



DIRECTOR OF ENGINEERING REPORT

Feb 19, 2020

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

West Headworks Improvements:

SCOPE: This project entails comprehensive upgrades to the screening and grit washing facilities on the west head works of the treatment facility. This portion of the facility covers roughly 45 percent of the Wastewater Treatment Facility's 125 MGD peak flow capacity. The project will include a new screen building with new screens and grit washers, replacement of the various carbon-based odor control units with a biological odor control filter and upgrades to pumps.						
Contractor: Plocher Construction, Inc. Engineer: Donohue and Associates						
Advertise	Pre-bid	Bid Open	Intent to Award / Final Award	Notice to Proceed	Pre- Construction	Scheduled Completion
02/13/18	03/15/18	04/19/18	05/24/18 07/02/18	08/13/18	07/11/18	02/04/20
Submittals Reviewed: 194 shop drawings submitted /194 complete Requests for Information (RFIs): 50 received / 50 answered Owner Requests for Proposal/Change Order (RFPCO): 13 issued / 0 outstanding						

○ **Key Activities:**

Substantial Completion was issued for all process equipment this last period except for odor control units. Weather has postponed the use of air flow balancing equipment. We expect this to be completed week of 02/22. Balance testing results are a punch list item. Contractor is working through punch list now.

Issues: NONE

○ **Future Change Items:** There are two remaining items.

4-01 WCD - 06 – Relocate W1 water line by 003 building	+ \$23,512.65
4-02 RFPCO-13 – Stabilizing brackets added to 003 Stair Tower	+ \$ 4,122.98

WYCKLES UPGRADES Project:

SCOPE: This project addresses the replacement of valves and appurtenances at 6 sludge inlets to the lagoons at the Wyckles facility along with site grading to address stormwater runoff on the NW corner of the westernmost lagoon.						
Contractor: The BURDICK COMPANY Engineer: SDD						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre- Construction	Scheduled Completion
08/23/19	08/27/18	09/13/18	09/18/19	01/06/20	12/20/20	60 days 03/06/20
Submittals Reviewed: 2 shop drawings submitted /2 complete Requests for Information (RFIs): 1 received /1 answered Owner Requests for Proposal/Change Order (RFPCO): 0 issued /0 outstanding						

○ **Key Activities:** Contractor has completed the valve replacements and is working through the stormwater runoff portion of the work.

-
- **Issues:** NONE
 - **Future Change Items:**
 - 1-01 FO-01 – Install an additional 3” yard hydrant on East Lagoon Ramp. (T&M) + TBD
-

NON-CONSTRUCTION ACTIVITY

ADMINISTRATIVE OFFICE MASTER PLANNING:

Architectural Expressions (AEX) previously performed staff interviews to obtain perspective on what building issues staff encounters currently and what future issues are on known to exist on the horizon (inclusive of staffing levels and new/upgraded equipment). A preliminary draft of the Phase 2 report was received and has been reviewed by staff. We have scheduled a meeting with AEX to review the draft.

Phase 3 (\$10,000) of this facility assessment will follow trustee review of Ph 2 and concurrence to proceed. Phase 3 is to perform a pre-design level study ranging from modifications and upgrades to the existing facilities to the possibility of a new facility, based on the space needs that were identified in Phase 2. The study includes a high-level cost opinion that provides context for the findings from Phase 1 and 2. A review of the existing lab space as a standalone structure is also included in Phase 3.

ARC FLASH STUDY

Industrial Technology Group (ITG) from Champaign, IL was awarded a professional services agreement on 01/22/2020 to update the main treatment plant ARC FLASH STUDY. All data, drawings, and information requested has been provided to ITG to begin the update.

RAS Pump Station Valve Replacement Quote

Staff held a pre-quote meeting for this work. Five Contractors were invited, two showed up at the pre-quote meeting. Staff was notified that afternoon that Burdick had not received the mailed pre-quote notification. To address the issue, a time to review the work was scheduled with Burdick and the contractors who were present at the initial pre-quote were notified and invited to attend that review. We will receive quotes from the contractors for the replacement of the 3 gate valves, 3 check valves and 1 knife valve in the Return Activated Sludge (RAS) pump station. This is for installation services only as the district has pre-purchased the valves and will be performing the pump station shut down and dewatering of the wet wells as needed. This pump station is integral to the recirculation of biological organisms into the main treatment process. Quotes will be received after preparation of this report but prior to the trustee meeting. An update will be provided at the meeting.

1. Petersburg Plumbing
2. E.L. Pruitt Co
3. Burdick Plumbing

Annexations

Under the consent agenda there are three annexation ordinances staff has assembled this last period.

UPCOMING PROJECTS:

Wyckles Decant Upgrades: Staff has been negotiating with the Farnsworth Group to prepare a series of plan sheets that will be utilized for bidding out upgrades to the decant facilities at the Wyckles lagoon facilities.

