

METROPOLITAN SEWER DISTRICT OF GREATER CINCINNATI

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

Progress Report for
Professional Services provided December 25, 2023 through January 28, 2024

Arcadis U.S., Inc.

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

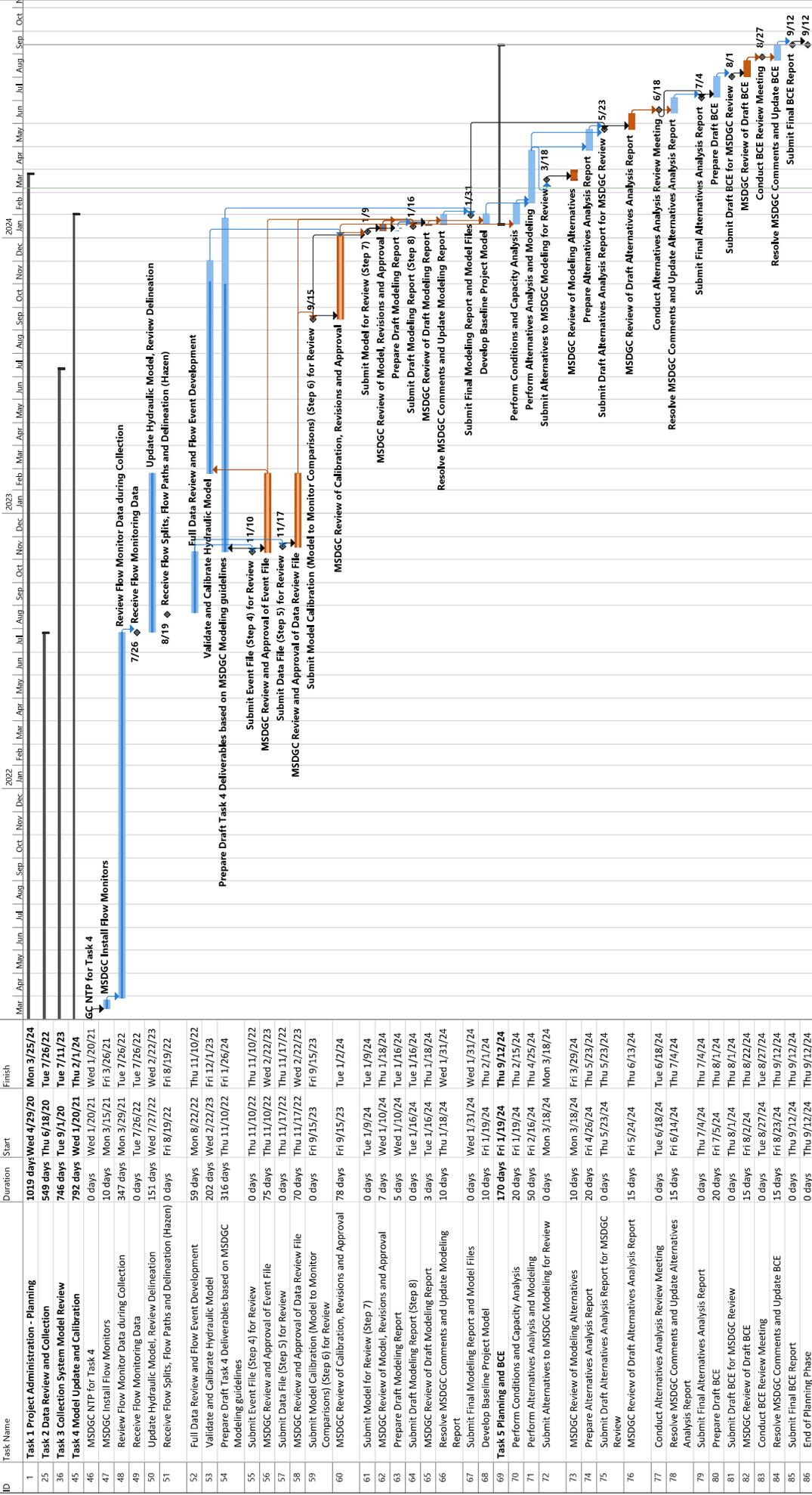
Task 1 Project Administration - Planning

