



DIRECTOR OF ENGINEERING REPORT

May 25, 2022

District Engineering manages projects, consultants, contractors, and equipment suppliers. Consultant reports and Project Managers reports are included in this section along with details regarding the status of the associated study, design, or construction projects.

ACTIVE PROJECTS

20-07 Digester Complex Improvements:

SCOPE: The Digester #3 floating cover and the face brick on all four digester tanks is being replaced.						
Contractor: Christy-Foltz			R.E. Inspector: SDD/W Gray - Donohue			
Engineer: Donohue and Associates						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion
11/17/20	12/01/20	12/22/20	02/17/21	03/18/21	03/18/21	9/22/2022 Substantial 10/22/22 Final
Submittals Reviewed: 9 complete / 0 open						
Requests for Information (RFIs): 7 complete / 0 open						
Owner Requests for Proposal/Change Order (RFPCO): 11 complete / 3 open						

Key Activities: Concrete repairs to digester #2 should be completed week of 5/28/22. Delivery of the new cover is still on track for a July 22, 2022 ship date. 7 tractor trailers will be sent to deliver component parts to the SDD.

Issues: The engineering services agreement with the engineer has reached its financial limit; staff has received a revised amendment (\$14,196) and requested additional backup from the engineer to substantiate the request.

Pending Changes:

- WCD 01 and WCD 02: Additional Pump Down of Digester Contents: Contract documents required SDD to bring digester liquid elevation down to 593.0 and digesters have been turned over to contractor at various liquid elevations due to pump down issues. Contractor was put on time and material for the additional pumping required.
Digester 1 – 594.50; Digester 2 - 595.80; Digester 3 – 595.33; Digester 4 – 593.00 \$ 31,668.00 +
\$ T&M is ongoing
- Digester #1 cold joint repairs. District issued Field Order to remove damaged concrete, prepare the leaking concrete seam, and install Xypex patch along the cold joint in the concrete walls. Work is being performed on a T&M basis. \$ T&M
- Coatings on Digester #3 will be addressed as contractor completes the installation of the cover. Contractor was directed to perform the work on a T&M basis. \$ T&M

20-01 Lake Shore Drive PS Replacement:

SCOPE: The lift station is being reconfigured with submersible pumps.						
Contractor: Christy-Foltz			R.E. Inspector: SDD/ J Edenburn - CDI			
Engineer: Clark Dietz Engineers, Inc						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Contract Completion
12/02/20	01/05/21	02/03/21	03/24/21	04/07/21	04/07/21	4/2/2022 + 30 Final
Submittals Reviewed: 84 received / 83 completed / 36 Rejected						
Requests for Information (RFIs): 14 submitted/14 completed						
Owner Requests for Proposal/Change Order (RFPCO): 1 Issued/1 Completed						
Change Orders: 2 completed						

Key Activities: Bypass operation is ongoing. Demo of the existing pump station building is complete.



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Contractor is scheduled to begin masonry work this week.

Issues: No substantial improvement has been made on catch-up with project schedule.

Contractor has completed the cast in place concrete work for the building, however, the final pours (floor and wet-well covers, were completed on a day where temps were 95 degrees. The high heat, high sunlight condition caused the concrete to cure too quickly, and a significant amount of surface cracking has occurred. While, not structural flaws in nature, the floor is unsightly, and the contractor has been advised that the aesthetics will need addressed for final completion.

Pending Changes:

1. None

20-01 South Shores Sewer Rehab:

SCOPE: CIPP lining of approximately 17,700 LF of sewer, tie-in connections and approximately 700 vertical feet of cementitious manhole restoration.						
Contractor: SAK Construction				Engineer: Farnsworth Group, Inc		
Advertise	Pre-bid	Bid Open	Intent Award Final Award	Notice to Proceed	Pre- Construction	Contract Completion
12/15/20	02/02/21	03/02/21	03/17/21 05/26/21	06/21/21	06/15/21	03/18/22 Substantial 04/17/22 Final
Submittals Reviewed: 4 received / 0 outstanding Requests for Information (RFIs): none Owner Requests for Proposal/Change Order (RFPCO): none						

Key Activities: All work is completed. A final change order #01 decreasing the contract amount by (\$354,283.44) from the original contract price and an increase of the final completion date by 38 days is before the board for consideration.

