



The Sewerage & Water Board

OF NEW ORLEANS

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June 9, 2020

Dear Councilmember Giarrusso,

Thank you for your timely and relevant questions for our consideration prior to the Public Works meeting. We also appreciate your decision to suspend the requirements of Louisiana Revised Statute 33:4091 to focus on these important topics.

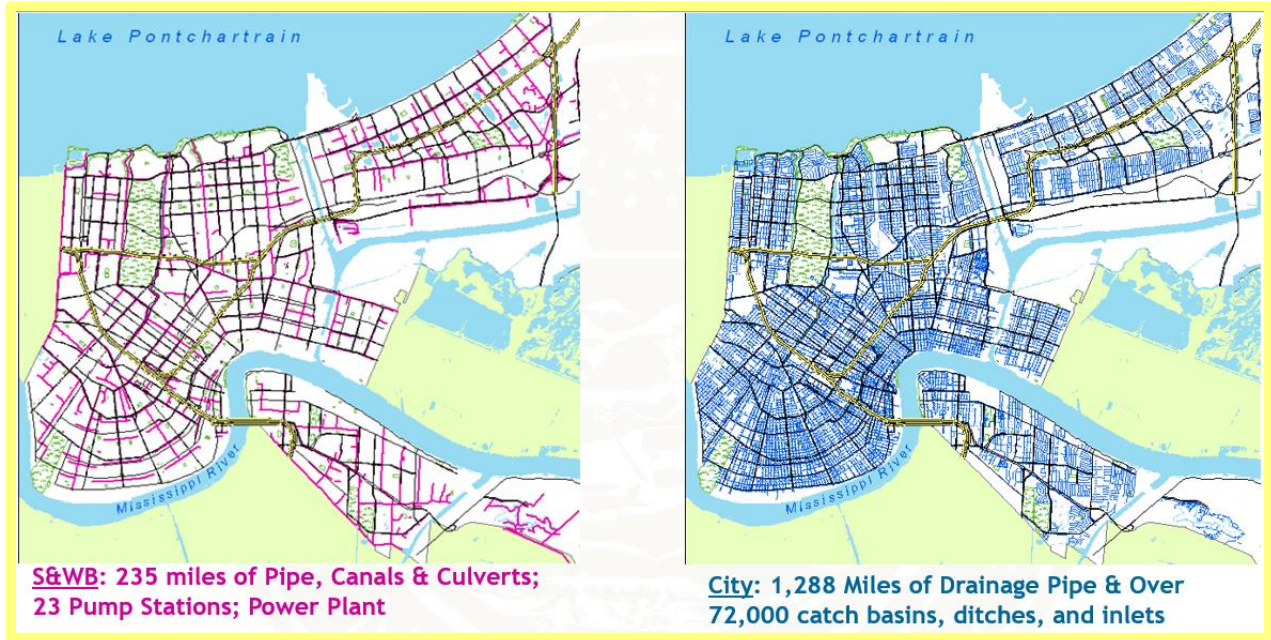
Below, you will find our responses to your inquiries organized to match your letter. We hope you and your colleagues on the City Council find this report informative, and illustrative of SWBNO's commitment to transparency, accountability.

HURRICANE PREPAREDNESS

Question context: *As of February 2020, SWBNO was preparing a detailed assessment of its drainage system performance, underground canal inspections, open canal cleanings, and collaborating with DPW to locate blockages in the drainage system ("Collective Drainage System").*

Question 1: *What is the status of assessing blockages in the Collective Drainage System?*

DPW and SWBNO are responsible for the Collective Drainage System with DPW responsible for catch basins and liner pipes smaller than 36' and SWBNO responsible for pipes 36' or larger; canals & culverts; pump stations; and, power. This map from the August 2018 ABS report shows each agency's piping infrastructure:



In the last nine months, the follow inspections have occurred:

- ***DPW inspected a total of 990 catch basins;***
- ***DPW has inspected 3,013 feet of its linear pipe;***
- ***SWBNO has inspected 35 open canals and over 3 miles of underground canals.¹***
(Note: pipe over 36” is generally considered a canal)

The Department of Public Works (DPW) has been assessing the catch basins and smaller lateral drainage pipes on a neighborhood-by-neighborhood basis. For instance, several locations in Mid-City have shown to have deficiencies (i.e undersized, choke points in system, etc). In addition, DPW is using its citywide model and 311 calls to assess the drainage conditions in that neighborhood. DPW has been conducting the same exercise in the Uptown neighborhood. That assessment is anticipated to be complete within the next two weeks.

At our Feb. 19 meeting of our Board of Directors, we shared our detailed, five-year plan to perpetually inspect the condition of all canals and culverts greater than 36 inches in diameter. Here is a summary:

- YEAR 1: Drainage Basins 1 and 6 (Uptown, Broadmoor, Central City, Carrollton, Riverbend)
- YEAR 2: Basins 2,3,4 and 19 (CBD, French Quarter, Treme, 7th Ward, Gentilly, Desire)
- YEAR 3: Basins 7 and 12 (City Park, Mid-City, Lakeview)
- YEAR 4: Basins 10, 14, 16, and 18 (New Orleans East)

¹ ***Attached is a list of the (a) location of and (b) inspection of each of the four above-inspection categories broken down by month (September 2019-May 2020).***

- YEAR 5: Basins 5 (Lower 9th Ward) and 13 (West Bank)

Based on our goals, this is how much we have inspected to date: 3.13 miles of underground canals, January through March 2020 in the YEAR 1 drainage basins, and found these sections to be clear of obstructions. When we shifted our operations to strictly essential and emergency duties in mid-March, we suspended this work

We had hoped to dedicate \$1 million in 2020 to this effort from Fair Share funds. The ensuing economic downturn, however, has threatened this funding. As a result, our team is exploring creative alternatives. We are looking to purchase handheld cameras and shoulder-mounted lights and battery packs to then train and send our own inspectors into underground canals, thus reducing our reliance on better-equipped, more expensive contractors. This may prove to be a more efficient and cost-effective approach going forward.

As detailed further below in this report, we have collected \$62.2M in drainage millages this year (as compared with \$57.2 in 2019). A small portion of these funds could be considered to continue this effort, but not the full \$1M amount. Please see the additional drainage projects supported by this funding on pages 6-7 of this report.

