

Kent



County

Wastewater Facilities
Phone: 302-335-6000
Fax: 302-335-0365

Department of Public Works
Division of Engineering

Phone: 302-744-2430

Fax: 302-736-2100

Kent County
Administrative Complex
555 Bay Road
Dover, DE 19901
(Handicapped Accessible)
www.co.kent.de.us

**KENT COUNTY REGIONAL SEWER ADVISORY BOARD
FOUR HUNDRED TWENTY (422nd) MEETING
November 4, 2020 at 5:00 PM**

This meeting is a Telephone Conference Call

Call-In Number: 1-800-377-8846

Participant Passcode: 92535882#

CALL TO ORDER

ROLL CALL AND DETERMINATION OF QUORUM

MINUTES OF THE PREVIOUS MEETING AND ACTION THEREOF

REPORTS OF OFFICERS, COMMITTEES AND STAFF

- A. OPERATIONS AND MAINTENANCE REPORT**
 - 1. August, 2020
- B. ENVIRONMENTAL PROGRAMS REPORT**
 - 1. August, 2020
- C. SEWER ADVISORY BOARD – LEVY COURT ACTIONS**
- D. OLD BUSINESS**
- E. NEW BUSINESS**
 - 1. KCSDD1 Proposed Extension (Magnolia North Area) – 3609 S. State Street/Berkshire Property

COMMENTS

ADJOURNMENT

POSTED: October 23, 2020

TAKEDOWN: Upon Replacement

Kent



County

Department of Public Works

**KENT COUNTY REGIONAL SEWER ADVISORY BOARD (SAB)
FOUR HUNDRED TWENTIETH (421st) MEETING MINUTES
October 7, 2020, 5:00 PM**

TELECONFERENCE MEETING

**Kent County Levy Court Administrative Complex,
555 Bay Road, Caucus Room Dover, DE**

MEMBERS PRESENT

Brooks Keen
Gerald Pepper
Rodney Hegman, Chairman
William Yonker, Vice Chairman
Robert Haynes
Lee Dean
Edward Welch
Bryan Ashby
Jason Lyon
James Puddicombe
Mike Svaby
William Evans

REPRESENTATIVE

1st District
2nd District
3rd District
4th District
5th District
6th District
At Large
DNREC - Alt
Dover
Milford - Alt
Milford
Smyrna – Alt

MEMBERS ABSENT

Harold Scott
Matthew Jordan
Virgil Holmes
Gary Stulir

REPRESENTATIVE

Camden-Wyoming
DAFB
DNREC
Smyrna

OTHERS PRESENT

Diana Golt
Cathy Moore
Brian Hall
Mark Kennedy
Jeremy Kalmbacher

Kent County Public Works
Kent County Public Works
Kent County Public Works
Kent County IT
Three Chord CEM

INSTRUCTIONS FOR TELECONFERENCE: *Prior to the start of the meeting, Mrs. Golt introduced herself and read a statement of instructions for the teleconference. The statement noted that the public meeting was being recorded and described the public participation process.*

ROLL CALL AND DETERMINATION OF QUORUM

The meeting was called to order by Mr. Hegman, Chair at 5:01pm. Roll-call commenced. With thirteen members in attendance, a quorum was determined to be present.

Approval of Meeting Minutes – No corrections were noted. A motion was made by Mr. Welch and seconded by Mr. Dean to accept the meeting minutes of May 6, 2020. **Motion carried unanimously.**

REPORTS OF OFFICERS, COMMITTEES AND STAFF

Operations and Maintenance Report – April, 2020 – Mrs. Golt gave a review of the April Operations and Maintenance Report. There were no odor complaints or power outages at the treatment facility. There was one sanitary sewer overflow at pump station #4 on Locust Grove Road and there were two exceedances of the daily maximum enterococcus limits. Those were on April 13 and 24 and were associated with heavy rain events and presumed to have been associated with pigeon feces. Performance data is included in the report. Performance, except for those exceedances, was within acceptable limits. The electric usage showed a slight decrease in the demand and in the usage during the prior month. Activities for the Wastewater Division and the Environmental Programs Section of the Engineering Division were summarized.