21-03 Effluent Pump #3 Replacement:

SCOPE: Scope of work includes the removal of existing effluent pump #3, installation of replacement pump/motor, procurement/installation of a FSI (formed suction intake) and flow modification appurtenances in the influent channel.						
Contractor: Burdick Plumbing				Engineer: SDD		
Advertise	Pre-Bid	Bid Open	Final Award	Notice to Proceed	Pre- Construction	Contract Completion
12/14/21	01/07/22	02/04/22	02/16/22	03/21/22	03/21/22	05/20/22 Substantial 06/19/22 Final

Key Activities: Pump, FSI, and flow conditioning devices install completed week of 05/09/2022. Site testing performed 05/16/2022 through 05/18/2022 to gather temperature and vibration readings. Final electrical and programming activities to take place week of 05/23/2022. Final change order #01 to remove a \$5,000 allowance from the contract will be prepared for consideration at the June trustee meeting.

20-10 De-chlorination Facilities (Bisulfite Tanks Replacement):

SCOPE: Remove and rebuild knock out wall to facilitate removal and installation of new sodium bi-sulfite tanks. Additional tuck point repairs throughout building to be performed within project. Tank removal and installation to be performed by SDD maintenance.						
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Contractor: TBD

Engineer: SDD

Key Activities: Re-submittal drawings have been received and returned to the manufacturer for construction to begin. Delivery ETA is between 26 and 31 weeks.

Staff is developing a specification for fixing the knockout panel in the building.

Demolition of Koshinski Lane Property: Weather permitting, this building should be demolished and removed by the end of week ending 5/27/22.

NON-CONSTRUCTION ACTIVITY

ADMINISTRATIVE OFFICE MASTER PLANNING:

Update: <<No Update>> In the March 2022 trustee meeting, staff was directed to investigate financing options before moving forward with Requests for Proposals; that investigation is underway.

NUTRIENT PROGRAM MANAGER (NPM) ACTIVITY

The monthly status update from BV is attached. The focus for the NPM team is currently on developing the Liquid Stream for future BNR operating configurations. Keith Richard (lab) and engineering staff met with BV to review nutrient bench study procedures and testing protocols.

High level schedule is:	
Feb/Mar –	Develop Quality Assurance Project Plan (QAPP); and Review of Publicly available data
Apr/May -	Review of Findings with SDD; and Perform Site Visit to confirm sampling locations; and Finalize sampling plan and review with IEPA
June-	Deploy samplers and begin sample collection

Introductory meeting was conducted by B&V with SDD, ADM, and Primient to introduce the NPDES Permit schedule, challenges to meet the permit, both from SDD and pre-treatment perspective.

Watershed – agreement was reached Geosytec and BV on the proposed river monitoring plan that is to be prepared and submitted to IEPA as a part of the QAPP.

21ENG51 Wet Weather Interceptor Capacity Study – Damon to Treatment Plant

There is a professional services agreement before the board for consideration for this effort.

20-17 Sewer Pre-Cleaning Televising and PACP Rating

The district utilizes NASSCO PACP ratings to standardize the condition of sewer pipes. The asset management program targets an assessment every 10 years. We perform rating in advance of sewer cleaning to highlight areas where SDD needs to extend extra effort to clean the sewer prior to rating the pipe. The PACP rating is a professional service offered by Telescan here in Decatur. Telescan began televising and performing pipeline condition televising rating of the sewers this last period.