Sodium Bisulfite Tank Replacement: Development of project plans to replace the two sodium bisulfite tanks is ongoing.

Sewer Cleaning Project: <<No Update>> The data from the sewer pre-cleaning televising done in 2019 (Pipeline Assessment and Condition Program (PACP) ratings) have been incorporated into the SDD GIS system over the last month. In addition to adding the condition ratings on the pipe, we have evaluated which sections of sewer needs heavy cleaning. The 2019 pre-cleaning contract included 25,000 LF of which approximately 5000 LF will require heavier cleaning. The heavier cleaning contract specifications are being prepared at this time.

South Shores Interceptor Lining: <<No update>> Staff will be preparing a Request for Proposals for firms to provide engineering services for the 2019 South Shores Interceptor Lining project. The access to this interceptor is complex due to the interceptor location (proximity to Lake Decatur and inaccessibility of manholes).

Lake Shore Pump Station Rebuild: <<No update>> Lake Shore pump station was originally built in 1953, modified in 1976, and subsequently modified again in August 2000 when a force main was installed by ADM to bypass the flow around the pump station. The original design of the pump station was for the 4 shaft driven pumps with the drive motors upstairs and the pumps 2 stories below. Staff has modified the pumps to be dry pit submersible style pumps to improve the reliability of the pumps, however access to the lower level is restricted and the pipe gallery is undersized and is a very difficult environment to perform any maintenance. Access to the wet-well is through a side entry door which requires a confined space entry and houses valves that are difficult to access. This pump station is scheduled for rebuild. Staff is preparing an RFP for engineering services to design a new pump station.

INTERGOVERNMENTAL ACTIVITIES

NONE

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



Memorandum

Date: February 12, 2020
To: Donald B. Miller, P.E., Director of Engineering
From: Terry Boyer, P.E.
Re: Project Status Report
West Headworks Improvements Project
Donohue Project No. 13384

West Headworks Improvements Project

The Contractor has submitted 194 submittals, 50 RFI's, and 18 pay applications. Donohue has issued 31 requests for proposal for change order to the Contractor. Change Order #003 was executed last month. Progress meetings are no longer being held. The Substantial Completion date for the project was February 4, 2020. All but one component of the project are substantially complete.

The project components are broken down into systems, those that are substantially complete include:

- System 1: West fine screens, washer compactor, and conveyor
- System 2: West grit pumps
- System 3: West grit washers and conveyor
- System 4: Replacement west primary sludge and scum pumps
- System 5: Replacement east primary sludge pumps

System 6, odorous air system, is not complete and needs to be tested and balanced before substantial completion can be issued. The Contractor has shifted their primary focus to completing punchlist items and readying the site for Owner occupancy.

Updated: 2-12-2020	Open	Closed	Total
Submittals	0	194	194
RFI	0	50	50
Change Order Request	2	29	31
Change Orders	1	3	4

Sanitary District of Decatur
501 Dipper Lane * Decatur, Illinois 62522 * 217/422-6931

MEMORANDUM

TO: Don Miller

DATE: February 13, 2020

FR: Roger Dudley

RE: Wyckles Facility Upgrades

- Contractor – Burdick Plumbing & Heating – Decatur, IL
- Valve replacement began on January 8.
- Valve replacement has been completed, excavations backfilled and tested for compaction requirements according to the specifications.
- Remaining contract items to complete:
 - Installing 8” storm drain
 - Storm drain inlet construction
 - Completion of these items are weather dependent.
- Additional fire hydrant has been added to the contract to facilitate the washing/cleaning of the unloading ramp located at the northwest corner of the east lagoon.

Sanitary District of Decatur
501 Dipper Lane * Decatur, Illinois 62522 * 217/422-6931

MEMORANDUM

TO: Don Miller

DATE: February 14, 2020

FR: Roger Dudley

RE: Clarifier #1 Concrete Repair

- Contractor – GRS General Contractors
- Contract amount - \$23,120.00
- Scope of work:
 - Repair deteriorated concrete & seal vertical cracking along the outside wall of the clarifier launderer.
- Insurance certificate has been submitted and approved.
- Purchase order has been issued to the contractor.
- Engineering Department awaiting submittals for approval.
- Contractor has stated that reinforcement submittals & delivery is approx. 3 weeks.

SANITARY DISTRICT OF DECATUR

501 Dipper Lane Decatur, IL (217) 422-6931

MEMORANDUM

TO: Kent Newton

FROM: J. D. Malone

DATE: 2/13/2020

SUBJECT: Maintenance Monthly Activity Report for January 2020

Overall

The three vehicles (2 trucks and 1 van) that were approved to be purchased at the November 2019 board meeting have been ordered. According to our latest update, Ford Transit Van and Ford F150 Super Cab have approximately 8 weeks of lead time remaining. The Silverado has been put in to service and is working out well. The truck it replaced will be auctioned late spring 2020. I am working with Dynagraphics to obtain the logos for all the new vehicles and the trailer jetter.

