

# METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI

**Project ID 10142910  
Ludlow Run Sustainable Source Control  
Contract 95x12762**

Progress Report for  
Professional Services provided July 3, 2023 through July 30, 2023

Arcadis U.S., Inc.

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At the request of the Metropolitan Sewer District of Greater Cincinnati, Arcadis worked on the following items as summarized below.

#### Task 1 Project Administration - Planning

- Performed project administration and resource management; communicated updates to MSDGC project manager.
- Updated Schedule

#### Task 2 Data Review and Collection

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#### Task 3 Collection System Model Review

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#### Task 4 Model Update and Calibration

- Continued working on calibration based on following Submodels, Boundary Conditions and Inflows for Model Calibration
  - Submodels:
    - Ludlow 007/008/010
    - Ludlow 009
    - Ludlow 074/075/075
    - Ludlow 017
    - Ludlow 011/012
- Schedule delay, calibration work had to be transitioned to new staff for medical reasons. The transition of work to new staff took some time to complete. The schedule has been updated to reflect this transition. Calibration efforts are continuing with new modeling team since transition.
- Additional delays due to understanding of Modeling features including the Spring Grove Cemetery and manhole installations on Howard Avenue upstream of meter MC-KR-075. Arcadis will provide an updated schedule with next invoice.

