

Operations Report

Emmanuel S. Stuppard, Dir. of Engineering, Operations & Maintenance



May 2019

DIRECTORS NOTES

- Preliminary draft of the RFP for lateral insurance is completed. Currently, it is being review by Ryan Scerbo of Decotiis Law. Following Ryan's review and comment of the draft document, I will make final edits/changes and resubmit to Ryan for final review. Once the RFP is finalized, Mike Riley will receive a copy to conduct final review and provide additional comment.
- Three (3) interns a currently working to solve and provide technological advances for our pH problem. They have done research, visited our plants and conducted interviews of the operations staff to come up with a plan that the Authority can implement.
- Visited Schneider Electric's R&D Center in Andover MA along with the ED and three Commissioners to learn more about micro grid technology and how it could benefit the Authority. From the experience, I gathered that we would have the ability to remove our dependence from the "grid" through the Micro-Grid technology, Solar PV technology and CHP technology. Will all of these ideas working in concert with each other, the Authority would have the ability to see a steep savings on the cost of energy supply for the system
- Contract is sign be all parties for the demolition of 24 Medallion Lane. Contract was mailed out to the contractor on 6.10.19. Awaiting response from the contractor to schedule a date to demolish the property.
- According to the 2019 Capital Budget, vehicle replacement allotment is present and I anticipate replacing to vehicles in the fleet. Please see the Resolutions.
- Lab services contract is prepared and ready to go out on the market.
- New 2019 F350 with Utility Body has been delivered to the Authority to replace truck #9 within System Maintenance.
- Grit and Screen removal project is estimated to cost \$5,198,000.00.
- Created an RFP for a Magnesium Hydroxide Feed System. Expecting bids to come in, not more than \$30k. This system will condition the effluent to raise the pH allowing the wastewater to be more neutral. When the waste waster is in a neutral state, the process by which the microorganisms are most effective in the treatment process is realized.

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Water, Pollution Control & System Maintenance Departments

WATER TREATMENT

	2019	2018
Total Gallons Raw Water Pumped Year to Date (1.999 Billion permitted)	452.118	454065
Total Monthly Gallons Raw Water Pumped - Million Gallons	100.202	110.784
Average in Million Gallons Per Day Raw Water Pumped Year to Date	2.994	3.007
Average Permitted Million Gallons Per Day	5.477	5.477
Total Gallons Treated Water Pumped - Million Gallons	97.525	109.454
Total Hours Treated Water Pumped	1,558	1,560
% of Wells runtime utilized* / % of Max Monthly Diversion (310 MGM)	35% / 32%	35% / 36%
Total Treated Water Pumped From Main Plant - Million Gallons	58.376	63.286
Total Treated Water Pumped From Well # 1 - Million Gallons	22.766	32.190
Total Treated Water Pumped From Well # 5A - Million Gallons	10.385	7.427
Total Treated Water Pumped From Well # 6 - Million Gallons	5.698	5.700
Wash Water Recycled - Million Gallons	0	.851
Average Water Per Day to Distribution System - MGD	3.15	3.531
Highest Single Day of Pumping 5/22/2019 - MGD	4.734	4.897
Ratio of Max Day to Firm Capacity (10.522 MGD*) *including Well #5A	45%	47%
Total Water Delivered to Mount Laurel - this month - Million Gallons	22.017	34.681
Total Water Delivered to Mount Laurel - Year to Date - Million Gallons	99.920	97.429

<i>CHEMICALS USED (Water Plant - Meribrook Circle)</i>		<i>CHEMICALS USED (Well # 1-Sylvan Lane)</i>	
Sodium Hypochlorite	5,400 gals.	Sodium Hypochlorite	188 gals.
Polymer	119 lbs.	Lime	8,750 lbs.
Lime	11,850 lbs.	Fluoride	674 lbs.
Fluoride	1,131 lbs.	Days Operated	26
Days Operated	31		
<i>CHEMICALS USED (Well #5A - Baldwin Lane)</i>		<i>CHEMICALS USED (Well #6 - Medallion Lane)</i>	
Chlorine Tablets	267 lbs.	Sodium Hypochlorite	496 gals.
Lime	200 lbs.	Lime	950 lbs.
Fluoride	284 lbs.	Fluoride	172 lbs.
Sequestering Agent	799 lbs.	Polymer	28.5 lbs.
Days Operated	16	Days Operated	16

