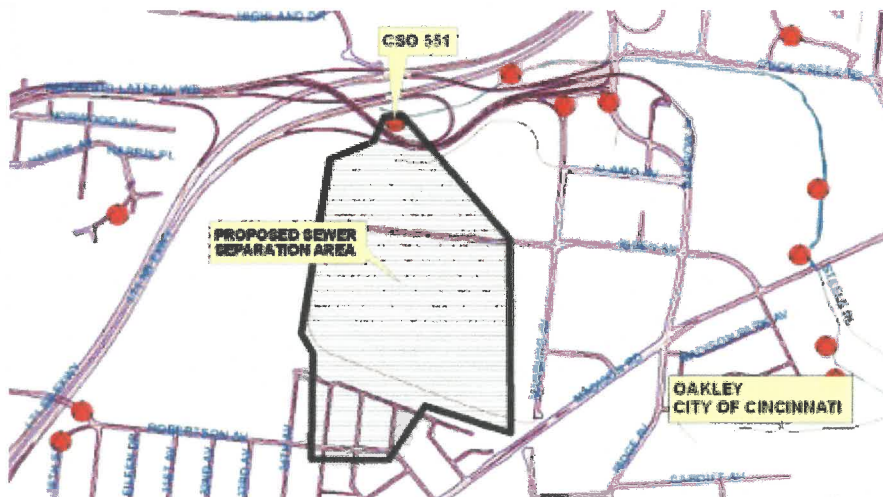
This project is intended to result in the reduction of overflows at CSO 551. The June 2009 submittal Project Description Design calls for sewer separation. This project is located in the Oakley neighborhood of the City of Cincinnati, Hamilton County, Ohio.



| 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                  | \$305,100         | \$0                 | \$0                | \$305,100                |
| Construction              | \$3,074,900               | \$0               | \$1,382,000         | \$0                | \$1,382,000              |
| 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>\$761,500</b>  | <b>\$1,475,800</b>  | <b>\$0</b>         | <b>\$2,237,300</b>       |

| Projected Legislation Dates | 2018        | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-------------|------|------|------|------|---------------|
| Prior Legislation           | \$761,500   | \$0  | \$0  | \$0  | \$0  | \$2,237,300   |
|                             | \$1,475,800 |      |      |      |      |               |

**Prior Legislation Action**  
 May 2016, Dec 2016



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title LMWWTP HRT Study and Bundle Project Integration Planning

Project ID 10172030 CIP Number 10172030  
 Project Type Treatment Facility Sewer Number 6713

## Purpose and Justification

During wet weather events, the Little Miami WWTP pumps excess flow of untreated wastewater to the Ohio River. The Little Miami "bundle" projects were planned several years ago when the treatment plant had an incinerator. The incinerator was permanently shut down in 2016 and a replacement disposal technology is still being evaluated. This change in operations not only requires some re-planning of some "bundle" projects, but it made land available for an HRT facility that was not previously an option. The construction of a High Rate Treatment Facility (HRT) could potentially mitigate a considerable volume of treatment plant bypass flow.

## Impact to Operating Budget

None.

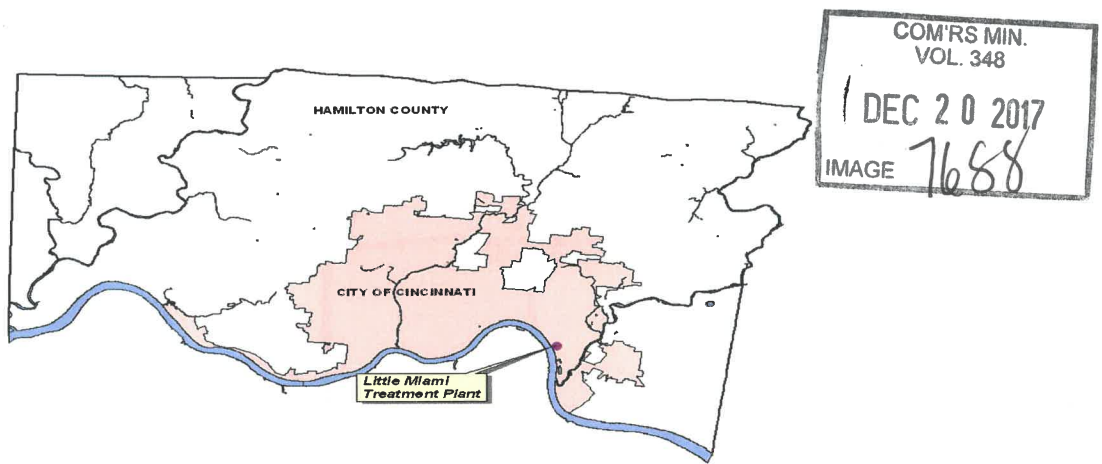
## Description and Location

This planning study will evaluate options for and feasibility of construction of a high rate facility to treat excess flow from the Little Miami WWTP pump stations. In addition, the project will re-plan the remaining Little Miami "bundle" projects in consideration of updated budget and schedule constraints as well as the outcomes of the solids handling master plan and proposed HRT facility evaluation. This project is located at the Little Miami Wastewater Treatment Plant in the East End neighborhood of the City of Cincinnati, Hamilton County, Ohio.

| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$1,500,000               | \$0               | \$1,450,000         | \$0                | \$1,450,000              |
| 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>\$1,500,000</b>        | <b>\$0</b>        | <b>\$1,450,000</b>  | <b>\$0</b>         | <b>\$1,450,000</b>       |

| Projected Legislation Dates | 2018        | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-------------|------|------|------|------|---------------|
| Prior Legislation           | \$0         | \$0  | \$0  | \$0  | \$0  | \$0           |
|                             | \$1,450,000 | \$0  | \$0  | \$0  | \$0  | \$1,450,000   |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |
|---------------|---|--------------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |
| Project Title | Main Sewer Renewal Program 2018                   |              |
| Project ID    | 10180118  | CIP Number   |
| 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 will be identified as needed in accordance with our Gravity Sewer Asset Management program.

| 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              | \$4,700,000               | \$0               | \$1,400,000         | \$0                | \$1,400,000              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$2,000,000               | \$0               | \$400,000           | \$0                | \$400,000                |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$6,700,000</b>        | <b>\$0</b>        | <b>\$1,800,000</b>  | <b>\$0</b>         | <b>\$1,800,000</b>       |

| Projected Legislation Dates | 2018 | 2019        | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|------|-------------|------|------|------|---------------|
| Prior Legislation           | \$0  | \$1,800,000 | \$0  | \$0  | \$0  | \$1,800,000   |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |  |
|---------------|---|--------------|--|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |  |
| Project Title | Manhole Renewal Program 2018                      |              |  |
| Project ID    | 10180218  | CIP Number   |  |
| Project Type  | Allowance   | Sewer Number |  |

## 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

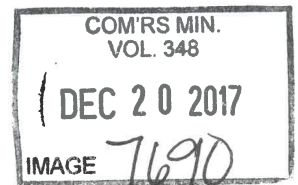
This program supports the renewal of structurally deficient manholes in the MSD wastewater collection system, and the installation of new manholes to support operation and maintenance of the wastewater collection system. Manhole renewal projects are identified by evaluating structural condition, consequence 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               | \$650,000           | \$0                | \$650,000                |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$100,000                 | \$0               | \$50,000            | \$0                | \$50,000                 |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$1,300,000</b>        | <b>\$0</b>        | <b>\$700,000</b>    | <b>\$0</b>         | <b>\$700,000</b>         |

## Projected Legislation Dates

| Prior Legislation | 2018      | 2019 | 2020 | 2021 | 2022 | Project Total |
|-------------------|-----------|------|------|------|------|---------------|
| \$0               | \$700,000 | \$0  | \$0  | \$0  | \$0  | \$700,000     |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | Small Diameter Sewer Rehabilitation - Phase 1     |              |          |
| Project ID    | 10180250  | CIP Number   | 10180250 |
| Project Type  | Sewer Replacement                                 | Sewer Number | 6719     |

## Purpose and Justification

MSD's operates an integrated application process to identify prioritized lists of existing main gravity sewers that are candidates for CIPP renewal as the best and most cost-effective way to extend useful life and reduce risk at the lowest life-cycle cost. The purpose of this project is to group substantial lists of assets prioritized by risk, and rehabilitate these assets as part of a fixed scope CIP project where funding will not be limited by calendar year. This approach was approved by the County Prosecutor to address long-standing problems associated with funding multi-year competitively bid sewer renewal projects through Allowance funds that cannot carry-over into a new calendar

## Impact to Operating Budget

None

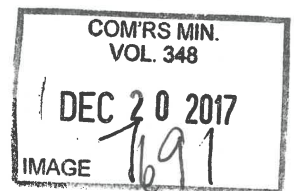
## Description and Location

Rehabilitation of existing main gravity sewers throughout the MSD service area using UV-cured Cured-in-Place-Pipe (CIPP) consistent with MSD's Gravity Sewer Risk Model and Gravity Sewer Asset Management Program. This project, along with 10180260, is replacing the former allowance for main sewer renewal.

| 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              | \$5,600,000               | \$0               | \$2,300,000         | \$0                | \$2,300,000              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$400,000                 | \$0               | \$200,000           | \$0                | \$200,000                |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$6,000,000</b>        | <b>\$0</b>        | <b>\$2,500,000</b>  | <b>\$0</b>         | <b>\$2,500,000</b>       |

| Projected Legislation Dates | 2018 | 2019        | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|------|-------------|------|------|------|---------------|
| Prior Legislation           | \$0  | \$2,500,000 | \$0  | \$0  | \$0  | \$2,500,000   |

Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | Large Diameter Sewer Rehabilitation - Phase 1     |              |          |
| Project ID    | 10180260  | CIP Number   | 10180260 |
| Project Type  | Sewer Replacement                                 | Sewer Number | 6720     |

## Purpose and Justification

MSD's operates an integrated application process to identify prioritized lists of existing main gravity sewers that are candidates for CIPP renewal as the best and most cost-effective way to extend useful life and reduce risk at the lowest life-cycle cost. The purpose of this project is to group substantial lists of assets prioritized by risk, and rehabilitate these assets as part of a fixed scope CIP project where funding will not be limited by calendar year. This approach was approved by the County Prosecutor to address long-standing problems associated with funding multi-year competitively bid sewer renewal projects through Allowance funds that cannot carry-over into a new calendar

## Impact to Operating Budget

None.

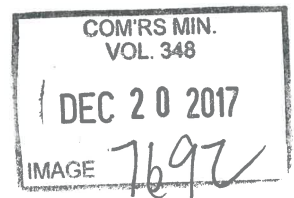
## Description and Location

Rehabilitation of existing large diameter main gravity sewers throughout the MSD service area using specialized rehabilitation methods consistent with MSD's Gravity Sewer Risk Model and Gravity Sewer Asset Management Program. This project, along with 10180250, is replacing the former allowance for main sewer renewal.

| 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              | \$5,600,000               | \$0               | \$2,300,000         | \$0                | \$2,300,000              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$400,000                 | \$0               | \$200,000           | \$0                | \$200,000                |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$6,000,000</b>        | <b>\$0</b>        | <b>\$2,500,000</b>  | <b>\$0</b>         | <b>\$2,500,000</b>       |

| Projected Legislation Dates | 2018 | 2019        | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|------|-------------|------|------|------|---------------|
| Prior Legislation           | \$0  | \$2,500,000 | \$0  | \$0  | \$0  | \$2,500,000   |

Prior Legislation Action





# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

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

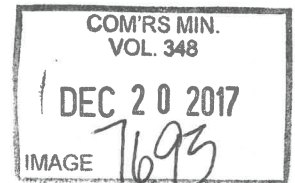
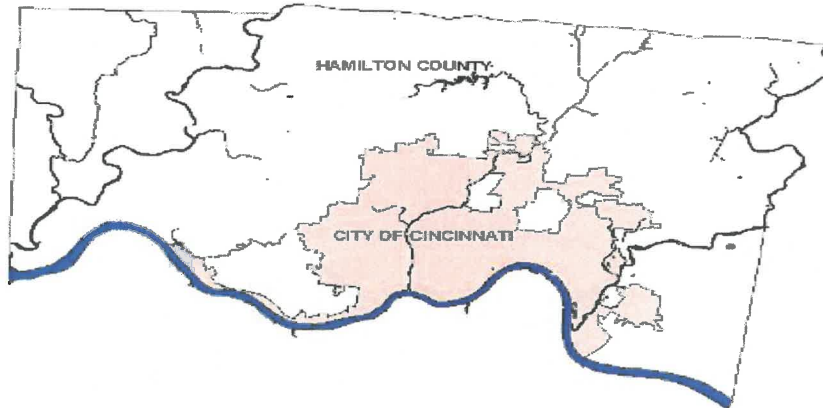
Support, development and implementation associated the Master Program Management Plan (MPMP) including interviews, research, reporting and revising processes to meet organizational needs, facilitation of cross-functional teams, coaching, training sessions and e-learning development to promote and support 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 | \$250,000                 | \$250,000         | \$160,000           | \$0                | \$410,000                |
| 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>\$250,000</b>          | <b>\$250,000</b>  | <b>\$160,000</b>    | <b>\$0</b>         | <b>\$410,000</b>         |

| Projected Legislation Dates | 2018      | 2019      | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-----------|-----------|------|------|------|---------------|
| Prior Legislation           | \$250,000 | \$160,000 | \$0  | \$0  | \$0  | \$410,000     |

**Prior Legislation Action**  
Dec 2016



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

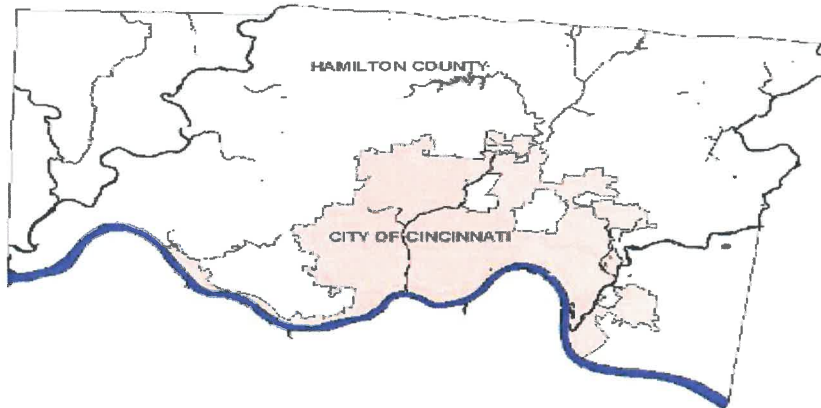
PROPOSED 12/19/17

|  |   |                                   |          |
|--|---|-----------------------------------|----------|
| Department   | Metropolitan Sewer District of Greater Cincinnati |                                   |          |
| Project Title  | Hamilton County Transition                        |                                   |          |
| Project ID   | 10180417  | CIP Number                        | 10180417 |
| Project Type   | Allowance   | Sewer Number                      |          |
| <b>Purpose and Justification</b>   |   | <b>Impact to Operating Budget</b> |          |
| This allowance is to fund activities related to the transition of MSD as a result of the expiration of the 1968 Agreement between the City of Cincinnati and Hamilton County, and in accordance with the Commitment Letter for a transition that was adopted by those parties in August of 2017. |   | None                              |          |
| <b>Description and Location</b>  |   |                                   |          |
| This allowance is to fund activities related to the transition of MSD as a result of the expiration of the 1968 Agreement between the City of Cincinnati and Hamilton County, and in accordance with the Commitment Letter for a transition that was adopted by those parties in August of 2017. |   |                                   |          |

| 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               | \$2,467,000         | \$0                | \$2,467,000              |
| 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               | \$2,467,000         | \$0                | \$2,467,000              |

| Projected Legislation Dates |             |      |      |      |      |               |             |
|-----------------------------|-------------|------|------|------|------|---------------|-------------|
| Prior Legislation           | 2018        | 2019 | 2020 | 2021 | 2022 | Project Total |             |
| \$0                         | \$2,467,000 | \$0  | \$0  | \$0  | \$0  | \$0           | \$2,467,000 |

**Prior Legislation Action**



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |
|---------------|---|--------------|
| 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.