- | | | |
|--------------------------|-----------|---------------|
| 1. Stevens Creek North | 22,646 LF | 78% complete |
| 2. West Mound Branch | 6,361 LF | 91% complete |
| 3. Northside Interceptor | 9,898 LF | 100% complete |

Of the work completed, there are 8 segments (manhole to manhole) that require heavy cleaning or approximately 2800 LF. SDD outside maintenance crew to has complete cleaning these 8 segments to facilitate remobilizing the contractor to perform PACP rating and assessment of the sewers.

21ENG04 Force Main Inspection

<<No Update>> The district is preparing to inspect the condition of existing force mains. Using a proprietary Smartball technology. The “Smartball” is inserted into a live pipeline, and it travels with the wastewater while collecting pipe wall data for metallic pipes and acoustic data for all pipes, which will be used to identify leaks and gas pockets at the same time.

The metallic pipe data collected is measuring changes in the magnetic fields of the pipe. The more the change in the magnetic field, the more the pipe is under stress. This stress can identify areas where cracks, pitting, wall loss, point loads, bending, pipe compression, etc... is occurring. It will not identify necessarily “what” is happening, but that something is happening. Based on the magnitude, further investigation may or may not be warranted.

This technology was utilized by SDD in 2015 to perform inspections on the Country Club and Lake Shore Drive 30” force mains. Pure Technologies has been purchased by Xylem, and SDD is looking to inspect the Finley Creek FM (16”) (5300 LF of ductile iron pipe).

Professional Services Agreement – Clark Dietz – General Services

Staff has been working with Clark Dietz to prepare a General Engineering Services agreement for miscellaneous professional services under which to issue “task orders” for small scale drafting work. The CDI draftsmen would work under the direction of the SDD Engineering department when drafting work would help prepare projects for advertisement. SDD’s engineering director would be responsible for professionally stamping all drawings.

UPCOMING PROJECTS:

21ADM50 Front Gate and Fencing Project:

Scope: Replacement of the damaged front gate, plant fencing repairs, and localized cast in place concrete work in the plant are included in this project. Staff has is pushing to get this project out for advertisement. Plans are about 80% complete.

22MNT04 Temporary By-pass Pumping to Support Valve Replacement:

Scope: Bypass pumping operation from building 259 to the head of the nitrification basin (230). Project is being combined with another project to include the scope of work for the valve replacement activities. Estimated completion of new project specification tracking for 05/27/2022 and ready to advertise approximately 06/03/2022.

21ENG40 Replacement of Sludge Transfer Pump: Engineer of Record Farnworth Group performed a facility walk through and is confirming the spatial restrictions of the new style ABEL pump will fit into the pump room. The District was recently told that ABEL no longer has exclusive distribution areas so the District will need to complete the formal bid process for procurement of this pump.

21ENG30 - East Headworks Grit Flow Modeling – Clemson Engineering Hydraulics

<<No Update>> The district experiences imbalanced grit loading through the Headworks (structure 201). This project is to build a scale model of flow/grit through structure 201. Staff has received photos of the constructed model and is planning a conference call with Clemson Engineering to



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confirm operation methods of the structure gates. The hydraulic modeling and subsequent report will be completed thereafter.

22ENG45 - Primary Clarifier #5 Replacement

<<No Update>> Primary Clarifier #5 is needing replaced. Staff has received budgetary quotes for the mechanisms and is preparing bidding documents for replacement and installation of the clarifier mechanism.

INTERGOVERNMENTAL ACTIVITIES

The intergovernmental agreement with the CITY regarding Faries Parkway Sewer relocation remains in the CITY's hands to accept the final terms.

If there are any questions, please contact me by telephone at 422-6931 ext 216, or by email at DonM@sddcleanwater.org.



