



**Brunswick-Glynn County Joint Water and Sewer Commission
1703 Gloucester Street, Brunswick GA 31520
Thursday, August 18, 2016 at 2:00 pm
Commission Chambers**

AGENDA

Call to Order

Invocation

Pledge

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.

COMMITTEE UPDATES

Communications & Customer Service – Commissioner Adams
Economic Development – Commissioner Boland
Facilities – Commissioner Perry
Finance – Commissioner Elliott
Human Resources – Commissioner Cason
Legislative – Commissioner Boland

APPROVAL

- 1. Minutes from August 4, 2016 Regular** *(subject to any necessary changes)*
- 2. Minutes from August 4, 2016 Executive Session** *(subject to any necessary changes)*
- 3. Bank Resolution Revision** – F. Wilson
- 4. Hawkins Island Deed** – Comm. Boland
- 5. Public Information Officer** – Comm. Elliott
- 6. Amendment of CIF Language** – Comm. Elliott
- 7. N. Mainland Additional Taps** – T. Kline
- 8. PS 2032 Pipe Pre-Purchase** – P. Crosby
- 9. Lift Station Bypass Pump** – P. Crosby / T. Kline / K. Young

DISCUSSION

- 1. Financial Report – June End of Month** – F. Wilson
- 2. RFP Financial Service Update** – P. Crosby
- 3. Impact Bond Defeasance** – Comm. Elliott
- 4. Peaking Factors** – T. Kline / H. Patel
- 5. Allocation of Capacity Additions** – J. Junkin

EXECUTIVE SESSION

Potential Litigation
Contract

EXECUTIVE DIRECTOR'S UPDATE

CHAIRMAN'S UPDATE

Meeting Adjourned



Brunswick-Glynn County Joint Water and Sewer Commission
1703 Gloucester Street, Brunswick, GA 31520
Thursday, August 18, 2016 at 2:00 PM

COMMISSION MINUTES

PRESENT:

Thomas Boland, Chairman
Clifford Adams, Vice-Chairman
Donald M. Elliott, Commissioner
Allen Booker, County Commissioner
John A. Cason, III, City Commissioner
Ronald Perry, Commissioner
Robert Bowen, Commissioner

ALSO PRESENT:

Charlie Dorminy, Legal Counsel
John D. Donaghy, Director of Administration & Finance
Pam Crosby, Director of Purchasing

Commissioner Boland called the meeting to order at 2:00 PM. Commissioner Booker provided the invocation and Commissioner Boland led the pledge.

PUBLIC COMMENT PERIOD

There being no citizens who wish to address the Commission, the Chairman closed the public comment period.

Wayne Moxley, Brunswick – Mr. Moxley represents Enclave Development Partnership and came today to say he is building a 400 unit complex and came to JWSC with questions about sewer capacity. His project escrow closes on September 20 and ground breaking is scheduled for January 1st. The project is worth \$500,000 in tap fees. He asked who he can talk to move forward.

Chris Amos, came to discuss the same project on Glyngo Parkway and would like some answers as they are to close on the project tomorrow and didn't have any answers. How is the new additional capacity going to be allocated? Will it be tied in to existing developments? Will new development be able to tie in?

Commissioner discussed the meeting on August 10th with the County, City and the Development Authority and he shared the large books on the Master Plan. For the years 2009 -2012 the master plans were not addressed fully. The peaking factor was created back in 2012 and there was no technical engineering facts to back up the numbers that someone created. Commissioner Boland appreciated the two (2) men's comments and hoped to have answers shortly. He asked the two (2) men to stay and the answers they are looking for should be discussed during the meeting.

There being no additional citizens who wish to address the Commission, the Chairman closed the public comment period.

COMMITTEE UPDATES

Communications & Customer Service Committee – Commissioner Adams

There was nothing new to report.

Economic Development Committee – Commissioner Elliott

There was nothing new to report.

Facilities Committee – Commissioner Perry

The Committee did meet and all of the information was forwarded to the commission.

Finance Committee – Commissioner Elliott

The Committee met this week and the items will be discussed on today's agenda.

Resources Committee – Commissioner Cason

There was nothing new to report.

Legislative Committee – Commissioner Boland

There was nothing new to report.

Commissioner Perry made a motion seconded by Commissioner Booker to move item #4 under approval to Executive Session and to move item #7 under approval to combine with item #5 under discussion.

Commissioner Perry made a motion seconded by Commissioner Booker to amend his motion to differ item # 4 Hawkins Island Deed until after the Executive Session. Motion approved 7-0-0.

APPROVAL

1. Minutes from the August 4, 2016 Regular Meeting

Commissioner Cason made a motion seconded by Commissioner Adams to approve the minutes from August 4, 2016 Regular Meeting. Motion carried 7-0-0.

2. Minutes from August 4, Executive Session Meeting

Commissioner Elliott made a motion seconded by Commissioner Booker to approve the minutes from the August 4 Executive Session Meeting. Motion carried 7-0-0.

3. Bank Resolution Revision – F. Wilson

Frances Wilson presented the Bank Resolution to the full Commission. It was stated that staff is requesting the approval of a new banking resolution and signature cards. Each time an authorized individual is added or removed a new signature card and banking resolution is needed to be submitted to the bank. Staff recommends that the Chairman, Vice-Chairman and Finance Committee Chairman of the JWSC be authorized signatories on the bank accounts of the JWSC and the Chairman, Vice-Chairman, Finance Committee Chairman, Executive Director, and Chief Financial Officer be authorized to execute the necessary banking resolution and signature cards with BB&T Bank.

Commissioner Elliott made a motion seconded by Commissioner Cason that the Chairman, Vice-Chairman and Finance Committee Chairman of the JWSC be authorized signatories on the bank accounts of the JWSC and the Chairman, Vice-Chairman, Finance Committee Chairman, Executive Director, and Chief Financial Officer be authorized to execute the necessary banking resolution and signature cards with BB&T Bank.

Commissioner Booker inquired as to who signs the checks currently. Frances stated that we are adding the Executive Director and normally checks under \$25,000 requires 1 signature which could be primarily the Chief Financial Officer. Anything about \$25,000 requires 2 signatures and any of those listed can sign in the absence of the Chief Financial Officer or Executive Director. It was further discussed that large expenditure items would go before the full commission and the check signing is the last step in a process in which the commissioners and/or the Executive Director would already be aware of. It was noted that an item will be coming to the Human Resources Committee on Policy where the Executive

Director can not bind the Commission to a contract in writing or orally without placing before the full Commission.

Motion approved 7-0-0.

4. Hawkins Island Deed – Comm. Boland

This item was motioned to be differed until after the Executive Session.

5. Public Information Officer – Comm. Elliott

Commissioner Elliott presented the Public Information Officer to the full Commission. It was noted that there is a need for a focal point and a contact person for several important areas. One area in particular is public information and how it is handled. A public Information Officer would handle the following areas: relationship with the media, provide public education, manage the JWSC website, receive and process open records requests, and handle legislation matters. This was presented before the Finance Committee for review and approval on 8/16 and it was confirmed that funds are available for this position. The Executive Director would work with Teamworks Services, Inc. to develop the job description, pay scale, and requirements to perform the function of a Public Information Officer and bring before the Human Resources Committee on September 1st and before the Full Commission on the same date. This position could help deal with customer relation issues, which is currently under the Finance Department.

Commissioner Elliott made a motion seconded Commissioner Cason to authorize the Executive Director to develop the position of a Public Information Officer and present to the Human Resources to approve the job description and the position. Motion approved 7-0-0.

6. Amendment of CIF Language – Comm. Elliott

Commissioner Elliott updated the Commission that the BGJWSC adopted a rate Resolution for the fiscal year ending June 30, 2017 at its Meeting on June 16, 2016. Amendments to Section IV, (e) and (f) were made on July 7, 2016. A further amendment is required to Section IV (e). It is currently written as: Capital improvement fees must be paid prior to, or concurrent with, the JWSC's approval of construction plans for the capacity required. The required capacity will be reserved for that property. Staff proposes that it be written as: Capital improvement fees shall be paid concurrent with, the JWSC's approval of construction plans for the capacity required. The required capacity will then be reserved for that property. The reason for this change is such that capital tap fees will be paid after the planning and construction approves the construction plans. The person will then go pay the tap fees. Right now as it is written it is not clear how that function will work. The term 'shall' is used instead of the word 'must'. Commissioner Boland restated that at the point the construction plans are approved by JWSC and the tap fee is paid this will guarantee to capacity.

Commissioner Elliott made a motion seconded by Commissioner Perry to accept the second amendment to Section IV of the Rate Resolution for the fiscal year ending June 30, 2017. Motion approved 7-0-0.

7. N. Mainland Additional Tap – T. Kline

Moved to discussion to be combined with item #5.

8. PS 2032 Pipe Pre-Purchase – P. Crosby

Pam Crosby presented to the Commissioners te PS2032 Pipe Pre-Purchase for approval. This item was brought before the Finance and Facilities Committees'. She stated that the project 2032 on SSI will require the pre-purchase of pipe in order to keep the contractor on target and on timeline. The project design calls for approximately 12,000 feet of pipe to be required for this project. If left up to the contractor of this project to order could take up to 8 weeks and could delay the project through and past the holiday season. The contract would be awarded in early December. What staff is asking for today is to seek formal quotes for the purchase of the 16" HDPE pipe for further review and approval. Staff will

also work with legal counsel to craft contract language to support contractor installation of the 16" HDPE pipe that would maintain all warranties and claims on the work performed. The main reason JWSC is asking for the request is help accelerate the timeline and ultimate completion of this project. This option has been reviewed and approved by both Finance and Facilities Committees at the respective meeting held on 8/16/16.