Mr. Hegman asked for any questions/comments and if none, asked for a motion to accept the April, 2020 report. Motion made by Mr. Keen and seconded by Mr. Welch to accept the report. **Motion carried unanimously.**

Operations and Maintenance Report – May, 2020 – Mrs. Golt gave a review of the May Operations and Maintenance Report. There was one odor complaint on May 27, caused by a buried cleanout filled with debris; it was cleaned out and the stack replaced. There were no power outages impacting operations or treatment during the month of May. There were also no sanitary sewer overflows during the month of May. There was one permit exceedance of the daily maximum enterococcus limits during the month of May. It was, again, associated with a heavy rain event and presumed to be associated with pigeon feces. During these reports you will hear a lot about exceedances with the UV, and there are multiple potential causes for them and some of that is identified in each report, and we are working on a plan to remove the pigeons. All channels were cleaned in the UV unit and results after the cleaning were within normal compliance. Under Performance Data, the flow was 11.66 MGD and less than the 12 and 18 month averages. Performance, other than the exceedances, was within acceptable parameters. Electric usage was a slight increase in demand and usage than the prior month. Activities for the Wastewater Division and the Environmental Programs Section of the Engineering Division were summarized.

Mr. Hegman asked for any questions/comments and if none, asked for a motion to accept the May, 2020 report. Motion made by Mr. Welch and seconded by Mr. Yonker to accept the report. **Motion carried unanimously.**

Operations and Maintenance Report – June, 2020 – Mrs. Golt gave a review of the June Operations and Maintenance Report. There were two (2) odor complaints for June. One was a resident from E. Commerce Street in Kenton on June 4; the belief is that it was associated with a dry trap; staff ran water to fill the trap. On June 5, in the Hilltop MHP, Camden, there was an odor complaint. Upon arrival, mechanics could not smell any odor, but assumed it was a dry trap as well. There were no power outages,

no sanitary sewer overflow or permit exceedances during June. Flow was less than the 12 and 18 month averages; it was 11.2 MGD. Page two summarizes the treatment plant performance which was within acceptable range during the month of June with no exceedances. For Electric Usage and Solar Production, there was a slight increase in solar production compared to the prior month. The electric usage saw no increase in demand but a slight increase in usage compared to the prior month. Activities for the Wastewater Division and the Environmental Programs Section of the Engineering Division were summarized.

Mr. Hegman asked for any questions/comments and if none, asked for a motion to accept the June, 2020 report. Motion made by Mr. Keen and seconded by Mr. Welch to accept the report. **Motion carried unanimously.**

Operations and Maintenance Report – July, 2020 – Mrs. Golt gave a review of the July Operations and Maintenance Report. There were no odor complaints, no power outages affecting transmission or treatment. In terms of SSO's, there were four (4) sanitary sewer overflows which occurred July 10 and occurred at PS2, 3, 4 and 6 and were all the result of the same heavy rain storm associated with tropical storms. The areas were cleaned and limed and samples were taken of the waterways to monitor return to normal levels. There were two (2) permit exceedances of the daily maximum enterococcus limits during the month of July. Performance data, the July flow was 12.04 MGD and was greater than the 12 month average but less than the 18 month average as shown in Table 1. In Table 2, performance for the entire month is shown to be within the appropriate limits and had successful treatment, except for the exceedances previously mentioned. Under Electric Usage and Solar Production, the electric demand and daily usage usually stabilize; however, the electric usage reflected a slight increase in demand and increased daily use from the prior month. Solar field output is tied to the days without cloud cover and functionality of the system. There was a slight increase in solar production and a slight decrease in daily solar production with the monthly value going up. This is affected by the number of days in the month. Under Plant Operations, all the UV channels were operating due to the violation issues. Operations staff helped with grass cutting and we continued decanting the digesters reserving space for wasting because we were waiting for hot oil pumps in the biosolids operation. The hot oil pump did come in and was installed by maintenance. They also did a pipe repair in Coursey's Point and performed 1,760 hours of preventative maintenance. We processed 7.1 MG of sludge and AgOps hauled and spread 897 tons of biosolids on area fields.

