



Brunswick-Glynn County Joint Water and Sewer Commission
1703 Gloucester Street, Brunswick GA 31520
Wednesday, February 19, 2020 at 1:00 PM
Commission Meeting Room

FACILITIES COMMITTEE MEETING AGENDA

COMMITTEE MEMBERS: **Committee Chairman Ben Turnipseed**
 Commissioner Bob Duncan
 Commissioner Steve Copeland
 Executive Director Andrew Burroughs

PUBLIC COMMENT PERIOD

Public Comments will be limited to 3 minutes per speaker. Comments are to be limited to relevant information regarding your position and should avoid being repetitious. Individuals should sign in stating your name, address and the subject matter on which you wish to speak. Your cooperation in this process will be greatly appreciated.

PRESENTATION

Mainland Smoke Testing Project – Dr. Fredrick Bloetscher, President, Public Utility Management and Planning Services, Inc.

APPROVAL

- 1. Minutes from January 15, 2020 Facilities Committee Meeting (*subject to any necessary changes*)**
- 2. Unsolicited Proposal Application to Upgrade PS2038-West Point Plantation, LLC – T. Kline**
- 3. 2020 Capital Projects Plan – A. Burroughs**

DISCUSSION

- 1. Asset Score Cards – A. Burroughs**
- 2. Timing of Capital Fee Payments – A. Burroughs**
- 3. Academy Creek Rehab Alternatives – A. Burroughs**
- 4. WPCF Plant Flows Report – A. Burroughs**
- 5. Project Report – A. Burroughs**

MEETING ADJOURNED

*All citizens are invited to attend.
There is a possibility of a quorum of City or County Commissioners being present.*



Brunswick-Glynn County Joint Water & Sewer Commission
1703 Gloucester Street, Brunswick, GA 31520
Commission Meeting Room
Wednesday, February 19, 2020 at 1:00 PM

FACILITIES COMMITTEE MINUTES

PRESENT: **Ben Turnipseed, Chairman**
 Steve Copeland, Commissioner
 Bob Duncan, Commissioner
 Andrew Burroughs, Executive Director

ALSO PRESENT: **Donald Elliott, Commissioner**
 Todd Kline, Director of Engineering
 Janice Meridith, Exec. Commission Administrator

MEDIA PRESENT: **Pamela Permar-Shierling, The Islander**

Chairman Turnipseed called the meeting to order at 1:00 PM.

Chairman Turnipseed provided the invocation.

PUBLIC COMMENT PERIOD

There being no citizens that wished to address the Committee, Chairman Turnipseed closed the Public Comment Period.

APPROVAL

1. Minutes from Facilities Committee Meeting January 15, 2020

Commissioner Duncan made a motion seconded by Chairman Turnipseed to approve the minutes from the Facilities Committee Meeting held on January 15, 2020. Motion carried 2-0-1. (Commissioner Copeland was not present for the vote.)

2. Unsolicited Proposal Application to Upgrade PS2038-West Point Plantation, LLC – T. Kline

Mr. Kline noted this Unsolicited Proposal was brought before the Facilities Committee previously, and Mr. Burroughs stated that the committee requested to defer it, and for staff to come back to the committee with information regarding the current status of the pump station and the build-out schedule from the West Point Plantation Group. Mr. Kline commented that this is proposing the upgrade of the existing pump station 2038 to accommodate the full build-out of the development. Staff did review the existing condition of the pump station and evaluated its capacity related to the proposed upgrades. Currently PS2038 is in the “green” with a surplus of capacity at this time, and is about a 200 gallons per minute pump station. Staff estimated that the full West Point Development alone would require about 300 gallons per minute. With the build-out of 20-25 lots per year, as laid out in the Unsolicited Proposal

Application by West Point, Mr. Kline estimated that it would be about a 5 year timeframe before JWSC would be looking at an upgrade for PS2038, and would not be considering to upgrade it at this time. There is currently enough capacity to build out the 28 lots for Phase II. Oversizing the pump station by going from 200 GPM to 300 GPM could create operational issues, extra operational costs, and cause damage to the pumps. Mr. Burroughs noted that the request from the West Point Group is to go ahead and get it locked in for all of the build-out, and it appears that their purpose here is to go ahead and secure flow and capacity for the full 295 lots. He added that West Point does understand that as of today there is not a need for this, but for the full build-out they are trying to get their pre-planning done. They brought forth this proposal so they could get moving with the intent of the entire subdivision being built.

Commissioner Duncan commented that West Point, LLC is in the development not the building business, and based on what they have done so far they are selling lots. He added that while their sales forecast may suggest an absorption of 25 per year that does seem rather aggressive, and the actual construction may be far less than they are projecting; so the reality of this is that the pump station would be significantly oversized. Commissioner Duncan asked the Chairman that this request be deferred and have a conference with the parties to help them understand the concerns the Commission has operationally about upgrading this station.

Commissioner Duncan made a motion seconded by Chairman Turnipseed to move that the Brunswick Glynn County Joint Water & Sewer Commission Facilities Committee defer the application described above until the next meeting after JWSC staff can meet with the developer

The Chairman inquired if this application was only to grant an engineering study, and Mr. Burroughs confirmed that this request is the first step in the Unsolicited Proposal process and following the approval of this application, the proposer would submit an engineering report outlining the proposed upgrades and the costs. That engineering report would be reviewed by JWSC staff. Typically the credit for taps would be equivalent to the amount of dollars spent on the construction of the project. This step will not in any way require JWSC do the project, it is only allowing the proposer to provide the report for review.

Commissioner Duncan brought forth a couple of concerns. One is that the party proposing is going to spend money for the application to JWSC and also for the engineering consultant to do the report and estimation. The second concern is that their estimate is based on today's dollars, and they would project out as to when those upgrades would have to be made. Another concern is since the project is not needed for quite some time, is projecting out that cost, perhaps 5 years into the future as to what it would be, and it could limit JWSC in some way to make any kind of commitment that we would accept such a proposal that is forecasted 5 years out. The Chairman added that this upgrade is basically upgrading pumps and supporting electrical parts, which would only take 6 months at the most. Commissioner Duncan commented that he does not believe this is a good use of the customer's resources to come up with the cost of the engineering study plus the \$5,000 application and review fee, and nothing is going to be done for a long period of time. The Chairman recommended that Mr. Burroughs advise the customer that the Facilities Committee will be glad to meet with them if they would like to attend the next meeting.

With a motion having been made and seconded, the vote was taken. Motion carried 2-0-1.
(Commissioner Copeland was not present for the vote.)

3. 2020 Capital Projects Plan – A. Burroughs

Mr. Burroughs presented a list of capital projects for the next fiscal year to the committee. A memo was provided showing a breakdown of the necessary funding for water and sewer projects with the greatest need on the mainland and St. Simons Island. Mr. Burroughs attached the 2020 Capital Projects Plan indicating projects staff has prioritized for consideration based upon condition-based needs and resource

availability. He provided and discussed details of each project, the total project cost, basic description of the scope, funding sources, required outside engineering and whether the labor will be contracted or done in-house. The total requested funding for these projects to be done within this next year is an estimated \$7.5M.

Commissioner Duncan made a motion seconded by Chairman Turnipseed to move that the Facilities Committee recommend approval of the attached 2020 Capital Projects Plan to the full Commission.

Before the vote, there was some additional discussion pertaining to the Magnolia Overruns, if that was going to happen, the consideration of bidding the water portion of the Project out, and expected timing of the Project as prioritized by the City. Chairman Turnipseed inquired as to the funding being available for the 2020 Capital Projects List after the completion of projects already in progress. He requested that a timeline be applied for the projects listed on the 2020 Capital Projects List which was currently listed in order of project cost.

Motion carried 2-0-1. (Commissioner Copeland was not present for the vote.)

DISCUSSION

1. Asset Score Cards – A. Burroughs

Mr. Burroughs provided a discussion to the Committee regarding the Asset Score Cards. This exercise had been performed in the previous year and the Commission requested a current scoring of the system. Various staff members scored assets in the areas of which they had the most knowledge of how the systems are currently operating. With anticipated future projects, the scores should improve over time as projects are completed and making improvements to JWSC's system. Commissioner Elliott requested for the number of emergency calls received during a period of time be added beside each part of the system on the score cards.

2. Timing of Capital Fee Payments – A. Burroughs

Mr. Burroughs reported that staff has spoken to some members of the local building community regarding the timing of Capital Fee payments. Currently if a new subdivision is to be built, the payment of Capital Fees for the entire subdivision is due at time of construction plan approval. This may not affect some of the larger developers as much as the smaller ones. Their cash flow is affected in a manner causing some developers to build the subdivisions in phases which slows the process of developing subdivisions down. The developers have requested to be able to pay the Capital Fees as they are needed rather than all at once. After doing a capacity analysis and understanding the capacity situation much better, it was determined that JWSC now sufficient capacity and a sufficient tracking mechanism where the requirement of all Capital Fees being paid at one time could be released. The fees would still be required to be paid before the actual building starts and building permits approved. This would require an amendment to the current Rate Resolution. Staff is also working with the County to have a plat note added that states capacity is not guaranteed until the payment of Capital Fees. This is currently all under review, and the plat note would have to be applied prior to this change going into effect.

3. Academy Creek Rehab Alternatives – A. Burroughs

Mr. Burroughs stated that staff is currently in the process of finalizing the process for the \$15M GEFA Loan for rehab at the Academy Creek Wastewater Treatment Plant as well as work in the sewer collection system. Originally \$10M was allocated for Academy Creek and \$5M going to sewer rehab. The chart provided contained three rehab budget options, with the data as provided by Goodwyn Mills Caywood Engineering. Mr. Burroughs explained the details of the alternative options, and the committee further discussed the various options, considerations and questions.

Commissioner Copeland arrived to the meeting at 1:45 p.m.

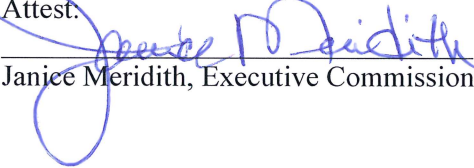
4. WPCF Plant Flows Report – A. Burroughs

Mr. Burroughs provided the discussion on plant flows report for all three wastewater treatment plants, Academy Creek, Dunbar and Southport during the month of January 2020. The numbers and percentages for various influent and effluent levels reported for the three plants were indicative that are all operating well within permit.


5. Project Report – A. Burroughs / T. Kline

Mr. Burroughs and Mr. Kline presented the project report to the Committee.