Memorandum

Date: May 3, 2022
To: Donald B. Miller, P.E., Director of Engineering
From: Will Gray, P.E., Donohue & Associates
Re: Project Status Report
2020-07 Digester Improvements Project
Donohue Project No. 13782

Project Progress Items

- Hatch replacement work is ongoing at D#1, most of the old hatch has been cut out, except the inside frame.
- Cold Joint repair at Digester #1 is ongoing. We estimate that 2/3 of the exposed digester circumference needs repaired. C-F has complete all but about 75 feet left to repair.
- Request sent to C-F to obtain information on the repair of the staircase hand rail that was damaged when the staircase was moved.
- Request sent to C-F seeking update as to when C-F will have the siding installed on Digester #1.
- Donohue to schedule a Job Progress meeting the week of May 16th
- C-F is satisfactorily keeping up with site housekeeping.

Updated: 5-3-2022	Open	Closed	Total
Submittals	0	9	9
RFI	0	7	7
Change Order Request	2	11	11
Change Orders	0	3	3

CHANGE ORDER LOG

- Change Order #1 has been executed, \$42,549.39.
- Change Order #2 has been executed, \$46,173.89.
- Change Order #3 has been executed, \$442,219.00. Add 193 days to contract.
- Gathering items for Change Order #4:
 - Digester #1 cold joint repair.
 - Digester #1 manway hatch replacement.



May 6, 2022

Mr. Donald Miller
Sanitary District of Decatur
501 S. Dipper Lane
Decatur, IL 62522

Re: Lakeshore Drive Lift Station Replacement Project
SDD Project No. 20-01
Clark Dietz Project No. D0540030
Monthly Progress Update

Dear Mr. Miller:

This letter summarizes the work of the Lakeshore Drive Lift Station construction project for the period from March 27 through April 29, 2022. The status of the construction is as follows:

- Submittals: Christy-Foltz has sent 85 submittals, 1 was reviewed and returned during this period. Thirty-six submittals have been rejected in whole or in part. We continue to track the several submittals that the contractor has not yet sent and we have made and transmitted to the contractor a log of additional submittals that we are expecting.
- RFIs: Christy-Foltz has sent sixteen RFIs, one was reviewed and returned during this period.
- RFPs and Change Orders: We have sent one RFP for the elimination of the 20-inch forcemain, which resulted in Change Order 1. The contractor has sent two time change requests. We prepared a review of the time extension request in a letter dated 3/8/22 and Change Order for additional materials in March.
- Pay Application: Christy-Foltz has sent nine pay applications.
- Meetings: Clark Dietz prepared agendas, lead, and prepared minutes for two construction progress meetings during this billing period, at your request.
- Schedule: Christy-Foltz's most recent project schedules was submitted on May 2, 2022 in conjunction with they Pay Application #9. As noted in March and April, the rate of progress of construction has increased during the last several months and the Contractor is making a good effort to finish the project. Their most recent schedule shows them getting to substantial completion on July 6, 2022, 64 days after the contract date. This schedule depends on the simultaneous work of many trades at the lift station during June: roofing, painting, piping installation, HVAC, electrical, and I&C. This amount of simultaneous work will require good coordination.
- Bypass pumping delays: though bypass pumping setup, startup, and testing was the primary cause of the delays. This system has been operational since December 2021.
- Construction review: with the increased amount of work on site, we have had our design and construction technician, who is working in Decatur, visiting the site and talking to the superintendent for an hour or two, two or three times per week.
- Resident Project Representative: per your request we have staffed this project with an inspector during the months of August, November, and December 2021 and January and February 2022. Per your request, we have stopped this inspection and do not plan for any more inspection in the future.

The contract dates are summarized as follows:

- April 2, 2022 – Substantial Completion
- May 2, 2022 – Final Completion



In May we anticipate that the contractor will pour the top slab of the structure, construct the masonry walls, and install the roof trusses. We anticipate that Clark Dietz's time during this period will include receiving and reviewing additional shop drawings, coordinating with the contractor regarding their schedule and questions, and attending and preparing agendas and minutes for progress meetings.

Please call me at 217-373-8933 if you have any questions.

Very Truly Yours,
Clark Dietz, Inc.