Question 2: *What has been done before hurricane season to clear the Collective Drainage System and what steps will be taken during hurricane season to keep the Collective Drainage System clear?*

In the last nine months, these cleanings have occurred:

- ***DPW has cleaned 6,088 catch basins;***
- ***DPW has cleaned 121,110 feet of its linear pipe;***
- ***SWBNO has cleaned 624 cubic yards of debris and 4,394 cubic yards of sediment from canals.²***

Our five-year canal inspection plan is intended to create a routine maintenance schedule for our larger underground canals, specifically identifying large blockages or defects in the canal structure. The results of the proactive inspections will inform the resulting cleaning schedule and, once performed routinely, should help prevent costly removal of large amounts of debris going forward. Similarly, our open canal cleaning plan reflects a regular effort to keep our open canals in good shape and free of large debris or blockages, year-round.

After major rain events in May, July and August 2019, SWBNO inspected underground canals in Uptown, the Central Business District, and Mid-City where excessive street pooling had occurred. These inspections found no blockages in these large canals, save for debris in the Orleans/Lafitte Canal. This canal is unusual because it transitions from uncovered to covered just as it crosses under Jefferson Davis Parkway. This allows sediment and debris to enter and flow into the unseen underground portion of the canal. We have removed major articles, such as a car and car parts, to improve flow.

² *Attached is a list of the (a) location of and (b) cleaning of each of the four above-cleaning categories broken down by month (September 2019-May 2020).*

These inspections and cleaning efforts cost SWBNO more than \$500,000 in 2019, funding that came at the expense of other projects and programs.

We have removed debris, cleaned, and/or cut the grass along 35 open canals since Hurricane Season 2019. **Attached is a detailed chart of our efforts.**

As we did throughout the 2019 storm and hurricane season, we will respond to emergency conditions as they arise during rain events. We also will continue to regularly clear debris from our pump station screens and respond to identified obstructions in our canals. For instance, we have cleared more than 900 tons from the suction basin of Drainage Pump Station 7, which is near City Park and serves a large portion of Lakeview.

We do urge residents to be mindful not to dump debris in the drainage canals or pour materials into catch basins. Every effort to keep our drainage system clear makes a difference.

DPW's Maintenance Division is using its GIS interface maps and apps to assign cleanings on streets that have reported flooding before. It is also cleaning catch basins and flushing drainage laterals and mains on major corridors. DPW began using pothole crews to augment its catch basin cleaning crews after Mardi Gras to increase the total number of catch basins cleaned and linear feet of laterals and mains flushed.

Question context: *Turbine 5's explosion in December 2019 left SWBNO without a critical power source. That turbine has not been replaced. With hurricane season looming, it is imperative SWBNO have enough power to handle heavy rain events.*

Question: *What is the current availability and capability of all SWBNO power sources and pumps and what steps have been taken to ensure redundancy?*

Power generation, transmission, and future power plans – specifically including Turbine 5 – was on the Council's Public Works February 18, 2020 agenda. At that meeting, SWBNO presented the following Turbine 5 (T5) slide:

T5: Immediate Action Required

Immediate Options:

- Connect another frequency changer to T6, allowing us to convert more 60 Hz power to 25 Hz power.
- Advance maintenance on the 25 Hz Electro-Motive Diesel generators to improve reliability.
- Reconfigure power equipment to make more available at one time.
- Upgrade T6 to produce more power, too.

Short-term Options:

- Exploring two options to buy/lease a 25 Hz generator. This would free up the frequency changer for other uses and improve redundancy.

Long-term Option to Consider:

- Is it better to invest in new power sources or repair T5?

Here are Councilmember questions from February 18, 2020:

1. *How has SWBNO acted on each and every one of the Immediate Options, Short-Term Options, and Long-Term Option (“Options”); is each of the Options actions completed and, if so, when and, if not, where does the work stand in process?³ See, Public Works 2-18-20 Transcript for additional guidance at pgs. 25-50.*

With regard to immediate measures to put our system in the best possible position as we enter hurricane season, please see below. For short/long-term options, please see response to question 5.

EMDs:

1. The connection of the power feed from the EMDs was moved from the outdoor switchgear to the T-5 bus, to provide 25 Hz power more directly to some the equipment that was normally powered from the #5 Turbine Generator.
2. All five units have been inspected and serviced, and they stand ready to be used during major events.
3. The staff training exercises and the frequency of testing has been increased. Standing orders are for units to be started and warmed up for all forecasted significant rain events to keep the units in good condition.

³

Understanding reconfiguring power availability is installing a conductor from Carrollton to Earhart and upgrading T6 is an 18 months project.

Boilers:

1. We are focusing efforts now on our annual boiler inspections, and we shut down our boiler room last week for this purpose. Our boilers are more important now that we will be using T1 and T3, our steam turbines, with more frequency in the absence of T5.

#1 Turbine Generator:

1. Turbine 1 concrete support pedestals were inspected, and cracks and spalled concrete was found in one of the two pedestals. Repairs are complete.
2. The Gear Box was opened and inspected on site by Philadelphia Gear, the gear box manufacturer. Preliminary indications are that the gears are in good shape. The manufacturer's written service report is pending. We expect that the report will recommend some additional work to check bearing clearances that could not be checked on site. Such work will require the gear box to be removed and shipped offsite, thus requiring an outage of #1 Turbine Generator. We will evaluate potential risks and decide if we can wait until after hurricane season to schedule the work.
3. The Turbine drive train was realigned after pedestal repair and gear box inspection was completed. The machine was successfully tested and has been returned to normal service.

#6 Turbine Generator:

1. The Control System was upgraded, and a second controller was added for redundancy. The project included training for SWBNO Turbine Operations personnel. The training program and all on-site work was completed in February of this year. The cost of the project was \$700,000. This is one example of using funds from the "additional" drainage millage collected this year.
2. The Turbine was inspected, and minor deficiencies were addressed. A spare part list was developed, and the parts were ordered and delivered in February.