There being no further committee business, Chairman Turnipseed adjourned the meeting at 2:30 p.m.

Attest.


Janice Meredith, Executive Commission Administrator



G. Ben Turnipseed, Chairman



Brunswick-Glynn County Joint Water and Sewer Commission

Memo

To: Brunswick-Glynn Joint Water & Sewer Commission – **Facilities Committee**
From: Todd Kline, P.E., Director of Engineering
Date: 19 February 2020
Re: Unsolicited Proposal – **Application from West Point Plantation, LLC to Upgrade JWSC PS2038**

Overview

- **Who:** West Point Plantation, LLC (applicant)
- **What:** Proposed 275 single family home build out of West Point Plantation S/D
- **Why:** Project served by JWSC PS2038; currently designated as over design capacity.
- **Cost/Funding:** T.B.D./ funded by applicant

Staff Report

West Point Plantation, LLC (WPP) is continuing development of a 295 lot residential subdivision on St. Simons Island off Frederica Road in the vicinity of Fort Frederica National Monument. A final plat for Phase II has been applied for and is awaiting approval. The development is served by JWSC PS2038. Staff analysis shows that PS2038 does not currently have sufficient design capacity to support the full proposed development. WPP wishes to utilize the JWSC Unsolicited Proposal tool to apply an equivalency of Capital Fees directly towards the upgrade of the JWSC collection system. This application initiates the conceptual review and confirms BOC interest in evaluating a public/private partnership. Approval of the application only commits the JWSC to the next step of reviewing a Preliminary Engineering Report (PER) for feasibility. If the PER is determined feasible and the BOC wishes to move forward, a Comprehensive Agreement would be formalized and executed between the applicant and the BOC. Otherwise, the efforts are discontinued.

Recommended Action

Utilizing the Unsolicited Proposal process to facilitate system improvements for new customer needs is an appropriate application of Capital Fees. As there is currently no funded project to improve the capacity of PS2038, Staff recommends BOC approval of this Unsolicited Proposal application to move forward with evaluating the feasibility of the improvements proposed by WPP.

Recommended Motion

I move that the Brunswick Glynn County Joint Water & Sewer Commission **Facilities Committee** forward the application described above to the full Commission with a recommendation for approval.

Attachments:

- 1) West Point Plantation, LLC Unsolicited Proposal



Brunswick-Glynn County

Joint Water and Sewer Commission

Memorandum

To: Facilities Committee
From: Andrew Burroughs, Executive Director
Date: Wednesday, February 19, 2020
Re: Approval – 2020 Capital Projects Plan

Background:

In recent years, staff has brought forward projects individually for consideration of scope and budget approval. After discussion with the Commission, staff has created a 2020 Capital Projects Plan for consideration. These projects address a number of needs for both the water and sewer systems of the Mainland and St. Simons Island. A breakdown of the funding is shown below.

Location	Water	Sewer	Total
Mainland	\$1,653,750	\$2,990,250	\$4,644,000
St Simons Island	\$868,750	\$1,927,250	\$2,796,000
Total	\$2,522,500	\$4,917,500	\$7,440,000

The attached project plan lists the projects that will require the JWSC to contract with outside engineering firms for design as well as projects that will be completed with in-house resources.

Staff Report

Staff has prioritized projects for consideration based upon condition-based needs and resource availability. Approving one year's worth of capital projects will allow staff to schedule projects more effectively to eliminate

Recommended Action

Staff recommends authorizing the projects listed in the attached 2020 Capital Projects Plan.

Recommended Motion

"I move that the Facilities Committee recommend approval of the attached 2020 Capital Projects Plan to the full Commission."

Enclosures

2020 Capital Projects Plan

2020 Capital Projects Plan

Project	Total Project Cost	Description	Funding	Requires Outside Engineering	Labor Type	2020
LS Scada Upgrades	\$ 2,000,000	Installation of VTScada at LS sites	R&R		Contracted	\$ 2,000,000
GEFA Loan Debt Service	\$ 15,000,000	Debt Service on GEFA Loan for Academy Creek Rehab/CIPP Work	R&R	X	Contracted	\$ 710,000
Magnolia Overruns	\$ 550,000	Budget Adjustment, if necessary	R&R	X	Contracted	\$ 550,000
Prince St EST Painting	\$ 550,000	Full interior/exterior blast and recoat of Prince St tank	R&R		Contracted	\$ 550,000
PS 2002 FM Replacement	\$ 500,000	Replace cast iron FM along Arnold Road	R&R	X	Contracted	\$ 500,000
Demere Road EST Tank	\$ 500,000	Full interior/exterior blast and recoat of Demere Road EST	R&R		Contracted	\$ 500,000
Bay Street Water Improvements	\$ 250,000	Replace ~1300 ft turberculated 12" Cast Iron line with PVC to improve Port fire protection	R&R	X	Contracted	\$ 400,000
LS 2023 Rehab	\$ 275,000	Install new pumps, 8" force main	R&R	X	Contracted	\$ 275,000
Arco Water & Sewer Expansion Engineering	\$ 300,000	Engineering design for expansion project for Arco	CIF	X	None	\$ 300,000
Community Rd Area Sewer Expansion Engineering	\$ 250,000	Engineering design for expansion project for Community Rd/Key Circle Dr	CIF	X	None	\$ 250,000
Meter Replacements	\$ 250,000	Pilot phase of meter changeout project	R&R		Contracted	\$ 250,000
Galvanized Replacements	\$ 250,000	In-house Galvanized Replacements - Multi-year Project	R&R		In-House	\$ 250,000
Brockinton Subdivision Gravity Rehab	\$ 250,000	Rehab 800 Linear Feet of Collapsing VCP with Failed Taps/Top Hat Failed Taps	R&R		Contracted	\$ 250,000
PS 4118/4119 Pump Upgrades	\$ 150,000	Replace Existing Pumps with Larger Pumps	R&R		In-House	\$ 200,000
SSI PRV	\$ 150,000	Install PRV near Stables to isolate pressure zones on SSI	R&R	X	Contracted	\$ 150,000
Master Plan Update	\$ 125,000	Study to determine appropriate planning for area north of Hwy 99	R&R	X	None	\$ 125,000
NM Water PRV	\$ 100,000	Install PRV near I95 to isolate pressure zones in the NM	R&R	X	Contracted	\$ 100,000
Tillman Water Line Replacement	\$ 80,000	Replace ~660 feet of 8" transite water main along Tillman St between J and K	R&R		In-House	\$ 80,000

Funding Source	2020
R&R	\$ 6,890,000
CIF	\$ 550,000
SPLOST	\$ -
TOTAL	\$ 7,440,000

System Report Card - Current

	Scorer 1	Scorer 2	Scorer 3	Scorer 4	Scorer 5	Scorer 6	Scorer 7	Scorer 8	Combined
Water									
<i>City of Brunswick System</i>									
<i>Production Wells</i>	B-	B			C		C	C-	C+
<i>Distribution system</i>	C	C+				C	C	C-	C+
<i>North Mainland System</i>									
<i>Production Wells</i>	B+	B-			B+		C	C	B-
<i>Distribution system</i>	B+	B+				B	C	C	B-
<i>South Mainland System</i>									
<i>Production Wells</i>	A	A-			C		C	C	B-
<i>Distribution system</i>	A	B				B	C	B	B
<i>St. Simons Island System</i>									
<i>Production Wells</i>	B	B+					C	C	B-
<i>Distribution system</i>	C+	B-				D	C	C	C
Sewer									
<i>Academy Creek WPCP System</i>									
<i>Collection & Conveyance System</i>	B-	C		D			F	C-	C-
<i>Wastewater Treatment Plant</i>	C-	C+	D				D	C	C-
<i>Exit 29 WPCP System</i>									
<i>Collection & Conveyance System</i>	A-	B+		B			C	B	B
<i>Wastewater Treatment Plant</i>	A-	A	B+				B	A	A-
<i>Dunbar Creek WPCP System</i>									
<i>Collection & Conveyance System</i>	B-	C+		C			C	C	C+
<i>Wastewater Treatment Plant</i>	B	B	C+				B	B	B

System Report Card - Upon Completion of Existing Projects

	Scorer 1	Scorer 2	Scorer 3	Scorer 4	Scorer 5	Scorer 6	Scorer 7	Scorer 8	Combined
Water									
<i>City of Brunswick System</i>									
Production Wells	B	B			B		C	C	B-
Distribution system	B-	B-				C+	C	C	C+
<i>North Mainland System</i>									
Production Wells	B+	B+			B+		C	C+	B
Distribution system	B+	B+				B	C	C	B-
<i>South Mainland System</i>									
Production Wells	A	A-			C+		C	C	B-
Distribution system	A	B				B	C	B	B
<i>St. Simons Island System</i>									
Production Wells	B	B+					C	C	B-
Distribution system	C+	B				D+	C	C	C
Sewer									
<i>Academy Creek WPCP System</i>									
Collection & Conveyance System	B	C+		C			D	B	C+
Wastewater Treatment Plant	B+	B	B				C	B	B-
<i>Exit 29 WPCP System</i>									
Collection & Conveyance System	A-	B+		B			C	B+	B
Wastewater Treatment Plant	A-	A	B+				B	A	A-
<i>Dunbar Creek WPCP System</i>									
Collection & Conveyance System	B	B-		C			C	C+	C+
Wastewater Treatment Plant	B	B+	C+				B	B	B

Academy Creek WPCF Rehab Budget Options

Full Project	
Item	Total
General Requirements	\$ 2,242,992.60
Screening	\$ 745,080.00
Influent Junction Box	\$ 959,532.00
Odor Control	\$ 765,392.00
Preaeration Split	\$ 627,382.00
Filtration	\$ 2,928,363.00
Flow Split Piping	\$ 468,697.00
Sludge Pumping	\$ 203,365.00
Admin/Lab Building	\$ 965,000.00
Sludge Offloading/Belt Press	\$ 1,251,445.00
SCADA System	\$ 766,600.00
Clarifier Baffles	\$ 288,000.00
Subtotal	\$ 12,211,848.60
Contingency (15%)	\$ 1,831,777.29
Total	\$ 14,043,625.89

Additive Alternates	Total
Admin/Lab Building	\$ 4,000,000.00
Dryer	\$ 3,500,000.00
Contingency (15%)	\$ 1,125,000.00
Subtotal	\$ 8,625,000.00
Total	\$ 22,668,625.89

Funding Availability	
Original GEFA Funding	\$ 10,000,000.00
SPLOST V Funds	\$ 1,641,306.30
Total Funding	\$ 11,641,306.30