Commissioner Elliott made a motion seconded by Commissioner Perry that we approve the pre-purchase of 16" HDPE Pipe for the PS2032 Force Main Project.

It was stated that this is the main way to try to stay on schedule in getting 2032 fixed. Currently as the engineering designs stands it is a 6 month construction window. If we waited this would push JWSC into July or maybe even August. Pam concluded that these are estimates for today and the plan is to pursue and return back with final numbers which they do vary. The suppliers were noted as producing domestic products S. Carolina and Kentucky.

Motion approved 7-0-0.

9. Lift Station Bypass Pump – K. Young

Kirk Young presented the approval of Bypass Pump rental and purchase. He began by updating the commission on the project currently under way. It includes multiple projects and initiative that are underway to address the limitations on sewer capacity in the SSI 2032 basin and North Mainland basin. The memorandum stated that on 8/4/16 the JWSC Commission approved a Basin Assessment project for the North Mainland basin with the engineering firm of Hussey Gay Bell. The assessment will include an existing data review, field confirmation, modeling and technical memo which will provide findings, rank alternatives and provide recommendations both short and long term to address sewer capacity deficiencies in this basin. The engineering phase of the 2032 basin Force Main upgrade is due to be completed in early October with construction anticipated to start in January of 2017. There have been multiple stakeholder meetings to discuss with Glynn County, Sea Palms staff, and 4 Waters Engineering firm. There is a public meeting scheduled to present the 30% design concept planned for the first week of September. The Joint Water and Sewer Commission approved a \$1M line item allocation during the FY2017 budget process to provide a means to address these critical repair needs within the sewer transmission system. An option to install permanent backup pumps at lift stations with identified capacities over target limits is currently underway. Xylem and Godwin pumps were selected as the sole source supplier for lift station pumps in 2014. JWSC staff has met with Xylem and Godwin representatives twice in the past week to address this need. Staff recommends a two-pronged approach to address the bypass requirements necessary to facilitate immediate and longer term capacity relief in the 2032 and North Mainland basins. In order to properly determine that bypass pumping requirements are specified correctly a significant amount of analysis is necessary. The JWSC staff has consulted with Xylem and the initial plan of action is outlined below for JWSC Commissions consideration: **Short-Term Contingency Plan**-JWSC to provide for (2) Rental Pumps from Xylem/Godwin-approximately \$15K per month, up to (12) weeks, not to exceed \$100K. These pumps will be returned once purchased pumps are installed. **Long-Term Plan**-Approve purchase of permanent pumps for (6) Mainland and (4) SSI lift stations at an estimated cost of \$1.25M. JWSC and Hussey Gay Bell are currently engaged in an overall North Mainland (NM)Basin Assessment Project of which this is a vital component. Continued assessment and determination is being done by both JWSC and HGB to determine the sizing and location for the following lift stations: NM basins; 4005, 4039, 4048, 4110, 4105, and 4107. The SSI basins include; 2032, 2001, 2002, and 2003. This approach has been reviewed and approved by the Finance and Facilities Committee. The estimated cost was included and discussed. Estimated duty point was noted to be based on the Master Plan calculations and our needs for pumping. The staff is looking to push beyond capacity and open up about 200 REU's. The testing and calculating will need to be done on all basins. Some of the transmission lines could be contributing to the capacity problems. Pumps will be added to basins 4105 and 4107 as they are under capacity and growth potential. These two were part of the list and

are still needing to be reviewed and are located near exit 38. These pumps can be used as backup pumps and contribute to your flow data once the permanent fix is completed. It was stated that I&I take away from capacity. Removable manholes and fines were discussed. Pump station 4108 will be part of the reverse or redirect project and provide relief off of 4039. Hussey Gay Bell is looking at condition of line and will provide a report and have been given 90 days. The pumps could be available in 12 – 14 weeks which is an adaptation that could correct some of our problems. Many of these problems were pointed out in the 2009 Master Plan but never got addressed. Kirk stated that the main area that was studied hard was PS2032. We have a solution and for that area and now there are others that are being addressed.

Commissioner Elliott made a motion seconded by Commissioner Perry to provide authorization for the short-term contingency plan and rent 2 pumps from Xylem/Godwin for approx.. \$15K per month, up to (12) weeks, not to exceed \$100K. these pumps will be returned once purchased pumps are installed. AND approve the long-term plan to purchase permanent pumps for 6) Mainland and (4) SSI lift stations at an estimated cost of \$1.25M. JWSC staff and HGB are currently engaged in an overall N. Mainland basin assessment project of which this is a vital component. The next update meeting for this project is scheduled for August 22, 2016 also that the Executive Director respond to the Wayne Moxley business by close of business/4:30 on Friday.

Commissioner Elliot explained that JWSC can not assume your business risk.

Motion approved 7-0-0.

DISCUSSION

1. Financial Report – June End of Month – F. Wilson

Frances presented to the Commission the Financial Statement ending June 30,2016. They were reminded that the numbers will change as the Finance Department is in the middle of an audit. Frances provided the reserve accounts which includes the operating, the capital reserve, expansion, Restore and Repair, and capital tap fee reserves. Also a listing of and encumbrances was pointed out which included the 1.5 capital assets on vehicles and equipment. The totals for the projects and capital purchases were discussed. The condensed summary of revenue and expenses were discussed and noted that it is a comparative statement. The projected revenues were \$26,305,950 and the actual was 24,627,002. It was noted that Administration portion includes all of the department in the Admin building and is; Office of Director, Finance, Planning and Construction, and Purchasing. Various items and their costs were detailed out and explained that the flow meters are part of the EPD consent order. The sludge dryer was a big expense. Bio-solids disposal was explained that the cost was \$653,000 due to the dryer being down periodically. Frances stated JWSC is currently under budget by \$552,443.00 and may change but not much. The last document was the detailed report and shares the history, year to date budget and expenses for the year.

2. RFP Financial Service Update – P. Crosby

Pam Crosby updated the Commissioners on the RFP Financial Services. This Monday a pre-proposal conference was held and there were 23 participants from 14 different firms. Questions were answered and discussed. The selection committee has been selected from the Financial Department and will review the bids on September 8th. The plan is to bring that recommendation before the commission on the October 6th meeting.

3. Impact Bond Defeasance – Comm. Elliott

Commissioner Elliott addressed the Commission to help them understand the Bond Defeasance. Defeasance, as suggested by some in the community, really doesn't help JWSC that much. There is the thought that if we go in and restructure our bonds it will reduce our interest rate, the cash will be available to us. The best way to handle a defeasance is to work, it as best possible, to offset the rate increase that is going to happen in operational portion of the bill against the reduction in the amount they are paying for the debt service charge.

4. Peaking Factors – T. Kline / H. Patel

Todd Kline presented the peaking factors and how they are calculated and assessed with regard to capacity. An equation and method used in designing for anticipate average of peek flows and method used to plan for existing and ultimate conditions must be established. Per EPD JWSC must use industry standard practices as the benchmark for acceptance. The regulatory measurement includes the EPD which regulates the JWSC on Operational & Design standards. The document we are held to is the EPD Guidelines for Sewage Collection System (2010). In this Design Document it is stated that the sewer must be designed in accordance with acceptable provisions of recognized design references in general use. The EPD cited design references are 10-State Standards, ASCE Manuals, EPA Publications, etc. JWSC does recognize the 10-State Standards as well as other communities and utilities like Savannah, Macon, JEA (Jacksonville). Todd discussed the development of anticipated flow-hydraulic capacity. The Average Daily Flow (ADF) was stated as how much water the system is expected to see on an average day. In absence of sufficient empirical (measured) data, industry standards are used. The best policy is noted as "Projections shall be made from the actual flow data to the extent possible." Historical/measured flow data is preferred; used to develop actual flow characteristics. The peaking factor was explained as an industry standard multiplier used to incorporate a factor of safety when designing wastewater collection and treatment systems. It is also used to design unforeseen flows, sustained wet weather flow/storm events, etc. There are several methods used to develop: Fair-Geyer (10-State Standards) JWSC Master Plan; Babbitt Equation (ASCE); and Design example using both methods. The JWSC master Plan was presented on March 2015(ATM/4 Waters Engineering); updated 2009 Master Plan (ATM). The Master Plan was adopted by the JWSC Commission Board as the guiding document for system health and planning. The engineers did not rely on assumed per capita usage, utilized a developed usage from population and measured flow. The population data is provided by Glynn County form the Brunswick Area Transportation Study (BATS). The BATS established specific Traffic Area Zone (TAZs) throughout the whole county. Flow Data was utilized measured from flow data. Per Capita Usage was derived from the total influent at the WWTP under dry weather. Additional area was discussed under individual sewer flow development. The JWSC Sewer Design Standards were discussed and the latest revision was 2012. Sections 3.2.2 Gravity Sewer Systems and Section 4.2.2 Sanitary Sewer Lift Stations and Forcemains were discussed as not having backup documents to reference. It was noted that there was a contradiction in design standards and a revision is recommended. The last pump station design approved by the JWSC use a peaking factor of 4.0 on Canal Crossing. Staff recommends the JWSC Standards for Water & Sewer Design and Construction be updated for consistency with accepted industry design standards and the Master Plan 2015. Staff also recommends that the design standards continue to be verified and adjusted accordingly through the use of actual measured flow data. The actual calculation of peaking factor was explained in detail by Harry Patel. Fair-Geyer and Babbitt Equation calculations were practiced. It was stated that staff took each basin and developed its own peaking factor based on population.