Mrs. Golt noted to members that the report portion on Environmental Programs and Sustainability Management Programs was taken out and put in a separate report because that group actually reports to Andy Riggi, the Assistant Director of the Engineering Division.

Mr. Hegman asked for any questions/comments and if none, asked for a motion to accept the July, 2020 report. Motion made by Mr. Dean and seconded by Mr. Keen to accept the report. **Motion carried unanimously.**

Environmental Programs Report – July, 2020 – The majority of the month was dedicated primarily to preparing handbooks used in employee training. Initial training was also completed with the inspection of septic hauler trucks and how to issue septic hauler permits. We monitored delinquent hauler accounts and calls were made to hauler regarding the delinquencies. We did have one account that was over 90 days past due. With the Fats, Oil and Grease Program, staff visited and left information at several food service facilities under construction, one of which was a Pizza Hut location which was inspected and issued a fats, oil and grease permit.

There is a correction to this report. Please strike the phrase, "and employee training". It is a duplicate phrase in the first paragraph of the report.

Mr. Hegman asked for any questions/comments and if none, asked for a motion to accept the July, 2020 Environmental Programs report. Motion made by Mr. Welch and seconded by Mr. Dean to accept the report. **Motion carried unanimously.**

LEVY COURT ACTIONS

KCSSD1/East Dover Area (Proposed Extension) – Rojan Meadows Property, LLC – Mrs. Golt reported that the extension of KCSSD1 for the East Dover Area done by Resolution Number 3788 was passed at a Public Hearing on June 9, 2020. There were six (6) Yeas' and one (1) Absent. This was an item that was discussed at the May 5, 2020 SAB meeting.

OLD BUSINESS

None.

NEW BUSINESS

KCSDD1 Proposed Extension (Double Run Area)-Walgreens Commercial Complex/Woodside Center Property – Mrs. Golt explained the item is a proposed extension in the Double Run Area for the Walgreens Commercial Complex/Woodside Center Property. Engineering received the request and the property parcel number is identified in the memo. The property is located in the Northwest quadrant of US 13 and Walnut Shade Road. (Refer to the map attached to the memo) Staff prepared a Technical Feasibility Study (TFS) and it indicated that we were legally required to extend the service to the property by having a Resolution. The property has mixed commercial uses. This property proposes five (5) EDUs. The TFS indicated that it was feasible and the applicant has acknowledged the findings of the TFS. They also acknowledged that they are required to maintain a portion of the proposed system located on private property. The applicants are responsible for the design, permitting and construction of the proposed infrastructure. During the design phase, there will be coordination activities required with the US13 widening project by DelDOT. The applicant/owner of the property is also responsible for the payment of commercial sewer permits and both impact fees per EDU prior to the sewer connection. The Aid in Construction (AIC) fees are not applicable in this case. The Aid in Construction was previously endorsed by Sewer Advisory Board and approved by Levy Court in 2003 and 2004. Approval of the sewer service does not impact or modify land use or zoning regulated through the Kent County Department of Planning. Mrs. Golt noted that Mr. Hall and Mr. Kalmbacher were both available for questions.

Mr. Hegman asked if there were any questions or inquiries for this project and if none, asked for a motion to accept the Double Run Area property proposal. Motion made by Mr. Welch and seconded by Mr. Dean to accept. **Motion carried unanimously.**

COMMENTS – Mr. Jeremy Kalmbacher, from Three Chord CEM, thanked the Sewer Advisory Board for reviewing the application this evening. He noted that this project has been going very well with the assistance of the Public Works Department and they are looking forward to abandoning the septic system at the site and receiving County sewer service. He thanked everyone once more.

ADJOURNMENT - With no other comments, questions or business, Mr. Hegman requested a motion for Adjournment. A motion to adjourn was made by Mr. Dean and seconded by Mr. Keen. **Motion carried.** The meeting adjourned at 5:32 p.m.

Mrs. Golt thanked everyone for participating in the meeting and announced the conclusion of the teleconference.