Expenses Proj to Date	\$ 395,429.47
Encumbrances Proj to Date	\$ 844,784.00
Total Proj to Date	\$ 1,240,213.47
Remaining Funding	\$ 10,401,092.83

Shortfall \$ (12,267,533.06)

Remove Additive Alternates	
Item	Total
General Requirements	\$ 2,025,867.60
Screening	\$ 745,080.00
Influent Junction Box	\$ 959,532.00
Odor Control	\$ 765,392.00
Preaeration Split	\$ 627,382.00
Filtration	\$ 2,928,363.00
Flow Split Piping	\$ 468,697.00
Sludge Pumping	\$ 203,365.00
Admin/Lab Building	\$ -
Sludge Offloading/Belt Press	\$ 1,251,445.00
SCADA System	\$ 766,600.00
Clarifier Baffles	\$ 288,000.00
Subtotal	\$ 11,029,723.60
Contingency (15%)	\$ 1,654,458.54
Total	\$ 12,684,182.14

Additive Alternates	Total
Admin/Lab Building	\$ -
Dryer	\$ -
Contingency (15%)	\$ -
Subtotal	\$ -
Total	\$ 12,684,182.14

Funding Availability	
Original GEFA Funding	\$ 10,000,000.00
SPLOST V Funds	\$ 1,641,306.30
Total Funding	\$ 11,641,306.30

Expenses Proj to Date	\$ 395,429.47
Encumbrances Proj to Date	\$ 844,784.00
Total Proj to Date	\$ 1,240,213.47
Remaining Funding	\$ 10,401,092.83

Shortfall \$ (2,283,089.31)

Remove Sludge Offloading Area	
Item	Total
General Requirements	\$ 1,744,292.48
Screening	\$ 745,080.00
Influent Junction Box	\$ 959,532.00
Odor Control	\$ 765,392.00
Preaeration Split	\$ 627,382.00
Filtration	\$ 2,928,363.00
Flow Split Piping	\$ 468,697.00
Sludge Pumping	\$ 203,365.00
Admin/Lab Building	\$ -
Sludge Offloading/Belt Press	\$ -
SCADA System	\$ 766,600.00
Clarifier Baffles	\$ 288,000.00
Subtotal	\$ 9,496,703.48
Contingency (15%)	\$ 1,424,505.52
Total	\$ 10,921,209.00

Additive Alternates	Total
Admin/Lab Building	\$ -
Dryer	\$ -
Contingency (15%)	\$ -
Subtotal	\$ -
Total	\$ 10,921,209.00

Funding Availability	
Original GEFA Funding	\$ 10,000,000.00
SPLOST V Funds	\$ 1,641,306.30
Total Funding	\$ 11,641,306.30

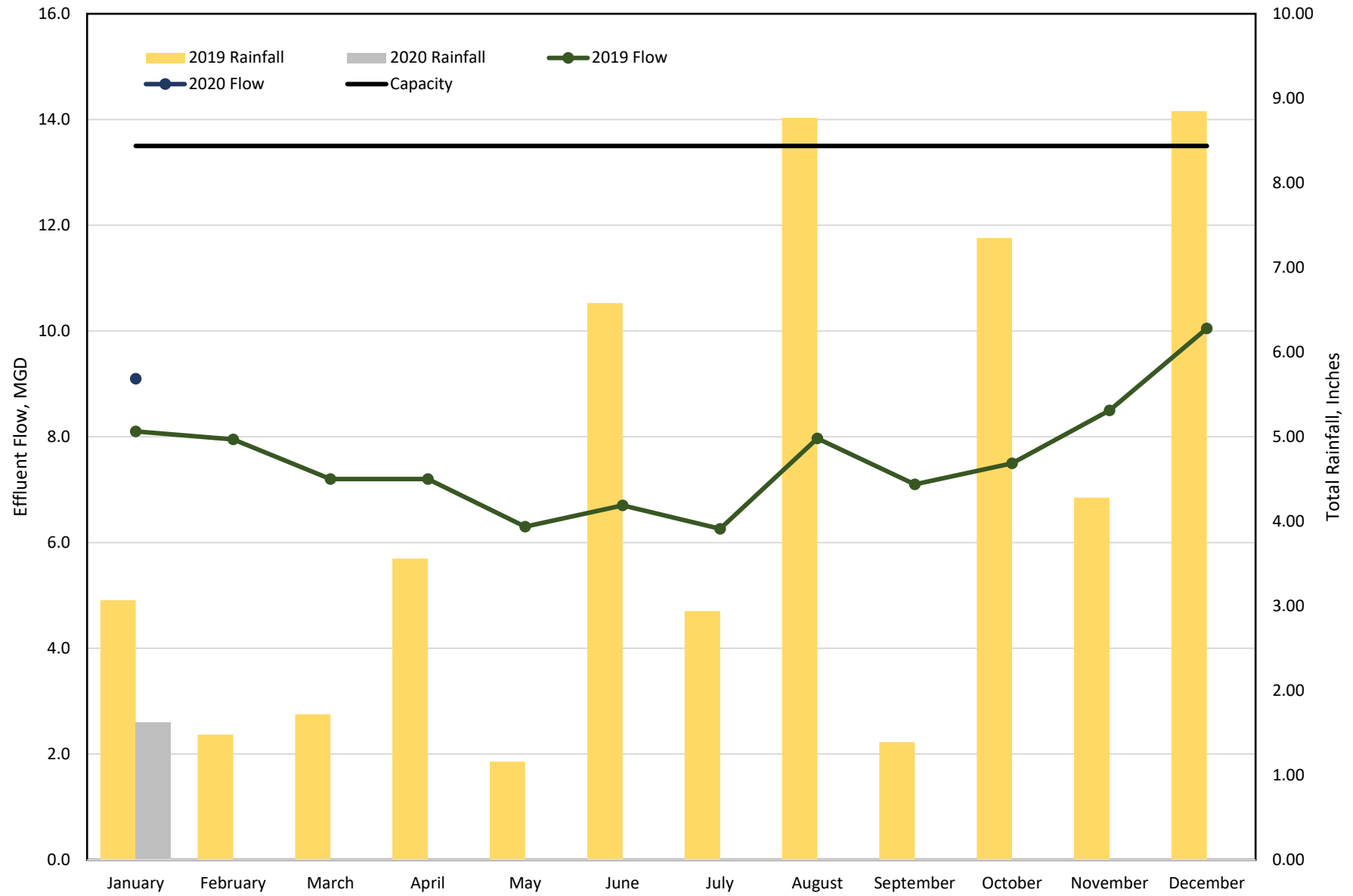
Expenses Proj to Date	\$ 395,429.47
Encumbrances Proj to Date	\$ 844,784.00
Total Proj to Date	\$ 1,240,213.47
Remaining Funding	\$ 10,401,092.83

Shortfall \$ (520,116.17)

ACADEMY CREEK WWTP	FLOW (MGD)				Influent Concentrations					Effluent Concentrations							Removal Efficiency		Rainfall		Water Meter Monthly MGal	Sludge Tons to Landfill	
	Month	INF	PINOVA	EFF	% Cap.	pH s.u.	BOD mg/L	TSS mg/L	NH3 mg/L	Phos mg/L	pH s.u.	D.O. mg/L	BOD mg/L	TSS mg/L	NH3 mg/L	TRC mg/L	Fecal #/100 mL	Phos. mg/L	BOD %	TSS %			Maximum Inches
January 2019	7.4	0.7	8.1	60%	7.6	169	193	13.1	8.4	6.8	6.5	11	13	11.6	0.03	24	2.9	93.49%	93.26%	0.90	3.07	0.589	114.16
February 2019	6.8	0.7	8.0	59%	7.6	190	213	18.4	15.2	6.7	6.8	9	12	10.8	0.06	16	8.4	95.26%	94.37%	1.00	1.48	0.653	85.01
March 2019	6.2	0.7	7.2	53%	7.4	258	272	22.0	13.2	6.7	6.2	10	12	8.5	0.04	24	8.8	96.12%	95.59%	0.60	1.72	0.926	68.53
April 2019	6.3	0.7	7.2	53%	7.5	219	231	24.1	15.8	6.9	6.3	9	15	11.2	0.01	23	6.8	95.89%	93.51%	1.83	3.56	0.890	93.13
May 2019	5.7	0.6	6.3	47%	7.5	246	251	31.0	15.0	6.5	5.3	11	9	11.7	0.04	55	10.8	95.53%	96.41%	0.66	1.16	0.900	86.50
June 2019	5.7	0.8	6.7	50%	7.4	251	230	27.2	9.4	6.6	6.0	10	11	10.7	0.10	23	3.7	96.02%	95.22%	1.68	6.58	0.800	100.71
July 2019	5.3	0.8	6.3	46%	7.4	216	237	32.3	12.2	6.6	6.0	7	10	14.9	0.05	29	7.8	96.76%	95.78%	0.88	2.94	0.500	26.74
August 2019	6.7	0.9	8.0	59%	7.3	195	215	37.5	7.8	6.9	5.8	8	11	21.3	0.01	19	6.4	95.90%	94.88%	2.15	8.77	0.951	75.13
September 2019	6.3	0.6	7.1	53%	7.5	175	210	31.9	1.9	6.6	6.0	6	9	17.3	0.10	26	1.2	96.57%	95.71%	0.94	1.39	0.445	81.77
October 2019	6.3	1.0	7.5	56%	7.5	180	177	21.4	5.8	6.5	6.0	9	14	11.6	0.02	66	3.6	95.00%	92.09%	2.80	7.35	0.571	61.88
November 2019	7.6	0.8	8.5	63%	7.4	191	223	17.1	12.2	6.6	5.1	10	16	9.5	0.12	104	5.3	94.76%	92.83%	2.45	4.28	0.610	55.00
December 2019	8.9	0.8	10.1	74%	7.5	182	204	13.6	20.0	6.6	6.6	10	16	7.3	0.04	153	9.6	94.51%	92.16%	4.39	8.85	0.520	44.88
January 2020	8.1	0.7	9.1	67%	7.6	186	195	14.0	7.2	6.6	6.2	10	13	8.6	0.07	11	1.3	94.62%	93.33%	0.75	1.62	0.725	61.04
February 2020																							
March 2020																							
April 2020																							
May 2020																							
June 2020																							
July 2020																							
August 2020																							
September 2020																							
October 2020																							
November 2020																							
December 2020																							
Average	6.7	0.8	7.7	57%	7.5	204.5	219	23.4	11.08	6.7	6.1	9.2	12.4	11.9	0.05	44	5.9	95.42%	94.24%	1.62	4.06	0.698	73.42
Max	8.9	1.0	10.1	74%	7.6	258.0	272	37.5	20.0	6.9	6.8	11.0	16.0	21.3	0.12	153	10.8	96.76%	96.41%	4.39	8.85	0.951	114.16
Min	5.3	0.6	6.3	46%	7.3	169.0	177	13.1	1.90	6.5	5.1	6.0	9.0	7.3	0.01	11	1.2	93.49%	92.09%	0.60	1.16	0.445	26.74
Permit Limits	N/A	N/A	13.5	N/A	N/A	N/A	N/A	N/A	N/A	6.0-9.0	2.0	20.0	30.0	17.4	0.14	200	Report	85.00%	85.00%				