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

Task 4 Model Update and Calibration

- Calibration approved for the following monitors in early December 2023;
 - Ludlow 007/008/010
 - Ludlow 074
 - Ludlow 017
 - Ludlow 011/012
 - Ludlow 025
- Calibrations approved for following monitors in early January:
 - Submodels:
 - Ludlow 009
 - Ludlow 076
- Submitted Step 7 and gain approval January 18m 204
- Developed Draft Modeling Report, received comments, performed revisions and Developing Resubmittal for Final on 1/31/2024
- Performed CSO Level Activation Review Observed vs. Modeled.

10142910 Ludlow Run Sustainable Source Control



ID	Task Name	Duration	Start	Finish
1	Task 1 Project Administration - Planning	1019 days	Wed 4/29/20	Mon 3/25/24
25	Task 2 Data Review and Collection	549 days	Thu 6/18/20	Thu 7/26/22
36	Task 3 Collection System Model Review	746 days	Tue 9/1/20	Tue 7/11/23
45	Task 4 Model Update and Calibration	792 days	Wed 1/20/21	Thu 2/1/24
46	MSDGC NTP for Task 4	0 days	Wed 1/20/21	Wed 1/20/21
47	MSDGC install Flow Monitors	10 days	Mon 3/15/21	Fri 3/26/21
48	Review Flow Monitor Data during Collection	347 days	Mon 3/29/21	Tue 7/26/22
49	Receive Flow Monitoring Data	0 days	Tue 7/26/22	Tue 7/26/22
50	Update Hydraulic Model, Review Delineation	151 days	Wed 7/27/22	Wed 2/22/23
51	Receive Flow Splits, Flow Paths and Delineation (Hazen)	0 days	Fri 8/19/22	Fri 8/19/22
52	Full Data Review and Flow Event Development	59 days	Mon 8/22/22	Thu 11/10/22
53	Validate and Calibrate Hydraulic Model	202 days	Wed 2/22/23	Fri 12/1/23
54	Prepare Draft Task 4 Deliverables based on MSDGC Modeling Guidelines	316 days	Thu 11/10/22	Fri 1/26/24
55	Submit Event File (Step 4) for Review	0 days	Thu 11/10/22	Thu 11/10/22
56	MSDGC Review and Approval of Event File	75 days	Thu 11/10/22	Wed 2/22/23
57	Submit Data File (Step 5) for Review	0 days	Thu 11/17/22	Thu 11/17/22
58	MSDGC Review and Approval of Data Review File	70 days	Thu 11/17/22	Wed 2/22/23
59	Submit Model Calibration (Model to Monitor Comparisons) (Step 6) for Review	0 days	Fri 9/15/23	Fri 9/15/23
60	MSDGC Review of Calibration, Revisions and Approval	78 days	Fri 9/15/23	Tue 1/22/24
61	Submit Model for Review (Step 7)	0 days	Tue 1/9/24	Tue 1/9/24
62	MSDGC Review of Model, Revisions and Approval	7 days	Wed 1/10/24	Thu 1/18/24
63	Prepare Draft Modeling Report	5 days	Wed 1/10/24	Tue 1/16/24
64	Submit Draft Modeling Report (Step 8)	0 days	Tue 1/16/24	Tue 1/16/24
65	MSDGC Review of Draft Modeling Report	3 days	Tue 1/16/24	Thu 1/18/24
66	Resolve MSDGC Comments and Update Modeling Report	10 days	Thu 1/18/24	Wed 1/31/24
67	Submit Final Modeling Report and Model Files	0 days	Wed 1/31/24	Wed 1/31/24
68	Develop Baseline Project Model	10 days	Fri 1/19/24	Thu 2/1/24
69	Task 5 Planning and BCE	170 days	Fri 1/19/24	Thu 9/12/24
70	Perform Conditions and Capacity Analysis	20 days	Fri 1/19/24	Thu 2/15/24
71	Perform Alternatives Analysis and Modeling	50 days	Fri 2/16/24	Thu 4/25/24
72	Submit Alternatives to MSDGC Modeling for Review	0 days	Mon 3/18/24	Mon 3/18/24
73	MSDGC Review of Modeling Alternatives	10 days	Mon 3/18/24	Fri 3/29/24
74	Prepare Alternatives Analysis Report	20 days	Fri 4/26/24	Thu 5/23/24
75	Submit Draft Alternatives Analysis Report for MSDGC Review	0 days	Thu 5/23/24	Thu 5/23/24
76	MSDGC Review of Draft Alternatives Analysis Report	15 days	Fri 5/24/24	Thu 6/13/24
77	Conduct Alternatives Analysis Review Meeting	0 days	Tue 6/18/24	Tue 6/18/24
78	Resolve MSDGC Comments and Update Alternatives Analysis Report	15 days	Fri 6/14/24	Thu 7/4/24
79	Submit Final Alternatives Analysis Report	0 days	Thu 7/4/24	Thu 7/4/24
80	Prepare Draft BCE	20 days	Fri 7/5/24	Thu 8/1/24
81	Submit Draft BCE for MSDGC Review	0 days	Thu 8/1/24	Thu 8/1/24
82	MSDGC Review of Draft BCE	15 days	Fri 8/2/24	Thu 8/22/24
83	Conduct BCE Review Meeting	0 days	Tue 8/27/24	Tue 8/27/24
84	Resolve MSDGC Comments and Update BCE	15 days	Fri 8/23/24	Thu 9/12/24
85	Submit Final BCE Report	0 days	Thu 9/12/24	Thu 9/12/24
86	End of Planning Phase	0 days	Thu 9/12/24	Thu 9/12/24