Kent County
Department of Public Works
Wastewater Facilities Division

MEMORANDUM

Date: September 25, 2020

To: Diana Golt, P.E., Public Works Director *dtg*

From: Keith Powell, Assistant Public Works Director - Wastewater Division

RE: **KCRRRF OPERATIONS & MAINTENANCE REPORT**

REPORTING PERIOD: August, 2020

Odor Complaints: There was one odor complaint in August from the owner of 4758 S. State Street, Magnolia. The source was determined to be poultry manure spread on a nearby farm field.

Power Outages: There was one power outage on August 4th associated with Storm Isaias from 8:30 to 11:10 at the KCRRRF. There were no interruptions in processing as all back-up generators functioned correctly.

SSOs & Permit Exceedances: During the month, there were six exceedances (08/04, 08/13, 08/14, 08/16, 08/17, 08/18) of the permitted enterococcus limit of 104 col/100ml. The exceedances ranged from 113 col/100ml to 410.6 col/100ml. As each violation coincided with a rain event, it is possible that pigeon feces washed into the effluent. Multiple causes are being investigated and pest control is being researched.

During the month, there were a total of nine (9) SSOs. There were five (5) SSOs between 08/04 and 08/06. All were associated with the rupture of a 24" main transmission line during Storm Isaias. The storm was a major rain event of over 3.5 inches of rain locally. Until the repair was completed, the flow was transferred to the parallel 16" line. The events are listed below.

Location ID	Date & Timeframe (Start/Stop)	Duration	Spill Volume (gal.)	Water Body
24" FM break (median of US13 near Twin Willows Rd)	08/04/20 09:30 hr to 08/04/20 11:00 hr	1.5 hr.	75,000	Snows Branch, tributary of Leipsic River
PS#33 (3726 Arthursville Rd, Hartly)	08/04/20 12:30 hr to 08/04/20 15:00 hr	2.5 hr.	4,000	Not Applicable, Ground surface only
PS#12C (318 Seven Hickories Rd, Kenton)	08/04/20 12:30 hr to 08/04/20 17:00 hr	4.5 hr.	4,000	Pinks Branch, tributary of Leipsic River
PS#1 (205 Mill Street, Smyrna)	08/04/20 10:20 hr to 08/04/20 10:30 hr	10 min.	1,000	Mill Creek, a tributary of Smyrna River
PS#1 (205 Mill Street, Smyrna)	08/05/20 12:50 hr to 08/06/20 01:05 hr	12.0 hr	500,000	Mill Creek, a tributary of Smyrna River

On Friday, August 7, 2020, Kent County received high level alarms from SCADA for various pump stations and staff was dispatched. The stations were running with all available pumps at maximum capacity during the rain event. The information below provides information on spill start/stop times, duration, volume, and water body.

Pump Station	Duration	Spill Volume	Water Body
PS2	0.5 hr.	8,000 gal.	Over land/ did not reach water
PS3	2.0 hr.	35,000 gal.	St. Jones
PS16	3.0 hr.	6,000 gal.	Dykes Branch
PS6	1.5 hr.	10,000 gal.	St. Jones

PERFORMANCE DATA:

The August flow of 13.61 MGD is greater than the 12 month average and the 18 month average shown in Table 1. Both 12 and 18 month averages are also slowly decreasing as our flows drop. The RRF performance is within permit limits as shown in Table 2. August was a very wet month with a total of about 10.28 inches of rain.

Table 1. Effluent Flow, MGD (Ave):^a

Permit Basis ^a	August	12 Mth	18 Mth
20	13.61	11.73	12.50

Table 2. KCRRRF Performance:

Parameter	Concentration In	Concentration Out	Permit Limit	% Removal
TSS (Ave)	281 mg/L	3.0 mg/L	15 mg/L	98.9 %
CBOD(Ave)	275 mg/L	2.1 mg/L	544 lbs/dy	99.2%, 238 lbs/dy discharged
Nitrogen	32.1 mg/L	2.87 mg/L	327,405 lbs/yr	326 lbs/day discharged
Phosphorous	3.6 mg/L	0.33 mg/L	51 lbs/dy	37.4 lbs/day discharged
Enterococcus	413.0 col/100 ml	26.3 col/100 ml	Geo.Mean 33 col/100 ml	93.6% ^b