5. Allocation of Capacity Additions – J. Junkin

Executive Director presented the Allocation of Capacity. With the changes and measures that are being made to add capacity there is a need to be fair and prevent one entity to gather all of the available taps. There will be a public meeting to be held Tuesday, August 30th. The general outline is to make sure tap fees are sold to builders who are truly ready to commence construction. It is intended to prevent entities for gathering them and just sitting on them. There have been many tap fees that have been sold where no construction has begun. The policy outline was presented and explained what is required and included a 30 day condition to begin construction. It was noted that those who are in immediate need for tap-ins, like Mr. Moxley presented, could possibly obtain those taps. It was noted that the Executive Director would be happy to meet with individuals separately to discuss needs for tap ins.

Commissioner Cason stated that much is happening and unfolded before us. The JWSC is taking every measures that we can to facilitate the needs of this community. He mentioned his concern of the force being placed on Dunbar Creek and Academy Creek that we know have deficiencies.

Chairman Boland asked the public to get behind the SPLOST as it will help to take care of fixing a lot of N. Mainland Issues. There is also money set aside by the County for a WWT facility that will not happen and asks that the money can be used to fix Academy Creek.

Commissioner Elliott proposed/made a motion that JWSC send a letter to the county on the SPLOST that states the valid initiative on the SPLOST needs to clearly state that we have the option to use the SPLOST dollars, should it pass, to repay debt that we are going to have to assume to correct these issues.

Commissioner Elliott explained that the as SPLOST works out it won't be passed until November 2016 which means the flows won't start until sometime 2017 and useable dollars won't be available to us until 2019. Once it passes, assuming that it does, we can borrow money to perform the work required in a much quicker fashion. We can use the SPLOST dollars to repay the principle and the interest in the debt service charge.

Seconded by Commissioner Adams. Motion approved 7-0-0.

Commissioner Perry wanted to take the time to say thank you to Chairman Boland and Commissioner Elliott for the time they have put in while filing the position and have both done a tremendous job. We really appreciate it. All those present agreed with gratitude and acclamation.

CHAIRMAN'S UPDATE

EXECUTIVE SESSION

Commissioner Perry made a motion seconded by Commissioner Elliott to adjourn into Executive Session for Potential Litigation and a Property Contract Issue. Motion carried 7-0-0.

Executive Session ended

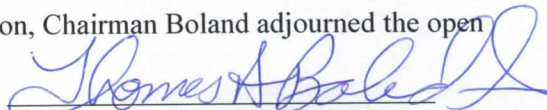
Commissioner Elliott made a motion seconded by Commissioner Cason to adjourn the Executive Session and return to the regular meeting. Motion approved 7-0-0.

Commissioner Elliott made a motion seconded by Commissioner Adams to authorize Commissioner Ronnie Perry to conduct negotiations for the purchase of the suggested property. Motion approved 7-0-0.

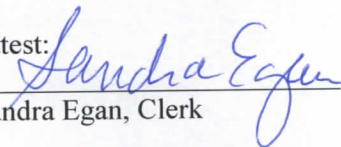
Commissioner Elliott made a motion seconded by Commissioner Bowen that the discussion item of Hawkins Island be deferred. Motion approved 7-0-0.

Commissioner Elliott made a motion seconded by Commissioner Cason to adjourn the Regular Meeting. Motion approved 7-0-0.

There being no additional business to bring before the Commission, Chairman Boland adjourned the open meeting at 5:02 pm.


Thomas A. Boland, Sr., Chairman

Attest:


Sandra Egan, Clerk



Brunswick-Glynn County Joint Water & Sewer Commission
1703 Gloucester Street, Brunswick, GA 31520
Phone (912) 261-7110 www.bgjwsc.org

To: JWSC Commissioners
From: John D. Donaghy, Director of Administration
Cc: Jimmy Junkin, Executive Director
Date: August 18, 2016
Re: Bank Resolutions and Signature Authorizations

Background:

Section 10. A. of the JWSC Financial Policy requires two (2) signatures on any check issued for \$25,000 or more.

In the absence of either the Executive Director or the Chief Financial Officer, it would be necessary to have either the Chairman, Vice-Chairman, or Finance Committee Chairman of the JWSC sign checks.

Recommendation:

Staff recommends that the Chairman, Vice-Chairman, and Finance Committee Chairman of the JWSC be authorized signatories on the bank accounts of the JWSC and that the Chairman, Vice-Chairman, Finance Committee Chairman, Executive Director, and Chief Financial Officer be authorized to execute the necessary banking resolutions and signature cards with BB&T Bank.

Motion:

“I move that the Brunswick-Glynn County Joint Water and Sewer Commission approve the Chairman, Vice-Chairman, and Finance Committee Chairman of the JWSC as authorized signatories on the bank accounts of the JWSC and that the Chairman, Vice-Chairman, Finance Committee Chairman, Executive Director, and Chief Financial Officer be authorized to execute the necessary banking resolutions and signature cards with BB&T Bank.”



Brunswick-Glynn County
Joint Water & Sewer Commission
1703 Gloucester Street
Brunswick, GA 31520

MEMO

To: Joint Water & Sewer Commission Members
From: Donald M. Elliott, Commissioner
Date: 18 August 2016
Re: Public Information Officer

It has become obvious that there is a need for focal point and/or contact person for several important areas. One area, in particular, is public information and how it is handled. A Public Information Officer would handle the following areas:

- Relationship with the media
- Provide Public Education
- Manage the JWSC website
- Receive and process Open Records Requests
- Handle Legislation matters

This has been presented before the Finance Committee for review and approval on 8/16/16. There is confirmation of funds available for this position. The Executive Director would work with Teamworks Services, Inc. to develop the job description, pay scale, and requirements to perform the functions of a Public Information Officer and bring before the Human Resources Committee.

Suggested Motion

I recommend that JWSC make a motion to authorize the Executive Director to develop the position of a Public Information Officer and present to the Human Resources to approve



Brunswick-Glynn County Joint Water & Sewer Commission
1703 Gloucester Street, Brunswick, GA 31520
Phone (912) 261-7110 www.bgjwsc.org

To: JWSC Commissioners
From: John D. Donaghy, Director of Administration and Finance
Date: August 18, 2016
Re: Rate Resolution Amendment

Background:

The Brunswick-Glynn County Joint Water and Sewer Commission adopted a rate Resolution for the fiscal year ending June 30, 2017 at its Meeting on June 16, 2016. Amendments to Section IV, (e) and (f) were made on July 7, 2016.

A further amendment is required to Section IV (e).

Section IV (e) is currently written as:

Capital improvement fees must be paid prior to, or concurrent with, the JWSC's approval of construction plans for the capacity required. The required capacity will be reserved for that property.

Staff proposes that it be written as:

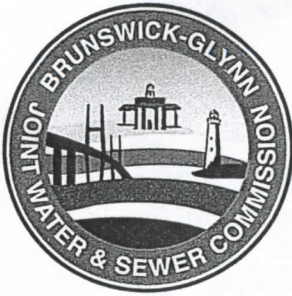
Capital improvement fees shall be paid concurrent with, the JWSC's approval of construction plans for the capacity required. The required capacity will be reserved for that property.

Recommendation:

Staff recommends that the JWSC accept the second amendment to the Rate Resolution for the fiscal year ending June 30, 2017.

Motion:

“I move that the JWSC accept the second amendment to Section IV of the Rate Resolution for the fiscal year ending June 30, 2017.”



Brunswick-Glynn County Joint Water and Sewer Commission

MEMORANDUM

To: JWSC Finance Committee
From: Pam Crosby
Date: August 16, 2016
Re: Approval – Pre-Purchase of 16" HDPE Pipe for PS2032 Force Main Project

Background

PS2032 Force Main Upgrade project is currently in the Engineering & Design Phase. Current timeline projects bidding of construction in October – November with contract award to be approved at the December Commission meeting. The project design calls for approximately 12,000 feet of pipe to be required for this construction. Based on feedback from pipe suppliers and potential construction bidders, the lead time for the 16" HDPE pipe could be as long as (8) weeks for an order of this size. This timeframe creates the potential for the awarded contract to be delayed in an early January start date on the drilling. The estimated cost of the pipe that will be required is \$323,760.00

Staff Recommendation

Staff would like to initiate JWSC seeking quotes for the purchase of the 16" HDPE pipe for further review and approval. Additionally, JWSC staff will work with legal counsel to craft contract language to support contractor installation of the 16" HDPE pipe that would maintain all warranties and claims on the work performed.

Enclosures:
Estimate – Consolidated Pipe

CONSOLIDATED PIPE AND SUPPLY CO., INC.
CUSTOMER QUOTE

3950 BRUNSWICK HWY
WAYCROSS GA 31503

Quote Nbr: 156890 000
Quote Date: 8/02/2016

Page 1

0014 - J WEST
PHONE 912-283-1114
FAX 912-283-8615

Job: 16" HDPE FM

791510 - BRUNSWICK GLYNN CNTY
JT WATER/SEWER COMM
1703 GLOUCESTER ST
BRUNSWICK GA 31520

Date Needed: 8/02/2016
Good Until: 8/30/2016
To: JESSICA
Email: JHARRELL@BGJWSC.ORG

Line	Qty	Item	Size/Wall/Description	Price	Extended Price
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1	12000.0		16" DIPS SDR11 HDPE BLACK W/ GRN STRIPE	2,698.00 CFT	323,760.00
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2	12000.0		16" IPS SDR11 HDPE BLACK W/GRN STRIPE	2,274.00 CFT	272,880.00
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Total: 596,640.00

Pamela Crosby

Subject: FW: FW: 16" HDPE FM

From: Kirk Young

Sent: Tuesday, August 02, 2016 5:11 PM

To: Pamela Crosby <PCrosby@bgjwsc.org>; Todd Kline <TKline@bgjwsc.org>; Angela Bryan <abryan@4weng.com>; Michael Klink <Mklink@4weng.com>

Subject: RE: FW: 16" HDPE FM

It states right now 1 to 2 weeks. This is a supply and demand item and as stated in the email 6 to 8 weeks for this size order. Also it would show our commitment to planning well in advance and expedition of the project to the best of what is in our control.