BOD - Biochemical Oxygen Demand
TSS - Total Suspended Solids
NH3 - Ammonia
Phos - Phosphorus
D.O. - Dissolved Oxygen
TRC - Total Residual Chlorine
Fecal - Fecal Coliform Bacteria

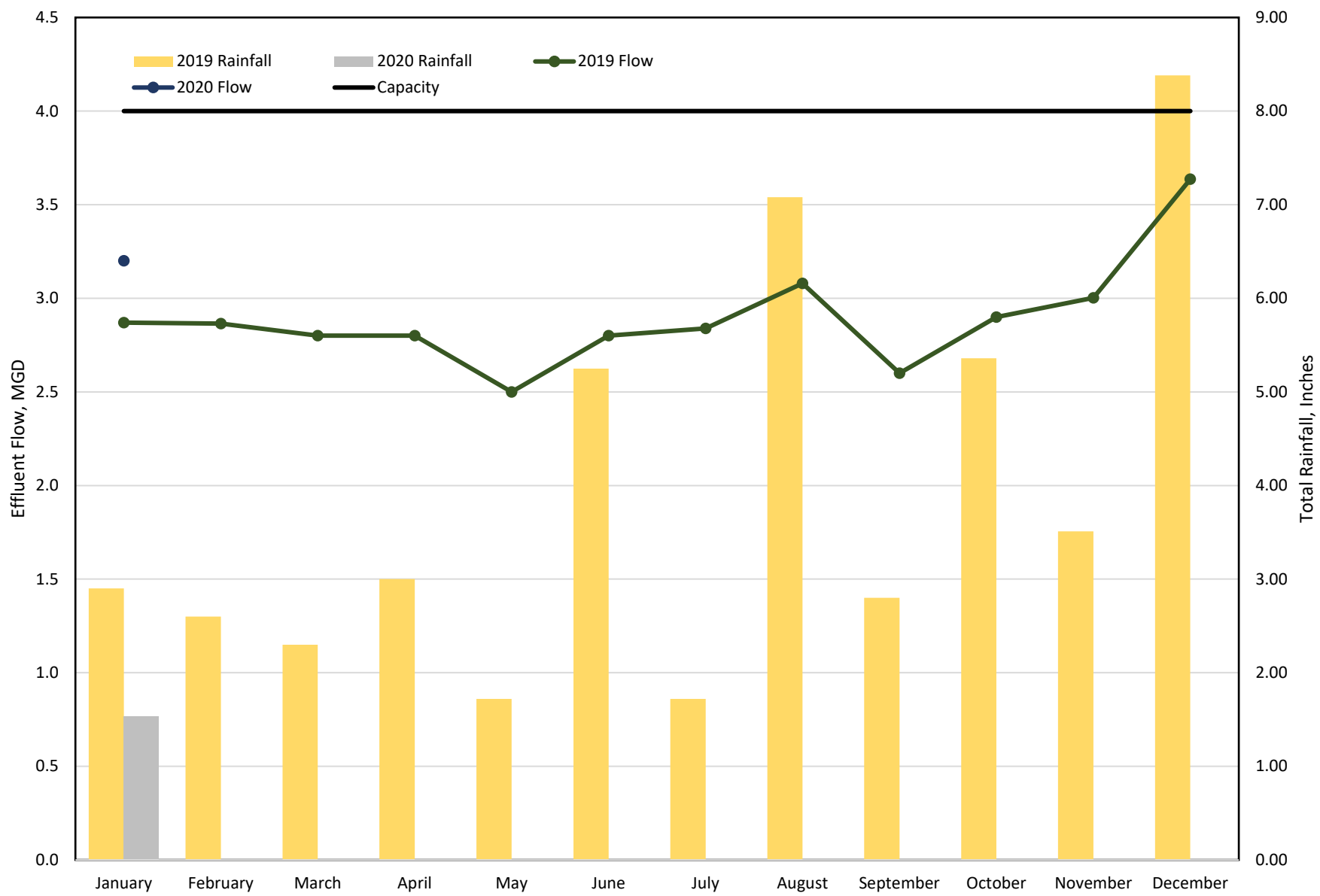
Academy Creek Effluent Flow



DUNBAR CREEK WWTP	FLOW (MGD)			Influent Concentrations					Effluent Concentrations						Removal Efficiency		Rainfall		Water Meter Monthly M/Gal	Sludge Tons to Landfill		
	Month	INF	EFF	% Cap.	pH s.u.	BOD mg/L	TSS mg/L	NH3 mg/L	Phos mg/L	pH s.u.	D.O. mg/L	BOD mg/L	TSS mg/L	NH3 mg/L	Entero. #/100 mL	Phos. mg/L	BOD %	TSS %			Maximum Inches	Total Inches
January 2019	3.8	2.9	72%	7.3	132	142	16.3	2.85	7.6	8.9	2.0	2.0	0.7	22	2.2	98.48%	98.59%	1.50	2.90	0.044	19.62	
February 2019	3.5	2.9	72%	7.5	148	161	20.9	2.65	7.5	8.7	2.0	1.8	0.5	11	2.0	98.65%	98.86%	1.00	2.60	0.015	7.41	
March 2019	3.2	2.8	70%	7.3	192	195	23.5	3.40	7.5	8.4	1.0	1.8	0.5	5	2.3	99.48%	99.08%	0.60	2.30	0.035	18.11	
April 2019	3.5	2.8	70%	7.2	205	230	23.3	3.90	7.5	7.6	2.0	2.3	0.9	5	2.4	99.02%	99.00%	0.90	3.00	0.037	26.76	
May 2019	3.4	2.5	63%	7.2	206	237	35.3	5.30	7.5	7.2	2.0	3.1	0.5	3	3.0	99.03%	98.69%	0.98	1.72	0.035	21.03	
June 2019	3.7	2.8	70%	7.3	189	267	22.0	4.80	7.5	7.4	2.0	2.5	0.5	5	3.3	98.94%	99.06%	1.62	5.25	0.043	4.52	
July 2019	3.6	2.8	71%	7.3	219	274	21.4	4.25	7.3	7.3	3.0	1.6	0.7	5	3.8	98.63%	99.40%	1.04	1.72	0.045	21.36	
August 2019	3.9	3.1	77%	6.9	168	193	34.1	4.20	7.3	8.0	3.0	2.3	0.7	26	3.3	98.21%	98.83%	1.91	7.08	0.065	41.48	
September 2019	3.2	2.6	65%	6.9	159	245	24.3	2.15	7.1	8.1	3.0	4.0	0.9	33	2.4	98.11%	98.37%	0.90	2.80	0.015	7.16	
October 2019	2.7	2.9	73%	6.9	165	188	31.8	3.50	6.9	8.1	2.0	2.2	0.4	20	2.7	98.79%	98.83%	1.93	5.36	0.036	21.06	
November 2019	2.9	3.0	75%	6.8	149	155	23.9	3.35	7.0	8.6	2.0	3.0	0.3	3	2.5	98.66%	98.06%	2.32	3.51	0.016	11.19	
December 2019	3.4	3.6	91%	7.0	140	164	18.3	3.20	7.3	8.8	2.0	2.5	0.2	11	2.2	98.57%	98.48%	4.01	8.38	0.038	19.03	
January 2020	3.0	3.2	80%	7.0	141	150	19.0	2.95	7.2	9.0	2.0	1.7	0.1	3	2.1	98.58%	98.87%	0.62	1.53	0.049	17.92	
February 2020																						
March 2020																						
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December 2020																						
Average	3.4	2.9	73%	7.1	170.2	200.1	24.2	3.58	7.3	8.2	2.2	2.4	0.5	12	2.6	98.70%	98.78%	1.5	3.7	0.036	18.20	
Max	3.9	3.6	91%	7.5	219.0	274.0	35.3	5.30	7.6	9.0	3.0	4.0	0.9	33	3.8	99.48%	99.40%	4.0	8.4	0.065	41.48	
Min	2.7	2.5	63%	6.8	132.0	142.0	16.3	2.15	6.9	7.2	1.0	1.6	0.1	3	2.0	98.11%	98.06%	0.6	1.5	0.015	4.52	
Permit Limits	N/A	4.0	N/A	N/A	N/A	N/A	N/A	N/A	6.0-9.0	6.0	5.0	20.0	2.0	35	Report	85.00%	85.00%					

BOD - Biochemical Oxygen Demand
TSS - Total Suspended Solids
NH3 - Ammonia
Phos - Phosphorus
D.O. - Dissolved Oxygen
TRC - Total Residual Chlorine
Entero. - Enterococci Bacteria