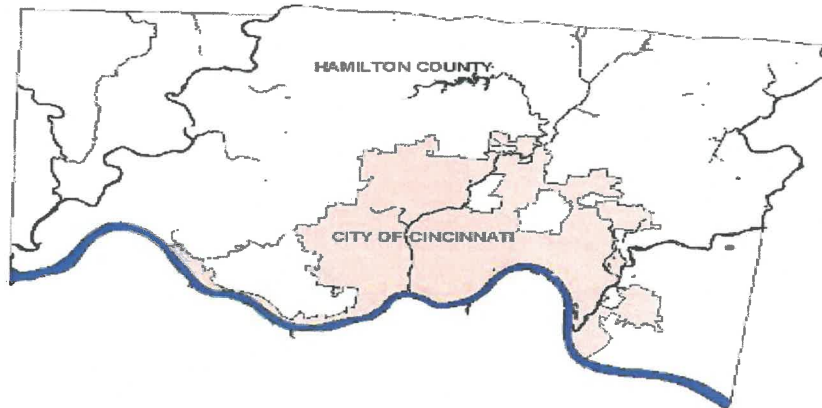
## Description and Location

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                  | \$1,700,000               | \$1,500,000        | \$1,500,000         | \$0                | \$3,000,000              |
| 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>              | <b>\$1,700,000</b>        | <b>\$1,500,000</b> | <b>\$1,500,000</b>  | <b>\$0</b>         | <b>\$3,000,000</b>       |

| Projected Legislation Dates | 2018        | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-------------|------|------|------|------|---------------|
| Prior Legislation           | \$1,500,000 | \$0  | \$0  | \$0  | \$0  | \$3,000,000   |

**Prior Legislation Action**  
Jan 2016, Dec 2016



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |  |
|---------------|---|--------------|--|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |  |
| Project Title | Home Sewer Treatment System Eliminations 2018     |              |  |
| Project ID    | 10190318  | CIP Number   |  |
| Project Type  | Allowance   | Sewer Number |  |

## 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.

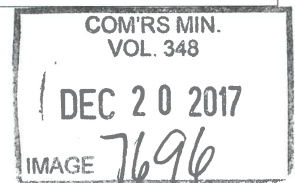
## Description and Location

This program supports the overall HSTS Elimination program in all watersheds by funding planning and petition services for various local and lateral sewer assessment projects as well as design of sewer lateral assessment projects. Work under this allowance is performed on an as-needed basis dependent upon requests from property owners and other stakeholders for petitions and related information. Funded activities include responding to stakeholder inquiries; planning and developing petitions; managing the petition process and communicating petition results; planning for local sewers; planning and design of sewer laterals; preparing and managing legislative process for authorization of local sewer and sewer lateral assessment projects; and management of annual final assessment process.

| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$220,000                 | \$0               | \$300,000           | \$0                | \$300,000                |
| Design                    | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Pre-Construction Services | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Miscellaneous Expense     | \$0                       | \$0               | \$20,000            | \$0                | \$20,000                 |
| Right-of-Way              | \$0                       | \$0               | \$20,000            | \$0                | \$20,000                 |
| 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>\$220,000</b>          | <b>\$0</b>        | <b>\$340,000</b>    | <b>\$0</b>         | <b>\$340,000</b>         |

| Projected Legislation Dates | 2018      | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-----------|------|------|------|------|---------------|
| Prior Legislation           | \$0       | \$0  | \$0  | \$0  | \$0  | \$0           |
|                             | \$340,000 | \$0  | \$0  | \$0  | \$0  | \$340,000     |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati                     |              |          |
| Project Title | Home Sewage Treatment System Eliminations 2018, Design & Construction |              |          |
| Project ID    | 10190418  | CIP Number   | 10190418 |
| Project Type  | Allowance   | Sewer Number | 6752     |

## Purpose and Justification

Elimination of failing or inadequate home sewage treatment systems improves the water quality of all watersheds in the district and is accomplished by construction of new local sewers and new laterals by the assessment sewer process. Local sewer assessment projects and sewer lateral assessment projects eliminate home sewage treatment systems by converting properties to central sewer service, thereby reducing the discharge of pollutants to WWIP watersheds. Failing and inadequate HSTS are a source of pollutants that has been linked to dry weather bacterial exceedances.

## Impact to Operating Budget

None

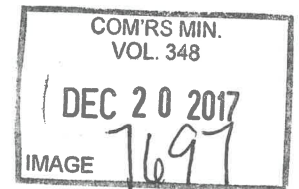
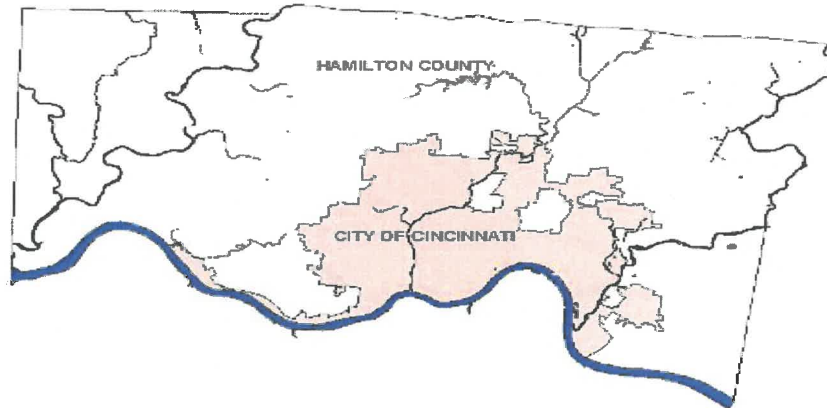
## Description and Location

This allowance supports the overall HSTS Elimination program by funding design and construction of various local sewer assessment projects and construction of various sewer lateral assessment projects in all district watersheds. Assessment sewer projects are initiated based on MSD Rules & 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. Design and construction of individual local sewer assessment projects and construction of individual sewer lateral assessment projects undergo public review and evaluation through legislative review and approval by the Board of County Commissioners. Funding of planning, petition services, and final assessment of local sewer and sewer lateral assessment projects as well as design of sewer lateral assessment projects is through a related allowance known as Home Sewage Treatment System Eliminations 2018,

| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Design                    | \$0                       | \$0               | \$138,000           | \$0                | \$138,000                |
| Pre-Construction Services | \$0                       | \$0               | \$138,000           | \$0                | \$138,000                |
| Miscellaneous Expense     | \$0                       | \$0               | \$68,000            | \$0                | \$68,000                 |
| Right-of-Way              | \$0                       | \$0               | \$138,000           | \$0                | \$138,000                |
| Construction              | \$898,000                 | \$0               | \$898,000           | \$0                | \$898,000                |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$0                       | \$0               | \$138,000           | \$0                | \$138,000                |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$898,000</b>          | <b>\$0</b>        | <b>\$1,518,000</b>  | <b>\$0</b>         | <b>\$1,518,000</b>       |

| Projected Legislation Dates | 2018 | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|------|------|------|------|------|---------------|
| Prior Legislation           | \$0  | \$0  | \$0  | \$0  | \$0  | \$1,518,000   |

Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | Program Management and Support Services 2018      |              |          |
| Project ID    | 10199018  | CIP Number   | 10199018 |
| Project Type  | Allowance   | Sewer Number |          |

## Purpose and Justification

This project supports the internal efforts, supplemental staff and professional services necessary to carry out the Wet Weather Program. The activities will include project and program scheduling, project estimating, project controls, risk management efforts, program communications and outreach services.

## Impact to Operating Budget

None.

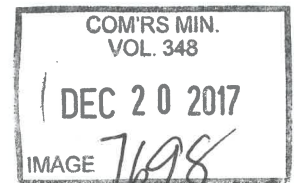
## Description and Location

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               | \$1,850,000         | \$0                | \$1,850,000              |
| 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>\$1,850,000</b>  | <b>\$0</b>         | <b>\$1,850,000</b>       |

| Projected Legislation Dates | 2018        | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-------------|------|------|------|------|---------------|
| Prior Legislation           | \$0         | \$0  | \$0  | \$0  | \$0  | \$0           |
|                             | \$1,850,000 | \$0  | \$0  | \$0  | \$0  | \$1,850,000   |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati       |              |          |
| Project Title | Hamilton County Utility Oversight and Coordination 2018 |              |          |
| Project ID    | 10199118  | CIP Number   | 10199118 |
| Project Type  | Allowance   | Sewer Number |          |

## Purpose and Justification

Hamilton County, as owner of the MSDGC and as party to the Consent Decree, will expend significant funds executing the Wet Weather Improvement Program "WWIP" as defined in the Consent Decree. To ensure that projects being built adhere to the WWIP and are cost effective and on schedule, a Monitor team has been created to help oversee the capital program. The Monitor team consists of County staff, consultants and attorneys.

## Impact to Operating Budget

None.

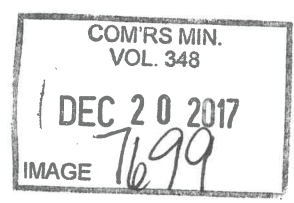
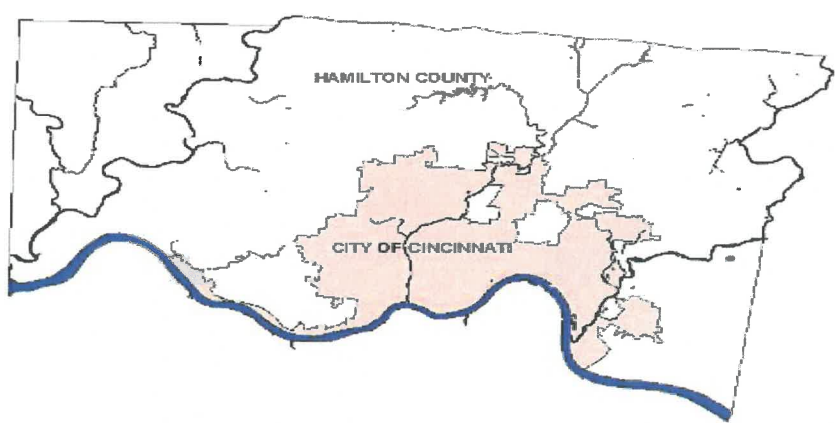
## Description and Location

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               | \$1,000,000         | \$0                | \$1,000,000              |
| 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>\$1,000,000</b>  | <b>\$0</b>         | <b>\$1,000,000</b>       |

| Projected Legislation Dates | 2018 | 2019        | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|------|-------------|------|------|------|---------------|
| Prior Legislation           | \$0  | \$1,000,000 | \$0  | \$0  | \$0  | \$1,000,000   |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | CSO 408 and 413 HW DW Protection                  |              |          |
| Project ID    | 10230640  | CIP Number   | 10230640 |
| Project Type  | CSO Improvement/Elim                              | Sewer Number | 6745     |

## Purpose and Justification

This project is required by the Wet Weather Consent Decree. CSO 408 and CSO 413 are in the High Water Dry Weather (HW DW) program and require upgrading in accordance with Indices 238 and 239 of Attachment 2 of the Final WWIP. The outfalls for CSO 408 and CSO 413 are submerged preventing regular inspection and allowing potential intrusion of river water into the collection system. An upgrade to both outfalls will address these concerns.

## Impact to Operating Budget

None

## Description and Location

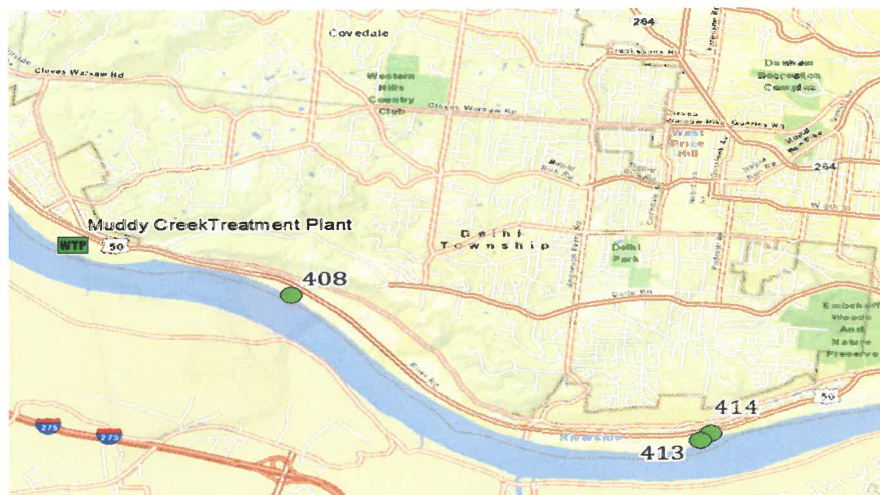
This project will upgrade the outfalls for CSO 408 and CSO 413 for improved high water dry weather control. This project is located in the River Road sewer shed of the Muddy Creek Basin and the Riverside neighborhood of the City of Cincinnati.

| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Design                    | \$225,800                 | \$0               | \$245,600           | \$0                | \$245,600                |
| Pre-Construction Services | \$64,300                  | \$0               | \$69,700            | \$0                | \$69,700                 |
| Miscellaneous Expense     | \$87,200                  | \$0               | \$94,500            | \$0                | \$94,500                 |
| Right-of-Way              | \$108,100                 | \$0               | \$117,100           | \$0                | \$117,100                |
| Construction              | \$1,531,200               | \$0               | \$0                 | \$1,659,300        | \$1,659,300              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$73,200                  | \$0               | \$0                 | \$79,300           | \$79,300                 |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$2,089,800</b>        | <b>\$0</b>        | <b>\$526,900</b>    | <b>\$1,738,600</b> | <b>\$2,265,500</b>       |

## Projected Legislation Dates

| Prior Legislation | 2018 | 2019      | 2020        | 2021 | 2022 | Project Total |
|-------------------|------|-----------|-------------|------|------|---------------|
|                   | \$0  | \$526,900 | \$1,738,600 | \$0  | \$0  | \$2,265,500   |

## Prior Legislation Action





# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | CSO 125 Stream Separation Ph C                    |              |          |
| Project ID    | 10240019  | CIP Number   | 10240019 |
| Project Type  | CSO Improvement/Elim                              | Sewer Number | 6108     |

## Purpose and Justification

As part of the West Fork source control projects for the LM CPR, 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 LM CPR will reduce overflow volumes in the entire West Fork watershed by 173 million gallons in a typical year, based on model version 3.2(LM CPR Study Report 2012).