Notes:

- a. A daily average discharge rate of 20 MGD was used by DNREC to determine mass-based effluent limits.
- b. The 93.6% removal rate for enterococcus was due to low concentrations entering the UV and the issues that we had with the violations. Normal concentrations of enterococcus entering into the UV system are a range of 300 to 800 col/100ml and can range as high as 2,419col/100ml. Although the effluent enterococcus remains under the geometric mean of 33 col/100ml the plant struggled somewhat. With the reopening of businesses and the cleaning restrictions, the disinfectants are taxing our ability to maintain a healthy bug population in the basins.

The current NPDES permit has moving 12-month cumulative load limits as well as seasonal limits from May through September for Nitrogen (N), Phosphorus (P), and Carbonaceous Biochemical Oxygen Demand (CBOD). The cumulative 12 monthly average for TN and TP went up slightly for the month of August and CBOD went down slightly. All parameters are well within the rolling average and slight variations up and down as expected. See table below.

Table3. KCRRRF Performance related to cumulative load limits:

		TN	TP	CBOD
PERMIT LIMIT	Moving 12-mo cumulative load, lbs	327,405	18,615	198,504
	Seasonal: May - Sept, lbs	NA	51	544
RESULTS	Effluent Results, lbs	134,019	9,199	67,011
	% Effluent Results of 12-mo Limit	40.6%	47.1%	33.4%

ELECTRIC USAGE & SOLAR PRODUCTION: In summer, the demand and usage should stabilize as the basin solids lower due to increased microbial activity. In summer, we should see a decrease in electric usage and possibly an increase in solar production. However, solar output is dependent upon cloud cover.

There have been difficulties in maintaining a healthy micro-life population this summer. More electricity was required to meet oxygen demand and population augmentation in the basins. This may correlate to increased cleaning frequencies for COVID-19. Our daily electric usage is higher than the previous month and the peak electric demand is similar to the previous month. Average daily solar production was lower than the prior month.

Table 4. Electric Usage		
Timeframe	Peak Demand	Daily Average
August 2020	1.649	34,064
Prior Month	1.661	33,948

Table 5. Solar Production		
Period	Total Monthly Production	Avg. Daily Production
August 2020	108,406 kW	3,497 kW
Prior Month	148,619 kW	4,794 kW

WASTEWATER DIVISION ACTIVITIES

Plant Operations:

1. Repaired diffuser on line 50
2. Calibrated truck scales
3. Operations completes the grass cutting at the plant when time permits
4. Helped engineer take measurements of blower building for installation of new turbo blowers
5. Helped fix a control issue at the sand filter controls
6. Processed a total of 422.01M Gal in July for a YTD total of 2.91177 billion gallons

Maintenance:

1. Helped outside contractor repair the 24 inch force main after it ruptured during the storm on 8/4/20
2. Flushed and pigged the DSWA force main
3. Repaired clarifier #4 scum arm.
4. Attended OSHA training for class F licenses
5. Repaired various UV units
6. Completed 1808 hours of preventive maintenance including work on air release valves, hauler machine, stations and line jetting.

Electrical:

1. Replaced yard lights with LEDs at 4 stations
2. Participated in the online sexual harassment training
3. Replaced transducers at various stations
4. Changed the scrubber pump in biosolids
5. Installed cellular auto dialers at 4 pump stations

Biosolids:

1. Processed 8.2 million gallons of sludge at 1.1% solids (376 tons).
2. Gas usage: 3402 MCF (1-MCF = 1000 cu/ft). Usage is 914 MCF higher.
3. Average belt press solids were 18.9 % and final dryer (Dryer #3) solids equal to 48.2%.
4. Average sludge flow = 294 gpm.

AgOPS:

1. Hauled and spread 119 tons of biosolids on area fields during the month.
2. Allowed DSWA to discharge to the western-most storage lagoon due to pump station issues. This will continue until the station issues are resolved.
3. Performed PM work on heavy equipment and helped cut grass around the plant.