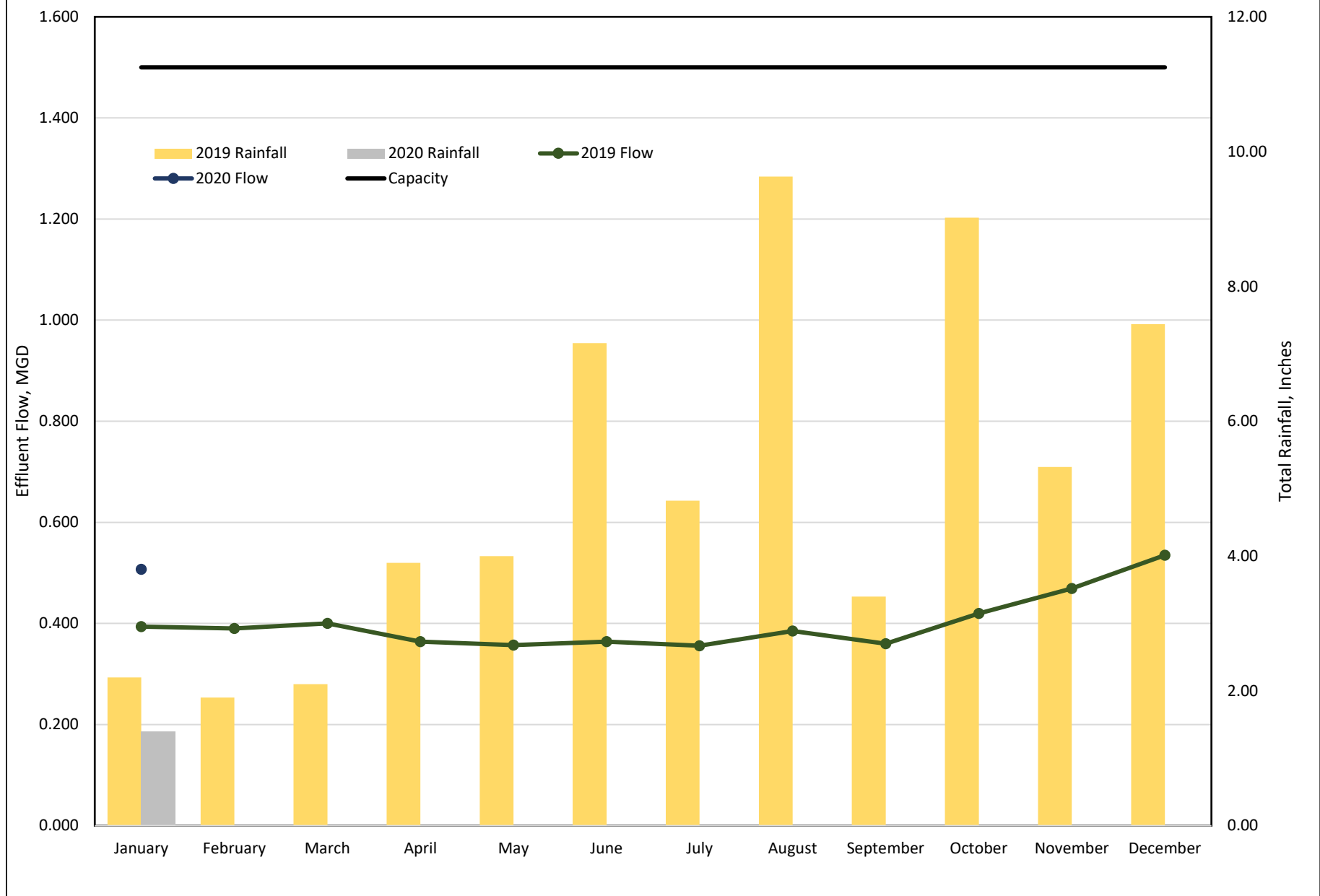
Dunbar Creek Effluent Flow



SOUTHPORT WWTP	FLOW (MGD)			Influent Concentrations					Effluent Concentrations						Removal Efficiency		Rainfall		Water Meter Monthly M/Gal	Sludge Tons to Landfill	
	Month	INF	EFF	% Cap.	pH s.u.	BOD mg/L	TSS mg/L	NH3 mg/L	Phos mg/L	pH s.u.	D.O. mg/L	BOD mg/L	TSS mg/L	NH3 mg/L	Fecal #/100 mL	Phos. mg/L	BOD %	TSS %			Maximum Inches
January 2019	0.376	0.394	26%	6.9	128	376	23.3	3.70	7.3	9.0	3.0	3.0	0.6	6	0.1	97.65%	99.20%	1.00	2.20	0.006	3.37
February 2019	0.377	0.390	26%	7.5	111	93	29.8	1.20	7.5	8.9	3.0	4.0	0.5	8	0.5	97.31%	95.70%	0.06	1.90	0.007	6.79
March 2019	0.358	0.400	27%	6.9	111	109	31.7	3.90	7.2	8.9	4.0	4.0	0.5	6	0.1	96.40%	96.33%	0.50	2.10	0.008	6.5
April 2019	0.359	0.364	24%	6.8	113	78	30.8	3.95	7.7	8.3	6.0	2.0	0.8	4	1.0	94.69%	97.44%	0.13	3.90	0.008	5.35
May 2019	0.350	0.357	24%	6.9	121	92	40.2	4.40	7.3	8.0	5.8	4.7	0.6	5	0.7	95.21%	94.89%	1.68	4.00	0.007	3.56
June 2019	0.358	0.364	24%	6.8	98	124	27.9	3.80	7.2	6.6	4.0	5.0	0.3	4	0.7	95.92%	95.97%	1.26	7.16	0.006	5.25
July 2019	0.361	0.356	24%	6.8	110	93	27.0	4.00	7.3	7.9	8.0	5.0	0.6	12	1.1	92.73%	94.62%	1.45	4.82	0.009	4.19
August 2019	0.369	0.385	26%	6.7	117	127	45.0	4.45	7.2	8.4	5.7	7.1	0.7	23	0.8	95.13%	94.41%	2.42	9.63	0.012	1.90
September 2019	0.362	0.360	24%	6.9	96	75	36.3	2.80	7.4	7.8	5.0	3.0	0.6	23	1.4	94.79%	96.00%	1.20	3.40	0.022	3.87
October 2019	0.363	0.420	28%	6.8	103	109	31.8	3.45	7.3	7.6	4.0	2.0	0.4	49	1.4	96.12%	98.17%	2.52	9.02	0.045	3.54
November 2019	0.397	0.469	31%	6.7	108	99	33.2	4.00	6.8	8.1	4.5	4.6	0.4	6	1.0	95.87%	95.35%	4.46	5.32	0.035	9.83
December 2019	0.456	0.535	36%	6.7	94	116	19.1	2.90	6.9	8.3	3.0	7.0	0.7	7	0.4	96.81%	93.97%	3.83	7.44	0.025	5.65
January 2020	0.439	0.507	34%	6.8	120	106	28.5	4.00	6.8	8.1	3.0	9.0	0.2	12	0.3	97.50%	91.51%	0.72	1.40	0.027	6.60
February 2020																					
March 2020																					
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May 2020																					
June 2020																					
July 2020																					
August 2020																					
September 2020																					
October 2020																					
November 2020																					
December 2020																					
Average	0.379	0.408	27%	6.9	110.0	122.8	31.1	3.58	7.2	8.1	4.5	4.6	0.5	13	0.7	95.85%	95.66%	1.6	4.8	0.017	5.11
Max	0.456	0.535	36%	7.5	127.6	375.7	45.0	4.45	7.7	9.0	8.0	9.0	0.8	49	1.4	97.65%	99.20%	4.5	9.6	0.045	9.83
Min	0.350	0.356	24%	6.7	94.0	75.0	19.1	1.20	6.8	6.6	3.0	2.0	0.2	4	0.1	92.73%	91.51%	0.1	1.4	0.006	1.90
Permit Limits	N/A	1.500	N/A	N/A	N/A	N/A	N/A	N/A	6.0-9.0	5.0	30.0	30.0	13.0	200	Report	85.00%	85.00%				

BOD - Biochemical Oxygen Demand
TSS - Total Suspended Solids
NH3 - Ammonia
Phos - Phosphorus
D.O. - Dissolved Oxygen
TRC - Total Residual Chlorine
Fecal - Fecal Coliform Bacteria