## Impact to Operating Budget

None.

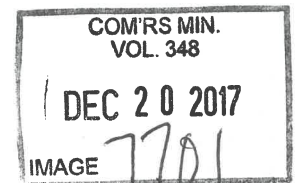
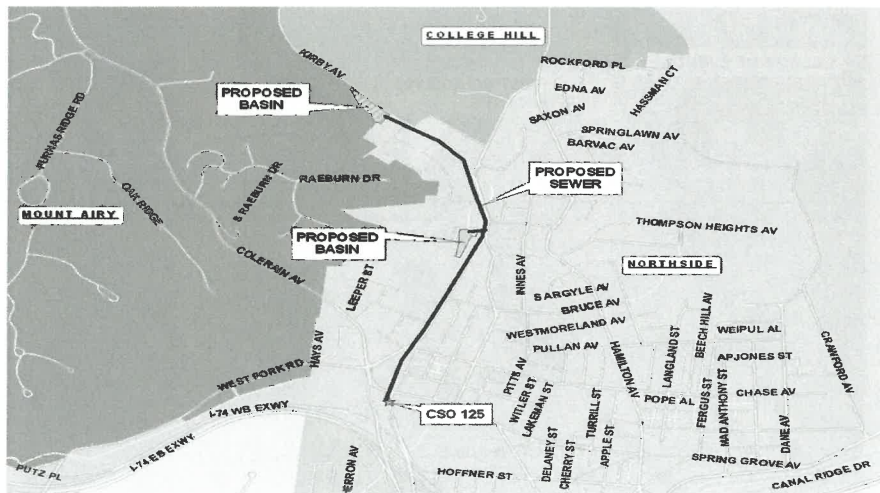
## Description and Location

This project consists of two stormwater detention basins, approximately 4,700 lf of basin outlet pipe, approximately 1500 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, 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               | \$186,400           | \$0                | \$186,400                |
| Right-of-Way              | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction              | \$0                       | \$0               | \$6,181,000         | \$0                | \$6,181,000              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$0                       | \$0               | \$402,500           | \$0                | \$402,500                |
| Interest / Financing      | \$0                       | \$0               | \$102,100           | \$0                | \$102,100                |
| <b>Total</b>              | <b>\$0</b>                | <b>\$0</b>        | <b>\$6,872,000</b>  | <b>\$0</b>         | <b>\$6,872,000</b>       |

| Projected Legislation Dates | 2018 | 2019        | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|------|-------------|------|------|------|---------------|
| Prior Legislation           | \$0  | \$6,872,000 | \$0  | \$0  | \$0  | \$6,872,000   |

Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| 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

None

## Description and Location

This project will improve the SSO 700 Facility by providing an additional storage tank, new storage tank piping, CEHRS solids pump station, interceptor chamber combined outfall sewer hydraulics controls, support system hydraulics, PACL storage tank, polymer system upgrade, coagulant metering pump replacement, water pressure booster system, foam control, electrical system improvements in support of upgrades, treatment and UV building HVAC system, and evaluation of the existing UV system. This project will also provide permanent access for construction and day to day operation traffic to the site. This project is located at 420 Cavett Drive in the City of Reading, Hamilton County, Ohio

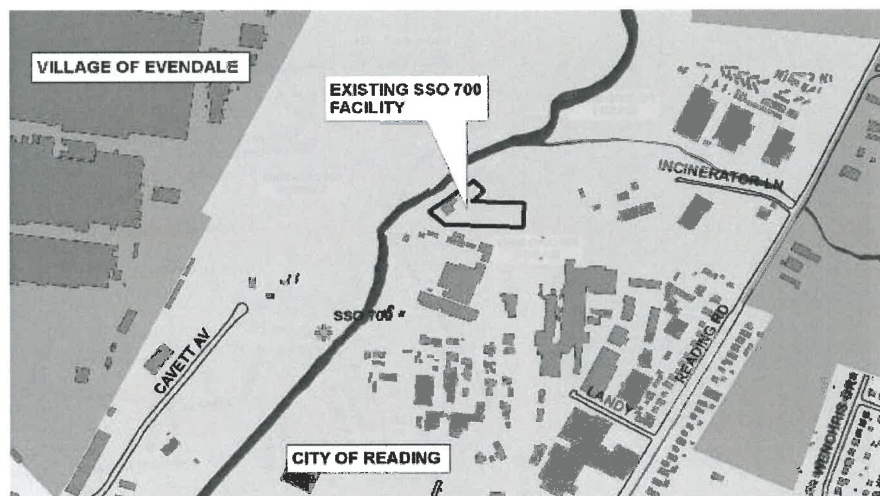
| Cost Description          | Original Project Estimate | Prior Legislation  | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|--------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$0                       | \$0                | \$0                 | \$0                | \$0                      |
| Design                    | \$0                       | \$635,300          | \$0                 | \$0                | \$635,300                |
| Pre-Construction Services | \$221,000                 | \$221,000          | \$0                 | \$0                | \$221,000                |
| Miscellaneous Expense     | \$100,000                 | \$100,000          | \$600,000           | \$0                | \$700,000                |
| Right-of-Way              | \$50,000                  | \$75,000           | \$0                 | \$0                | \$75,000                 |
| Construction              | \$7,380,200               | \$0                | \$9,489,442         | \$0                | \$9,489,442              |
| Program Management        | \$0                       | \$106              | \$0                 | \$0                | \$106                    |
| Construction Services     | \$664,300                 | \$0                | \$1,897,888         | \$0                | \$1,897,888              |
| Interest / Financing      | \$465,000                 | \$0                | \$335,854           | \$0                | \$335,854                |
| <b>Total</b>              | <b>\$8,880,500</b>        | <b>\$1,031,406</b> | <b>\$12,323,184</b> | <b>\$0</b>         | <b>\$13,354,590</b>      |

## Projected Legislation Dates

| Prior Legislation | 2018         | 2019 | 2020 | 2021 | 2022 | Project Total |
|-------------------|--------------|------|------|------|------|---------------|
| \$1,031,406       | \$12,323,184 | \$0  | \$0  | \$0  | \$0  | \$13,354,590  |

## Prior Legislation Action

Jan 2013, May 2014, Dec 2016



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| 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.

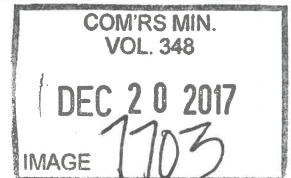
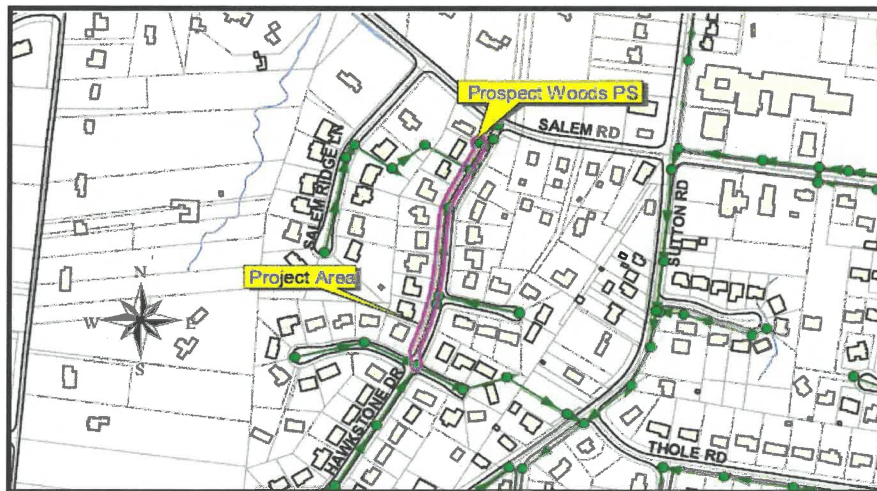
## Description and Location

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 within 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                  | \$48,000          | \$0                 | \$0                | \$48,000                 |
| 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               | \$114,100           | \$0                | \$114,100                |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$1,108,637</b>        | <b>\$330,499</b>  | <b>\$854,600</b>    | <b>\$0</b>         | <b>\$1,185,099</b>       |

| Projected Legislation Dates | 2018      | 2019      | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-----------|-----------|------|------|------|---------------|
| Prior Legislation           | \$330,499 | \$854,600 | \$0  | \$0  | \$0  | \$1,185,099   |

**Prior Legislation Action**  
Jan 2014, May 2014, Nov 2017



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |
|---------------|---|--------------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |
| Project Title | Columbia Square Development Separation            |              |
| Project ID    | 10270190  | CIP Number   |
| Project Type  | Sewer Separation                                  | Sewer Number |

## Purpose and Justification

This project will convey the storm water from the Columbia Square Development to the Ohio River. It is currently connected to the combined sewer system. The purpose is to reduce the Plan Remaining CSO Volume at CSO 469 to help meet the performance criteria in the Final WWIP.

## Impact to Operating Budget

None.

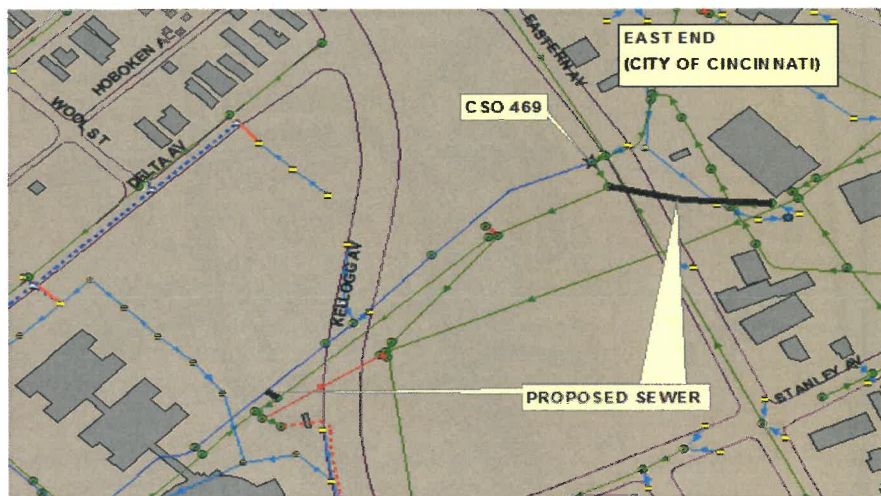
## Description and Location

This project will construct approximately 250 feet of 24-inch storm sewer and approximately 25 feet of 30-inch storm sewer to separate the Columbia Square Development from the combined sewer system. This project is located in the Columbia Tusculum 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                    | \$53,600                  | \$53,600          | \$108,000           | \$0                | \$161,600                |
| Pre-Construction Services | \$8,000                   | \$8,000           | \$88,000            | \$0                | \$96,000                 |
| Miscellaneous Expense     | \$38,200                  | \$38,200          | \$0                 | \$0                | \$38,200                 |
| Right-of-Way              | \$39,300                  | \$39,300          | \$0                 | \$0                | \$39,300                 |
| Construction              | \$268,000                 | \$0               | \$0                 | \$415,000          | \$415,000                |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$12,600                  | \$0               | \$0                 | \$63,000           | \$63,000                 |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$419,700</b>          | <b>\$139,100</b>  | <b>\$196,000</b>    | <b>\$478,000</b>   | <b>\$813,100</b>         |

| Projected Legislation Dates | 2018      | 2019      | 2020      | 2021 | 2022 | Project Total |
|-----------------------------|-----------|-----------|-----------|------|------|---------------|
| Prior Legislation           | \$139,100 | \$196,000 | \$478,000 | \$0  | \$0  | \$813,100     |

**Prior Legislation Action**  
Jan 2016



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| 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 (Ph A); sewer separation via installation of 2,050 lf combined, 700 lf sanitary and 900 lf storm sewers (Ph A2); sewer separation via installation of 1950 lf combined and 350 lf of sanitary (Ph A3); a storage facility (Ph B); and sewer separation along Winton Rd via installation of 4,700 lf storm sewer, and 2,200 lf sanitary sewer (Ph C). Ph A2 (Project ID 11243142) had its scope and budget subdivided from Ph A due to design schedule, ROW acquisition and specialized construction of the basins of Ph A. The overall LMCPR Bundle estimate is currently under the original \$244M 2006 budget.

## Impact to Operating Budget

None.

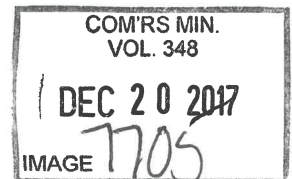
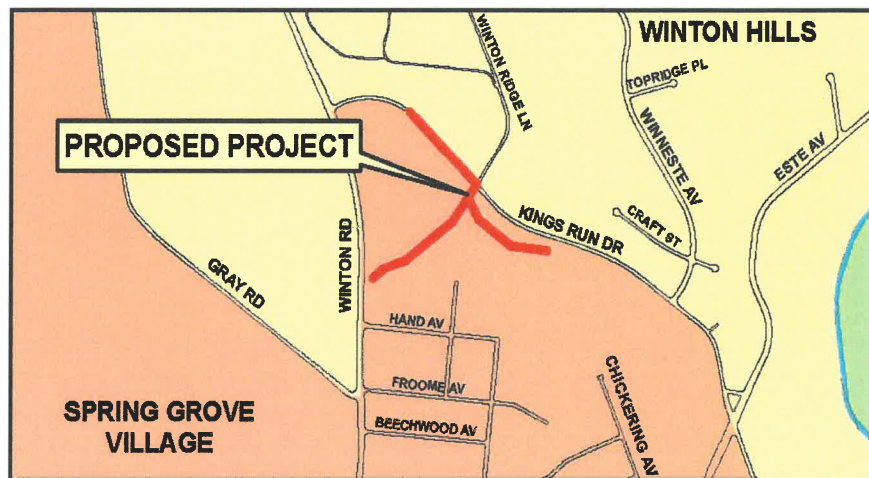
## Description and Location

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, 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                       | \$19,000          | \$0                 | \$0                | \$19,000                 |
| Right-of-Way              | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction              | \$5,209,000               | \$0               | \$3,361,000         | \$0                | \$3,361,000              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$250,700                 | \$0               | \$265,400           | \$0                | \$265,400                |
| Interest / Financing      | \$98,000                  | \$0               | \$59,000            | \$0                | \$59,000                 |
| <b>Total</b>              | <b>\$5,557,700</b>        | <b>\$19,000</b>   | <b>\$3,685,400</b>  | <b>\$0</b>         | <b>\$3,704,400</b>       |

| Projected Legislation Dates | 2018        | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-------------|------|------|------|------|---------------|
| Prior Legislation           | \$19,000    | \$0  | \$0  | \$0  | \$0  | \$3,704,400   |
|                             | \$3,685,400 |      |      |      |      |               |