I am pursuing a replacement for our 2006 F450 service body truck. This is one of two service trucks with cranes that are primarily used by our in-town crews. The existing truck has mechanical issues that make it unreliable to operate. Ordering of a replacement cab and chassis is on hold until the state of Illinois approves the bid for heavy duty trucks. The existing service body is in good condition and will be installed on the new chassis along with a new crane.

I am working with vendors to obtain pricing for a new electric forklift for our inventory area. This area does not have adequate ventilation to use gasoline or LP forklifts.

Startup service for the Hotsy hot water power washer for the Sludge Thickening Building (114) was completed 2/3/2020. The unit is now in operation and has been utilized during preventive maintenance work.



SANITARY DISTRICT OF DECATUR

501 Dipper Lane Decatur, IL (217) 422-6931

MEMORANDUM

Work Orders Completed, Total of 1066

98 Corrective

9 Improvement / New

904 PM

4 Process

0 Project

7 Safety

1 Training / Meeting

0 Asset Management

43 Proactive Work / Issues found during a PM

I&C Monthly Activity

Final installation work on the improved chemical flow meters for the disinfection system is in progress. Installation will be completed and ready for final testing by the operations group by late February / early March.

Worked with mechanical maintenance group to complete the installation of the relocated seal water system in the 105 (Digester) building. The system is up and running now. Relocation of the unit has improved operations and maintenance staff access to the unit. Moving the unit also allowed us to install standard components rather than class 1 div 1 components.

March 2nd through March 6th Allen Bradley will be on site to perform a customized training course for the entire I&C group. The training will consist of Studio 5000 Logix Designer Level 1, ControlLogix Fundamentals & Troubleshooting, and PowerFlex 750 Configuration and Startup classes. The class has been custom tailored to the equipment that we install and use on a regular basis.

Mechanical Maintenance Monthly Activity

Eastside Booster Pump #2 was repaired by Bodine Electric and installed by the outside maintenance crew. Pump #4 was also returned after warranty repair and installed / put back in to operation. Pump #3 will be pulled for planned rebuild / impeller replacement March 2020.

SANITARY DISTRICT OF DECATUR

501 Dipper Lane Decatur, IL (217) 422-6931

MEMORANDUM

We will be utilizing a pump removed from the old Hickory Point pump station as a replacement for Fairies Park pump #2. The pump will be rebuilt, and a new base elbow will be installed in the Fairies Park pump station. The repaired pump has been received and we will begin coordination of pump station shut down and pump installation.

I will give an update during the board meeting on training for our laborers in training. The training is progressing well, and the employees are being familiarized with all facets of our plant / collection system.

M.I.S. Department Monthly Update

- Network Administration, Helpdesk, Troubleshooting and Repair
 - Ongoing network administration.
 - Work on SDD surveillance system
 - Ongoing replacement of SDD virtual servers
 - Ongoing SDD Network rebuild