Plan for the worst, hope for the best.

Kirk

Sent from my Verizon 4G LTE smartphone

From: Jonathan West [mailto:JWest@consolidatedpipe.com]

Sent: Tuesday, August 02, 2016 5:01 PM

To: Pamela Crosby <PCrosby@bgjwsc.org>

Subject: Re: FW: 16" HDPE FM

RIGHT NOW IS 1-2 WEEKS, BUT FOR AN ORDER THIS SIZE I WOULD
RECOMMEND 6-8 WEEKS TO BE SAFE

Pamela Crosby <PCrosby@bgjwsc.org>

Jonathan West
CONSOLIDATED PIPE & SUPPLY
3950 Brunswick Hwy
Waycross, GA 31503
(P) (912) 283-1114
(M) (912) 816-7496
(F) (912) 283-8615

From:

To:

Date:

Subject:

"jwest@consolidatedpipe.com"
<jwest@consolidatedpipe.com>

08/02/2016 03:56 PM

FW: 16" HDPE FM

What would be the lead time on these? We have a project that will begin in January and want to make sure we allow enough lead time to place the order.

Thanks,
Pam



Pamela Drury-Crosby
Purchasing Director
Brunswick-Glynn County
Joint Water & Sewer Commission
1703 Gloucester St
Brunswick, GA 31520
Office: 912.261.7127
Fax: 912.261.7178
Email: pcrosby@bgjwsc.org

From: Kirk Young
Sent: Tuesday, August 02, 2016 10:59 AM
To: Pamela Crosby <PCrosby@bgjwsc.org>
Subject: Fwd: 16" HDPE FM

Sent from my Verizon, Samsung Galaxy smartphone

----- Original message -----

From: jwest@consolidatedpipe.com
Date: 08/02/2016 9:57 AM (GMT-05:00)
To: Jessica Harrell <JHarrell@bgjwsc.org>
Subject: 16" HDPE FM
Date/Time: Tue, 02 Aug 2016 09:00:47
Recipient: JHARRELL@BGJWSC.ORG

The attachment is a message that originated from Consolidated Pipe and Supply.[attachment "F3022873.PDF" deleted by Jonathan West/waycross/cps]

Bypass pump needs

Lift Station	Pump Rate		Forcemain		Forcemain		Forcemain Length	Recommended Pump	Station Depth	Bottom Elevation	invert depth	Estimated Duty Point	Budget Price
	GPM	Size	Length	Size	Length								
LS 4005	8,000	14"	1,193'				CD400M	24.89 ?			18 8000 GPM @ 68' TDH	\$ 250,100.00	
LS 4039	1,700	12"	9,273'				CD225M	20.3 ?			15 1700 GPM @ 68' TDH	\$ 72,200.00	
LS 4048	3,200	16"	15,200'	18"	2,200'		CD300M	21.9 ?			15 3200 GPM @ 96' TDH	\$ 165,000.00	
LS 2001	1,000	10"	9,323'				CD150M	24.5 ?			18 1000 GPM @ 65' TDH	\$ 56,500.00	
LS 2002	800	10"	3,081'				NC100M	21.9 ?			17 800 GPM @ 29' TDH	\$ 55,100.00	
LS 2003	3,300	16"	7,000'				CD250M	21.6 ?			18 3300 GPM @ 53' TDH	\$ 98,000.00	
LS 2032	1,100	10"	1,000'	8"	6,200'		NC150M	28.8 ?			24 1100 GPM @ 133' TDH	\$ 64,000.00	
LS 4110	1,500	8"	8,174'	12"	4,571'		HL200M	25.8 ?			22 1500 GPM @ 286' TDH	\$ 113,000.00	
total budget price												\$ 873,900.00	

Kirk Young

From: Heyel, Chris - Xylem <Chris.Heyel@Xyleminc.com>
Sent: Friday, August 12, 2016 10:15 AM
To: Kirk Young
Subject: 2032 Pipe calcs

Kirk

Based on the spreadsheet, and using 1400GPM for flow. We are seeing about 9.836ft/sec in the FM and the head is around 336 TDH. I have run other calculations as well for you to look over. The extra flow will push us into to a larger pump selection.

Chris Heyel
Savannah Branch Manager
Xylem Inc.
128A Airport Park Drive
Savannah, GA. 31408
O: 912.344.9925 M: 912.313.3111
F: 912.966.1579
chris.heyel@xyleminc.com

xylem

Let's Solve Water

Flygt | Leopold | Sanitaire | Wedeco



MIXERS - POWER AND THRUST WEBINAR (07-22-2016)



Banner linked to Registration page at http://info.xyleminc.com/Treatment-07-MixerTankDesign-Webinar_Treatment-07-MixerTankDesign-LP.html?utm_source=EmailSignatureBanner&utm_medium=Digital&utm_campaign=MixersPowerTrust_Webinar

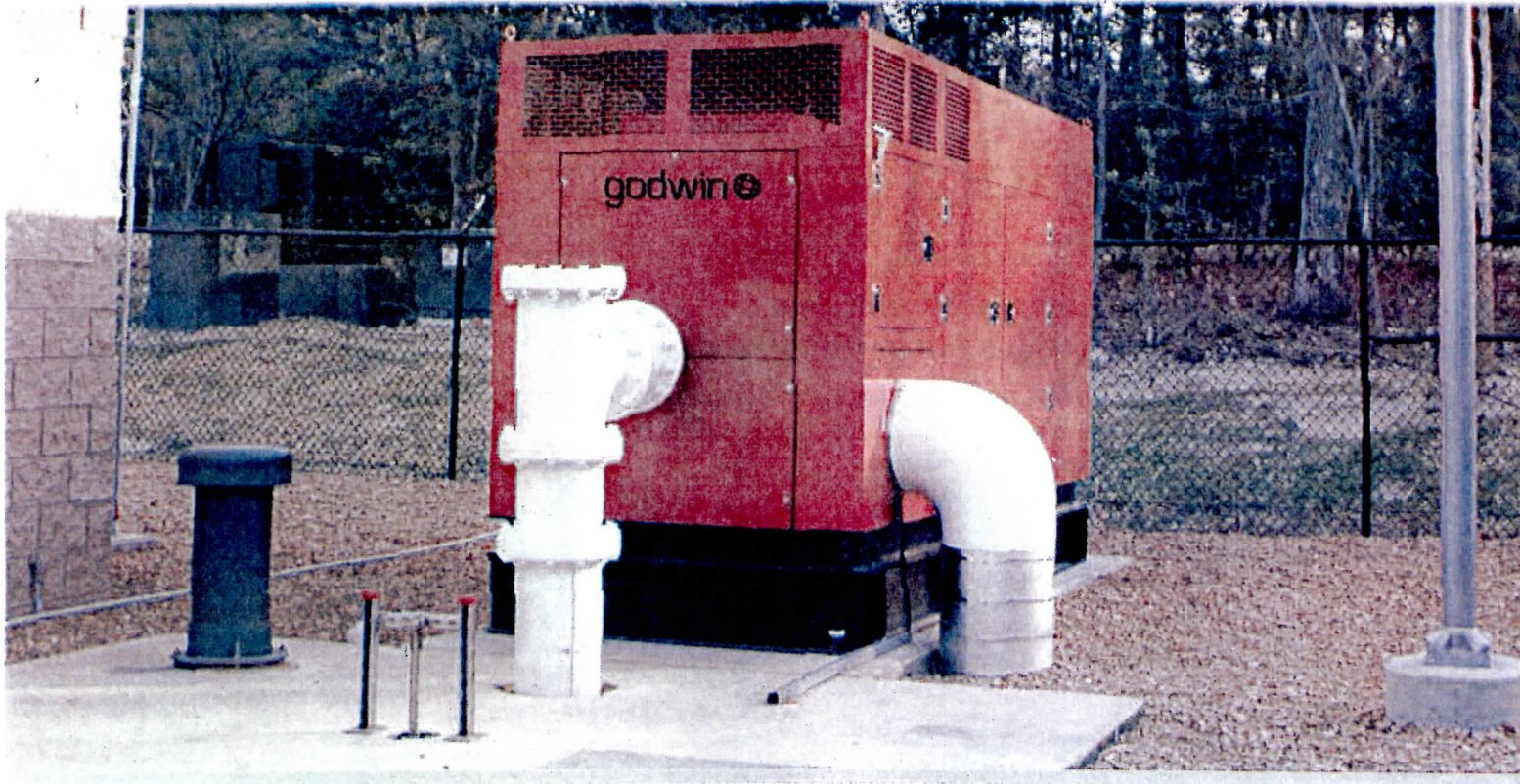
CONFIDENTIALITY NOTICE: This e-mail, including any attachments and/or linked documents, is intended for the sole use of the intended addressee and may contain information that is privileged, confidential, proprietary, or otherwise protected by law. Any unauthorized review, dissemination, distribution, or copying is prohibited. If you have received this communication in error, please contact the original sender immediately by