**Prior Legislation Action**  
Jan 2016



# 2018 ASSET Projects





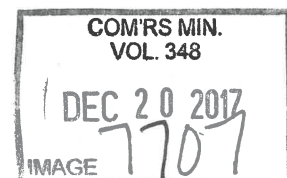
## 2018 Projects

PROPOSED 12/19/17

# Metropolitan Sewer District of Greater Cincinnati

## ASSET Projects

| Project ID                              | CIP Type | Project Type | Project Name  | MSD                 | Other      | Total               | Page |
|---|----------|--------------|---|---------------------|------------|---------------------|------|
| 10221245                                | ASSET    | FAC          | Taylor Creek WWTP Disinfection Upgrade (Construction)                                     | \$1,530,000         | \$0        | \$1,530,000         | 58   |
| 10230155                                | ASSET    | SEP          | Darwin Avenue Sewer Backup Remediation (HN 3520) (Construction)                           | \$60,200            | \$0        | \$60,200            | 59   |
| 10240055                                | ASSET    | FAC          | MCWWTP Liquid Sludge Storage Tank Covers and Odor Control (Design,Construction)           | \$4,668,000         | \$0        | \$4,668,000         | 60   |
| 10240245                                | ASSET    | FAC          | Mill Creek WWTP Service Water (NPW) Reliability and Service Upgrade (Design,Construction) | \$7,057,300         | \$0        | \$7,057,300         | 61   |
| 10240320                                | ASSET    | REP          | Wilder Avenue Sewer Replacement (Design)  | \$70,000            | \$0        | \$70,000            | 62   |
| 10240405                                | ASSET    | PSE          | Ponderosa Woods Pump Station Elimination (Construction)                                   | \$512,000           | \$0        | \$512,000           | 63   |
| 10240430                                | ASSET    | REP          | Berkley Avenue Sewer Replacement (Construction)   | \$728,860           | \$0        | \$728,860           | 64   |
| 10240455                                | ASSET    | REP          | Spring Grove Avenue Sewer Replacement and Rehabilitation (Construction)                   | \$550,900           | \$0        | \$550,900           | 65   |
| 10240526                                | ASSET    | REP          | Cypress St - Ashland Av to 250 feet east Sewer Replacement (Construction)                 | \$58,800            | \$0        | \$58,800            | 66   |
| 10240550                                | ASSET    | REP          | Pardee Alley Sewer Replacement-Oswald Al to 200' north (Construction)                     | \$209,900           | \$0        | \$209,900           | 67   |
| 10240590                                | ASSET    | FAC          | Mill Creek WWTP Main Substation Improvements (Construction)                               | \$1,208,900         | \$0        | \$1,208,900         | 68   |
| 10240665                                | ASSET    | FAC          | Mill Creek WWTP Septage Receiving Station Odor Control Improvements (Construction)        | \$1,506,000         | \$0        | \$1,506,000         | 69   |
| 10270145                                | ASSET    | REP          | Columbia Parkway at Delta Sewer Replacement (Construction)                                | \$500,600           | \$0        | \$500,600           | 70   |
| 10280238                                | ASSET    | ALW          | Hydraulic Modeling 2018 (Planning)  | \$700,000           | \$0        | \$700,000           | 71   |
| 10280318                                | ASSET    | ALW          | Emergency Sewer Repairs 2018 (Construction)   | \$6,000,000         | \$0        | \$6,000,000         | 72   |
| 10280505                                | ASSET    | PSE          | Pump Station Telemetry System Upgrades (Design)   | \$54,200            | \$0        | \$54,200            | 73   |
| 10280518                                | ASSET    | ALW          | WWC High Risk Asset Renewal 2018 (Construction)   | \$6,000,000         | \$0        | \$6,000,000         | 74   |
| 10280608                                | ASSET    | ALW          | Building Sewer Renewal Program 2018 (Construction)  | \$2,000,000         | \$0        | \$2,000,000         | 75   |
| 10280718                                | ASSET    | ALW          | Critical Asset Management Projects 2018 (Construction)                                    | \$6,000,000         | \$0        | \$6,000,000         | 76   |
| 10282018                                | ASSET    | ALW          | CIP Project Planning 2018 (Planning)  | \$1,000,000         | \$0        | \$1,000,000         | 77   |
| <b>Total Cost for 20 ASSET Projects</b> |          |              |   | <b>\$40,415,660</b> | <b>\$0</b> | <b>\$40,415,660</b> |      |



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | Taylor Creek WWTP Disinfection Upgrade            |              |          |
| Project ID    | 10221245  | CIP Number   | 10221245 |
| Project Type  | Treatment Facility                                | Sewer Number | 6732     |

## Purpose and Justification

The Taylor Creek WWTP requires additional UV disinfection equipment to comply with the new 2016 NPDES permit limit for E. coli while also meeting the redundancy required by the Ten State Standards. The existing single channel configuration may not provide adequate disinfection for flows under all flow conditions, specifically in wet weather and low flows. These flow conditions can result in the use of a bypass channel that does not utilize disinfection before discharging into the Great Miami River or the shutdown of the UV system due to insufficient fluid cover over the UV bulbs. These instances put the Taylor Creek WWTP at risk for NPDES permit violations.

## Impact to Operating Budget

None.

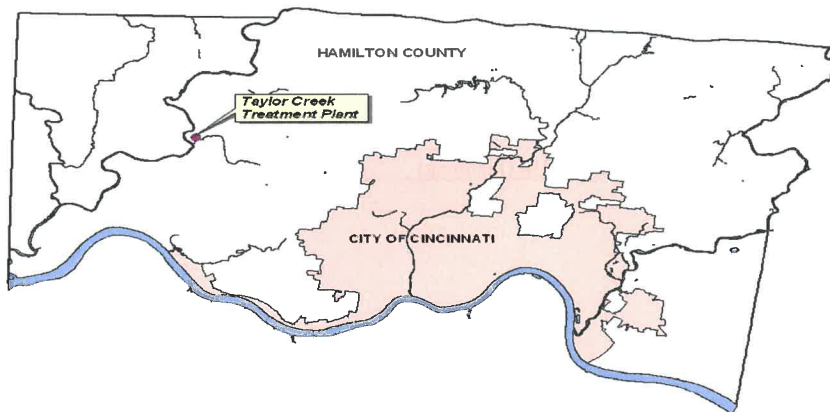
## Description and Location

This project will provide reliable disinfection to comply with the new NPDES permit requirements for Taylor Creek WWTP, with the installation of two new banks of UV bulbs in the existing second channel disinfection channel. This project is located at the Taylor Creek WWTP in Miami 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                    | \$108,000                 | \$108,000         | \$0                 | \$0                | \$108,000                |
| Pre-Construction Services | \$19,000                  | \$55,000          | \$0                 | \$0                | \$55,000                 |
| Miscellaneous Expense     | \$0                       | \$20,000          | \$0                 | \$0                | \$20,000                 |
| Right-of-Way              | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction              | \$908,000                 | \$0               | \$1,270,000         | \$0                | \$1,270,000              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$264,000                 | \$0               | \$260,000           | \$0                | \$260,000                |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$1,299,000</b>        | <b>\$183,000</b>  | <b>\$1,530,000</b>  | <b>\$0</b>         | <b>\$1,713,000</b>       |

| Projected Legislation Dates | 2018        | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-------------|------|------|------|------|---------------|
| Prior Legislation           | \$183,000   | \$0  | \$0  | \$0  | \$0  | \$1,713,000   |
|                             | \$1,530,000 | \$0  | \$0  | \$0  | \$0  | \$1,713,000   |

**Prior Legislation Action**  
Jan 2016, Nov 2017





# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

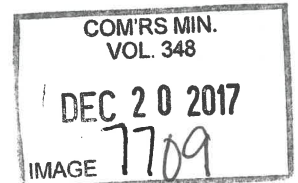
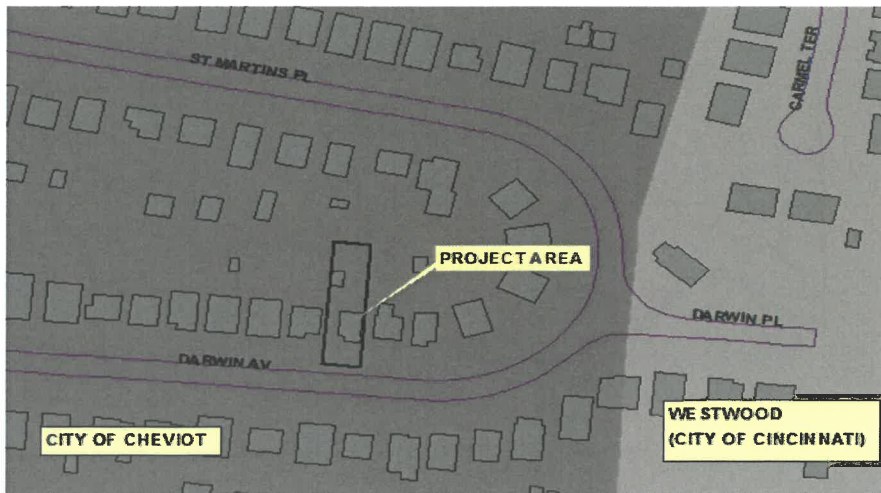
|  |   |              |          |
|--|---|--------------|----------|
| Department   | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title  | Darwin Avenue Sewer Backup Remediation (HN 3520)  |              |          |
| Project ID   | 10230155  | CIP Number   | 10230155 |
| Project Type   | Sewer Separation                                  | Sewer Number | 6490     |
| <b>Impact to Operating Budget</b>  |   |              |          |
| None.  |   |              |          |
| <b>Description and Location</b>  |   |              |          |
| 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. |   |              |          |

**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".

| 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                  | \$27,000          | \$0                 | \$0                | \$27,000                 |
| 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               | \$51,600            | \$0                | \$51,600                 |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$0                       | \$0               | \$8,600             | \$0                | \$8,600                  |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$195,600</b>          | <b>\$155,700</b>  | <b>\$60,200</b>     | <b>\$0</b>         | <b>\$215,900</b>         |

| Projected Legislation Dates | 2018      | 2019     | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-----------|----------|------|------|------|---------------|
| Prior Legislation           | \$155,700 | \$60,200 | \$0  | \$0  | \$0  | \$215,900     |

**Prior Legislation Action**  
 Nov 2015, Aug 2017



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

Department Metropolitan Sewer District of Greater Cincinnati  
 Project Title MCWWTP Liquid Sludge Storage Tank Covers and Odor Control

Project ID 10240055 CIP Number 10240055  
 Project Type Treatment Facility Sewer Number 6667

## Purpose and Justification

To replace the existing covers that have exceeded their useful life and are a clear and present danger to employees. The replacement will also allow for new odor control to be provided to capture and treat the emissions that are currently untreated.

## Impact to Operating Budget

None.

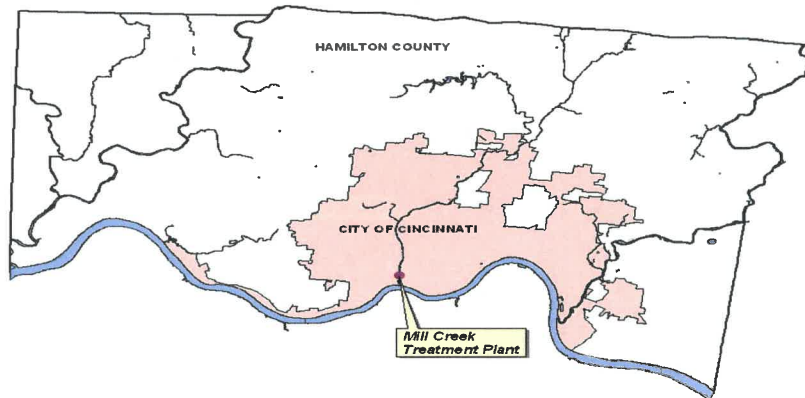
## Description and Location

This project will provide an engineering design for new covers for existing sludge holding tanks A1 and A2. The scope will include demolition of the existing covers, design of the new covers, and a new odor control system to capture and treat odorous air from the two tanks. All necessary Structural, Electrical, I&C, and Mechanical drawings and specifications are to be included. Services for construction administration will also include submittal review, meetings, bidding assistance, permits, SCADA, and training. This project is located at the Mill Creek WWTP 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                    | \$340,000                 | \$0               | \$340,000           | \$0                | \$340,000                |
| Pre-Construction Services | \$70,000                  | \$0               | \$70,000            | \$0                | \$70,000                 |
| Miscellaneous Expense     | \$40,000                  | \$0               | \$40,000            | \$0                | \$40,000                 |
| Right-of-Way              | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction              | \$3,500,000               | \$0               | \$3,500,000         | \$0                | \$3,500,000              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$718,000                 | \$0               | \$718,000           | \$0                | \$718,000                |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$4,668,000</b>        | <b>\$0</b>        | <b>\$4,668,000</b>  | <b>\$0</b>         | <b>\$4,668,000</b>       |

| Projected Legislation Dates | 2018        | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-------------|------|------|------|------|---------------|
| Prior Legislation           | \$0         | \$0  | \$0  | \$0  | \$0  | \$0           |
|                             | \$4,668,000 | \$0  | \$0  | \$0  | \$0  | \$4,668,000   |

Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| 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.