Southport Effluent Flow



Capital Proj Status for Fac and BOC

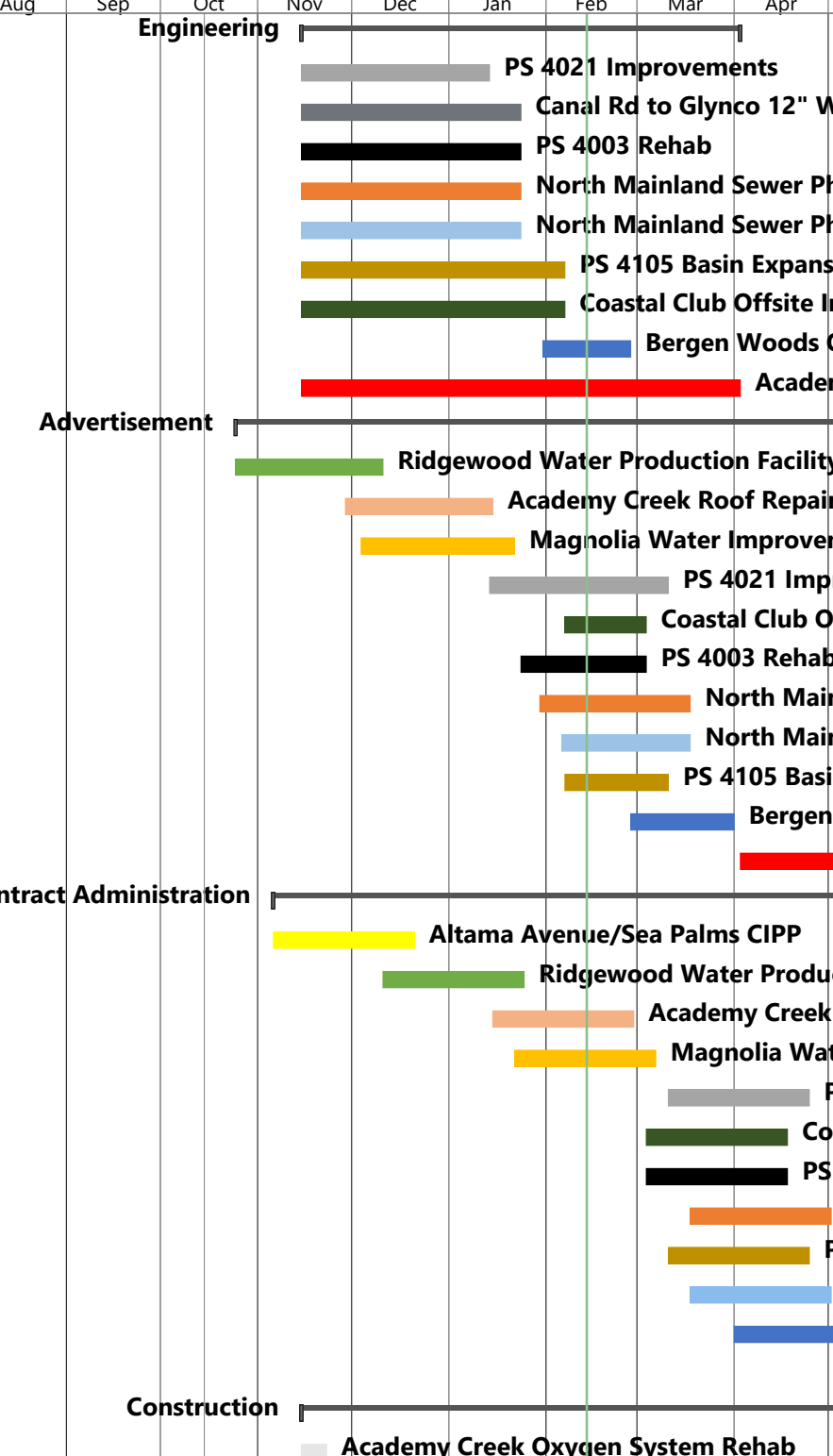
Financial Data as of 01-31-2020

Proj #	Project Name	Original Project Estimate	Project Manager	Concept Design	Detail Design	Construction	BOC APPROVED FUNDING & SOURCE				COMMITTED			BUDGET VS. EXPENDITURES					Uncommitted \$\$\$ (App Fund - Exp)	% Approved Budget Available	Status
							R&R Reserve	CIF Reserve	SPLOST	Total Approved Funds	Purchase Orders Issued	BOC Approved Change Orders	Total PO+CO	Expenditures Paid to CO's	Expenditures Remaining	Misc. Expenditures	Total Expenditures	BALANCE			
232	SR-99 Water Main Extension	\$2,200,000	Kline/Patel/Vo	EMC Engineering Services	Richardson, Garreston & Associates / EMC	Seaboard Construction LLC	\$0	\$2,200,000	\$0	\$2,200,000	\$1,263,167	\$673,667	\$1,936,834	\$1,761,543	\$388,874	\$0	\$2,150,417	\$49,583	2.25%	Seaboard Construction LLC remobilized onsite 01/20/2020. The waterline installation is on-going. currently 2,100LF of wm has been removed and 1,000LF has been installed.	
417	Ridgewood Water Production Facility	\$1,000,000	Kline/Vo	JWSC	Richardson, Garreston & Associates / EMC	Southern Civil, LLC	\$1,650,000	\$0	\$0	\$1,650,000	\$107,366	\$0	\$107,366	\$36,432	\$70,934	\$65,943	\$173,309	\$1,476,691	89.50%	Bid Opened 12/10/2019. Five bids recieved and the awarded Contractor is Southern Civil, LLC for the amount of \$1,473,532.00. Preconstruction meeting held 01/29/2020 and NTP scheduled for 02/17/2020.	
702	North Mainland Sewer Improvements	\$14,900,000	Kline/Vo	JWSC/ EMC	Thomas & Hutton	IPR Southeast	\$0	\$11,700,000	\$3,200,000	\$14,900,000	\$7,184,822	\$293,423	\$7,478,245	\$5,615,724	\$1,793,351	\$0	\$7,409,075	\$7,490,925	50.27%	Construction progress meeting held on 02/12/2020. Final CIPP shot under Community Road scheduled 02/11/2020. The MH Rehab & Contract LDs has been discussed with the Contractor and he is making every effort to meet the schedule.	
702	North Mainland Sewer Improvements - PHII PS4035 & 4036	Funds appropriated in Master 702	Kline/Vo	JWSC/ EMC	Thomas & Hutton	TBD	\$0													Sub-Project of #702. Project Advertised 01/30/2020, Prebid scheduled 02/21/2020, and anticipated Bid Open 03/17/2020.	
702	North Mainland Sewer Improvements - PHIII Forcemain	Funds appropriated in Master 702	Kline/Vo	JWSC/ EMC	Four Waters Engineering, Inc.	TBD	\$0													Sub-Project of #702. Project Advertised 02/06/2020, Prebid scheduled 02/21/2020, and anticipated Bid Open 03/17/2020.	
703	PS 4003 Decommission and Gravity Sewer	\$3,300,000	Kline/Patel/Vo	JWSC	Hussey Gay Bell	TBD	\$0	\$0	\$3,300,000	\$3,300,000	\$301,099	\$0	\$301,099	\$155,991	\$145,108	\$3,589	\$304,688	\$2,995,312	90.77%	EOR addressing all comments and finalizing structural, civil and electrical plans; due next week. JWSC in the process of obtaining construction easement along adjacent property owner.	
704	Canal Road to Glynco 12-inch Watermain Loop	\$1,200,000	Kline/Patel/Vo	JWSC	JWSC	TBD	\$0	\$1,200,000	\$0	\$1,200,000	\$48,000	\$0	\$48,000	\$48,000	\$0	\$0	\$48,000	\$1,152,000	96.00%	Conceptual design exhibit complete. Survey RFP advertised 02/06/2020.	
801	FEMA Hazard Mitigation-Academy Creek	\$3,188,000	Burroughs	Haggerty	TBD	TBD	\$3,188,000	\$0	\$0	\$3,188,000	\$37,233	\$0	\$37,233	\$31,408	\$0	\$137,339	\$168,747	\$3,019,253	94.71%	Bid package being prepared for transfer switch installation and portable generator purchase.	
804	Magnolia Water Improvements (City of Brunswick)	\$1,150,000	Kline/Vo	JWSC	City of BWK / EMC Engineering Services	Georgia Asphalt Producers, Inc	\$1,150,000	\$0	\$0	\$1,150,000	\$117,050	\$0	\$117,050	\$55,300	\$61,750	\$0	\$117,050	\$1,032,950	89.82%	City Project/Contract. Bid Open 01/21/2020. Two bids recieved and the apparent low bidder is Georgia Asphalt Producers for the amount of \$6,434,919.60 (JWSC \$1,915,315.50). City has asked bidder to provide price reduction options.	
805	L Street Water Improvements (City of Brunswick)	\$650,000	Kline/Vo	JWSC	City of BWK / EMC Engineering Services	Georgia Asphalt Producers	\$787,334	\$0	\$0	\$787,334	\$755,884	\$6,226	\$762,110	\$411,007	\$351,104	\$0	\$762,111	\$25,223	3.20%	City Project/Contract. All Phase I JWSC water is complete and in service. Construction Progress meeting held 02/11/2020. Ph-1 estimated completion date 03/21/2020 and Ph-2&3 schedule to be provided towards the end of Ph-1.	
806	Academy Creek Oxygen System Rehab	\$1,040,000	Burroughs	Hussey Gay Bell	Hussey Gay Bell	A&G / Matheson	\$1,040,000	\$0	\$0	\$1,040,000	\$1,039,533	\$0	\$1,039,533	\$1,007,067	\$31,816	\$0	\$1,038,883	\$1,117	0.11%	Awaiting final invoicing.	
903	SR 27 Resurfacing Yellow Bluff Creek to US 25 (GDOT)	\$77,000	Kline/Vo	JWSC/GDOT	GDOT	Seaboard Construction LLC	\$102,000	\$0	\$0	\$102,000	\$101,929	\$0	\$101,929	\$0	\$0	\$101,929	\$101,929	\$71	0.07%	Seaboard Construction LLC mobilized onsite 09/19/2019. The mainline milling & resurfacing activities is on-going and expected to be completed by end of February 2020.	
904	Pumpstation 4021 Rehabilitation & Upgrade	\$275,000	Kline/Patel	JWSC	JWSC	TBD	\$0	\$275,000	\$0	\$275,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$275,000	100.00%	Project Advertised 01/14/2020, Prebid held 01/29/2020, and anticipated Bid Open 03/10/2020. Construction time extended to 180 days	
906	Water Pollution Rehab-Academy & Dunbar	\$15,000,000	Burroughs	JWSC	GMC	TBD	\$0	\$0	\$1,480,647	\$16,641,306	\$1,181,150	\$0	\$1,181,150	\$345,366	\$844,784	\$50,083	\$1,240,233	\$15,401,073	92.55%	60% Design Completed. Comments Returned to GMC. GEFA Loan to be approved by both City and County week of 01/14/2020. Modeling completed by DWG Associates.	
2001	PS4105 Basin Expansion/Forcemain reroute & CIPP*	\$1,485,000	Burroughs/Kline/Vo	JWSC	Roberts Civil Engineering	TBD	\$1,000,000	\$485,000	\$0	\$1,485,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,485,000	100.00%	Design report comments returned to EOR.	
2002	Altama Avenue CIPP	\$625,000	Burroughs/Kline/Vo	JWSC	JWSC	IPR Southeast	\$625,000	\$0	\$0	\$625,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$625,000	100.00%	Preconstruction Meeting held 01/17/2020 and NTP scheduled for 03/09/2020.	
2003	Sea Palms CIPP	\$561,795	Burroughs/Kline/Vo	JWSC	JWSC	IPR Southeast	\$0	\$0	\$561,795	\$561,795	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$561,795	100.00%	Preconstruction Meeting held 01/17/2020 and NTP scheduled for 03/09/2020.	
2004	Mainland Smoke Testing	\$325,000	Zettler	JWSC	N/A	P. U. M. P. S.	\$325,000	\$0	\$0	\$325,000	\$231,649	\$0	\$231,649	\$0	\$231,649	\$0	\$231,649	\$93,351	28.72%	Midnight investigation final report with draft PPT submitted to PM 01/30/2020.	
2005	Coastal Club Apts. Offsite PS & FM Improvements*	\$228,000	Kline/Vo	JWSC	Roberts Civil Engineering	TBD	\$0	\$0	\$0	\$228,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$228,000	100.00%	45% design submittal recieved 02/13/2020 and under JWSC review.	
2006	Academy Creek Roof Repair	\$300,000	Burroughs/Young	JWSC	N/A	TBD	\$300,000	\$0	\$0	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300,000	100.00%	NTP and Preconstruction meeting held 02/13/2020.	
2007	Bergen Woods Offsite Forcemain Improvements*	\$220,000	Kline/Patel	JWSC	Roberts Civil Engineering	TBD	\$0	\$220,000	\$0	\$220,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$220,000	100.00%	GDOT review completed. Secondary EPD approval received. Anticipates project advertisement by end of February 2020.	
2008	Demere East Beach Roundabout W&S Improvements (Glynn County)	\$118,000	Kline/Patel	JWSC	Glynn County/EMC Engineering Services	Riverstone Construction, LLC	\$118,000	\$0	\$0	\$118,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$118,000	100.00%	Glynn Co. project/contract. Contractor is Riverstone Construction, LLC. for the amount of \$1,713,513.96. MOU with County approved by BOC 01/16/2020.	
2009	Sea Palms East Water Line Rehab	\$178,595					\$178,595	\$0	\$0	\$178,595	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$178,595	100.00%		
TOTALS		\$48,021,390					\$10,463,929	\$16,080,000	\$8,542,442	\$50,475,030	\$12,368,882	\$973,316	\$13,342,198	\$9,467,838	\$3,919,370	\$358,883	\$13,746,091	\$36,728,939	72.77%		