Feeders:

1. A new feeder route was designed to supply 60 Hz power from #6 Turbine Generator to the #1 Frequency Changer located at the Carrollton Frequency Changer Facility. A contract was awarded, and work has begun. The contractor indicates that all work will be completed before the end of July this year. The construction cost of this project is just under \$500,000. This is another example of using drainage millage and will help in the event of an Entergy outage.

2. Field investigations are underway to complete a cost estimate and approximate construction duration to convert feeder 180 from aerial to underground. Feeder 180 carries power from the #4 Frequency Changer to DPS 3. From there, , multiple options exist so that power can be routed to other drainage pumping stations using existing underground feeders. Preliminary estimates indicate that the earliest this new feeder could be operational is November of this year. Approximate cost is \$3.5 million.

Outdoor 25 HZ Switch Gear at Carrollton Water Plant:

1. Site plans are nearly complete and all required equipment will be on site in mid-June of this year. The upgrade should be complete by mid-August 2020. The existing equipment is well beyond its service life. This project will significantly improve reliability to this facility. Proper function of this outdoor switchgear is crucial to maintain flexibility to route power to where it is needed.

Central Control Bus Upgrade

1. This project is underway and is scheduled to complete in mid-July of this year. It includes upgrading most of the ring bus at Central Control, and provides a means to hook up our load bank. After completion of the work, the load bank can be used to run tests on our 25 Hz power generating equipment with simulated loads. Approximate project cost is \$150,000. This, too, will be funded using the drainage millage funds from this year.
2. ***What is the status on upgrading frequency changer feeders and the reliability of the frequency change feeders throughout the system?***

In addition to the feeder update above, we are working to accelerate our efforts to add a larger frequency changer to our system to use with T6. If feasible, it would enable us to convert much more of T6's 15MW of power into 25 Hz. There is potential to use the hazard mitigation funding obtained via the state as part of the Fair Share deal to help offset the cost, which we anticipate to be around \$6M.

3. ***What is the status on upgrading actual electrical distribution facilities at the Carrollton plant?***

We are partnering with Entergy to complete the proposed "fast bus" transfer project within 12 months. This project will enable us to switch from one feeder to another in seconds, without interrupting pumping operations. Entergy will design, engineer, and

implement the entirety of the project, while SWBNO will reimburse for the approximately \$410,000 of costs on our side of the meter using an approved high-load factor rate. Initial design is complete, and we expect to receive a proposed reimbursement agreement from Entergy within two weeks.

We also continue to pursue the construction of an electrical substation on the campus of the Carrollton Water Plant. This will be a major step forward in power security. We believe building that Entergy substation at the Carrollton Plant will pay immediate dividends, including:

- Shielding us from power outages around town
- Emphasizing protected underground feeders over vulnerable overhead lines
- Reducing risk posed by lightning in every storm

This project is moving forward using \$7 million in state Capital Outlay dollars this year to redevelop a site on the grounds of our Carrollton Water Plant for the future substation. We have asked the state for another round of Capital Outlay dollars to continue working toward the substation, with the understanding that such funding is not guaranteed and typically comes in small portions compared to the overall cost of the project. Funding for the remaining cost of Phase One of this project has not yet been identified. Ultimately, we would like to add to the Capital Outlay funding, perhaps via private investment or a bond issuance, to create a 51% match for a second WIFIA application to fund the remaining portions of Phase One.

We continue to work closely with Entergy and the City Council on crafting a path forward that best leverages existing and new resources. Without financial support from these partners, the project is at risk. *In addition to Entergy, SWBNO may consider other providers who can immediately supply clean, safe, and cost-efficient resources that comply with the Council's RPS.*

Please see attached for a breakdown of project costs from our Power Master Plan.

- 4. What is the status of the T5 insurance claim given that 90 days has elapsed since the insurer should have completed its investigation and how much money has SWBNO recovered to date on the T5 insurance claim?*

Our insurer is working closely with both GE and ABS on the investigation, which is not complete. Certain aspects of the investigation are reimbursable by the insurer, above our \$1M deductible. We have not received any insurance funds to date. Please see below for additional information.

5. What is the status of the ABS report on the root cause of the T5 explosion?

The ABS proximal cause site inspection was set for March 30, but was delayed due to COVID-19 travel restrictions and concerns. During the delay, ABS conducted personnel interviews via Skype and phone. The “as found” inspections took place on May 26-28, including placing the turbine on turning gear. No damage issues were observed. The next step will be to open the turbine to inspect the interior, at a cost of \$500,000.

During the COVID delay, SWBNO elected to request a borescope inspection performed by GE. No damage due to the explosion could be seen in accessible compressor or turbine stages, while minor pre-incident damage and leading-edge deposit buildup identified in scope.

6. What is the plan for immediate additional power sources if existing ones were to fail?

[The PW has specific questions related to this chart: (1) to what extent are T1 & T3 used for power supply; (2) if ENO loses power, how does SWBNO manage power shortages; and, (3) what inventory exists of critical spare parts as discussed in the 2018 Condition Assessment?]

Our available power supply has not changed significantly since our last report in February – from 59 MW to 65 MW, as detailed in the chart below. T6 is back online after some preventative maintenance, and all 5 EMDs have now been fully tested and are available, which together add about 6 additional MW of available 25 Hz power to the system. The most accurate way to quantify available power is by categorizing it into 25Hz versus 60Hz:

Unit	Frequency	Capacity in MW	Available
T1	25 Hz	Approx. 6 MW	6
T3	25 Hz	Approx. 6 MW	6
T4	25 Hz	20 MW	20
T5	25 Hz	20 MW	0
Carrollton Frequency Changers 1&2	Converts 60 to 25Hz	8.5 MW	8.5
Station D Frequency Changers 3&4	Converts 60 to 25Hz	12 MW	12
Five EMDs	25Hz	12.5MW (total)	12.5
		Total 25 Hz:	65 MW
T6	60 Hz	15 MW	15 (60 Hz)

We generally relied upon Turbines 1, 3, 4, and 5 to power the great majority of our drainage pumps, which operate on 25 Hz power. Entergy typically powers our 60 Hz drainage pumps (two large pumps at DPS 1). If we lose Entergy power, we replace it with 60 Hz power generated by T6. If we lose 25 Hz power from another source, we can use T6 in conjunction with the Carrollton frequency changer - but in that scenario, T6 can only produce 3.75 MW of 25 Hz power. We also have all 5 EMDs at our disposal, which can supplement the loss of 25 Hz power.