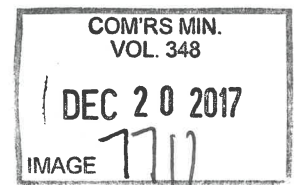
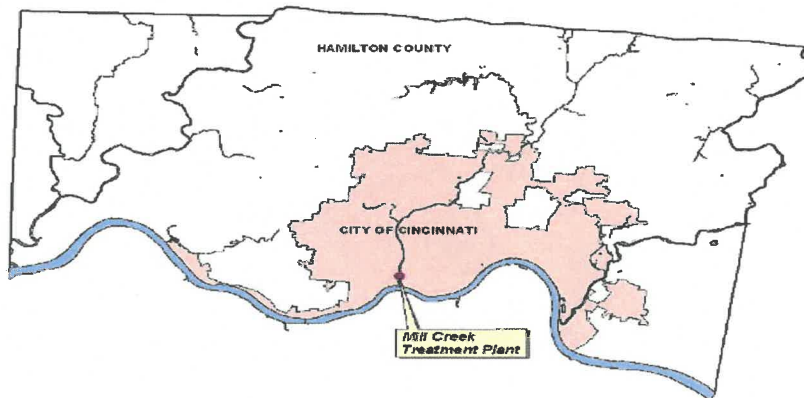
## Description and Location

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                 | \$554,024         | \$0                 | \$0                | \$554,024                |
| 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               | \$5,660,000         | \$0                | \$5,660,000              |
| Program Management        | \$0                       | \$45,664          | \$0                 | \$0                | \$45,664                 |
| Construction Services     | \$175,000                 | \$0               | \$1,160,000         | \$0                | \$1,160,000              |
| Interest / Financing      | \$218,000                 | \$0               | \$218,000           | \$0                | \$218,000                |
| <b>Total</b>              | <b>\$5,150,000</b>        | <b>\$745,813</b>  | <b>\$7,057,300</b>  | <b>\$0</b>         | <b>\$7,803,113</b>       |

| Projected Legislation Dates | 2018      | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-----------|------|------|------|------|---------------|
| Prior Legislation           | \$745,813 | \$0  | \$0  | \$0  | \$0  | \$7,803,113   |

**Prior Legislation Action**  
Dec 2011, May 2014, May 2016, Jun 2016, Sep 2017



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

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

## 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

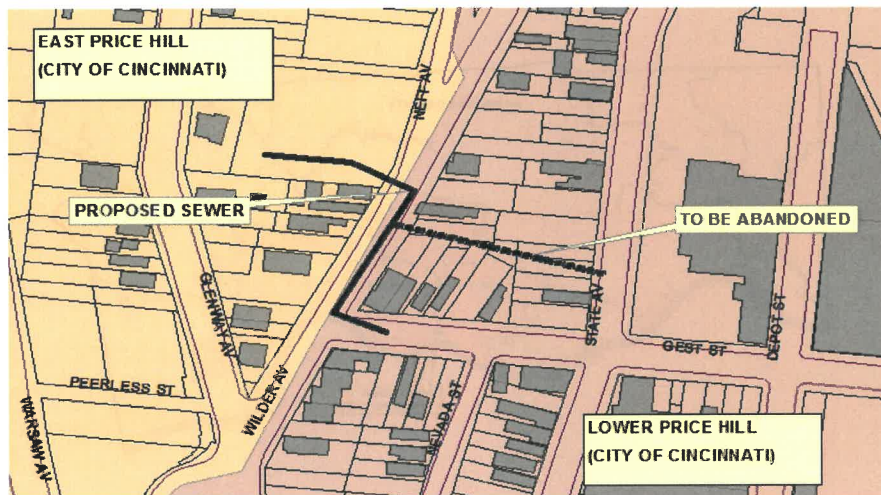
This project will replace and or rehabilitate 549 feet of existing stone combined sewer. A new sewer section may be built on a slope that is less steep and located off private property. This project is located in the Lower Price Hill neighborhood of the City of Cincinnati. The project crosses Wilder 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                  | \$231,305         | \$0                 | \$0                | \$231,305                |
| Pre-Construction Services | \$7,000                   | \$130,095         | \$70,000            | \$0                | \$200,095                |
| 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                 | \$507,000          | \$507,000                |
| Program Management        | \$0                       | \$13,818          | \$0                 | \$0                | \$13,818                 |
| Construction Services     | \$29,000                  | \$0               | \$0                 | \$53,000           | \$53,000                 |
| Interest / Financing      | \$2,000                   | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$296,000</b>          | <b>\$451,218</b>  | <b>\$70,000</b>     | <b>\$560,000</b>   | <b>\$1,081,218</b>       |

| Projected Legislation Dates | 2018      | 2019     | 2020 | 2021      | 2022 | Project Total |
|-----------------------------|-----------|----------|------|-----------|------|---------------|
| Prior Legislation           | \$451,218 | \$70,000 | \$0  | \$560,000 | \$0  | \$0           |
|                             |           |          |      |           |      | \$1,081,218   |

## Prior Legislation Action

Dec 2008, May 2010, Dec 2011, Jan 2014, May 2014, Dec 2016



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

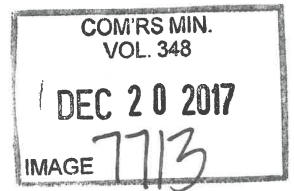
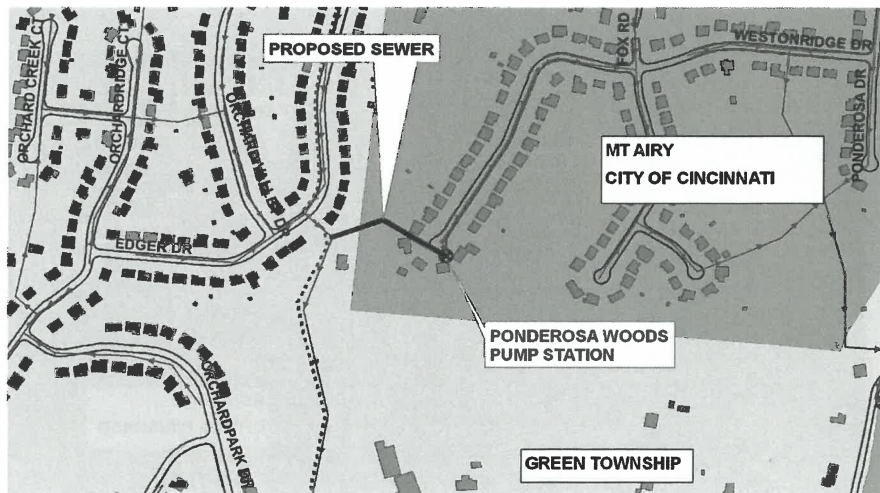
|  |   |              |       |
|--|---|--------------|-------|
| Department   | Metropolitan Sewer District of Greater Cincinnati |              |       |
| Project Title  | Ponderosa Woods Pump Station Elimination          |              |       |
| Project ID   | 10240405  | CIP Number   | 99-38 |
| Project Type   | Pump Station Improvement/Elim                     | Sewer Number | 5063  |
| <b>Impact to Operating Budget</b>  |   |              |       |
| None.  |   |              |       |
| <b>Description and Location</b>  |   |              |       |
| 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. |   |              |       |

**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.

| 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                  | \$53,734          | \$0                 | \$0                | \$53,734                 |
| Pre-Construction Services | \$7,600                   | \$50,900          | \$0                 | \$0                | \$50,900                 |
| Miscellaneous Expense     | \$36,300                  | \$27,666          | \$0                 | \$0                | \$27,666                 |
| Right-of-Way              | \$90,600                  | \$54,900          | \$0                 | \$0                | \$54,900                 |
| Construction              | \$253,200                 | \$0               | \$451,000           | \$0                | \$451,000                |
| Program Management        | \$0                       | \$2,578           | \$0                 | \$0                | \$2,578                  |
| Construction Services     | \$42,100                  | \$0               | \$61,000            | \$0                | \$61,000                 |
| Interest / Financing      | \$3,200                   | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$478,100</b>          | <b>\$212,545</b>  | <b>\$512,000</b>    | <b>\$0</b>         | <b>\$724,545</b>         |

| Projected Legislation Dates | 2018      | 2019      | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-----------|-----------|------|------|------|---------------|
| Prior Legislation           | \$212,545 | \$512,000 | \$0  | \$0  | \$0  | \$724,545     |

**Prior Legislation Action**  
 Jan 2014, May 2014, Mar 2017, Aug 2017



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | Berkley Avenue Sewer Replacement                  |              |          |
| Project ID    | 10240430  | CIP Number   | 10240430 |
| Project Type  | Sewer Replacement                                 | Sewer Number | 6586     |

## 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.

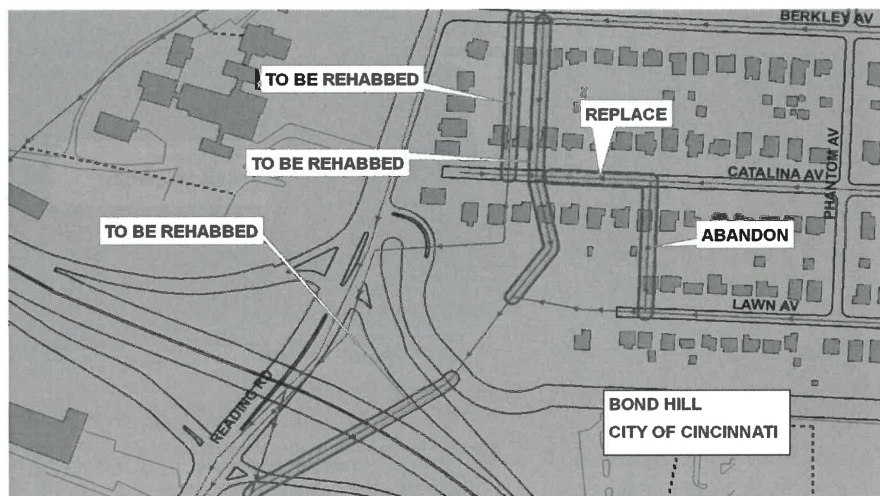
| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$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

| Prior Legislation | 2018      | 2019 | 2020 | 2021 | 2022 | Project Total |
|-------------------|-----------|------|------|------|------|---------------|
| \$227,821         | \$728,860 | \$0  | \$0  | \$0  | \$0  | \$956,681     |

## Prior Legislation Action

Jan 2013, Jan 2014, Mar 2014, May 2014, Oct 2015, Feb 2016, Jul 2017



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |  |              |          |
|---------------|--|--------------|----------|
| 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.

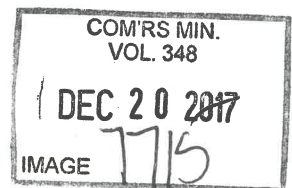
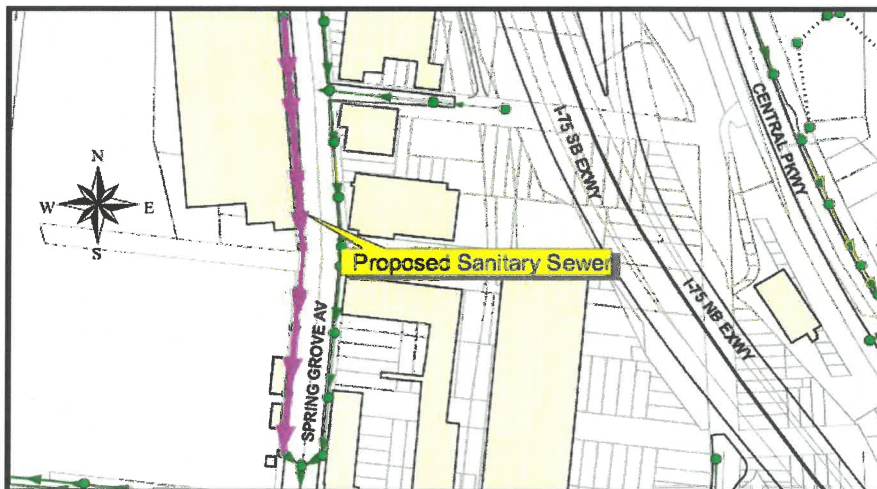
## Description and Location

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                  | \$89,450          | \$0                 | \$0                | \$89,450                 |
| 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               | \$44,700            | \$0                | \$44,700                 |
| Interest / Financing      | \$4,400                   | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$673,000</b>          | <b>\$152,445</b>  | <b>\$550,900</b>    | <b>\$0</b>         | <b>\$703,345</b>         |

| Projected Legislation Dates | 2018      | 2019      | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-----------|-----------|------|------|------|---------------|
| Prior Legislation           | \$152,445 | \$550,900 | \$0  | \$0  | \$0  | \$703,345     |

**Prior Legislation Action**  
Jan 2014, May 2014, Dec 2017



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |  |              |          |
|---------------|--|--------------|----------|
| 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.

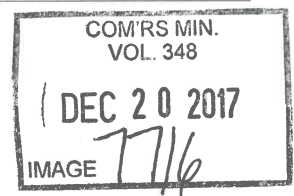
## Description and Location

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                 | \$176,700         | \$58,800            | \$0                | \$235,500                |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$28,800                  | \$25,500          | \$0                 | \$0                | \$25,500                 |
| Interest / Financing      | \$1,000                   | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$215,300</b>          | <b>\$269,200</b>  | <b>\$58,800</b>     | <b>\$0</b>         | <b>\$328,000</b>         |

| Projected Legislation Dates | 2018      | 2019     | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-----------|----------|------|------|------|---------------|
| Prior Legislation           | \$269,200 | \$58,800 | \$0  | \$0  | \$0  | \$328,000     |

| Prior Legislation Action     |
|------------------------------|
| Jan 2014, Nov 2014, Mar 2017 |





# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |  |              |          |
|---------------|--|--------------|----------|
| 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.

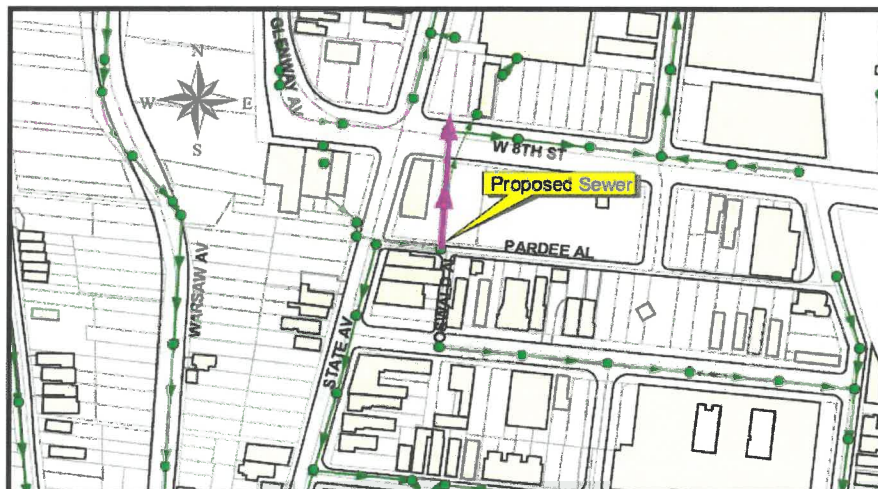
## Description and Location

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                   | \$56,800          | \$0                 | \$0                | \$56,800                 |
| 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>\$218,653</b>  | <b>\$209,900</b>    | <b>\$0</b>         | <b>\$428,553</b>         |

| Projected Legislation Dates | 2018      | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-----------|------|------|------|------|---------------|
| Prior Legislation           | \$218,653 | \$0  | \$0  | \$0  | \$0  | \$428,553     |

**Prior Legislation Action**  
Jan 2014, May 2014, Sep 2014, Nov 2014, Dec 2017



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| 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

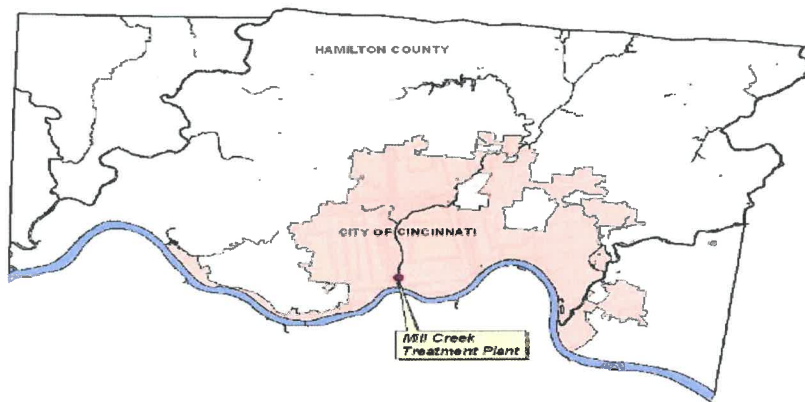
This project will provide improvements for the main substation transformers, power bus and switches, along with revising the electric service entrance, adding power monitoring and transformer isolation wall. Power Building Switchgear will be demolished with feeders extended from the new substation to 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                  | \$58,600           | \$0                 | \$0                | \$58,600                 |
| Right-of-Way              | \$0                       | \$0                | \$0                 | \$0                | \$0                      |
| Construction              | \$2,560,000               | \$5,490,700        | \$1,208,900         | \$0                | \$6,699,600              |
| Program Management        | \$0                       | \$0                | \$0                 | \$0                | \$0                      |
| Construction Services     | \$231,000                 | \$700,000          | \$0                 | \$0                | \$700,000                |
| Interest / Financing      | \$70,000                  | \$188,000          | \$0                 | \$0                | \$188,000                |
| <b>Total</b>              | <b>\$3,506,100</b>        | <b>\$6,720,300</b> | <b>\$1,208,900</b>  | <b>\$0</b>         | <b>\$7,929,200</b>       |

| Projected Legislation Dates | 2018        | 2019        | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-------------|-------------|------|------|------|---------------|
| Prior Legislation           | \$6,720,300 | \$1,208,900 | \$0  | \$0  | \$0  | \$7,929,200   |

## Prior Legislation Action

Jan 2016, Dec 2016, Dec 2017



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

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.