Activity ID	Activity Name	Original Duration	Start	Finish	2020												2021												2022												2023												2024						
					May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	F	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	F	Mar	Apr	M	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	F	Mar	Apr	M	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	M	Jun	Jul				
<b>10142910 Ludlow Run Sustainable Source Control</b>																																																											25-Mar-24, 10142910
<b>Task 1 Project Administration - Planning</b>																																																											25-Mar-24, Task 1
1.010	Notice to Proceed for PM Task 1	0	29-Apr-20 A	25-Mar-24																																																							Notice to Proceed for PM Task 1
1.020	PM during Planning Project	610	29-Apr-20 A	25-Mar-24																																																							PM during Planning
1.030	Prepare Task 1 Deliverables	26	29-Apr-20 A	03-Jun-20 A																																																							Prepare Task 1 Deliverables
1.040	Submit Draft Project Management Plan and Baseline Schedule for MSDGC Review	0		03-Jun-20 A																																																							Submit Draft Project Management Plan and Baseline Schedule for MSDGC Review
1.050	Submit Draft QA/QC Plan for MSDGC Review	0		03-Jun-20 A																																																							Submit Draft QA/QC Plan for MSDGC Review
1.060	Submit Draft Risk Management Plan for MSDGC Review	0		03-Jun-20 A																																																							Submit Draft Risk Management Plan for MSDGC Review
1.070	MSDGC Review of Draft Deliverables	10	04-Jun-20 A	17-Jun-20 A																																																							MSDGC Review of Draft Deliverables
1.080	Resolve MSDGC Comments and Update Task 1 Deliverables	10	18-Jun-20 A	20-Jul-20 A																																																							Resolve MSDGC Comments and Update Task 1 Deliverables
1.085	Submit Revised Draft Task 1 Deliverables	0		01-Jul-20 A																																																							Submit Revised Draft Task 1 Deliverables
1.090	Submit Final Project Management Plan	0		21-Jul-20 A																																																							Submit Final Project Management Plan
1.100	Submit Final QA/QC Plan	0		21-Jul-20 A																																																							Submit Final QA/QC Plan
1.110	Submit Final Risk Management Plan and Update Risk Register	0		21-Jul-20 A																																																							Submit Final Risk Management Plan and Update Risk Register
1.140	Community Meeting	0	30-Jun-20 A																																																								Community Meeting
1.150	Planning Workshop and Project Meeting 1	0	04-Dec-20 A																																																								Planning Workshop and Project Meeting 1
1.160	Project Meeting 2	0	18-Jun-21 A																																																								Project Meeting 2
1.170	Project Meeting 3	0	10-Sep-21 A																																																								Project Meeting 3
1.180	Project Meeting 4	0	03-Dec-21 A																																																								Project Meeting 4
1.190	Project Meeting 5	0	25-Feb-22 A																																																								Project Meeting 5
1.200	Project Meeting 6	0	20-May-22 A																																																								Project Meeting 6
1.210	Project Meeting 7	0	12-Aug-22 A																																																								Project Meeting 7
1.220	Project Meeting 8	0	04-Nov-22 A																																																								Project Meeting 8
1.230	Project Meeting 9	0	27-Jan-23 A																																																								Project Meeting 9
1.240	Progress Meeting 10	0	17-Mar-23 A																																																								Progress Meeting 10
<b>Task 2 Data Review and Collection</b>																																																											22-Aug-23, Task 2 Data Review and Collection
2.010	MSDGC NTP for Data Review and Collection and Collection System Model Review (Task 2 and 3)	0	18-Jun-20 A																																																								MSDGC NTP for Data Review and Collection and Collection System Model Review (Task 2 and 3)
2.020	Obtain Data from MSDGC (NTP on 6/18/2020)	15	18-Jun-20 A	13-Nov-20 A																																																							Obtain Data from MSDGC (NTP on 6/18/2020)
2.030	Review Data	45	18-Jun-20 A	13-Nov-20 A																																																							Review Data
2.040	Initial Site Visit with MSDGC	0	08-Sep-20 A																																																								Initial Site Visit with MSDGC
2.050	Prepare Draft Data Review Technical Memorandum	15	20-Aug-20 A	16-Sep-20 A																																																							Prepare Draft Data Review Technical Memorandum
2.060	Submit Draft Data Review Tech Memo for MSDGC Review	0		16-Sep-20 A																																																							Submit Draft Data Review Tech Memo for MSDGC Review
2.070	MSDGC Review of Draft Data Review Tech Memo	10	16-Sep-20 A	06-Oct-20 A																																																							MSDGC Review of Draft Data Review Tech Memo
2.080	Resolve MSDGC Comments, Continue Collecting Data, and Update Data Review Tech Memo	10	07-Oct-20 A	11-Dec-20 A																																																							Resolve MSDGC Comments, Continue Collecting Data, and Update Data Review Tech Memo
2.090	Submit Final Data Review Tech Memo	0		11-Dec-20 A																																																							Submit Final Data Review Tech Memo
2.100	Collect additional data as requested (as authorized by MSDGC)	40	28-Jun-23	22-Aug-23																																																							Collect additional data as requested (as authorized by MSDGC)
<b>Task 3 Collection System Model Review</b>																																																											11-Jul-23, Task 3 Collection System Model Review
3.010	Obtain Model and Model Data from MSDGC	0	01-Sep-20 A																																																								Obtain Model and Model Data from MSDGC
3.020	Review Flow and Rain Data and Review Model	40	01-Sep-20 A	24-Nov-20 A																																																							Review Flow and Rain Data and Review Model
3.030	Prepare Draft Model Review Technical Memorandum, Preliminary Review Checklist, and Flow Monitoring Plan	15	04-Nov-20 A	24-Nov-20 A																																																							Prepare Draft Model Review Technical Memorandum, Preliminary Review Checklist, and Flow Monitoring Plan
3.040	Submit Draft Model Review Tech Memo, Preliminary Review Checklist, and Flow Monitoring Plan for MSDGC Review	0		24-Nov-20 A																																																							Submit Draft Model Review Tech Memo, Preliminary Review Checklist, and Flow Monitoring Plan for MSDGC Review
3.050	MSDGC Review of Draft Model Review Tech Memo	13	25-Nov-20 A	11-Dec-20 A																																																							MSDGC Review of Draft Model Review Tech Memo
3.060	Resolve MSDGC Comments and Update Model Review Tech Memo and Flow Monitoring Plan	20	14-Dec-20 A	08-Jan-21 A																																																							Resolve MSDGC Comments and Update Model Review Tech Memo and Flow Monitoring Plan
3.070	Submit Final Model Review Tech Memo and Flow Monitoring Plan	0		08-Jan-21 A																																																							Submit Final Model Review Tech Memo and Flow Monitoring Plan
3.080	Perform system survey as recommended in Model Review Tech Memo (with MSDGC Approval)	10	22-Feb-23 A	11-Jul-23																																																							Perform system survey as recommended in Model Review Tech Memo (with MSDGC Approval)
<b>Task 4 Model Update and Calibration</b>																																																											06-Oct-23, Task 4 Model Update and Calibration
4.005	MSDGC NTP for Task 4	0	20-Jan-21 A																																																								MSDGC NTP for Task 4
4.010	MSDGC Install Flow Monitors	10	15-Mar-21 A	26-Mar-21 A																																																							MSDGC Install Flow Monitors
4.020	Review Flow Monitor Data during Collection	347	29-Mar-21 A	26-Jul-22 A																																																							Review Flow Monitor Data during Collection
4.030	Receive Flow Monitoring Data	0		26-Jul-22 A																																																							Receive Flow Monitoring Data
4.040	Update Hydraulic Model, Review Delineation	18	27-Jul-22 A	22-Feb-23 A																																																							Update Hydraulic Model, Review Delineation
4.041	Receive Flow Splits, Flow Paths and Delineation (Hazen)	0		19-Aug-22 A																																																							Receive Flow Splits, Flow Paths and Delineation (Hazen)
4.042	Full Data Review and Flow Event Development	50	22-Aug-22 A	10-Nov-22 A																																																							Full Data Review and Flow Event Development

█ Remaining Level of Effort   
 █ Actual Work   
 █ Critical Remaining Work  
█ Actual Level of Effort   
 █ Remaining Work   
 ◆ Milestone