MSDGC Date: Thu 3/7/24

Task Split Milestone

Summary Project Summary Inactive Task

Inactive Milestone Inactive Summary Manual Task

Duration-only Manual Summary Rollup Manual Summary

Start-only Finish-only External Tasks

External Milestone Decline Progress

Manual Progress

INVOICE

Metropolitan Sewer District of Greater Cincinnati, OH

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 United States

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 Bank of America
 Acct: 8188093937
 ACH: 071 000 039 Wire: 026009
 593
 SWIFT: BOFAUS3N
 Remit-mailbox@arcadis-us.com
 62638 Collections Center Drive
 Chicago, IL 60693-0626

Invoice Date	07-Mar-2024	Invoice Number	34421360
Due Date	06-Apr-2024	Payment Term	30 days
Contract 95x12762, Funding: 704x400x0000x7681, Proj 10142910 Uploaded to E-Builder System			
Arcadis Reference Number	30030534	Project Number	30030534
Arcadis Reference Name	MSDGC: Ludlow Run Sustainable Source Control	Project Name	MSDGC: Ludlow Run Sustainable
Arcadis Reference Description	Ludlow Run Sustainable Source Control	Project Manager	Kristen Krzak
Services Through	28-Jan-2024	Client Contact	Alex Shumakh

Professional Services to 28-Jan-2024

Total Contract Value	526,651.00	
Services Billed Previously	342,420.75	65.02% Billed Previously
Services Billed This Invoice	<u>14,627.19</u>	2.78% Billed This Invoice
Total Services To Date	<u>357,047.94</u>	67.80% Billed To Date
Amount Remaining	169,603.06	

Total This Invoice 14,627.19 USD

Bank Name	BANK OF AMERICA N.A.	Bank/Branch Code	BOFA-071923284
Account No.	8188093937	SWIFT	BOFAUS3N
Remittance Address: Remit-Mailbox@arcadis-us.com			
Please include the invoice number on all payments and include remittance copy with all postal payments. Late payments will be assessed according to contract terms.			