While we do have enough 25 Hz power to run the drainage system at full capacity, we lack resiliency with the loss of T5. After much investigation, the decision we must make at this point is whether to repair or replace T5. A summary of each option is below:

1. Repair T5

If the remaining inspections show no significant internal damage to T5, we could repair and/or replace critical aspects of the machine – including the control panel and stack – and bring the turbine back online for a predicted life of another 5-10 years. Insurance proceeds would cover some of these costs, but we would be required to invest between \$3M and \$6M to complete the project to our standards. There is a possibility that we will identify additional changes/improvements that it would be prudent to make after we open the turbine to complete inspection, which would further increase the cost. Projected timeline: 8-12 months.

2. Replace T5

There are a few options available to us to replace the power previously provided by T5, including the purchase of a new generator capable of providing 25Hz power on its own or purchasing a 60Hz generator for use in conjunction with a frequency changer. Either option will require some additional work to prepare a site and ensure compatibility with our existing system. The objectives guiding this decision include implementing a solution that will ultimately further our master plan to modernize the power system, while moving as quickly as possible to provide additional protection before next hurricane season at a reasonable cost. Projected timeline: 12-14 months.

If SWBNO was the recipient of a \$3-5M grant, it would give us the flexibility to make the most sound decision for replacing T5 by providing enough funding to advance either of these options in the immediate future. Without cost as the overriding factor, we believe that replacing T5 will put the utility in the best possible position for the future and will avoid repeating history by investing millions of dollars in an aging asset.

Finally, as we start the 2020 Hurricane Season, all 99 drainage pumps are available to respond to storm events. Three of our smaller 21 constant-duty pumps, which generally regulate groundwater that seeps into canals, are under planned repairs. The pumps that are out are due to an ongoing project to refurbish underpass pumps and stations and are located at Press Street, Paris Avenue, and Old Carrollton. We have rented generators to help drain underpasses while this project is ongoing.

[Please provide explanation of power loss at DPS 1 in the early morning hours of May 15, 2020; how long the pumps were down; if power has been restored to all three pumps and, if not, when it is expected to be; and, what is being done to mitigate against that type of loss in the future.]

During the rain event in the early morning hours of May 15, two lightning strikes – at 12:50 a.m. and 1:02 a.m. – caused an Entergy power outage that affected our two 60 Hz pumps at Drainage Pumping Station 1 (DPS1). At the time of the first lightning strike, our pump operators were in the process of bringing the first of the 60 Hz pumps online. The outage rendered that effort unsuccessful. Two 25 Hz pumps were operational at the time and ran continuously throughout the outages. The station operators were able to bring another 25 Hz pump online around 1:35 a.m., which provided the additional pumping capacity needed for the remainder of the rain event. A separate lightning strike to a feeder outside of DPS1 affected which 25 Hz pumps could be brought online, but it did not cause a separate outage or knock any running pumps offline.

All of the pumps are available again. Each of the measures outlined above – from the proposed substation to hardening feeders and utilizing T6 through an additional frequency changer – are steps we are pursuing to further mitigation efforts.

Question context: *SWBNO has issued numerous boil water advisories over the past few years. In February 2020, SWBNO reported conducting a “full inventory” of shut-off valves to limit the number of impacted people if a line broke and a boil water advisory was issued.*

Question: *What specific criteria (e.g., age of pipe, number of times pipe busted, proximity to essential businesses such as hospitals) was used to determine existing valve replacement and what is the status of installed shut-off valves?*

Remember the age of the water system and that we do not have enough capital dollars to replace the older water mains. Therefore, as a creative way to minimize loss of water to neighborhoods and boil water advisories, SWBNO has begun installing shut-off valves across the City to better mitigate against water main breaks.

Thousands of water system valves throughout the city let us control how water flows through our mains. This ability helps us to respond to emergencies, such as water main breaks. But to be effective, these valves must work and some date to the first years of the water system’s installation. We have budgeted \$138,000 in 2020 to begin tracking and repairing our valves. It will be a multi-year effort to locate and determine the condition of each valve, driven primarily by budget considerations. As the work progresses, we will build out a map showing the location and status of the new valves.

In the meantime, we prioritize our valve replacements based on two major criteria: size and significance of the water main associated with the valve and whether that main serves critical care facilities. Since January, we have identified major valves on 50-inch transmission mains that will be targeted for planned repairs or replacement in the next 18 months. These valves are generally along South Claiborne Avenue, Earhart Boulevard, Dupre Street and Florida Avenue.

We also have replaced several mid-sized valves on 20- to 30-inch mains, including those that serve Children’s Hospital, because of their importance to the health and safety of the City.

Our power sources, along with Entergy, also energize our drinking water system. Our power security efforts will greatly reduce the frequency of precautionary boil-water advisories (BWAs) by supplying reliable power to our water pumps. As you know, loss of power can lead to loss of water pressure in our distribution system. When pressure drops below 20 pounds per square inch (psi) in any given area, state regulations require we issue a BWA for residents and businesses.

A major project underway that will ultimately mitigate BWA’s is the Water Hammer Hazard Mitigation Project. SWBNO has launched Phase II at the Carrollton Water Plant. This major, FEMA-financed undertaking will complement the two water towers built at the Carrollton Water Plant to protect our drinking water system. We are retrofitting our water pumps with variable-speed motors that will allow them to react to pressure fluctuations in the distribution system in real time. Such responsiveness will not only prevent the damage to pipes caused by the water hammer effect when pressure drops, but it will also reduce the need to call for BWAs.

FINANCES

Question context: As of May 1, 2019, the A/R balance on open accounts delinquent over 60 days – plus closed accounts – was approximately \$55 million. As of September 4, 2019, the A/R balance on accounts over 60 days – plus closed accounts – was approximately \$64 million. As of December 31, 2019, the current A/R balance on closed accounts and accounts over 60 days old was approximately \$68 million.