Andrea W. Bretl, P.E.
Project Manager



May 2, 2022

Sanitary District of Decatur (SDD)
501 Dipper Lane
Decatur, IL 62522

Nutrient Program Manager
BV Project No. 411502

Attention: Don Miller, P.E., Director of Engineering

Subject: SDD Nutrient Program Management
April Monthly Progress Update (April 5, 2022 – April 29, 2022)

Dear Mr. Miller:

This letter summarizes the work associated to the SDD Nutrient Program Management project for services from April 5, 2022 through April 29, 2022.

1. Program Management, Administration, and Coordination
 - Conducted bi-weekly program conference calls to update progress and discuss key issues.
 - Provided Monthly Project Update
 - Provided ongoing management of the project including program management, preparation/monitoring of the program schedule and budget as well as program administrative duties.
2. Pretreatment Program Update
 - Continued data evaluation in parallel to the WWRF Upgrade Plan SDD data request.
 - Began industrial data requests.
3. Phosphorus Discharge and Optimization Plan (PDOP)
 - BV continued the evaluation of Optimization Measures including both influent and effluent reduction measures.
 - BV began to prepare for the introduction and coordination meeting with both ADM and Primient.
4. Watershed Support Services
 - Conducted bi-weekly progress update meetings
 - Geosyntec completed the following items:
 - i. Continued data review and analysis
 - ii. Continued to development of the baseline data collection plan
 - iii. Continued the development of the Quality Assurance Project Plan (QAPP)
 - iv. Presented the initial data analysis summary and initial data collection plan
 - Continued initial planning and outline for the Watershed Group formation development

5. WRRF Upgrade Plan

- Prepared meeting minutes for Workshop #1: Kickoff / Team Chartering Workshop.
- Continued data evaluation
- Continued the development of Technical Memorandum 1 which will include a summary of current conditions with industrial influent characterization and future drivers for WWRf upgrades.
- Continued additional data review to identify a range of technologies that are applicable for modifying the activated sludge process for nutrient removal as well as begin to define key drives and needs for the overall facility.
- Conducted initial modeling efforts for applicable nutrient removal technologies in preparation for Workshop #2.
- Began to integrate project data into Power BI.

6. Pilot and Demonstration Testing (if needed)

- No services were performed this period

Please feel free to contact me with any questions, comments or if you need additional information.