Water Treatment and Distribution Departments (continued)

- 1) New WMUA signs where installed at the Water treatment plant, System Maintenance & PCP
- 2) Wach's valve exercise trailer was delivered.
- 3) Drained, cleaned & inspected the Settling basins.
- 4) DEP stop by the WTP for a spot check, all went well.
- 5) Installed 7 new parking stop blocks at the office.
- 6) Concrete slab was installed for our motor storage garage.
- 7) Brock, Carlin & Eddie have been studying for there state exam next month.

Water Main Breaks

<i>DATE</i>	<i>LOCATION</i>	<i>SIZE MAIN</i>

RECONSTRUCTION:

RECONSTRUCTION:	0	0	Current Month:	Current Year	To Date:
(1986 to present) Contractor Water Main Replacement: (linear feet)	0	0	119,018		
(1990 to present) System Water Main Replacement: (linear feet)	0	0	272,233		
Total LF of 6" / 8" AC Mains (Twin Hills & Rittenhouse not included in total) = 381,800. Total LF Replaced To Date = 380,097 Ft (99.6%) with 1,703 Ft (0.4%) to go. Total installed at Town Center = 3,901 Ft of 6, 8, 10 DIP, 6,725 Ft of 12" PVC Low Pressure Main on Pageant & Salem Road and 528 Ft of 12" PVC Discharge Main @ Well #6 =					

Service Leaks

- 55 Melbourne Lane—N.O.P
- 85 Thornhill Lane—N.O.P.

Sewer Repair

- 20 Mandolin Lane
- 12 Garland Lane sink hole—N.O.P.

Fire Hydrant Repairs

- K-81 next to the Ruby Tuesday in the Willingboro Plaza
- K-81 in front of Willingboro High School Gym
- 11 Tipton Lane—Installed new fire hydrant

Meter Pit

- 63 Middleton Lane—Broken yoke
- 87 Glenview Lane—Replaced broken collar
- 92 Gainscott Lane—Leak in the pit
- 155 Clubhouse Drive—Replaced broken collar
- 49 Middlebury Lane—Hard to turn

Concrete

- 10 Patriot Lane—Replaced the curb

Manhole Repairs

- 10/14 Rockland Drive—N.O.P.

Landscaping

- 26 Granite Lane
- 14 Peachfield Lane
- 22 Montrose Lane
- 45 New Pond Lane
- 10 Patriot Lane
- 23 Mayapple Lane
- 29 Hancock Lane
- 50 Hargrove Lane
- 51 Hopewell Lane

Miscellaneous

- Picked up furniture for trailer
- Connected water & sewer to trailer
- Removed & replaced parking bumpers at the main office
- Took a load of concrete to Winzinger
- Fixed chain link fence at 202 Millbrook Drive
- Fixed chain link & wooden fence at 59 Peacock Lane
- Helped night flush—Keith
- Greased Hydrants— 11 days
- Cleaned trucks—2 days
- Cleaned out the Backhoes
- Hung Cabinet, paper towel dispenser and first aid kit in the Bathroom
- Hung defib in break room
- Cut grass at #1 Well—2 days
- Cleaned out #9 truck
- Picked up filing cabinet & office stuff from main office
- 22 Windsor Lane sink hole in the road—N.O.P.
- Picked up old pipes from water plant
- Cleaned trailer & well—3 days
- Replaced 4" popup at 208 Millbrook Drive
- Removed fence and bushes from 20 mandolin for sewer job
- Took bushes to Burlington County Dump
- 20 Mandolin Lane—filled in ruts with fill dirt
- Used 2 backhoes to clear fence at water plant—2 days
- Put more cold patch at Dollar General lot
- Marked main & services at the old Shoprite Plaza
- 3hr class on new valve exerciser at the Water Plant