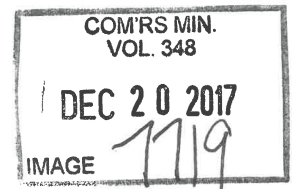
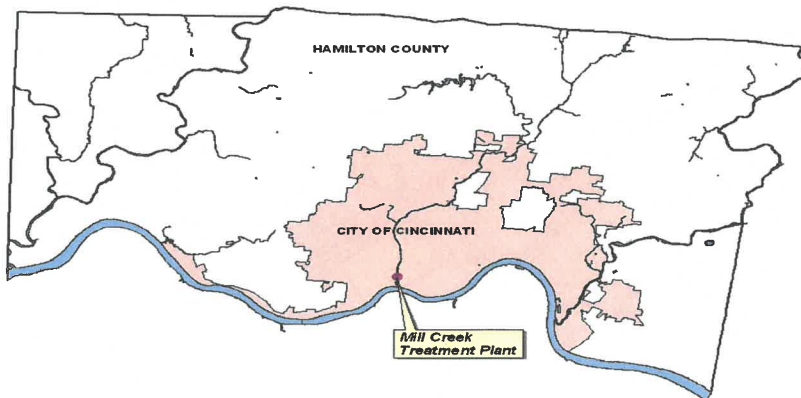
## Description and Location

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                 | \$120,288         | \$0                 | \$0                | \$120,288                |
| Pre-Construction Services | \$34,400                  | \$34,400          | \$0                 | \$0                | \$34,400                 |
| Miscellaneous Expense     | \$27,500                  | \$27,500          | \$0                 | \$0                | \$27,500                 |
| Right-of-Way              | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction              | \$859,800                 | \$0               | \$1,250,000         | \$0                | \$1,250,000              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$154,800                 | \$0               | \$256,000           | \$0                | \$256,000                |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$1,193,400</b>        | <b>\$182,188</b>  | <b>\$1,506,000</b>  | <b>\$0</b>         | <b>\$1,688,188</b>       |

| Projected Legislation Dates | 2018      | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-----------|------|------|------|------|---------------|
| Prior Legislation           | \$182,188 | \$0  | \$0  | \$0  | \$0  | \$1,688,188   |

**Prior Legislation Action**  
 Jan 2017, May 2017



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |      |
|---------------|---|--------------|------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |      |
| Project Title | Columbia Parkway at Delta Sewer Replacement       |              |      |
| Project ID    | 10270145  | CIP Number   |      |
| Project Type  | Sewer Replacement                                 | Sewer Number | 6419 |

## Purpose and Justification

The existing pipe was installed approximately 100 years ago and is currently experiencing various levels of deformation and four quarter cracking and the sewer segments have been identified as surcharging as frequently as for a 6 month storm. Modeling of the area indicated that overflows occur for as little as a 2 year storm.

## Impact to Operating Budget

None.

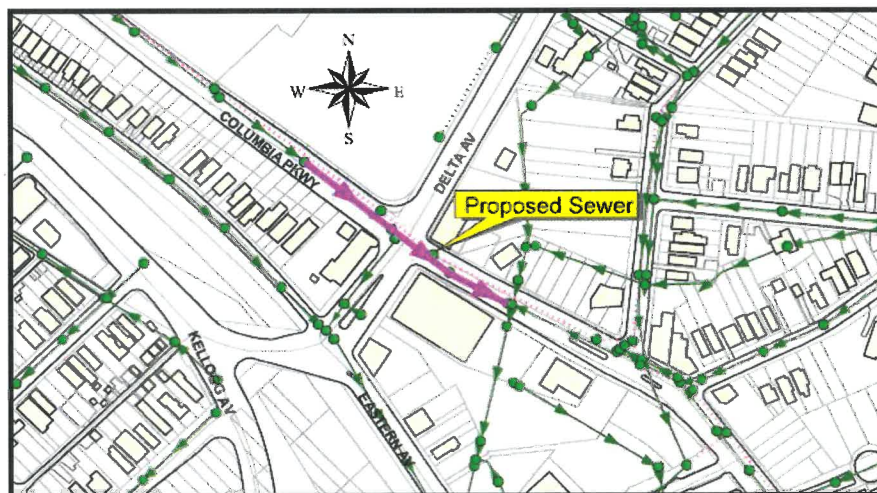
## Description and Location

This project will replace 342 feet of existing 12-inch and 140 feet of existing 15-inch sewer between MH 40906039-40905036 with 24-Inch sewer, in the existing approximate alignment. This project is located in Columbia Tusculum at the intersection of Columbia Parkway and Delta Avenue, in the City of Cincinnati, Hamilton County, Ohio.

| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$0                       | \$42,361          | \$0                 | \$0                | \$42,361                 |
| Design                    | \$52,800                  | \$80,657          | \$0                 | \$0                | \$80,657                 |
| Pre-Construction Services | \$8,300                   | \$8,300           | \$0                 | \$0                | \$8,300                  |
| Miscellaneous Expense     | \$35,400                  | \$35,400          | \$0                 | \$0                | \$35,400                 |
| Right-of-Way              | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction              | \$276,400                 | \$0               | \$430,000           | \$0                | \$430,000                |
| Program Management        | \$0                       | \$4,771           | \$0                 | \$0                | \$4,771                  |
| Construction Services     | \$22,600                  | \$0               | \$70,600            | \$0                | \$70,600                 |
| Interest / Financing      | \$5,000                   | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | \$400,500                 | \$171,489         | \$500,600           | \$0                | \$672,089                |

| Projected Legislation Dates | 2018      | 2019      | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-----------|-----------|------|------|------|---------------|
| Prior Legislation           | \$171,489 | \$500,600 | \$0  | \$0  | \$0  | \$672,089     |

**Prior Legislation Action**  
Jan 2014, May 2014, Dec 2014, Dec 2017



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |
|---------------|---|--------------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |
| Project Title | Hydraulic Modeling 2018                           |              |
| Project ID    | 10280238  | CIP Number   |
| Project Type  | Allowance   | Sewer Number |

## Purpose and Justification

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.

## Impact to Operating Budget

None.

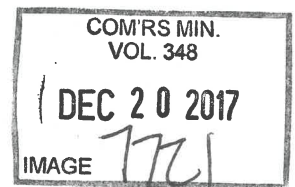
## Description and Location

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.

| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$1,000,000               | \$0               | \$700,000           | \$0                | \$700,000                |
| 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>\$1,000,000</b>        | <b>\$0</b>        | <b>\$700,000</b>    | <b>\$0</b>         | <b>\$700,000</b>         |

| Projected Legislation Dates | 2018 | 2019      | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|------|-----------|------|------|------|---------------|
| Prior Legislation           | \$0  | \$700,000 | \$0  | \$0  | \$0  | \$700,000     |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |
|---------------|---|--------------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |
| Project Title | Emergency Sewer Repairs 2018                      |              |
| Project ID    | 10280318  | CIP Number   |
| Project Type  | Allowance   | Sewer Number |

## Purpose and Justification

This project will allow MSDGC to quickly respond to sudden, unexpected sewer system failures which may threaten the public health, welfare, or safety. Conditions that warrant emergency sewer repairs include cave-ins, structurally failed sewers, manholes or building sewers, sewer backups into private property, sewer overflows that may violate permits and regulations, and imminent danger to structures or real property.

## Impact to Operating Budget

None.

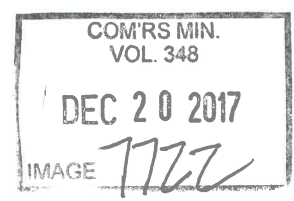
## Description and Location

Emergency sewer system repairs are completed throughout the entire District using competitively bid as-needed sewer repair contracts. This project allows MSD to quickly and efficiently restore and maintain interrupted service while mitigating the risk of additional damages or losses.

| 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              | \$5,000,000               | \$0               | \$5,000,000         | \$0                | \$5,000,000              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$1,000,000               | \$0               | \$1,000,000         | \$0                | \$1,000,000              |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$6,000,000</b>        | <b>\$0</b>        | <b>\$6,000,000</b>  | <b>\$0</b>         | <b>\$6,000,000</b>       |

| Projected Legislation Dates | 2018        | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-------------|------|------|------|------|---------------|
| Prior Legislation           | \$0         | \$0  | \$0  | \$0  | \$0  | \$0           |
|                             | \$6,000,000 | \$0  | \$0  | \$0  | \$0  | \$6,000,000   |

## Prior Legislation Action



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | Pump Station Telemetry System Upgrades            |              |          |
| Project ID    | 10280505  | CIP Number   | 10280505 |
| Project Type  | Pump Station Improvement/Elim                     | Sewer Number |          |

## Purpose and Justification

The purpose of this project is to replace the existing telemetry system that was installed in 1993 for the pump stations throughout the MSD service area. The system has significantly exceeded its expected useful life of 7 to 10 years. Replacement parts have been installed as needed to maintain the system; however the manufacturer of the radio system no longer supports the proprietary control board.

## Impact to Operating Budget

None.

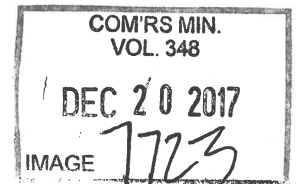
## Description and Location

This project will replace the existing telemetry system at over 100 locations throughout the MSD service area. In addition to complying with NPDES permit monitoring requirements, the new system will provide accurate time stamped data, capture additional data to improve diagnostics and maintenance strategies, mitigate security risks, and reduce maintenance personnel safety risks.

| Cost Description          | Original Project Estimate | Prior Legislation | Current Legislation | Future Legislation | Current Project Estimate |
|---------------------------|---------------------------|-------------------|---------------------|--------------------|--------------------------|
| Planning                  | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Design                    | \$400,000                 | \$439,951         | \$0                 | \$0                | \$439,951                |
| Pre-Construction Services | \$0                       | \$39,000          | \$29,200            | \$0                | \$68,200                 |
| Miscellaneous Expense     | \$0                       | \$0               | \$25,000            | \$0                | \$25,000                 |
| Right-of-Way              | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction              | \$0                       | \$0               | \$0                 | \$3,410,200        | \$3,410,200              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$0                       | \$0               | \$0                 | \$2,055,000        | \$2,055,000              |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$400,000</b>          | <b>\$478,951</b>  | <b>\$54,200</b>     | <b>\$5,465,200</b> | <b>\$5,998,351</b>       |

| Projected Legislation Dates | 2018      | 2019     | 2020 | 2021        | 2022 | Project Total |
|-----------------------------|-----------|----------|------|-------------|------|---------------|
| Prior Legislation           | \$478,951 | \$54,200 | \$0  | \$5,465,200 | \$0  | \$0           |
|                             |           |          |      |             |      | \$5,998,351   |

**Prior Legislation Action**  
Feb 2016, Dec 2016, Sep 2017



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|                      |   |                     |  |
|----------------------|---|---------------------|--|
| <b>Department</b>    | Metropolitan Sewer District of Greater Cincinnati |                     |  |
| <b>Project Title</b> | WWC High Risk Asset Renewal 2018                  |                     |  |
| <b>Project ID</b>    | <b>10280518</b>                                   | <b>CIP Number</b>   |  |
| <b>Project Type</b>  | <b>Allowance</b>                                  | <b>Sewer Number</b> |  |

## Purpose and Justification

This program is a new allowance dedicated to addressing issues with privately owned building sewers located within the public right-of-way. The District's Rules and Regulations require MSDGC to take responsibility for the structural condition of private building sewers located within the public right-of-way. The program will allow the District to respond to sudden, unexpected building sewer failures as well as planned improvements to private building sewers

## Impact to Operating Budget

None.

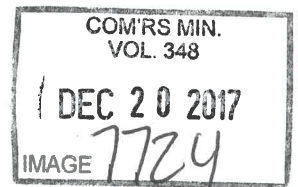
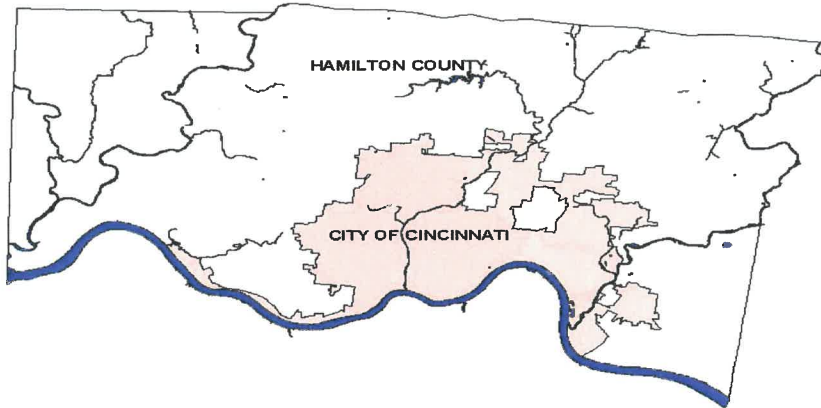
## Description and Location

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 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 work associated with inspection port installations and rehabilitation of privately-owned building sewers within the public right-of-way.

| 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              | \$5,000,000               | \$0               | \$5,000,000         | \$0                | \$5,000,000              |
| Program Management        | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| Construction Services     | \$1,000,000               | \$0               | \$1,000,000         | \$0                | \$1,000,000              |
| Interest / Financing      | \$0                       | \$0               | \$0                 | \$0                | \$0                      |
| <b>Total</b>              | <b>\$6,000,000</b>        | <b>\$0</b>        | <b>\$6,000,000</b>  | <b>\$0</b>         | <b>\$6,000,000</b>       |

| Projected Legislation Dates | 2018        | 2019 | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|-------------|------|------|------|------|---------------|
| Prior Legislation           | \$0         | \$0  | \$0  | \$0  | \$0  | \$0           |
|                             | \$6,000,000 | \$0  | \$0  | \$0  | \$0  | \$6,000,000   |

## Prior Legislation Action





# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|                      |   |                     |
|----------------------|---|---------------------|
| <b>Department</b>    | Metropolitan Sewer District of Greater Cincinnati |                     |
| <b>Project Title</b> | Building Sewer Renewal Program 2018               |                     |
| <b>Project ID</b>    | <b>10280608</b>                                   | <b>CIP Number</b>   |
| <b>Project Type</b>  | <b>Allowance</b>                                  | <b>Sewer Number</b> |

## Purpose and Justification

This program is necessary 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.

## Impact to Operating Budget

None.