Question: *How much does SWBNO plan on collecting out of the A/R balance from now until year end and what specifically does that plan entail?*

Let’s start with the closed accounts first. This is what SWBNO’s closed accounts showed as of December 31, 2019:

Row Labels	Number of Accounts	Balance
COMMERCIAL	13	\$16,104.36
HYDRANT	45	\$224,940.11
INDUSTRIAL	1	\$32,641.78
LG		
COMMERCIAL	113	\$1,132,231.86
MULTI FAMILY	989	\$1,043,938.71
RESIDENTIAL	41218	\$29,424,067.69
SM		
COMMERCIAL	1645	\$2,239,312.64
Grand Total	44024	\$34,113,237.15

By contrast, this is SWBNO’s inactive account balance as of May 21, 2020:

CURRENT BALANCE DUE-INACTIVE ACCOUNTS 5/21/2020			
Location Class	Count of Location Class	Sum of Current Balance	
RESIDENTIAL	33,212	\$	29,761,178.55
SM COMMERCIAL	1,275	\$	2,343,303.77
LG COMMERCIAL	95	\$	1,063,711.40
MULTI FAMILY	775	\$	1,022,767.40
HYDRANT	22	\$	80,278.79
INDUSTRIAL	1	\$	32,641.78
COMMERCIAL	14	\$	15,388.05
Grand Total	35,394	\$	34,319,269.74

For the inactive accounts, our collection agency has been working since November to recoup these funds. They paused their efforts during the declared emergency. From November-March 16, the collection agency recouped \$65,000 for SWBNO on inactive accounts. We plan to restart our collections process at the end of July, per our customer service care plan. Based on information provided by our collection agency and our past experience, we hope to recoup significantly more than the first 4-month effort. But even assuming that collections continue at the current rate of about \$16,250/month (\$195,000 annually), there is no downside to continuing the effort as we only pay the collection agency for recovered dollars – and it is revenue we would not otherwise be collecting.

In April, we wrote off all accounts that had been inactive since 2016, per our policy that supports write-offs for accounts that are older than 3 years. This included approximately 8,000 residential accounts, 370 small commercial accounts, 214 multi-family accounts, 18 large commercial accounts, and 23 hydrant accounts. The total dollar amount written off was \$3.68M. This explains the reduced number of inactive accounts on the tables above. Below is a table that compares March to April inactive accounts, for context.

April 2020							
Row Labels	Class Count		Sum of Balance		Average Per Unit Balance		
	March	April	March	April	March	April	
COMMERCIAL	15	15	16,497.93	16,880.53	1,099.86	1,125.37	
HYDRANT	48	23	219,022.67	83,418.63	4,562.97	3,626.90	
INDUSTRIAL	1	1	32,641.78	32,641.78	32,641.78	32,641.78	
LG COMMERCIAL	124	94	1,081,837.85	1,055,916.42	8,724.50	11,233.15	
MULTI FAMILY	1,019	776	1,095,700.48	1,017,996.20	1,075.27	1,311.85	
RESIDENTIAL	42,468	33,025	31,692,451.85	29,445,600.61	746.27	891.62	
SM COMMERCIAL	1,707	1,271	2,505,268.67	2,310,588.25	1,467.64	1,817.93	
Grand Total	45,382	35,205	36,643,421.23	33,963,042.42			

Typically, management establishes a policy that governs write-offs, the terms of which are governed by state law and accounting standards. Our 3-year policy is also informed by the fact that writing off a material amount requires an offsetting expense entry, which negatively impacts bond covenant ratios. We have initiated a conversation with our auditors regarding any flexibility we may have to adjust our policy.

As for past due accounts, this is what SWBNO showed as of December 31, 2019:

Row Labels	Number of Accounts	Current Balance	Total Over 60 Days
COMMERCIAL	31	\$255,519.55	\$203,183.53
HYDRANT	63	\$972,166.42	\$898,283.10
INDUSTRIAL LG	5	\$11,448.72	\$1,601.44
COMMERCIAL	182	\$4,875,214.16	\$3,455,555.84
MULTI FAMILY	666	\$2,324,430.78	\$1,795,535.78
RESIDENTIAL SM	23,735	\$32,325,630.12	\$24,098,577.76
COMMERCIAL	1,212	\$4,415,500.87	\$3,428,992.21
Grand Total	25,894	\$45,179,910.62	\$33,881,729.66

By contrast, this is SWBNO's past due account balance as of May 21, 2020:

TOTAL PAST DUE OVER 60 DAYS-ACTIVE ACCOUNTS 5/21/2020				
Location Class	Count of Location Class	Sum of Current Balance	Sum of Total Past Due Over 60 Days	
RESIDENTIAL	23,776	\$ 35,516,740.86	\$ 27,489,821.14	
LG COMMERCIAL	226	\$ 7,770,369.97	\$ 5,837,504.76	
SM COMMERCIAL	1,363	\$ 4,967,245.60	\$ 3,861,442.60	
MULTI FAMILY	733	\$ 3,472,612.26	\$ 2,877,194.65	
HYDRANT	75	\$ 1,067,530.71	\$ 1,013,709.35	
COMMERCIAL	36	\$ 386,741.39	\$ 317,115.68	
INDUSTRIAL	5	\$ 15,332.27	\$ 3,690.45	
Grand Total	26,214	\$ 53,196,573.06	\$ 41,400,478.63	

Location Class	Sum of Past 61-	
	90	Sum of >90 Days
COMMERCIAL	\$ 24,724.09	\$ 292,391.59
HYDRANT	\$ 24,331.84	\$ 989,377.51
INDUSTRIAL	\$ 2,968.10	\$ 722.35
LG COMMERCIAL	\$ 789,725.40	\$ 5,047,779.36
MULTI FAMILY	\$ 791,938.38	\$ 2,085,256.27
RESIDENTIAL	\$ 2,871,059.20	\$ 24,618,761.94
SM COMMERCIAL	\$ 435,388.08	\$ 3,426,054.52
Grand Total	\$4,940,135.09	\$36,460,343.54

COVID-19 and the suspension of our water disconnection policies have reduced our collection rates and, therefore, our revenues. We have about \$41 million as of May 21, 2020 in past-due balances over 60 days old among our active accounts. We have another \$34 million among inactive accounts. Please see the charts above for additional detail.