Pollution Control & Sewer Maintenance Departments

<i>CATEGORY</i>	<i>ACTUAL</i>	<i>5/2019</i>	<i>STANDARD</i>	<i>PERMIT LIMITS</i>	<i>5/2018</i>
Flow	Total	145.801	MG	Report	119.976
	Daily	4.703	MGD	Report only	3.870
Leachate	Total	75700	Gallons		76,900
	Daily	2442	Gallons		2,480
Dissolved Oxygen	Weekly	7.42	Minimum	5.5 mg/l min	6.97
Chlorine Produced Oxidants	Daily	0.04	Maximum	0.13 mg/l max	0.06
	Monthly	0.01	Average	0.03 mg/l max	0.02
E. Coli	Monthly	16	Average	126 max	23
Ammonia	Monthly	2.59	Average	(Nov-Apr) 35 mg/l	N/A
	Daily	7.89	Maximum	Report only	N/A
	Monthly	N/A	Average	(May-Oct) 11.6 mg/l max	2.71
	Daily	N/A	Maximum	19 mg/l max	3.92
BOD (5 day)	Effluent	17	Weekly Avg.	45 mg/l max	17
		9	Minimum		9
		12	Mon. Average	30 mg/l max	13
	Influent	251	Average		222
		95%	% Removal	88.5% min	94.2%
Total Suspended Solids	Effluent	23	Weekly Avg.	45 mg/l max	18
		9	Minimum		16
		14	Mon. Average	30 mg/l max	17
	Influent	210	Average		287
		93%	% Removal	85% min	93.0 %
Digester Gas Metered	Total		Cubic Feet		2,040,550
Digester Gas Calculated	Total	3,209,090	Cubic Feet		3,005,390
Sludge Removed from Digester	Total	163,908	Gallons		363,718
	Daily	5,287	Gallons		11,733
Sludge Transferred To Burl Co:	By		07516	Woolston	
NJ0082741 Burl Co. Comp.	Total	80.29	Tons	MCO1	146.69
	Average	44.92	Tons	Daily	4.73
Digester Sludge Solids	Final	5.22	Per Cent	Average	4.37
Dewatered Sludge Cake	Final	21.99	Per Cent	Average	21.28
Reduction Vol. Solids	Final	65.93	Per Cent		60.90
Wet Metric Tons	Monthly	72.99	Metric Tons		133.35
	Daily	2.35	Metric Tons		4.30
Dry Metric Tons	Monthly	16.05	Metric Tons		28.38
	Daily	0.52	Metric Tons		0.92
CHEMICAL USAGE					
Sodium Hypochlorite	Total	4490	Gallons		3,520
	Daily	145	Gallons		113.54
Sulfur Dioxide	Total	2606	Lbs.		2,388
	Daily	84	Lbs.		77.03
Polymer	Total	476	Lbs.		1,350
	Daily		Lbs.		43.54

Pollution Control and Sewer Maintenance Department (Continued)

1. Secondary #'s 3-6 were cleaned of algae.
2. Decision was made to pursue a magnesium feed system due to pH problem.
3. 8.1" of rain fell during May.
4. Due to rain & watches on May 30, 2019 four (4) pumps clogged including both MSP's . Handled by our staff.

SEWER SYSTEM MAINTENANCE



<i>MAIN CLEANING TOTALS 2019</i>			<i>MAIN CLEANING TOTALS 2018</i>		
Preventive / TV CAM	40		Preventive	4,972	
Monthly	834		Monthly	5,719	
Year To Date	109706		Year To Date	29,856	
Sections Cleaned In:	Hawthorne				
Sections Completed					
<i>CALLOUTS</i>	<i>MONTH</i>	<i>YEAR TO DATE</i>	<i>SERVICE CONNECTIONS</i>	<i>MONTH</i>	<i>YEAR TO DATE</i>
Total	37	163	Total		
Customer problem	20	88	New		
Main Blockages	1	12	Replacement		
Lift Station	0	0	Partial Replacements		
Manholes	0	0	Vents Installed		
Miscellaneous / TV	1	1/12	Vents Pending		
Markouts - WMUA TV Camera	17/156	125/1070	Markout Request - WMUA		