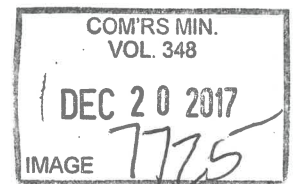
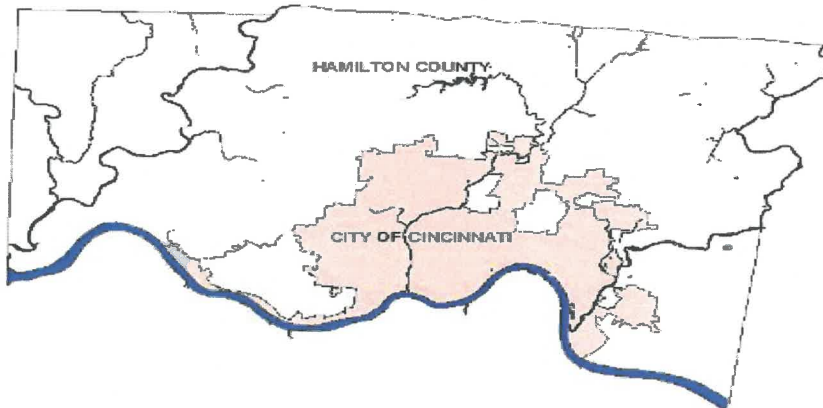
## Description and Location

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 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 work associated with inspection port installations and rehabilitation of privately-owned building sewers within the public right-of-way.

| 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               | \$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>\$0</b>                | <b>\$0</b>        | <b>\$2,000,000</b>  | <b>\$0</b>         | <b>\$2,000,000</b>       |

| Projected Legislation Dates | 2018 | 2019        | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|------|-------------|------|------|------|---------------|
| Prior Legislation           | \$0  | \$2,000,000 | \$0  | \$0  | \$0  | \$2,000,000   |

**Prior Legislation Action**



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |          |
|---------------|---|--------------|----------|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |          |
| Project Title | Critical Asset Management Projects 2018           |              |          |
| Project ID    | 10280718  | CIP Number   | 10280718 |
| Project Type  | Allowance   | Sewer Number |          |

## 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.

## Impact to Operating Budget

None.

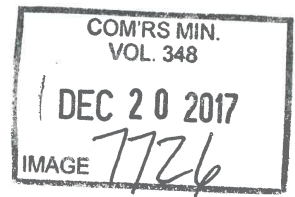
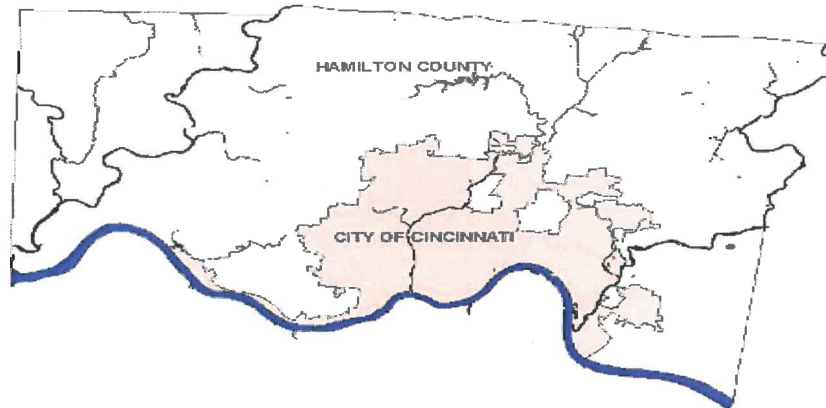
## Description and Location

This allowance is to address critical asset management projects and equipment for the collection system, treatment plants, pumping stations, and we weather facilities. The Asset Renewal Allowance from previous years has been combined with the Critical Asset Management Projects 2018 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 | \$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               | \$6,000,000         | \$0                | \$6,000,000              |
| 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>\$10,000,000</b>       | <b>\$0</b>        | <b>\$6,000,000</b>  | <b>\$0</b>         | <b>\$6,000,000</b>       |

| Projected Legislation Dates | 2018 | 2019        | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|------|-------------|------|------|------|---------------|
| Prior Legislation           | \$0  | \$6,000,000 | \$0  | \$0  | \$0  | \$6,000,000   |

**Prior Legislation Action**



# 2018 Capital Budget and Capital Improvement Program

Tuesday, December 19, 2017

PROPOSED 12/19/17

|               |   |              |  |
|---------------|---|--------------|--|
| Department    | Metropolitan Sewer District of Greater Cincinnati |              |  |
| Project Title | CIP Project Planning 2018                         |              |  |
| Project ID    | 10282018  | CIP Number   |  |
| Project Type  | Allowance   | Sewer Number |  |

## Purpose and Justification

This project will provide capital funding to support planning CIP projects.

## Impact to Operating Budget

None.

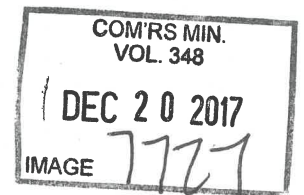
## Description and Location

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                  | \$1,000,000               | \$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>              | <b>\$1,000,000</b>        | <b>\$0</b>        | <b>\$1,000,000</b>  | <b>\$0</b>         | <b>\$1,000,000</b>       |

| Projected Legislation Dates | 2018 | 2019        | 2020 | 2021 | 2022 | Project Total |
|-----------------------------|------|-------------|------|------|------|---------------|
| Prior Legislation           | \$0  | \$1,000,000 | \$0  | \$0  | \$0  | \$1,000,000   |

Prior Legislation Action



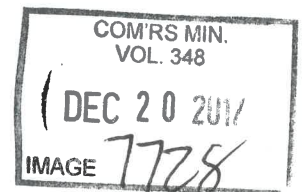


2019 CIP

PROPOSED 12/19/17

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)                                    | \$1,057,400         | \$0        | \$1,057,400         |
| 10130740                                       | WWIP     | FAC          | Werk & Westbourne EHRT Facility (Construction)                           | \$400,000           | \$0        | \$400,000           |
| 10130850                                       | WWIP     | CSO          | Muddy Creek Westbourne HRT Phase A Improvements (Construction)           | \$5,171,300         | \$0        | \$5,171,300         |
| 10140417                                       | WWIP     | ALW          | LMCPR Monitoring and Modeling (Design)                                   | \$1,700,000         | \$0        | \$1,700,000         |
| 10142200                                       | WWIP     | SEP          | CSO 513 Sewer Separation (Construction)                                  | \$2,737,000         | \$0        | \$2,737,000         |
| 10142220                                       | WWIP     | SEP          | CSO 514 Sewer Separation (Construction)                                  | \$1,345,100         | \$0        | \$1,345,100         |
| 10170176                                       | WWIP     | REP          | Stanley Ave Lateral Relocations (Construction)                           | \$155,400           | \$0        | \$155,400           |
| 10170810                                       | WWIP     | FAC          | LMWWTP Electrical Feeders (Design)                                       | \$926,500           | \$0        | \$926,500           |
| 10170813                                       | WWIP     | FAC          | LMWWTP Preliminary Treatment Improvements Phase A (Construction)         | \$14,595,600        | \$0        | \$14,595,600        |
| 10171540                                       | WWIP     | REG          | CSO 135 Elimination (Construction)                                       | \$380,400           | \$0        | \$380,400           |
| 10171560                                       | WWIP     | REG          | CSO 43 Elimination (Construction)  | \$376,200           | \$0        | \$376,200           |
| 10171641                                       | WWIP     | SEP          | CSO 214 Partial Separation (Construction)                                | \$2,718,000         | \$0        | \$2,718,000         |
| 10180119                                       | WWIP     | ALW          | Main Sewer Renewal Program 2019 (Construction)                           | \$2,000,000         | \$0        | \$2,000,000         |
| 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,Design,Easement) | \$340,000           | \$0        | \$340,000           |
| 10199019                                       | WWIP     | ALW          | Program Management and Support Services 2019 (Design)                    | \$3,000,000         | \$0        | \$3,000,000         |
| 10230130                                       | WWIP     | REP          | Dry Weather Channel for SS 937 (Construction)                            | \$3,213,000         | \$0        | \$3,213,000         |
| 10230640                                       | WWIP     | CSO          | CSO 408 and 413 HW DW Protection (Construction)                          | \$1,738,600         | \$0        | \$1,738,600         |
| 10270170                                       | WWIP     | CSO          | CSO 83 and 472 Dynamic Underflow Control (Construction)                  | \$2,296,400         | \$0        | \$2,296,400         |
| 10270190                                       | WWIP     | SEP          | Columbia Square Development Separation (Construction)                    | \$478,000           | \$0        | \$478,000           |
| 10270195                                       | WWIP     | FAC          | Little Miami WWTP Biosolids Disposal (Design)                            | \$2,006,600         | \$0        | \$2,006,600         |
| <b>Total Cost for 21 WWIP Projects in 2019</b> |          |              |  | <b>\$47,935,500</b> | <b>\$0</b> | <b>\$47,935,500</b> |



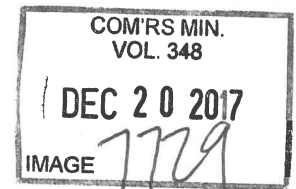


2019 CIP

PROPOSED 12/19/17

Metropolitan Sewer District of Greater Cincinnati  
OTHER Projects

| Project ID                                     | CIP Type | Project Type | Project Name                      | MSD                 | Other      | Total               |
|--|----------|--------------|-----------------------------------|---------------------|------------|---------------------|
| 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> |

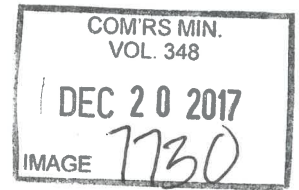




2019 CIP

PROPOSED 12/19/17

Metropolitan Sewer District of Greater Cincinnati  
ASSET Projects



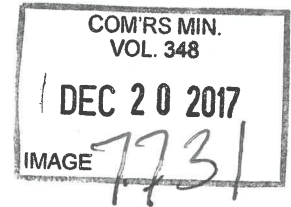
| Project ID | CIP Type | Project Type | Project Name  | MSD         | Other | Total       |
|------------|----------|--------------|---|-------------|-------|-------------|
| 10220054   | AM       | PSE          | Bruestle Avenue Pump Station Elimination (Construction)                           | \$702,200   | \$0   | \$702,200   |
| 10220061   | AM       | SEW          | Whitewater Township Regional Sewer District SR 128 Sewer Extension (Construction) | \$6,458,400 | \$0   | \$6,458,400 |
| 10230150   | AM       | REP          | Addyston Creek and Sewer Rehab (Construction)                                     | \$468,400   | \$0   | \$468,400   |
| 10240275   | AM       | SSO          | SSO 603 and 704 Improvements (Design,Construction)                                | \$3,304,460 | \$0   | \$3,304,460 |
| 10240330   | AM       | REP          | Otte Avenue Sewer Replacement (Construction)                                      | \$797,600   | \$0   | \$797,600   |
| 10240360   | AM       | PSE          | Timbers Pump Station Elimination (Construction)                                   | \$1,417,500 | \$0   | \$1,417,500 |
| 10240365   | AM       | REP          | Quebec Road Sewer Replacement (Construction)                                      | \$428,600   | \$0   | \$428,600   |
| 10240426   | AM       | PSE          | Pleasant Run Pump Station Upgrades (Design,Easement)                              | \$2,741,000 | \$0   | \$2,741,000 |
| 10240473   | AM       | PSE          | Bahama Gardens Pump Station Upgrade (Construction)                                | \$709,000   | \$0   | \$709,000   |
| 10240525   | AM       | REP          | Victory Parkway Sewer Rehabilitation (Construction)                               | \$343,300   | \$0   | \$343,300   |
| 10240600   | AM       | FAC          | Mill Creek WWTP Electrical Arc Flash Protection (Design)                          | \$60,000    | \$0   | \$60,000    |
| 10240625   | AM       | FAC          | MCWWTP Standby Power Distribution System Improvements (Design)                    | \$464,000   | \$0   | \$464,000   |
| 10240660   | AM       | FAC          | Mill Creek WWTP Gravity Thickeners Odor Control (Design,Construction)             | \$926,800   | \$0   | \$926,800   |
| 10240697   | AM       | FAC          | Mill Creek 4.16 kV & 13.2 kV Loop Improvements (Design)                           | \$232,000   | \$0   | \$232,000   |
| 10240710   | AM       | STY          | Fitzpatrick Sewer and Mill Creek Drain Sewer Evaluation (Design,Easement)         | \$1,151,000 | \$0   | \$1,151,000 |
| 10270110   | AM       | REP          | Linwood Avenue Sewer Replacement (Construction)                                   | \$799,500   | \$0   | \$799,500   |
| 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 |
| 10280189   | AM       | ALW          | WWT WO Asset Renewal 2019 (Construction)  | \$2,000,000 | \$0   | \$2,000,000 |
| 10280239   | AM       | ALW          | Hydraulic Modeling 2019 (Planning)  | \$1,200,000 | \$0   | \$1,200,000 |
| 10280609   | AM       | ALW          | Building Sewer Renewal Program 2019 (Construction)                                | \$5,000,000 | \$0   | \$5,000,000 |
| 10280719   | AM       | ALW          | Critical Asset Management Projects 2019 (Construction)                            | \$6,000,000 | \$0   | \$6,000,000 |



**2019 CIP**

PROPOSED 12/19/17

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



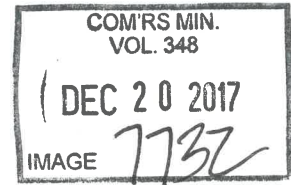
| <b>Project ID</b>                               | <b>CIP Type</b> | <b>Project Type</b> | <b>Project Name</b>   | <b>MSD</b>           | <b>Other</b> | <b>Total</b>         |
|---|-----------------|---------------------|---|----------------------|--------------|----------------------|
| 10281319  | AM              | ALW                 | Prioritized Wastewater Collection System Improvements 2019 (Construction) | \$12,000,000         | \$0          | \$12,000,000         |
| 10282019  | AM              | ALW                 | CIP Project Planning 2019 (Planning)                                      | \$2,500,000          | \$0          | \$2,500,000          |
| <b>Total Cost for 24 ASSET Projects in 2019</b> |                 |                     |   | <b>\$51,501,860</b>  | <b>\$0</b>   | <b>\$51,501,860</b>  |
| <b>Grand Totals for 46 Projects in 2019</b>     |                 |                     |   | <b>\$109,437,360</b> | <b>\$0</b>   | <b>\$109,437,360</b> |