UNSELECTED PROPOSALS*	DESCRIPTION	Concept	Application	Preliminary Engineering	Comprehensive Agreement	STATUS
Sinclair S/D residential development (SSI)	121 Lot S/D; proposed improvements to PS2056 and force main.	Complete	Complete	Complete	Complete May 2018	Pending developer action.
Bergen Woods Apartments	Proposed 252 apartment development and force main improvements.	Complete	Complete	Complete	Complete August 2018	Plans in EPD and GDOT review.
Frederica Township	Downstream upgrades to accommodate 200 additional lots; cooperative w/ Sinclair U.P.	Complete	Complete	Complete	Complete August 2018	Pending developer action.
Oak Grove/Carolina Partners	Force main improvements to serve proposed development on Oak Grove Island.	Complete	Complete	Complete	Complete February 2019	Development in Glynn Co. planning approval; 60% design to be received
Saddlebrook Subdivision / Wade Journey Homes	Improve PS4105 sewer capacity for the addition of 41 new homes	Complete	Complete	Complete	Complete May 2019	PS4105/4107 upgrade PER under review.
Coastal Club Apartments (link to Proj 904)	Improve PS4056 & 4059 for proposed 240 unit apt. complex 3061 Old Cypress Mill Rd.	Complete	Complete	Complete	Complete September 2019	45% design plans under review.
Boomers Bakery (fmr. Pumpkin Patch) W& FM extension	Extend W&S from Friendly Exp #71 to 341; obtain easement	On hold				Pending developer decision to move forward.

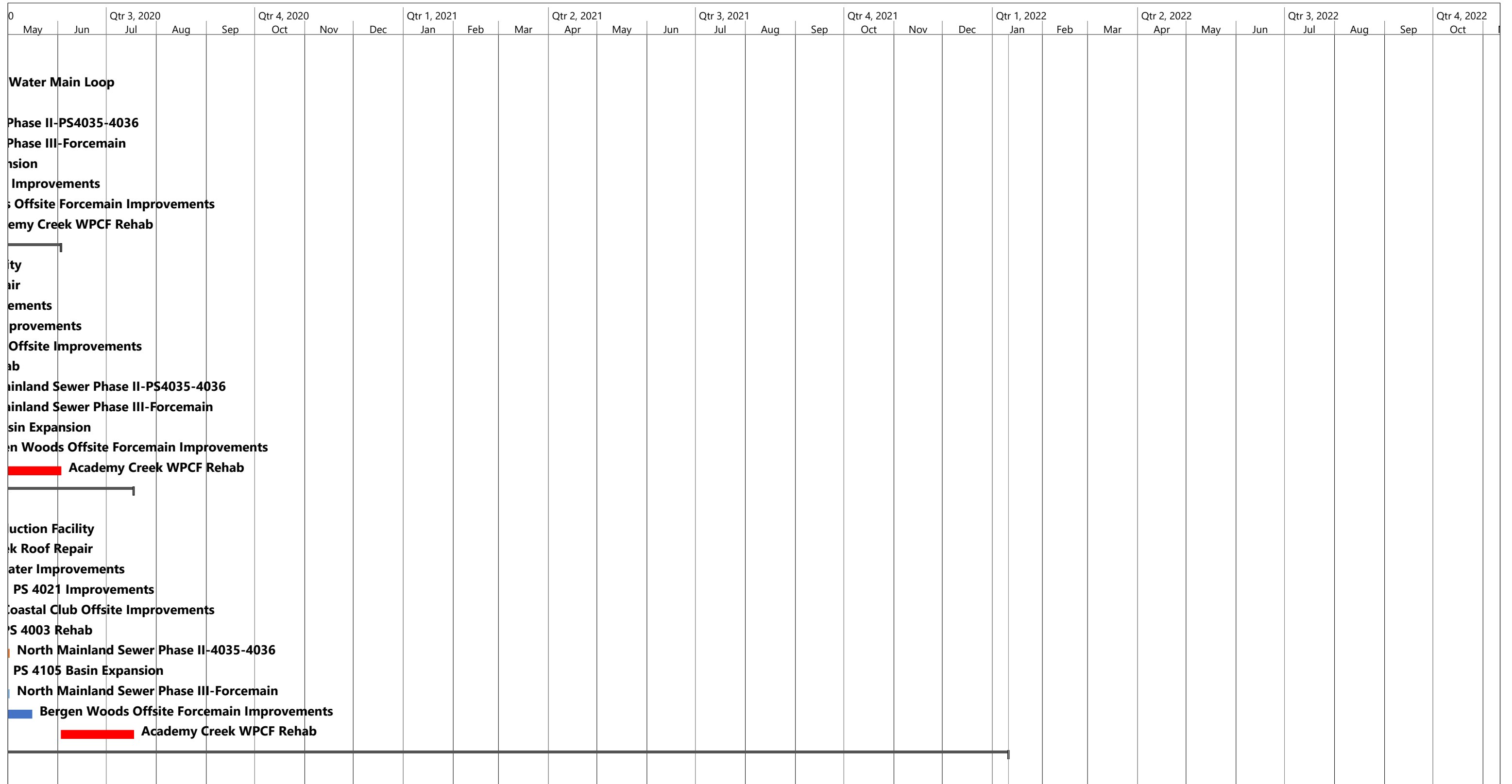
BULL PEN (Proposed)	
Glynn County Village Storm Improvements- Phase II	Opportunity project with Glynn County to replace/upgrade sections of W&S in common with areas of storm improvements; Glynn Co. proposed SPLOST 2020.
JWSC 2020 SPLOST projects	Proposed list submitted to Glynn County grouped by funding levels.

ID	Task Name	Duration	Scheduled Start	Scheduled Finish	Actual Start	Qtr 2, 2019			Qtr 3, 2019			Qtr 4, 2019			Qtr 1, 2020			Qtr 2, 2020	
						Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	
1	Engineering	140 days	Fri 11/15/19	Thu 4/2/20	Fri 11/15/19														
4	PS 4021 Improvements	60 days	Fri 11/15/19	Mon 1/13/20	Fri 11/15/19														
2	Canal Rd to Glynco 12" Water Main Loop	70 days	Fri 11/15/19	Thu 1/23/20	Fri 11/15/19														
7	PS 4003 Rehab	70 days	Fri 11/15/19	Thu 1/23/20	Fri 11/15/19														
8	North Mainland Sewer Phase II-PS4035-4036	70 days	Fri 11/15/19	Thu 1/23/20	Fri 11/15/19														
9	North Mainland Sewer Phase III-Forcemain	70 days	Fri 11/15/19	Thu 1/23/20	Fri 11/15/19														
5	PS 4105 Basin Expansion	84 days	Fri 11/15/19	Thu 2/6/20	Fri 11/15/19														
6	Coastal Club Offsite Improvements	84 days	Fri 11/15/19	Thu 2/6/20	Fri 11/15/19														
3	Bergen Woods Offsite Forcemain Improvements	28 days	Fri 1/31/20	Thu 2/27/20	Fri 1/31/20														
10	Academy Creek WPCF Rehab	140 days	Fri 11/15/19	Thu 4/2/20	Fri 11/15/19														
11	Advertisement	222 days	Fri 10/25/19	Tue 6/2/20	Fri 10/25/19														
17	Ridgewood Water Production Facility	47 days	Fri 10/25/19	Tue 12/10/19	Fri 10/25/19														
12	Academy Creek Roof Repair	47 days	Fri 11/29/19	Tue 1/14/20	Fri 11/29/19														
19	Magnolia Water Improvements	49 days	Wed 12/4/19	Tue 1/21/20	Wed 12/4/19														
14	PS 4021 Improvements	57 days	Tue 1/14/20	Tue 3/10/20	NA														
16	Coastal Club Offsite Improvements	26 days	Fri 2/7/20	Tue 3/3/20	NA														
18	PS 4003 Rehab	40 days	Fri 1/24/20	Tue 3/3/20	NA														
20	North Mainland Sewer Phase II-PS4035-4036	48 days	Thu 1/30/20	Tue 3/17/20	NA														
21	North Mainland Sewer Phase III-Forcemain	41 days	Thu 2/6/20	Tue 3/17/20	NA														
15	PS 4105 Basin Expansion	33 days	Fri 2/7/20	Tue 3/10/20	NA														
13	Bergen Woods Offsite Forcemain Improvements	33 days	Fri 2/28/20	Tue 3/31/20	NA														
22	Academy Creek WPCF Rehab	61 days	Fri 4/3/20	Tue 6/2/20	NA														
23	Contract Administration	255 days	Wed 11/6/19	Fri 7/17/20	NA														
25	Altama Avenue/Sea Palms CIPP	45 days	Wed 11/6/19	Fri 12/20/19	NA														
30	Ridgewood Water Production Facility	45 days	Wed 12/11/19	Fri 1/24/20	NA														
24	Academy Creek Roof Repair	45 days	Wed 1/15/20	Fri 2/28/20	NA														
32	Magnolia Water Improvements	45 days	Wed 1/22/20	Fri 3/6/20	NA														
27	PS 4021 Improvements	45 days	Wed 3/11/20	Fri 4/24/20	NA														
29	Coastal Club Offsite Improvements	45 days	Wed 3/4/20	Fri 4/17/20	NA														
31	PS 4003 Rehab	45 days	Wed 3/4/20	Fri 4/17/20	NA														
34	North Mainland Sewer Phase II-4035-4036	45 days	Wed 3/18/20	Fri 5/1/20	NA														
28	PS 4105 Basin Expansion	45 days	Wed 3/11/20	Fri 4/24/20	NA														
33	North Mainland Sewer Phase III-Forcemain	45 days	Wed 3/18/20	Fri 5/1/20	NA														
26	Bergen Woods Offsite Forcemain Improvements	45 days	Wed 4/1/20	Fri 5/15/20	NA														
35	Academy Creek WPCF Rehab	45 days	Wed 6/3/20	Fri 7/17/20	NA														
36	Construction	788 days	Fri 11/15/19	Mon 1/10/22	Fri 11/15/19														
37	Academy Creek Oxygen System Rehab	8 days	Fri 11/15/19	Fri 11/22/19	Fri 11/15/19														