Pumped fluid	Water, pure	Number of pumps	1				
Flow	1100 US g.p.m.	Nature of system	Single head pump				
Static head	30 ft	Layout	Wet well installation				
Viscosity	1.69E-5 ft ² /s	Calculation mode	Colebrook				
Friction loss							
Force Main							
Piping 1 (1)							
Type	∅ / inch	? or L	Qty.	v / ft/s	k / inch	H / ft	
Piping: Plastic Old DN 250 / SCH80	9.56	1000 ft	1	4.91	0.00669	9.201	
Total friction head						9.201	
Piping 2 (1)							
Type	∅ / inch	? or L	Qty.	v / ft/s	k / inch	H / ft	
Piping: Plastic Old DN 200 / SCH80	7.63	6200 ft	1	7.73	0.00669	182	
Total friction head						182	
Friction loss head							191 ft
Total static head							30
Total head							221 ft

Pumped fluid	Water, pure	Number of pumps	1			
Flow	1200 US g.p.m.	Nature of system	Single head pump			
Static head	30 ft	Layout	Wet well installation			
Viscosity	.169E-5 ft ² /s	Calculation model	Colebrook			
Friction loss						
Force Main						
Piping 1 (1)						
Type	Ø / inch	? or L	Qty.	v / ft/s	k / inch	H / ft
Piping: Plastic Old DN 250 / SCH80	9.56	1000 ft	1	5.36	0.00669	10.89
Total friction head						10.89
Piping 2 (1)						
Type	Ø / inch	? or L	Qty.	v / ft/s	k / inch	H / ft
Piping: Plastic Old DN 200 / SCH80	7.63	6200 ft	1	8.43	0.00669	215.7
Total friction head						215.7
Friction loss head						227 ft
Total static head						30
Total head						257 ft

Pumped fluid	Water, pure		Number of pumps	1		
Flow	1300 US g.p.m.		Nature of system	Single head pump		
Static head	30 ft		Layout	Wet well installation		
Viscosity	1.69E-5 ft ² /s		Calculation model	Colebrook		
Friction loss						
Force Main						
Piping 1 (1)						
Type	Ø / inch	? or L	Qty.	v / ft/s	k / inch	H / ft
Piping: Plastic Old DN 250 / SCH80	9.56	1000 ft	1	5.81	0.00669	12.71
Total friction head						12.71
Piping 2 (1)						
Type	Ø / inch	? or L	Qty.	v / ft/s	k / inch	H / ft
Piping: Plastic Old DN 200 / SCH80	7.63	6200 ft	1	9.13	0.00669	252.2
Total friction head						252.2
Friction loss head						265 ft
Total static head						30
Total head						295 ft

Pumped fluid	Water, pure	Number of pumps	1			
Flow	1400 US g.p.m.	Nature of system	Single head pump			
Static head	30 ft	Layout	Wet well installation			
Viscosity	1.69E-5 ft ² /s	Calculation model	Colebrook			
Friction loss						
Force Main						
Piping 1 (1)						
Type	∅ / inch	? or L	Qty.	v / ft/s	k / inch	H / ft
Piping: Plastic Old DN 250 / SCH80	9.56	1000 ft	1	6.25	0.00669	14.68
Total friction head						14.68
Piping 2 (1)						
Type	∅ / inch	? or L	Qty.	v / ft/s	k / inch	H / ft
Piping: Plastic Old DN 200 / SCH80	7.63	6200 ft	1	9.84	0.00669	291.6
Total friction head						291.6
Friction loss head						306 ft
Total static head						30
Total head						336 ft



Dri-Prime Backup System

The Godwin Dri-Prime Backup System (DBS™) offers peace-of-mind with a reliable lift station contingency plan. With the DBS, you'll have backup pumping instead of backup power.

The Dri-Prime Backup System is engaged during loss of primary power or switch gear failure. It can also be used during routine pump maintenance or unexpected pump failure. The DBS is available with Optional Flygt N-technology, for sustained efficiency while handling stringy material.

DBS Features and Benefits

- 100% pump station redundancy
- PrimeGuard 2 digital control panel allows seamless interface to existing control systems
- Field Smart Technology (FST) provides remote monitoring and control
- The Godwin DBS is available in 3" to 24" sizes with flows to 15,000 gpm and discharge heads to 600 feet

Options

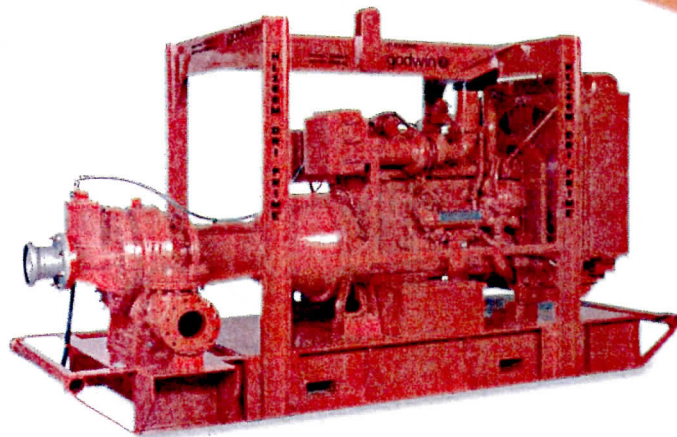
- Flexible fuel options to meet your needs:
diesel, natural gas, or LP vapor
- Flygt N-technology
- Cold weather package for use in freezing conditions

HL160M Dri-Prime® Pump

The Godwin Dri-Prime HL160M pump offers flow rates to 2140 USGPM and has the capability of discharge pressures to 268 psi.

The HL160M is able to automatically prime to 28' of suction lift from dry. Automatic or manual starting/stopping available through integral mounted control panel or optional wireless-remote access.

High discharge pressure, dry-running, and portability make the HL160M the perfect choice for mining, industrial and emergency fire backup applications.



Features and Benefits

- Simple maintenance normally limited to checking fluid levels and filters.
- Dri-Prime (continuously operated Venturi air ejector priming device) requiring no periodic adjustment or control. Optional automatic on-off control available on the priming system.
- Dry-running high pressure liquid bath mechanical seal with high abrasion resistant solid silicon carbide faces.
- Close-coupled centrifugal pump with Dri-Prime system coupled to a diesel engine or electric motor.
- All cast iron construction (stainless steel construction option available) with cast steel impeller.
- Also available in a critically silenced unit which reduces noise levels to less than 70dBA at 30'.
- Standard engine Caterpillar C15 (T3 Flex). Also available with Caterpillar C15 (IT4).

Specifications

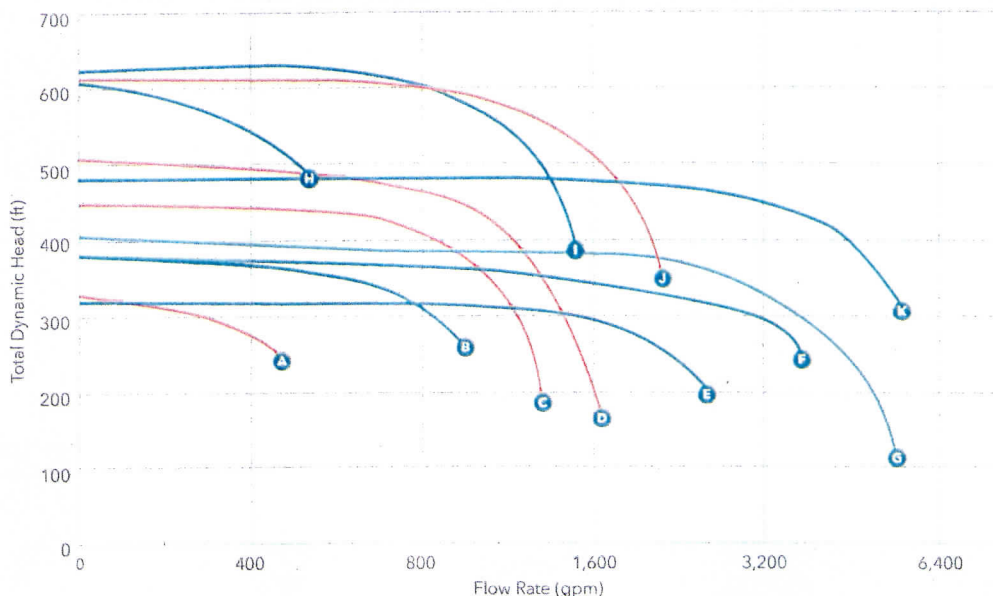
Suction connection	8" 150# ANSI B16.5
Delivery connection	6" 300# ANSI B16.5
Max capacity	2140 USGPM †
Max solids handling	1.4"
Max Impeller diameter	20.0"
Max operating temp	176°F*
Max working pressure	268 psi
Max suction pressure	87 psi
Max casing pressure	402 psi
Max operating speed	2000 rpm

* Please contact our office for applications in excess of 176°F.

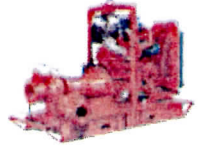


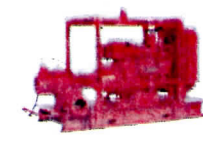
† Larger diameter pipes may be required for maximum flows.