The above past-due data reflects that the number of delinquent accounts increased by 320, resulting in an additional \$7.6M in delinquent collections (note that the “sum of current balance” category includes both the non-delinquent and delinquent sums associated with the account). We do not have the ability to break down the new delinquent accounts and the amount that, for lack of a better term, they brought with them into the delinquency bucket. But one large account could have multiple properties or units tied to it, and as soon as that account reaches the 60-day mark, the entirety of the account – delinquent or not – is reflected in the table.

Additionally, we have about 13,000 accounts that fell behind since the emergency was declared in March. Most of these customers – 94 percent – owe \$500 or less. These accounts are not included in the delinquency figures because they are not more than 60 days past due at this point, nor are they disputed accounts. We do not have the ability to determine if each of these 13,000 accounts had estimated or actual reads over the past few months.

We ideally want to recoup as much of this sum as we can by the end of the year. But we understand the economic hardship that has befallen the City and our customers. That is why we created a **Customer Care Payment Plan**.

Our goal is to ease the burden of balances on those customers impacted by the COVID crisis. But we also see an opportunity to welcome back into good standing those customers who were delinquent before the stay-at-home order. Some highlights of the plan include:

For all customers

- Starting in July, anyone with a past-due balance will be enrolled in a payment plan to help spread out overdue amounts across bills.
- No down payments will be required. Customers may opt out of the plan anytime.

- Payment plans will last at least six months, though customers can pay off their balances at any time.
- Regardless of amount overdue, no residential customer will have more than \$100 per bill above their regular balance. Most will have far less.
- No late fees will be charged for those customers who meet their plans' requirements.
- We are willing to work with all our customers to establish a plan that works best for them and this utility. We urge them to call 52-WATER to speak with a Customer Service Representative.

Residents impacted by the COVID emergency

- We will give the rest of the year to residential customers who fell behind after the COVID emergency was declared to pay off their outstanding balances. Their past-due amounts will be evenly divided among their monthly bills until their balances are eliminated.
- We are willing to discuss longer payment plans on a case-by-case basis.

Residents who were behind before the COVID emergency

- We will put them on extended payment plans that charge no more than \$100 above their regular bills for three 3 years (36 months).
- For every six months that they make full and consistent payments, we will remove \$50 in already-paid late fees from their outstanding balances.
- Customers don't miss a payment for 36 months but owe more than \$3,600 will be eligible for a 75-percent reduction of their remaining balance.

Businesses impacted by the COVID emergency

- Commercial accounts with outstanding balances up to \$4,800 will be automatically placed into special payment plans.
- They will not be charged late fees if they make their plans' full monthly payments.
- They will not be charged more than \$200 a month – likely less – in addition to their regular water bills.
- They will have at least 6 months, and up to two years (24 months), to pay off their remaining balances.

Please see the attached draft for more details on our proposed Customer Care Payment Plan. Customers who have disputed bills may elect to participate in this plan for the undisputed portions of their bill; disputed portions will be resolved via our updated bill review process prior to an administrative hearing or, if unresolvable by any other means, via a phone/virtual administrative hearing beginning in July. Customer Service agents will be trained and provided scripts/messaging on all aspects of the plan before it goes into full effect in July.

Question context: *Our office receives, on average, three complaints about abnormal/incorrect bills per day. There does not seem to be an auditing mechanism to see which bills are “good” and which ones are “bad.” Some constituents have gone through SWBNO’s investigative process*

without a proper bill adjustment, forcing them to either pay a “bad” bill or fight the bill at an administrative hearing. The District A office has attended more than 20 administrative hearings with each dispute resolved in the ratepayer’s favor. SWBNO has an outdated policy of reducing bills by only 50% before an administrative hearing and will not preemptively revise bills any further.

Question 1: *What method(s) is used by SWBNO to sample bills to clearly and quickly distinguish between “good” and “bad” bills?*

At the February 18, 2020 meeting, the Council specifically asked what is the SWBNO billing error versus the customer error. SWBNO answered that it does not know that number. Now, nearly four months after the last Public Works meeting, SWBNO answers that it does have a method for sampling bills. Moreover, if the billing system flags a high bill, this is how SWBNO has warranted that a clerk examines the bill and prevents that bill from being sent:

Our system flags any bill that is 125 percent higher than the average of the previous 12 months of bills. A bill review clerk then examines the bill, associated read, service orders and account notes. In general, if the previous bill on the associated account was not also flagged for being high, the clerk pulls the bill from the queue and the customer receives an estimate bill.

We have identified opportunities to improve this process. We are developing a new policy to better inform our customers when we flag a high bill by doing two things. The first step will be to send customers an automatically generated letter alerting them that we detected a high bill. The second will be to proactively launch an internal investigation of the bill – reread the meter, check for leaks on the public side, etc. – without the customer having to file an official dispute. The goal is to identify and correct problems before the customer is asked to pay a high bill, thereby reducing disputes and administrative hearings.

We would also like to add additional administrative positions for clerks to scrub meter reads before bills are created. This would add an additional layer of review before a bill is sent out (or even generated). We will begin working with Civil Service on positions for this function.

These improvements will require some adjustments to our billing system and internal processes. We are finalizing our billing system upgrade with Cogsdale now and are scheduled to “go live” on the upgrade on June 12. Our customer service and billing agents are currently in extensive training on the upgrade technology. This will bring our system up to the 2019 Cogsdale model, addressing the issues set forth in the LLA March audit.

Below is an overview of the system upgrades:

Performance Improvement

Currently, SWBNO users experience many performance issues, such as deadlocks, which is when the system locks while performing a major process, like billing or payment import. With the upgrade we expect to see:

- 1) Improved bill calculation and statement creation processes.

- 2) Reduction in deadlocks, that affect payment processing.
- 3) Improvement in void processing performance.