Kent County
Department of Public Works

MEMORANDUM

DATE: October 26, 2020
TO: Diana T. Golt, P.E., Public Works Director *dtg*
VIA: Andy Riggi, P.E., Assistant Public Works Director – Engineering Division
FROM: Jim Burk, Environmental Programs Manager
RE: Environmental Programs Report – August 2020

1. Industrial Pretreatment Program:

- a. Staff was trained in sample collection for various monthly parameters using ISCO & Sigma samplers. Staff visited and sampled 7 significant industrial users:

08/10-08/12 Perdue;
08/11-08/13 Seawatch;
08/12 Coastal Brewing;
08/12-08/14 Garrison; Kraft Heinz; Proctor & Gamble;
08/18-08/20 NRG.

- b. Staff was trained in annual sample collection and collected annual samples from DSWA, Garrison, Kraft, NRG, Dover Wipes and Seawatch.

2. FOG Program: Staff inspected Mama Maria's, Surf and Turf, Tropical Delight, and La Hacienda and issued their FOG permits
3. Shelly Stevens was hired as a full-time employee. John Messina worked part time in Environmental Programs and will continue to do so until his transfer from Operations is completed.

Environmental Programs Report includes the Industrial Pretreatment Program, the Fats, Oil & Grease Program, the Septage Hauler Program and the Sustainability Management System.



Department of Public Works

MEMORANDUM

DATE: November 4, 2020
TO: Kent County Regional Sewer Advisory Board
FROM: Diana T. Golt, P.E., Public Works Director
Andrew Riggi, P.E., Assistant Public Works Director *AAR*
RE: KCSDD1 PROPOSED EXTENSION (MAGNOLIA NORTH AREA) – 3609 S.
STATE STREET/BERKSHIRE PROPERTY

The Engineering Division received a request for County sanitary sewer (SS) service from the applicant/equitable owner of Parcel No. NM-00-104.00-01-75.00-000. The property is located on the east side of S. State Street and north of the Town of Magnolia. Currently, this 78.5 acre property is primarily agricultural use. The application indicates a 104-lot subdivision of single-family homes is proposed. Please refer to the attached map at the site where the property is labeled “Lands of Cypress Glen” (aka Berkshire Project).

Staff prepared a Technical Feasibility Study (TFS), dated September 28, 2020, for the proposed sewer service. An extension of Kent County Sewage Disposal District No. 1 (KCSDD1) for the Magnolia North Area is required to provide sewer service. As shown on the map, the proposed infrastructure would entail installation of a gravity collection main connecting to the existing gravity system across from Captain Davis Drive; and the reconnection of the existing force main from the Delaware State Police Troop 3 (DSP-T3) Complex to the new sewer main. An Aid-In-Construction (AIC) contribution is required to be paid by the developer to Kent County for required future improvements (pumps & controls) to the existing PS#11D. Downstream of PS#11D, there is adequate capacity in the system to accommodate the proposed 104 Equivalent Dwelling Units (EDUs). The applicant has formally agreed to the findings of the Technical Feasibility Study (TFS).

The applicants/owners are responsible for the design, permitting, and construction of the proposed infrastructure. Additionally, the owner/applicant/developer of the property is responsible for the payment of the residential sewer permits and both impact fees per EDU of growth as required.

Approval of sewer service does not impact or modify land use and/or zoning regulated through the Kent County Planning Department.

The Engineering Division will present this proposal to the SAB on Wednesday, November 4, 2020 at 5:00 p.m. Please refer to the Agenda for the virtual meeting instructions. The applicants and interested parties are invited to participate in this public meeting.

Attachment

cc: Christopher J. Flathers, MRA, Inc.



Kent County
Sewage Disposal District No.1
3609 South State Street
Magnolia North Area



- Proposal Area
- TFS Gravity
- TFS Manhole
- EX Pump Station
- EX Force mains
- EX Grinder Pump
- EX Gravity Sewer
- EX Manhole
- Tax Parcels