Performance curves

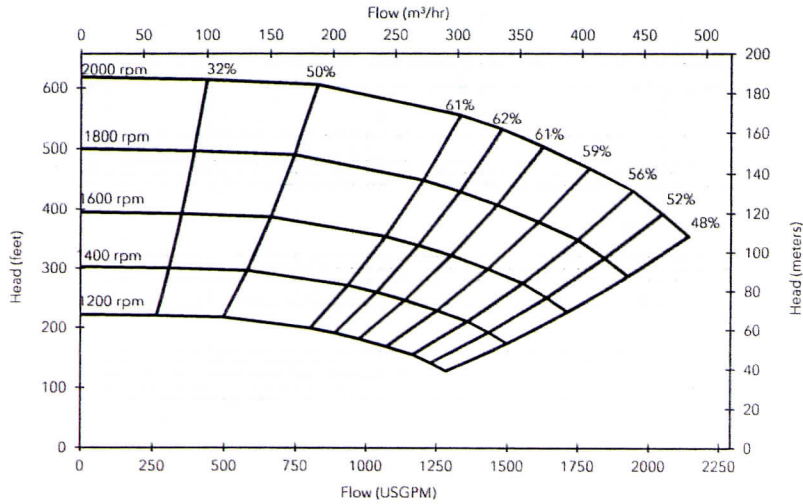
- A** HL80M
- B** HL100M
- C** HL125M
- D** HL150M
- E** HL200M
- F** HL225M
- G** HL250M
- H** HL110M
- I** HL130M
- J** HL160M
- K** HL260M



Composite curves for comparison purposes only. Consult engineering data for exact flow and head capabilities.

Extreme High-Head					
HL225M	HL250M	HL110M	HL130M	HL160M	HL260M
					
10x8	12x10	4x3	6x4	8x6	10x10
1,500-3,600	2,500-5,200	200-600	400-1,300	400-2,000	1,500-5,300
380	405	615	630	620	480
300@2000	475@2000	156@2200	300@2100	475@2000	700@1800
2 1/2"	2 1/2"	3/4"	1"	1 1/2"	2"
17%	17%	18%	20 1/4"	20"	21 1/2"
Skid Base	Skid Base	Skid Base	Skid Base	Skid Base	Skid Base
97	95	84	97	95	99
152	162	147	152	162	168
62	70	53	60	67	79
10,560	14,030	6,740	10,490	14,040	17,550
F	G	H	I	J	K

Performance Curve



Engine option 1

Caterpillar C15 (T3 Flex), 475 HP @ 2000 rpm

Impeller diameter 20.0"

Pump speed 2000 rpm

Suction Lift Table

Total Suction Head (feet)	Total Delivery Head (feet)				
	361	459	525	591	591
	Output (USGPM)				
10	2140	1788	1519	1057	815
15	2091	1752	1471	1013	748
20	1827	1783	1409	872	713
25	1431	1387	1277	881	-

Fuel capacity: 240 US Gal

Max Fuel consumption @ 2000 rpm: 24.4 US Gal/hr

Max Fuel consumption @ 1800 rpm: 23.7 US Gal/hr

Weight (Dry): 12,240 lbs

Weight (Wet): 14,040 lbs

Dimensions: (L) 162" x (W) 67" x (H) 95"

Performance data provided in tables is based on water tests at sea level and 20°C ambient. All information is approximate and for general guidance only. Please contact the factory or office for further details.

Materials

Pump casing & suction cover	Cast iron BS EN 1561 - 1997
Wearplates	High Chromium Cast Iron HC403:1977 Grade FR6252
Pump Shaft	Carbon steel BS 970 - 1991 817M40T
Impeller	Cast Steel BS3100 A5 Hardness to 200 HB Brinell
Non-return valve body	Cast Iron
Mechanical seal	Silicon carbide face; Viton elastomers; Stainless steel body

Engine option 2

Caterpillar C15 (IT4), 475 HP @ 2000 rpm

Impeller diameter 20.0"

Pump speed 2000 rpm

Suction Lift Table

Total Suction Head (feet)	Total Delivery Head (feet)				
	361	459	525	591	591
	Output (USGPM)				
10	2140	1788	1519	1057	815
15	2091	1752	1471	1013	748
20	1827	1783	1409	872	713
25	1431	1387	1277	881	-

Fuel capacity: 240 US Gal

Max Fuel consumption @ 2000 rpm: 24.4 US Gal/hr

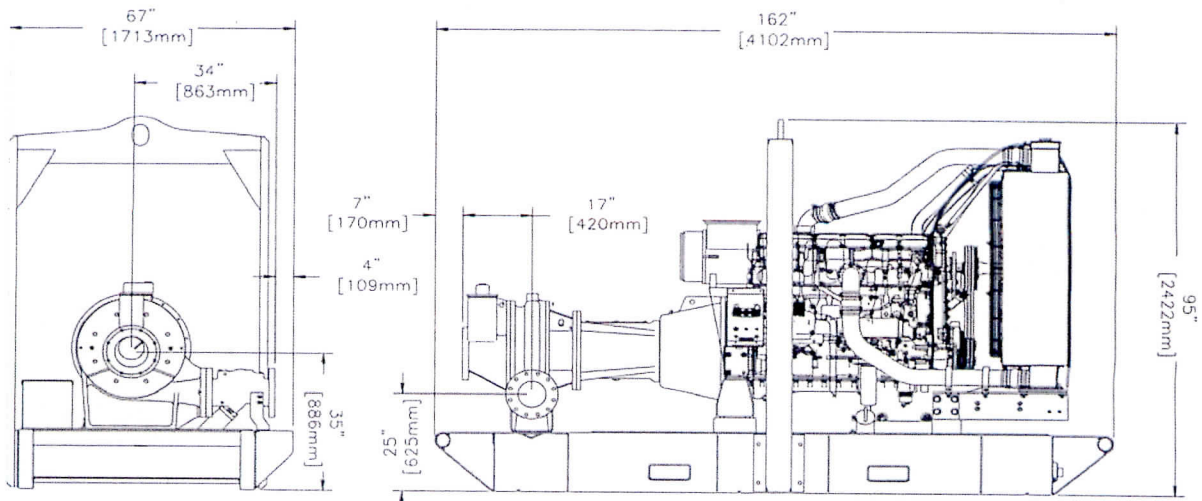
Max Fuel consumption @ 1800 rpm: 23.7 US Gal/hr

Weight (Dry): 13,240 lbs

Weight (Wet): 15,040 lbs

Dimensions: (L) 162" x (W) 67" x (H) 109"

Performance data provided in tables is based on water tests at sea level and 20°C ambient. All information is approximate and for general guidance only. Please contact the factory or office for further details.



xylem
Let's Solve Water

84 Floodgate Road
Bridgeport, NJ 08014 USA
(856) 467-3636 • Fax (856) 467-4841
Email: sales@godwinpumps.com

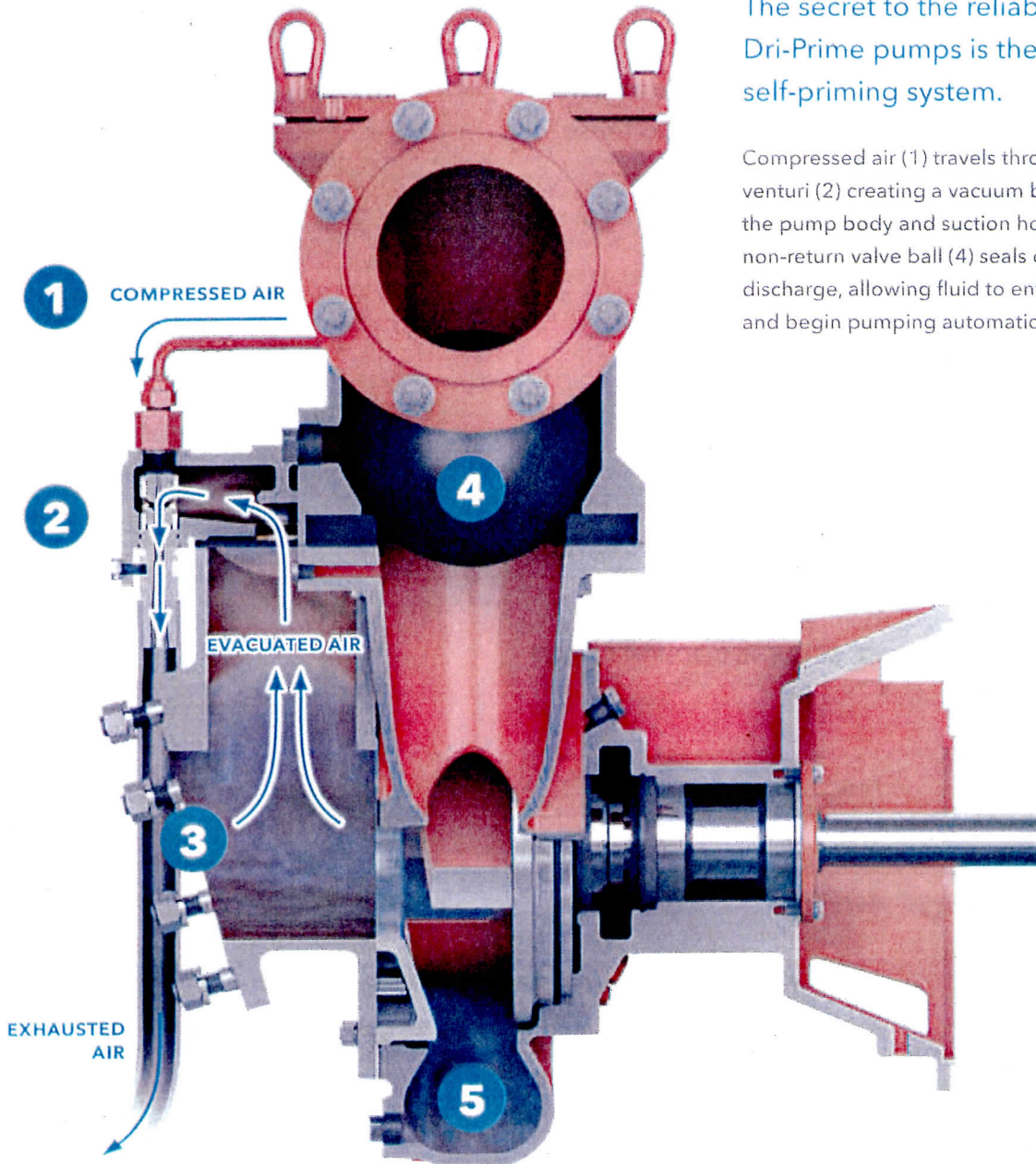
Reference number : 95-1117-3000
Date of issue : February 26, 2014
Issue : 3

www.godwinpumps.com

How Dri-Prime[®] Works

The secret to the reliability of Godwin Dri-Prime pumps is the automatic self-priming system.