User Enhancements

- 1) Account Management –The improvements related to account management will help users in being more efficient in assisting customers.
 - a. Improved account search-The search bar has been moved to the account screen, reducing the number of screens a user has to access to search for accounts. The search criteria has also been improved, by increasing the number of fields that can be searched simultaneously, improving the accuracy of finding the correct customer.
 - b. Improved account screen- The account screen will contain more information that will reduce the number of screens a user has to access to assist customer. The last 4 digits of the SSN will now be on the account screen, for improved customer verification. The user will be able to personalize the account screen to contain certain hot buttons that they often use.
 - c. Special Payment Arrangement presentation improvement – The updated screen will now show the SPA balance on the account screen. This will again, reduce the number of screens a user has to access and allow them to more quickly respond to customer inquiries related to Special Payment Arrangements.
- 2) Payments –
 - a. The time a payment is received will now be displayed on the payment document. This is helpful information, when investigation when a payment was received for a customer and for back office departments.
 - b. A Search pane has been added to the Cashiering model. Allowing the user to search for the customer’s information on the payment window. This reduces the number of windows a user has to access to find the account.
 - c. Improved cash balancing window. The window will contain the opening drawer balance, as well as the over and short. This change should improve the cash balancing process.
- 3) Other improvements-
 - a. Improved meter reading entry allows posting from window, reducing the number of windows the user must access.
 - b. Updated Collections processing window, will allow for export to excel. This will assist in better review of accounts.
 - c. Updated Final Billing processing window.

If, for some reason, a high bill is sent, a customer service representative is empowered to fix that bill, provided that all of the requisite information is available (e.g., a plumber’s note, an investigation result, or a re-read). If the customer service representative cannot adjust the bill without further assistance, it is elevated to a bill review clerk for further assistance prior to scheduling an administrative hearing.

In the meantime, we have created a billing SWAT team comprised of Board members and customer service team members in an effort to track and identify the most frequent causes of customer complaints and high bills. This team is performing a deep analysis on 100 recent bills as an initial data set. We will plan to share outcomes and suggested changes to our process as soon as possible.

Finally, we have received resumes for a Chief Customer Service Officer from the national search firm retained to target the best possible candidate for the job. Hiring for this executive-level position is a priority, and we hope to complete the hiring process with a month.

Question 2: *How does SWBNO square its position that nearly 2,000 of its 136,000 accounts are under investigation or in dispute with its reported A/R amount?*

Balances in dispute are not included in our totals for Accounts Receivable until the dispute process concludes. The reason for this is that our billing system considers an entire customer's account to be under dispute when oftentimes the dispute only involves a specific portion of a particular bill. We would like to have the ability to separate disputed amounts and compile that total universe. We plan to raise this issue with Cogsdale.

Question 3: *Please provide SWBNO's detailed plan with benchmarks to eliminate unnecessary administrative hearings, particularly in light of the COVID hardship.*

Our ultimate goal is to minimize the need for hearings or disputes in general by consistently providing customers with accurate bills. As you know, implementing Automated Metering Infrastructure (AMI) will greatly reduce the chances for error in the meter reading and billing process.

Until then, we continue to add layers of accountability and efficiency to our bill review process. In response to the City Council's suggestion, we now automatically first send the disputed bill to a specialized billing agent when a customer requests an administrative hearing. That agent investigates the circumstances with the goal of providing an adjustment that settles the dispute and eliminates the need for a hearing. We began this process in December 2019 and are working to improve our tracking methods for hearing outcomes.

We also will complete a major upgrade to our billing system in mid-June that will allow us, among other things, to track a disputed bill through our Customer Service and Bill Review departments. These data will help us target sections or even individual employees who may benefit from additional training.

In a similar vein, we began a process this year that requires our bill review clerks to notate each account with an explanation of when and why they sent a reviewed bill to a customer.

We will be restarting administrative hearings in June by contacting previously scheduled customers to set new hearing dates. Hearings will be conducted by phone or video. For customers

without access to a phone or computer, a kiosk will be set up in the St. Joseph Street lobby for them to remotely participate in their hearings.

STATUS OF SWBNO EMPLOYEES

Question context: *According to SWBNO's 2019 year-end numbers reported to Civil Service, there were 51 Water Service Inspector 1 (meter reader) and 14 Billing Review and Commercial Accounts positions filled. SWBNO can hire as many meter reader and/or billing review positions as it can afford based on our understanding from Civil Service. SWBNO's 2019 year-end numbers show 211 eligible applicants for the Water Service Inspector 1 position and 73 eligible applicants for the Billing Review and Commercial Accounts position. Additionally, as we understand, SWBNO can hire from the backlog of eligible applications or through contract labor without prior Civil Service approval.*

Question 1: *How many individuals were employed as meter readers and billing review employees before the March 16, 2020 stay-at-home order and how many people were employed as meter readers and billing review employees after the first round of bills were sent following the stay-at-home order?*

The COVID-19 pandemic created major challenges for our meter readers. After the first round of bills were sent in the first half of March, the entire department was quarantined for two weeks due to a high number of positive cases and our system of contact tracing. Only 18 readers— out of close to 40 – returned to work full time by mid-April and were put onto rotating shifts to avoid close contact. Our billing review staff remained stable at 12 employees through the implementation of the stay-at-home order, during which they worked remotely using SWBNO-issued Surfaces to continue reviewing bills and responding to customer issues.

Question 2: *How many of the eligible Water Service Inspector 1 and Billing Review Commercial Accounts applicants were hired as supplemental staff after the COVID outbreak? Were any of those vacant positions filled by temporary or contract workers?*

No hires have been made since mid-March because of the high level of risk posed by the COVID-19 pandemic and the related impacts on the hiring and training process. It was a major health concern to bring on new employees. Unlike many of our other essential positions, meter readers must be trained in person before they can start taking reads – which requires close interaction with other employees, as well as traveling together in dedicated vehicles. Most of our other essential positions – including those at the plant and at drainage stations – were able to work on rotating civil leave shifts, thereby avoiding being in close quarters with one another. Only one new employee, a safety engineer, began employment with SWBNO during the “stay at home” aspect of the pandemic.

Because of the staffing issues detailed above, our meter reading operations were significantly reduced, and we resorted to estimating more residential customer bills. As our team came back online, we used available vehicles in our SWBNO fleet to limit the number of readers in each car and abide by social distancing guidelines. We put our readers on rotational shifts, and prioritized

large commercial reads (such as hotels) to reduce the financial impact on those customers hardest hit by the effects of the pandemic.