2020 CIP

PROPOSED 12/19/17

Metropolitan Sewer District of Greater Cincinnati  
WWIP Projects



| Project ID                                     | CIP Type | Project Type | Project Name   | MSD                 | Other      | Total               |
|--|----------|--------------|--|---------------------|------------|---------------------|
| 10130780                                       | WWIP     | CSO          | East Branch Muddy Creek Interceptor CSO Relocation Eliminations Phase 1 (Construction) | \$1,859,360         | \$0        | \$1,859,360         |
| 10130840                                       | WWIP     | SEP          | CSO's 411, 412, 413, 414, 415, 416 (Construction)                                      | \$4,082,231         | \$0        | \$4,082,231         |
| 10131021                                       | WWIP     | CSO          | CSO 402-406 Wet Weather Improvements (Construction)                                    | \$14,638,100        | \$0        | \$14,638,100        |
| 10140417                                       | WWIP     | ALW          | LMCPR Monitoring and Modeling (Design)   | \$2,100,000         | \$0        | \$2,100,000         |
| 10180120                                       | WWIP     | ALW          | Main Sewer Renewal Program 2020 (Construction)   | \$2,000,000         | \$0        | \$2,000,000         |
| 10180220                                       | WWIP     | ALW          | Manhole Renewal Program 2020 (Construction)  | \$1,300,000         | \$0        | \$1,300,000         |
| 10180251                                       | WWIP     | REP          | Small Diameter Sewer Rehabilitation - Phase 2 (Construction)                           | \$8,000,000         | \$0        | \$8,000,000         |
| 10180261                                       | WWIP     | REP          | Large Diameter Sewer Rehabilitation - Phase 2 (Construction)                           | \$4,000,000         | \$0        | \$4,000,000         |
| 10190320                                       | WWIP     | ALW          | Home Sewer Treatment System Eliminations 2020 (Planning)                               | \$340,000           | \$0        | \$340,000           |
| 10199020                                       | WWIP     | ALW          | Program Management and Support Services 2020 (Design)                                  | \$2,500,000         | \$0        | \$2,500,000         |
| 11042801                                       | WWIP     | SRC          | North Fairmount Bioswale Project (Construction)  | \$381,000           | \$0        | \$381,000           |
| 11142741                                       | WWIP     | SEP          | CSO 488 490 I-75 Reconstruction Coordination (Construction)                            | \$1,613,000         | \$0        | \$1,613,000         |
| 11142745                                       | WWIP     | SEP          | CSO 488 Strategic Sewer Separation Phase A (Construction)                              | \$6,398,850         | \$0        | \$6,398,850         |
| <b>Total Cost for 13 WWIP Projects in 2020</b> |          |              |  | <b>\$49,212,541</b> | <b>\$0</b> | <b>\$49,212,541</b> |





2020 CIP

PROPOSED 12/19/17

Metropolitan Sewer District of Greater Cincinnati  
OTHER Projects



| Project ID                                     | CIP Type | Project Type | Project Name                      | MSD                 | Other      | Total               |
|--|----------|--------------|-----------------------------------|---------------------|------------|---------------------|
| 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> |



2020 CIP

PROPOSED 12/19/17

Metropolitan Sewer District of Greater Cincinnati  
ASSET Projects



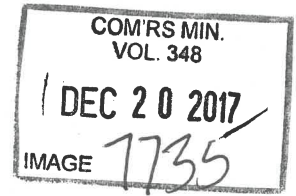
| Project ID                                      | CIP Type | Project Type | Project Name  | MSD                  | Other      | Total                |
|---|----------|--------------|---|----------------------|------------|----------------------|
| 10230090  | AM       | PSE          | Barrington Hills, Barrington Hills BLK. F, Gil Volz, and Kirkridge Acres P.S. Eliminations (Construction) | \$7,396,900          | \$0        | \$7,396,900          |
| 10240180  | AM       | REP          | 3934 Winding Way Sewer Replacement (Construction)   | \$388,300            | \$0        | \$388,300            |
| 10240320  | AM       | REP          | Wilder Avenue Sewer Replacement (Construction)  | \$560,000            | \$0        | \$560,000            |
| 10240420  | AM       | REP          | Freeland Avenue Area Sewer Replacement (Construction)   | \$96,400             | \$0        | \$96,400             |
| 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)  | \$485,600            | \$0        | \$485,600            |
| 10240600  | AM       | FAC          | Mill Creek WWTP Electrical Arc Flash Protection (Construction)  | \$149,000            | \$0        | \$149,000            |
| 10240697  | AM       | FAC          | Mill Creek 4.16 kV & 13.2 kV Loop Improvements (Construction)   | \$729,000            | \$0        | \$729,000            |
| 10240710  | AM       | STY          | Fitzpatrick Sewer and Mill Creek Drain Sewer Evaluation (Construction)                                    | \$8,477,000          | \$0        | \$8,477,000          |
| 10241900  | AM       | REG          | Mill Creek CSO Dynamic Underflow Control Improvements (Planning, Design)                                  | \$881,000            | \$0        | \$881,000            |
| 10270026  | AM       | PSE          | Camargo Canyon Pump Station Elimination (Construction)  | \$1,200,800          | \$0        | \$1,200,800          |
| 10280190  | AM       | ALW          | WWT WO Asset Renewal 2020 (Construction)  | \$2,000,000          | \$0        | \$2,000,000          |
| 10280240  | AM       | ALW          | Hydraulic Modeling 2020 (Planning)  | \$1,200,000          | \$0        | \$1,200,000          |
| 10280505  | AM       | PSE          | Pump Station Telemetry System Upgrades (Construction)   | \$5,465,200          | \$0        | \$5,465,200          |
| 10280610  | AM       | ALW          | Building Sewer Renewal Program 2020 (Construction)  | \$5,000,000          | \$0        | \$5,000,000          |
| 10280720  | AM       | ALW          | Critical Asset Management Projects 2020 (Construction)  | \$6,000,000          | \$0        | \$6,000,000          |
| 10281320  | AM       | ALW          | Prioritized Wastewater Collection System Improvements 2020 (Construction)                                 | \$12,000,000         | \$0        | \$12,000,000         |
| 10282020  | AM       | ALW          | CIP Project Planning 2020 (Planning)  | \$2,500,000          | \$0        | \$2,500,000          |
| <b>Total Cost for 19 ASSET Projects in 2020</b> |          |              |   | <b>\$54,751,600</b>  | <b>\$0</b> | <b>\$54,751,600</b>  |
| <b>Grand Totals for 33 Projects in 2020</b>     |          |              |   | <b>\$113,964,141</b> | <b>\$0</b> | <b>\$113,964,141</b> |



2021 CIP

PROPOSED 12/19/17

Metropolitan Sewer District of Greater Cincinnati  
 WWIP Projects



| Project ID                                    | CIP Type | Project Type | Project Name  | MSD                 | Other      | Total               |
|---|----------|--------------|---|---------------------|------------|---------------------|
| 10140417                                      | WWIP     | ALW          | LMCPR Monitoring and Modeling (Design)  | \$1,950,000         | \$0        | \$1,950,000         |
| 10180121                                      | WWIP     | ALW          | Main Sewer Renewal Program 2021<br>(Construction)   | \$2,000,000         | \$0        | \$2,000,000         |
| 10180221                                      | WWIP     | ALW          | Manhole Renewal Program 2021<br>(Construction)  | \$1,300,000         | \$0        | \$1,300,000         |
| 10190321                                      | WWIP     | ALW          | Home Sewer Treatment Systems<br>Eliminations 2021 (Planning)                              | \$340,000           | \$0        | \$340,000           |
| 10199021                                      | WWIP     | ALW          | Program Management and Support Services<br>2021 (Design)                                  | \$2,000,000         | \$0        | \$2,000,000         |
| 10270195                                      | WWIP     | FAC          | Little Miami WWTP Biosolids Disposal<br>(Construction)                                    | \$19,943,400        | \$0        | \$19,943,400        |
| 11242846                                      | WWIP     | SEP          | CSO 12 Sewer Separation Phase A.4b -<br>Colerain to Spring Grove Avenue<br>(Construction) | \$7,085,100         | \$0        | \$7,085,100         |
| <b>Total Cost for 7 WWIP Projects in 2021</b> |          |              |   | <b>\$34,618,500</b> | <b>\$0</b> | <b>\$34,618,500</b> |



**2021 CIP**

PROPOSED 12/19/17

**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> |



2021 CIP

PROPOSED 12/19/17

Metropolitan Sewer District of Greater Cincinnati  
ASSET Projects



| Project ID                                      | CIP Type | Project Type | Project Name  | MSD                  | Other      | Total                |
|---|----------|--------------|---|----------------------|------------|----------------------|
| 10230125  | AM       | PSE          | East Branch Muddy Creek Pump Station Upgrades (Construction)              | \$2,308,100          | \$0        | \$2,308,100          |
| 10240271  | AM       | CSO          | Lower Mill Creek HW DW Protection (Construction)                          | \$1,392,000          | \$0        | \$1,392,000          |
| 10240426  | AM       | PSE          | Pleasant Run Pump Station Upgrades (Construction)                         | \$18,421,000         | \$0        | \$18,421,000         |
| 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          |
| 10240625  | AM       | FAC          | MCWWTP Standby Power Distribution System Improvements (Construction)      | \$3,862,000          | \$0        | \$3,862,000          |
| 10270007  | AM       | SEW          | Dry Run Area Sewers Phase 2 Contract RB (Design,Construction)             | \$7,187,500          | \$0        | \$7,187,500          |
| 10270008  | AM       | SEW          | Dry Run Sewers - Contract 8M (Construction)                               | \$5,331,500          | \$0        | \$5,331,500          |
| 10280191  | AM       | ALW          | WWT WO Asset Renewal 2021 (Construction)                                  | \$2,000,000          | \$0        | \$2,000,000          |
| 10280241  | AM       | ALW          | Hydraulic Modeling 2021 (Planning)  | \$1,200,000          | \$0        | \$1,200,000          |
| 10280611  | AM       | ALW          | Building Sewer Renewal Program 2021 (Construction)                        | \$5,000,000          | \$0        | \$5,000,000          |
| 10280721  | AM       | ALW          | Critical Asset Management Projects 2021 (Construction)                    | \$6,000,000          | \$0        | \$6,000,000          |
| 10281321  | AM       | ALW          | Prioritized Wastewater Collection System Improvements 2021 (Construction) | \$12,000,000         | \$0        | \$12,000,000         |
| 10282021  | AM       | ALW          | CIP Project Planning 2021 (Planning)                                      | \$2,000,000          | \$0        | \$2,000,000          |
| 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             |
| <b>Total Cost for 16 ASSET Projects in 2021</b> |          |              |   | <b>\$69,713,700</b>  | <b>\$0</b> | <b>\$69,713,700</b>  |
| <b>Grand Totals for 24 Projects in 2021</b>     |          |              |   | <b>\$114,332,200</b> | <b>\$0</b> | <b>\$114,332,200</b> |



2022 CIP

PROPOSED 12/19/17

Metropolitan Sewer District of Greater Cincinnati  
 WWIP Projects



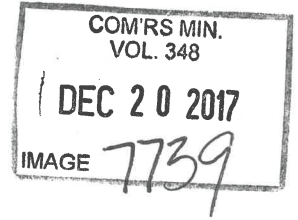
| Project ID                                    | CIP Type | Project Type | Project Name  | MSD                 | Other      | Total               |
|---|----------|--------------|---|---------------------|------------|---------------------|
| 10140417                                      | WWIP     | ALW          | LMCPR Monitoring and Modeling (Design)                          | \$850,000           | \$0        | \$850,000           |
| 10180122                                      | WWIP     | ALW          | Main Sewer Renewal Program 2022<br>(Construction)               | \$2,000,000         | \$0        | \$2,000,000         |
| 10180222                                      | WWIP     | ALW          | Manhole Renewal Program 2022<br>(Construction)                  | \$1,300,000         | \$0        | \$1,300,000         |
| 10180252                                      | WWIP     | REP          | Small Diameter Sewer Rehabilitation -<br>Phase 3 (Construction) | \$8,000,000         | \$0        | \$8,000,000         |
| 10180262                                      | WWIP     | REP          | Large Diameter Sewer Rehabilitation -<br>Phase 3 (Construction) | \$4,000,000         | \$0        | \$4,000,000         |
| 10190322                                      | WWIP     | ALW          | Home Sewer Treatment Systems<br>Eliminations 2022 (Planning)    | \$340,000           | \$0        | \$340,000           |
| 10199022                                      | WWIP     | ALW          | Program Management and Support Services<br>2022 (Design)        | \$2,000,000         | \$0        | \$2,000,000         |
| 11140065                                      | WWIP     | STY          | West Branch Mill Creek IWAP (Planning)                          | \$1,500,000         | \$0        | \$1,500,000         |
| <b>Total Cost for 8 WWIP Projects in 2022</b> |          |              |   | <b>\$19,990,000</b> | <b>\$0</b> | <b>\$19,990,000</b> |



# 2022 CIP

PROPOSED 12/19/17

## Metropolitan Sewer District of Greater Cincinnati OTHER Projects



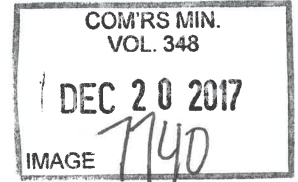
| Project ID                                     | CIP Type | Project Type | Project Name                      | MSD                 | Other      | Total               |
|--|----------|--------------|-----------------------------------|---------------------|------------|---------------------|
| 13090000                                       | OTHER    | PRG          | Programmatic Contingency (Design) | \$10,000,000        | \$0        | \$10,000,000        |
| <b>Total Cost for 1 OTHER Projects in 2022</b> |          |              |                                   | <b>\$10,000,000</b> | <b>\$0</b> | <b>\$10,000,000</b> |



**2022 CIP**

PROPOSED 12/19/17

**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>        |
|---|-----------------|---------------------|---|---------------------|--------------|---------------------|
| 10230625  | AM              | REG                 | Muddy Creek CSO Dynamic Underflow Control Improvements (Planning,Design)  | \$897,500           | \$0          | \$897,500           |
| 10240610  | AM              | FAC                 | MCWWTP Primary Sludge Pumping Improvements (Design)                       | \$1,494,300         | \$0          | \$1,494,300         |
| 10270155  | AM              | REP                 | Paxton Avenue Sewer Rehabilitation (Construction)                         | \$1,734,200         | \$0          | \$1,734,200         |
| 10280192  | AM              | ALW                 | WWT WO Asset Renewal 2022 (Construction)                                  | \$2,000,000         | \$0          | \$2,000,000         |
| 10280242  | AM              | ALW                 | Hydraulic Modeling 2022 (Planning)  | \$1,200,000         | \$0          | \$1,200,000         |
| 10280612  | AM              | ALW                 | Building Sewer Renewal Program 2022 (Construction)                        | \$5,000,000         | \$0          | \$5,000,000         |
| 10280722  | AM              | ALW                 | Critical Asset Management Projects 2022 (Construction)                    | \$6,000,000         | \$0          | \$6,000,000         |
| 10281322  | AM              | ALW                 | Prioritized Wastewater Collection System Improvements 2022 (Construction) | \$12,000,000        | \$0          | \$12,000,000        |
| 10282022  | AM              | ALW                 | CIP Project Planning 2022 (Planning)                                      | \$2,000,000         | \$0          | \$2,000,000         |
| 12240510  | AM              | STY                 | Rockdale and Windham Sewer Evaluation (Design)                            | \$30,000            | \$0          | \$30,000            |
| <b>Total Cost for 10 ASSET Projects in 2022</b> |                 |                     |   | <b>\$32,356,000</b> | <b>\$0</b>   | <b>\$32,356,000</b> |
| <b>Grand Totals for 19 Projects in 2022</b>     |                 |                     |   | <b>\$62,346,000</b> | <b>\$0</b>   | <b>\$62,346,000</b> |