Compressed air (1) travels through the Godwin venturi (2) creating a vacuum by evacuating air from the pump body and suction hose (3), while the non-return valve ball (4) seals out air from the discharge, allowing fluid to enter the pump body (5) and begin pumping automatically.



Basics of payment plans



Your complete payment plan guide from Key Equipment Finance

By providing fast and dependable funding, we offer affordable payments to liberate your cash flow and allow you to invest in more reliable, efficient equipment.

The benefits

Key Equipment Finance offers a variety of payment terms, so you can use your water and wastewater equipment funding as an essential tool for business success. Here are some ways your business can benefit.

Improved cash-flow management

Conserve capital for reinvesting in your other projects:

- Improve budgeting accuracy through fixed monthly payments and no floating rates
- Enjoy protection from outdated water and wastewater pumping and treatment equipment through easy, affordable upgrades
- Match the length of the payment contract to the expected useful life of your asset(s)

100% funding

Qualified applicants can finance 100% of the cost into one plan, including:

- Equipment
- Services
- Software
- Approved soft costs such as installation and delivery

Savings on down payments

Avoid large upfront payments with little or no downpayment required.

Easier funding than loans

Avoid such requirements as compensating balances, large down payments, client list reviews, cash-flow projections and blanket liens.

FAQs about funding

What is a lease?

A lease with Key Equipment Finance allows you to acquire the water and wastewater equipment solutions you need by making fixed monthly payments to Key Equipment Finance for the contract term. This affords you full use of the equipment without spending capital to purchase it outright, freeing up capital you can use for your other projects.

Funding your water and wastewater treatment equipment in this manner allows you to choose the term of your contract — we offer flexible terms to qualified customers, plus flexible end-of-contract purchase options. Some of the benefits of payment plans include improved cash management and the ability to avoid owning assets that might quickly become outdated. In addition, payment plans allow you to

The Key difference:

- 43 years of funding experience
- Water industry domain experience
- In-house legal, credit, tax and underwriting
- Nimble credit model/efficient processing
- Local presence and market knowledge
- Transactions ranging from small-ticket to large, complex structures
- Steadfast through all economic climates

accelerate project rollout and realize cost savings efficiencies more quickly.

How do I qualify?

Payment plans provided by Key Equipment Finance are available to business customers through participating vendors and preferred vendors. Credit standards may require the owner(s) to personally guarantee the lease.

How do I apply?

If you are a new or existing customer of Key Equipment Finance, you can apply directly by contacting Tom Waters at 720-304-1226.

What terms are available?

Key Equipment Finance offers payment terms of 3-7 years. Other options and

Key Equipment Finance



FLYGT
a xylem brand

Basics of payment plans

Your complete guide from Key Equipment Finance

customized terms are available to qualified applicants.

What information will I need to provide on the application?

- Vendor name, address, phone and contact information for your Xylem representative.
- Your legal business name and address, contact name for the person executing the lease, guarantor information if applicable, estimated cost or total estimated lease amount, and the location where the assets will be used/installed.

What purchase options are available?

Our Fair Market Value, or "FMV," lease allows you to use the product for the term of the plan and have the option of

either returning or purchasing your water and wastewater pumping and treatment equipment, or extending the lease term. This purchase option is based on the Fair Market Value of the equipment at the end of the lease term.

Our \$1.00 Purchase Option allows you to purchase the equipment at the end of the term for \$1.00.

Our 10% Purchase Option lease allows you to purchase the equipment at the end of the term for 10% of the original cost.

End-of-contract options may vary from one vendor program to another.

Are advance payments required?

A nominal documentation fee and no advanced payments are required for most leases.

What will my rate be?

Your rate will be based on a number of factors, including equipment type and cost, length of the contract and the end-of-contract options. Once the rate is determined, it will be fixed for the term of the contract.

To learn more:

Contact Tom Waters, Vice President-Water Infrastructure Finance, at 720-304-1226 or thomas.waters@key.com

Visit keyequipmentfinance.com/partner/energy_and_water.htm

**Key Equipment
Finance**



Brunswick-Glynn County JWSC
Balance Sheet
June 30, 2015 and 2016

	2015	2016
CURRENT ASSETS		
Cash and Cash Equivalents	849,892	801,780
Bond Sinking Fund	319,289	321,872
Accounts Receivable	2,013,713	2,365,443
Unbilled Revenue	1,091,142	1,065,307
Prepaid Expenses	276,991	247,696
Inventory	1,062,067	1,221,029
Total Current Assets	5,613,094	6,023,127
RESTRICTED CASH ACCOUNTS		
JWSC Reserves	20,022,277	16,345,532
Capital Reserves	4,686,465	4,476,810
Trustee Held Funds	6,553,937	4,712,096
Customer Deposit Reserve	2,713,555	2,862,055
Total Restricted Cash	33,976,234	28,396,493
CAPITAL ASSETS		
Fixed Assets Net of Depreciation	120,201,676	121,500,007
Construction In Progress	2,533,619	11,391,258
Total Capital Assets	122,735,295	132,891,265
OTHER ASSETS		
Bond Issue Costs Net of Amortization	266,722	253,385
DEFERRED PENSION OUTFLOWS		
Deferred Pension Outflow -	274,345	274,345
Deferred Pension Outflow -		
Experience	18,123	18,123
Deferred Pension Outflows	292,468	292,468
TOTAL ASSETS	162,883,813	167,856,739
CURRENT LIABILITIES		
Accounts Payable	1,813,255	2,218,275
Accrued Salaries and Vacation	385,289	385,289
Accrued Liabilities	29,869	29,501
Retainage Payable	232,314	542,461
Interest Payable	154,756	148,289
Short-Term Portion of Debt	1,940,000	2,020,000
Total Current Liabilities	4,555,483	5,343,816
LONG-TERM DEBT		
Long-Term Portion of Bond Payable	39,535,000	37,515,000
OTHER LIABILITIES		
Customer Deposits Payable	2,711,934	2,844,930
Bond Premium Net of Amortization	1,407,000	1,283,064
TOTAL OTHER LIABILITIES	4,118,934	4,127,994
NET PENSION LIABILITY	1,788,876	1,788,876
TOTAL LIABILITIES	49,998,294	48,775,686
FUND BALANCES		
Contributed Capital	97,630,424	97,751,477
Capital Tap Fees	5,255,272	6,457,160
Unrestricted	9,999,823	14,872,416
TOTAL FUND BALANCES	112,885,519	119,081,053

Brunswick-Glynn County Joint Water and Sewer Commission
Reserve Balance Summary

	6/30/16 Computed Balance	6/30/16 Encumbrances	6/30/16 Available Balance
<u>Operating Reserve:</u>			
Capital Purchases (\$1.5 total authorized)	8,960,000.00 (438,585.00)		8,521,415.00
<u>Capital Reserve:</u>			
Contributions:			
FYE 2011	300,000.00		
FYE 2012	300,000.00		
FYE 2013	300,000.00		
FYE 2014	300,000.00		
FYE 2015	300,000.00		
FYE 2016	300,000.00		
	1,800,000.00		
<u>Expansion Reserve:</u>			
FYE 2015	1,000,000.00		
FYE 2016	0.00		
	(172,000.00) (307,437.00)		520,563.00
<u>Repair and Replacement Reserve:</u>			
	Contributions	Expended	
FYE 2011	3,000,000.00		
FYE 2012	4,993,834.25	1,006,165.75	
FYE 2013	3,000,000.00	3,311,677.10	
FYE 2013 Additional	1,150,000.00		
FYE 2014	3,000,000.00	823,031.88	
FYE 2015	3,000,000.00	3,065,994.00	
FYE 2016	3,000,000.00	6,376,671.00	
	4,566,460.27		2,069,060.27
		2,497,400.00	
			862,573
		162,793	(700,027)
		1,997,488	365,290
		0	1,147,733
		7,079	4,664,760.00
		4,664,760.00	
	6/30/2015	YTD Contributions	Costs
	1,395,367	508,850	(878,851)
	2,587,833	430,350	(1,720,722)
	302,740	62,550	0
	969,332	200,138	(14,657)
		1,025,366	1,297,461
		365,290	1,154,812
		1,154,812	

CAPITAL TAP FEE RESERVE - ST SIMONS
CAPITAL TAP FEE RESERVE - NO MAINLAND
CAPITAL TAP FEE RESERVE - SO MAINLAND
CAPITAL TAP FEE RESERVE - BRUNSWICK