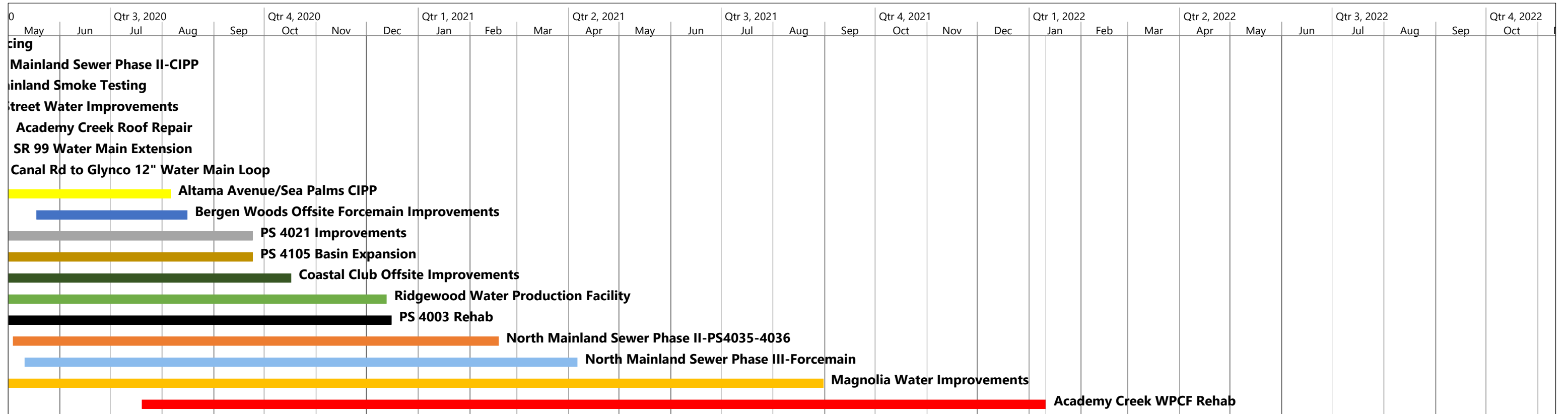


Project: Capital Projects Gantt C
Date: Fri 2/14/20

Task		Inactive Task		Manual Summary Rollup		External Milestone		Progress	
Split		Inactive Milestone		Manual Summary		Deadline		Manual Progress	
Milestone		Inactive Summary		Start-only		Baseline			
Summary		Manual Task		Finish-only		Baseline Milestone			
Project Summary		Duration-only		External Tasks		Baseline Summary			



Project: Capital Projects Gantt Chart Date: Fri 2/14/20	Task		Inactive Task		Manual Summary Rollup		External Milestone		Progress	
	Split		Inactive Milestone		Manual Summary		Deadline		Manual Progress	
	Milestone		Inactive Summary		Start-only		Baseline			
	Summary		Manual Task		Finish-only		Baseline Milestone			
	Project Summary		Duration-only		External Tasks		Baseline Summary			



Project: Capital Projects Gantt C Date: Fri 2/14/20	Task		Inactive Task		Manual Summary Rollup		External Milestone		Progress	
	Split		Inactive Milestone		Manual Summary		Deadline		Manual Progress	
	Milestone		Inactive Summary		Start-only		Baseline			
	Summary		Manual Task		Finish-only		Baseline Milestone			
	Project Summary		Duration-only		External Tasks		Baseline Summary			

Executive Summary

2/19/2020

Public Utility Management and Planning Services Inc. was contracted by the Brunswick-Glynn County Joint Water-Sewer Commission to smoke test a series of lift station basins, review the pipes in the Brunswick-Glynn County Joint Water-Sewer Commission pump station service areas, and provide a recommendation for repairs for any defects found. The goal of the investigation was to determine where inflow and infiltration are present in the gravity system for each lift station.

The smoke testing from September through early November revealed over 647 openings where water can enter the sewer system during rainfall (see Table 1). Findings included that:

- 647 Openings were found
- 241 were related to Manholes (can leak 30 gpm)
- 239 were related to cleanouts
- 8 illegal connections
- 7 stormwater crossings
- 37 were significant problems
- LS area 4002 was the worst area

Of note, 243 of these are on public property.

The results of the midnight run December 16-17 were as follows:

- The gravity sewer lines are ABS truss pipe, PVC and vitrified clay.
- Brick manholes are primarily from the period 1961-1963 based on the manhole covers.
- Manhole dishes are absent from the system. Inflow defender dishes should be placed in all manholes based on the results of the midnight investigation
- A number of the precast manholes are leaking. Calcium aluminate products and epoxy should be used for repairs.
- A percentage of the system is lined, but the liners leak. The liner leaks need to be repaired
- Manhole rings in a number of places were clearly detached from the concrete. This needs to be fixed with Elasti-seal.
- A number of covers cannot be removed. These need to be corrected.
- Service laterals that were visible were primarily clay and most were visibly leaking.
- The midnight run showed that there was a leak coming in several runs of pipe. These pipes should be televised, encompassing 70,000 ft of the sewer system
- The system was relatively clean, although there were several areas with collections of paper products and grease. Several manhole were surcharged from the perspective of paper products in the sewers.
- There are 82 manhole issues to address
- The total flow coming into the system in the lift station areas investigated is estimated to be 350 gpm or nearly 0.5 MGD of infiltration from leaks in the pipes or from service laterals.

The Brunswick-Glynn County Joint Water-Sewer Commission deliverables were as follows:

- Smoke Test results for each lift station basin
- Photographs and gps locations of all smoke test results
- Maps of each basin the smoke sites
- Summary of manholes opened at midnight with issues (not all manholes were opened)
- Maps and spreadsheet of pipes that showed flows
- Specifications and a bid sheet to address the smoke test results

Figure 1 shows a sample of the maps typically provided with the smoke locations. Figure 2 shows one of the maps of pipes that were leaking and need to be televised.

Table 1– Summary all Areas

Lift Station Area	Number of Openings	Public	Private	Manholes	Cleanouts	cracked cleanout	illegal connections	Storm water xing	vent stack leak	main line leak	Leak Signif = Large	Leak Signif = Medium	Leak Signif = Small
4001	7	5	2		4	1	1	1	0	0	1	6	0
4002	105	62	43	17	60	1	1	2	0	0	1	37	67
4003	64	39	25	15	40	1	1	2	0	0	2	40	22
4006	32	20	11	14	14	3		1	0	0	3	24	5
4007	22	16	6	11	11	0	0	0	0	0	0	16	6
4009	11	8	3	5	6	0	0	0	0	0	0	6	3
4011	1	1	0	1	0	0	0	0	0	0	1	0	0
4012	5	1	4	0	5	0	0	0	0	0	0	5	0
4013	42	25	17	16	21	3	1	1	0	0	2	32	8
4015	1	1	0	0	1	0	0	0	0	0	0	1	0
4017	11	6	5	6	4	0	1	0	0	0	0	6	5
4021	36	20	16	20	12	4	0	0	0	0	2	30	4
4023	14	6	8	4	10	0	0	0	0	0	1	11	2
4024	7	7	0	6	1	0	0	0	0	0	0	7	0
4027	38	16	22	8	25	4	1	0	0	0	0	35	3
4029	26	12	14	7	17	0	1	0	0	0	2	26	0
4035	53	27	26	26	21	3	0	0	3	0	3	45	6
4036	71	52	19	35	29	5	1	0	0	1	4	59	9
4038	21	19	2	12	9	0	0	0	0	0	14	3	4
4039	21	15	6	12	7	2	0	0	0	0	0	17	4
4044	51	37	14	24	16	10	0	0	0	0	0	41	10
4056	8	8	0	2	6	0	0	0	0	0	1	7	0
Total	647	403	243	241	319	37	8	7	3	1	37	454	158

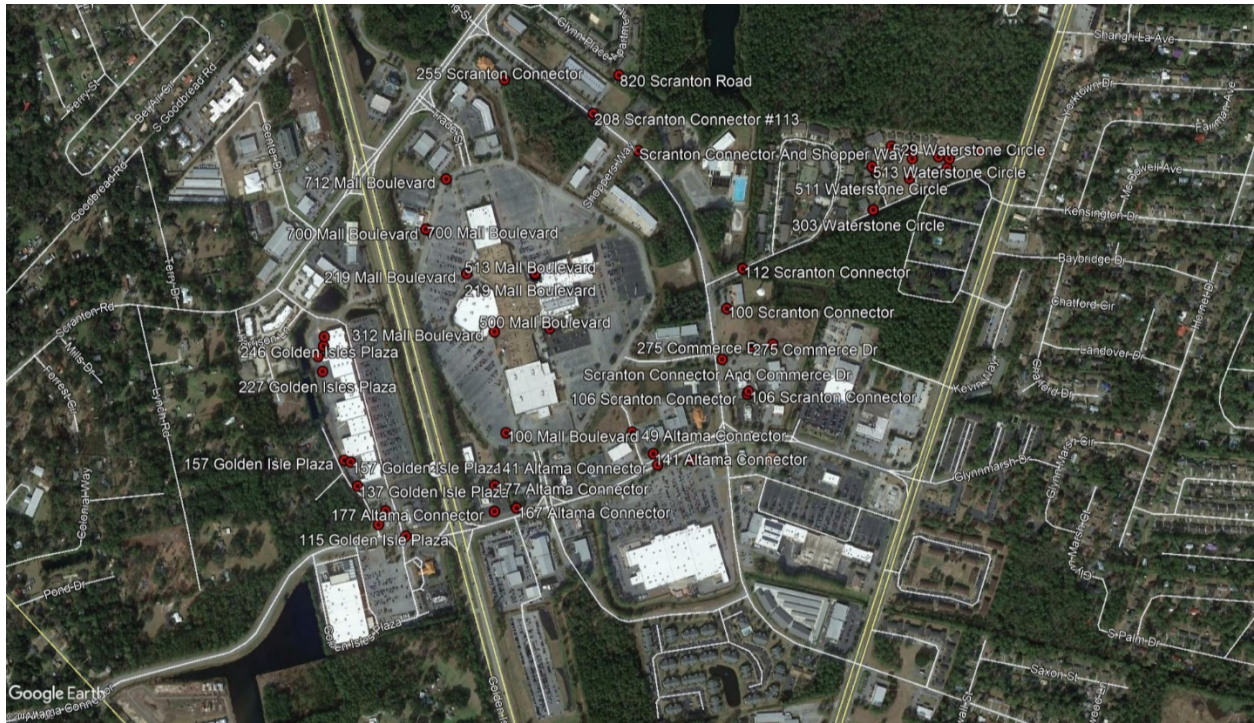


Figure 1 – locations of smoke in Lift Station Area 4044



Figure 2 - Map of pipes that indicated leakage