Mimecast Email Security

Email Volume Vs Rejected Mail

From 1 Jan 2020 To 1 Feb 2020

Total Email Count : 10324 Total Rejection Count : 3361

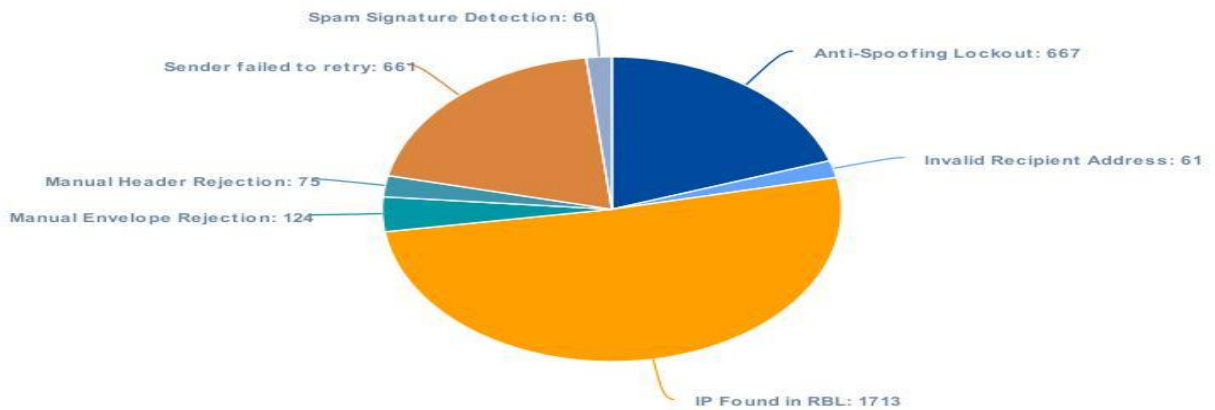


SANITARY DISTRICT OF DECATUR

501 Dipper Lane Decatur, IL (217) 422-6931

MEMORANDUM

Rejection Overview
 From 1 Jan 2020 To 1 Feb 2020
 Total Rejection Count: 3361



Email Statistics Report

From Feb - 2019 To Jan - 2020

Month-Year	Total Inbound email	Rejections (includes viruses & spam)	Legit Inbound Email	% Rejections	Total Outbound email	Total Internal email
Feb - 2019	3,569	1,199	2,370	33.59 %	648	3,065
Mar - 2019	5,902	1,873	4,029	31.74 %	1,115	6,071
Apr - 2019	6,218	2,066	4,152	33.23 %	1,446	5,885
May - 2019	6,263	2,308	3,955	36.85 %	1,495	5,200
June - 2019	6,453	3,182	3,271	49.31 %	1,373	4,314
July - 2019	8,068	4,514	3,554	55.95 %	1,325	4,865
Aug - 2019	9,209	5,540	3,669	60.16 %	1,352	4,952
Sep - 2019	19,087	15,377	3,710	80.56 %	1,214	4,273
Oct - 2019	17,123	13,201	3,922	77.10 %	1,212	5,319
Nov - 2019	8,292	5,050	3,242	60.90 %	1,158	4,563
Dec - 2019	7,676	4,476	3,200	58.31 %	906	5,465
Jan - 2020	6,604	3,281	3,323	49.68 %	1,207	5,632
Total	104,464	62,067	42,397		14,451	59,604
Mean	8,705.33	5,172.25	3,533.08	52.28 %	1,204.25	4,967.00

SANITARY DISTRICT OF DECATUR

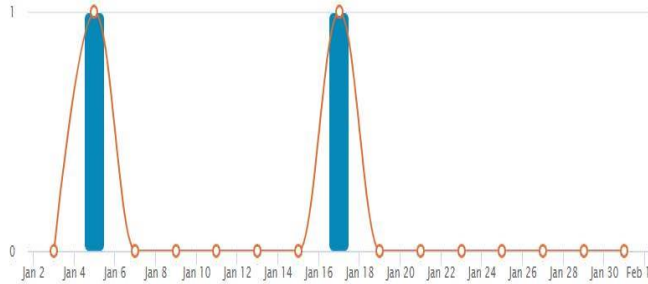
501 Dipper Lane Decatur, IL (217) 422-6931

MEMORANDUM

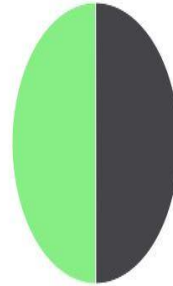
Vipre Endpoint Security

From Jan 1, 2020 7:34 AM to Feb 1, 2020 7:34 AM

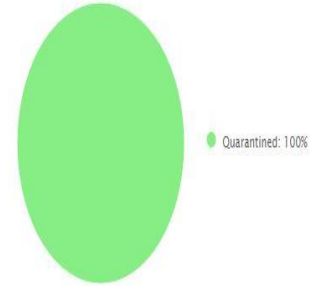
INSTANCE VS. DEVICES



DETECTION SOURCES



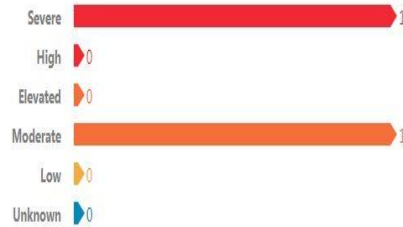
ACTIONS TAKEN



TOP 10 DEVICES



SEVERITY BREAKDOWN



TOP 10 THREATS



DETECTIONS

TIME	NAME	SOURCE	SEVERITY	DEVICE	POLICY	ACTION TAKEN
Jan 17, 2020 9:04 PM	JS:Trojan.Cryxos.2699	Scan	Severe	BOARDROOM-01	Workstations	Quarantined
Jan 6, 2020 10:32 AM	Blocked URL	Email	Moderate	HP-SheriH	Workstations	Quarantined

Systems Integrator Monthly Update

- West Headworks upgrade project - completing documentation and minor adjustments to running program per operations
- SCADA has been upgraded for Windows 10 compliance to iFIX 5.9 and HISTORIAN has been upgraded to Version 7.0 SP6
- All SCADA nodes have been installed including new nodes in 5 locations around the plant

If you have any questions or would like additional information about the maintenance department and our activities, feel free to contact me.

Thank you,

James Malone, CPMM

Phone: (217) 422-6931 (x-226)