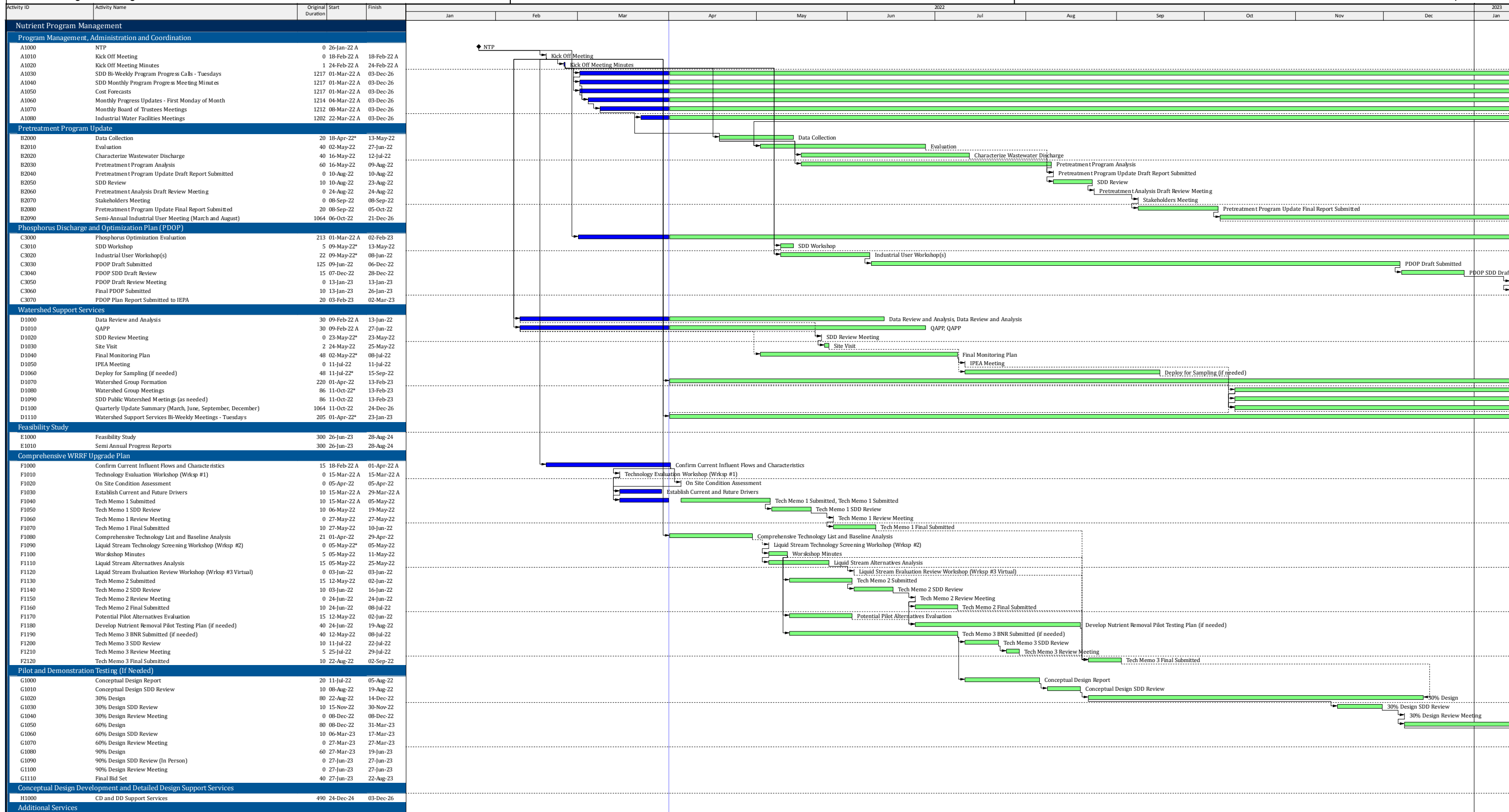
Sincerely,



Diane Grossenheider, P.E.
Project Manager, Black & Veatch

Enclosure(s):

- SDD Nutrient Program Manager Schedule (Year 1)
- Anticipated Cost Forecast



█ Actual Work █ Critical Remaining Work
█ Remaining Work ◆ Milestone

SANITARY DISTRICT OF DECATUR- NUTRIENT PROGRAM MANAGEMEN'

2022 COST FORECAST

BV Project Number: 411502

Incremental	2022.02	2022.03	2022.04	2022.05	2022.06	2022.07	2022.08	2022.09	2022.10	2022.11	2022.12	2022 Total
Planned	13,683	108,359	237,519	168,336	497,476	284,217	100,648	86,219	109,725	91,822	91,820	1,789,824
Actuals	16,724	60,831	63,600									141,154
Forecast	16,724	60,831	75,600	168,336	497,476	284,217	100,648	133,747	124,116	191,822	136,307	1,789,824

Cumulative	2022.02	2022.03	2022.04	2022.05	2022.06	2022.07	2022.08	2022.09	2022.10	2022.11	2022.12	2022 Total
Planned	13,683	122,042	359,561	527,897	1,025,373	1,309,590	1,410,238	1,496,457	1,606,182	1,698,004	1,789,824	1,789,824
Actuals	16,724	77,554	141,154									
Forecast	16,724	77,555	153,155	321,491	818,967	1,103,184	1,203,832	1,337,579	1,461,695	1,653,517	1,789,824	1,789,824