As of today, we are back up to around 65% actual reads, which is still not where we would like to be.

Our formula is based on customers' past water use and has shown to be consistently close to actual use, but estimates, by their very nature, are inaccurate. To reduce our reliance on them, we are doubling our efforts to increase our meter reading teams. Our goal is to return to our baseline of 80% or more actual reads by August 1. We will accomplish this by:

- Hiring more meter readers to ensure more routes are covered. We have added 10 positions to our budget in this regard, bringing the total number of meter readers up to 60, and hiring restarted via a virtual interview process on May 26. We have hired 17 readers since then, and plan to bring on another 8 in the next week.
- Launching an internal incentive program to attract and retain more meter readers, which historically has been a position with high turnover. We are in active discussions with Civil Service about our proposed program.
- Seeking the assistance of third-party utility experts, non-profits, and local partners to find ways to supplement our workforce, while potentially offering employment to members of our community who have been laid off due to the pandemic.

Again, the ultimate solution to the meter reading and billing process is AMI. We are choosing a program manager to oversee this major endeavor the first week of June. The first phase of the project will include a survey of all meters in the City. The data generated by the survey will give us the opportunity to restore or repair compromised meters while continuing to progress toward AMI, which hopefully will help reduce estimates in the meantime. Phase one of the project – the survey – will begin immediately upon signing a contract with the selected project manager and will take approximately 12 months, with information on the condition/accuracy of meters being relayed to us on a routine basis. We had targeted \$1-2M Fair Share dollars to fund the project this year, which is still a possibility given the \$4.5M or so we expect to receive from that source this year.

COVID RESPONSE

Question Context: *Many water and wastewater utilities have created pandemic resilience plans based on best practices and experiences from past global outbreaks. WEF and EPA have developed Pandemic Response Checklists for water/wastewater utilities along with proposed templates.*

Question: *Has SWBNO adopted or considered adopting any of these procedures and, if so, which ones and how are those being managed to mitigate the spread of COVID?*

We have been following closely the responses and best practices of the water industry as we all grapple with this pandemic. In particular, we engaged the American Water Works Association (AWWA) for guidance on our Customer Care Pay Plan. We joined forces with hundreds of utilities

across the country to support efforts for financial relief for water utilities and their customers. **Attached is the recent letter we sent to our congressional delegation.** We also have partnered with Tulane University, the New Orleans Health Department and the Louisiana Department of Health to research how detecting the coronavirus in wastewater may serve as a predictor for future outbreaks.

Our utility stands at the forefront of establishing best practices, too. We updated our business continuity plan in February and March in anticipation of the emergency. We implemented new civil leave policies, alternate scheduling, and remote work options for our employees to minimize person-to-person contact and still fulfill our mission. We created a COVID-19 specific PPE distribution system through our safety manager and deployed teams to deep-clean offices and entire floors as COVID-positive results were detected.

A major achievement was the establishment of our “COVID Response Team.” This group was on call 24/7 to advise symptomatic employees, arrange testing, and conduct contact tracing should there be positive results. They also handled much of the human resources aspects of this emergency. Their daily reports on the status of COVID-19 within our workforce gave the rest of our team information they needed to make crucial managerial decisions, as well as the freedom to focus on their jobs. **Attached is our policy for addressing the challenges of this pandemic.**

Here is an example of a daily report from May 16:

- **No new positives**
- Positive COVID19 Tests (cumulative to date): 73 (0)
- Active COVID19 Test: 18 (-1)
- Pending Test Results: 0 (0)
- New Quarantines (last 24 hrs): 0
- Under Quarantine (current): 0 (0)
- Employees released from Quarantine (last 24 hrs): 0
- Employees Currently Hospitalized: 0 (one in a rehab facility)

Question context: *COVID has drastically reduced the number of people who are able to pay their water bills. This economic impact will most certainly last until at least autumn, reducing the revenue SWBNO brings in without adjusting the amount of water used.*

Question: *What is the general financial impact of COVID on SWBNO and what is its plan for ratepayers affected by COVID?*

The strength of this utility will always be tied to its financial health. COVID-19 added another layer of unpredictable stress on SWBNO’s bottom line. As a result, we worked to predict our best- and worst-case financial scenarios depending on when the economy would begin to stabilize. **Please see the attached projections and underlying assumptions.**

The baseline for these projections mirror sewer and water revenue trends from the first quarter of the year, which were higher than those in 2019 (likely a combination of better collections and the

10% rate increase). As of May 29, 2020, sewer revenues were \$10.1M and water revenues were \$8.1M – enough to continue to break even on O&M and debt service expenses.

We expect those revenues to begin to decline, as collections catch up to the billing cycle, which is about a 30 to 45-day lag, generally. We ran both optimistic and stressed projections, with the following assumptions (please see attached for full detail):

Optimistic:

- Residential delinquencies will increase from 10% to 45% through July, then begin to normalize and return to 15% by the end of September; residential use will increase by about 10%, returning to normal levels in late fall.
- Commercial revenue will decrease by 65% (large) or 45% (small) by May, returning to normal by the end of August

Stressed:

- Residential delinquencies will increase from 10% to 45% through July and remain at that level for the remainder of the year, with no correlating increase in usage
- Commercial revenue decreases at a similar rate, but does not recover until the end of October.

Because drainage revenue is based entirely on millage collections, cashflow projections are not as relevant. This year, we collected a total of \$62.2M (compared to \$57.2M in 2019). The additional \$5M received this year is a result of the roll-forward approved by our Board, the City Council, and the Board of Liquidation. All of the funds will likely go toward operating expenses and the projects identified as part of our power improvement efforts (detailed above); if any remains, it could be considered for one or more Fair Share projects.

We will continue to pursue what is owed to us for water produced and services rendered, but we will balance good business sense with compassion for our customers. That is why we plan to implement the Customer Care Pay Plan that accounts for, to the greatest extent possible, the hardships our customers have endured during the COVID-19 pandemic.

As we enter this phased reopening, compassion for our customers and good business practices are the two driving forces behind our response to the COVID-19 pandemic. They are not mutually exclusive. What we can do now to help our customers who are facing myriad challenges makes perfect business sense because it may improve their confidence in this utility