Brunswick-Glynn County Joint Water and Sewer Commission
Reserve Balance Summary

	6/30/16 Computed Balance	6/30/16 Encumbrances	6/30/16 Uncommitted Balance
Operating Reserve:			
Capital Purchases (\$1.5 total authorized)	8,960,000.00		
	(438,585.00)	703,760.00	8,163,760.00
Capital Reserve:			
Contributions:			
FYE 2011	300,000.00		
FYE 2012	300,000.00		
FYE 2013	300,000.00		
FYE 2014	300,000.00		
FYE 2015	300,000.00		
FYE 2016	300,000.00		1,800,000.00
Expansion Reserve:			
FYE 2015	1,000,000.00		
FYE 2016	0.00		520,563.00
Repair and Replacement Reserve:			
	Contributions	Expended	
FYE 2011	3,000,000.00		
FYE 2012	3,000,000.00	1,006,165.75	
FYE 2013	3,000,000.00	3,311,677.10	
FYE 2013 Additional	1,150,000.00		
FYE 2014	3,000,000.00	823,031.88	
FYE 2015	3,000,000.00	3,065,994.00	
FYE 2016	3,000,000.00	6,376,671.00	2,069,060.27
	YTD Contributions	Costs	6/30/2016
CAPITAL TAP FEE RESERVE - ST SIMONS	508,850	(878,851)	1,025,366
CAPITAL TAP FEE RESERVE - NO MAINLAND	430,350	(1,720,722)	1,297,461
CAPITAL TAP FEE RESERVE - SO MAINLAND	62,550	0	365,290
CAPITAL TAP FEE RESERVE - BRUNSWICK	200,138	(14,657)	1,154,812
	\$ 1,925,138	\$ 1,614,228	\$ 4,228,952.93

Brunswick-Glynn County JWSC

For Period Ending 06/30/2016

Project #	Project Name	Costs to 6/30/2015	Current Year Costs - 6/30/16	Encumbrances 6/30/2016	Add Encumb Post 6/30/16
206	SUB-BASIN 4048	80,186.38	0.00	0.00	
213	NM WWTP NPDES PERMIT	138,975.75	1,458.00	0.00	
232	SR-99 WATER MAIN EXTENSIONS	157,951.58	620,445.56	721,035.51	
303	WATER LINE REHAB	104,474.46	0.00	0.00	
304	SSI VILLAGE AREA WATER IMPR	182,752.07	0.00	0.00	
319	URBANA PROJECT	5,701.38	668,920.77	1,177,265.62	
409	LS 2030 AND FM REHAB	585,654.29	3,809,790.56	528,145.50	
413	FREDERICA/ATLANTIC SEWERr & FM REHAB PROJECT	502,739.01	1,254,070.59	96,177.82	
414	BASIN 2012 WTP RDII REDUCTION	9,160.00	0.00	0.00	
415	HARRINGTON REPLACEMENT WELL	403,407.62	32,049.73	4,450.00	
416	HAMPTON WATER PRODUCTION FACILITY	90,343.80	942,456.84	67,985.99	
417	RIDGEWOOD WATER PRODUCTION FACILITY	65,453.22	490.00	0.00	
418	SOUTHPORT WATER PRODUCTION FACILITY	57,130.85	490.00	0.00	
419	CANAL ROAD TO OLD JESUP WATER & SEWER IMPROV	27,825.00	792,111.85	291,677.84	
421	MANSFIELD STREET PROJECT	82,364.61	272,355.75	640,154.19	
424	LOW PRESSURE SEWER DESIGN - COMMUNITY RD	13,769.20	887.30	5,700.80	
425	LOW PREWWURE SEWER DESIGN - EPWORTH ACRES	6,500.00	2,222.50	55,277.50	
501	ALDER CIRCLE FIRE LINE	15,885.00	4,865.00	17,110.00	
502	GLYNN ACADEMY SEWER IMPROVEMENT	0.00	184,023.30	0.00	
503	CANAL CROSSING WATER & SEWER IMPROVEMENTS	3,345.00	22,905.00	811,586.00	
504	CANAL ROAD PUMP STATION	0.00	73,425.00	203,773.00	
505	LIFT STATION 2032 AND FORCEMAIN	0.00	51,019.90	0.00	382,350.00
602	HOLLY STREET	0.00	2,279.20	44,420.80	
	R&R PROJECT COSTS	\$ 2,533,619.22	\$ 8,736,266.85	\$ 4,664,760.57	\$ 382,350.00

Brunswick-Glynn County JWSC

Commission Report

Period Ending 06/30/2016

	2014 Actual	2015 Actual	2016 Budget	2016 Actual
Sewer Revenue	10,965,169	11,207,806	12,283,950	11,578,473
Water Revenue	4,620,209	4,653,950	5,105,550	4,905,722
Debt Charges	3,687,472	3,722,512	3,822,000	3,831,963
Administration Fees	2,686,274	2,669,294	3,529,700	2,764,739
Service Fees	221,393	188,588	200,000	111,810
Late Fees	346,540	359,552	300,000	99,219
Operational Tap Fees	321,859	375,674	350,000	513,341
Interest Income	54,852	34,250	40,000	7,777
Bad Debt Recovery	55,697	31,672	30,000	39,186
Tower Rental	269,189	297,173	315,000	375,685
Rental Income	100	96,000	96,000	96,100
Septic Hauler Fees	95,390	85,877	90,000	97,005
Scrap Sales	10,943	15,622	16,000	6,198
Other Revenues	139,351	139,022	127,750	199,785
Total Operating Revenue	23,474,437	23,876,992	26,305,950	24,627,002
Governing Body Expenses	228,510	291,337	277,850	326,797
Administration				
Salaries and Wages	1,528,952	1,612,956	1,911,350	1,867,323
Overtime	51,312	56,821	45,000	90,766
FICA and Medicare	111,544	120,980	149,850	141,671
Workers Compensation	44,562	51,812	44,350	66,780
Group Insurance	332,759	366,523	495,800	402,958
Retirement	118,294	117,767	127,550	120,139
Other Personnel Expenses	1,835	19,160	8,700	9,768
Temporary Services	30,779	21,720	26,700	174,022
Total Administration Personnel	2,220,038	2,367,739	2,809,300	2,873,425
Purchased Services	745,149	961,496	809,600	909,063
Fuel, Electric and Natural Gas	34,391	35,186	48,000	69,658
Equipment Parts and Supplies	1,744	4,079	23,500	7,699
Small Equipment	3,016	5,589	14,000	3,850
Supplies	72,636	110,923	83,700	154,185
Other Expenses	161,867	173,450	243,500	209,038
Rent	139,700	152,933	500	5,270
Administration Expenses	3,378,540	3,811,395	4,032,100	4,232,189
Sewer				
Salaries and Wages	2,317,503	2,356,603	2,690,000	2,706,913
Overtime	466,073	405,013	413,000	412,734
FICA and Medicare	202,780	200,540	234,050	228,844
Workers Compensation	143,625	152,829	131,700	162,957
Group Insurance	653,824	578,559	687,100	562,133
Retirement	215,611	194,774	199,300	191,406
Other Personnel Expense	1,842	3,099	6,100	5,151

Brunswick-Glynn County JWSC

Commission Report

Period Ending 06/30/2016

	2014 Actual	2015 Actual	2016 Budget	2016 Actual
Temporary Services	61,968	125,971	27,000	60,685
Total Sewer Personnel Expense	4,063,227	4,017,388	4,388,250	4,330,823
Purchased Services	1,239,660	1,164,166	1,320,500	1,270,639
Fuel, Electric and Natural Gas	1,139,705	1,113,886	1,084,500	1,120,284
Infrastructure Maintenance	416,724	371,650	695,000	800,628
Chemicals	484,527	630,527	781,000	875,197
Equipment Parts and Supplies	319,723	261,663	274,250	775,357
Small Equipment	69,620	65,627	95,500	68,438
Supplies	140,412	184,220	218,700	191,266
Other Expenses	115,993	163,705	196,000	162,766
Rent	22,784	21,193	17,500	93,025
Sewer Expenses	8,012,377	7,994,025	9,071,200	9,688,423
Water				
Salaries and Wages	584,765	629,578	798,700	715,665
Overtime	103,010	125,460	82,000	149,443
FICA and Medicare	50,007	54,935	67,400	62,124
Workers Compensation	33,091	39,344	32,950	44,247
Group Insurance	144,090	163,892	207,200	194,187
Pension	52,272	53,253	57,400	53,079
Other Employee Expenses	795	693	3,100	425
Temporary Services	1,152	461	4,000	0
Total Water Personnel Expense	969,182	1,067,616	1,252,750	1,219,170
Purchased Services	490,224	626,446	213,500	218,885
Fuel, Electric and Natural Gas	424,905	457,388	439,850	456,975
Infrastructure Maintenance	520,660	878,705	802,700	582,193
Chemicals	96,791	120,552	142,500	116,193
Equipment Parts and Supplies	216,614	(94,867)	25,700	23,871
Small Equipment	15,998	15,621	15,000	11,794
Supplies	31,380	60,128	52,600	50,052
Other Expenses	34,301	73,568	365,550	346,312
Rent	1,717	627	1,500	469
Water Expenses	2,801,772	3,205,784	3,311,650	3,025,912
Insurance and Damage Claims	412,489	419,011	406,450	420,376
Interest Expense	1,860,636	1,793,520	1,882,000	1,726,666
Bad Debt Expense	491,978	644,141	600,000	598,033
Amortization Expense	13,336	13,336	0	13,336
Other Expenses	2,778,438	2,870,008	2,888,450	2,758,410
Facilities Expenses	0	0	0	4,724
Total Operating Expenses	17,199,636	18,172,549	19,581,250	20,036,455

Brunswick-Glynn County JWSC

Commission Report

Period Ending 06/30/2016

	2014 Actual	2015 Actual	2016 Budget	2016 Actual
Operating Revenues Over Expenses	6,274,801	5,704,443	6,724,700	4,590,548
Capital Revenues	446,090	403,590	0	1,201,888
Total Revenues Over Expenses	<u>6,720,891</u>	<u>6,108,033</u>	6,724,700	5,792,435
Debt Principal			1,940,000	1,939,992
Capital Expenditures			484,700	0
Reserve Deposits			4,300,000	3,300,000
Net Revenues Over Cash Requirements			<u>0</u>	<u>552,443</u>



Brunswick-Glynn County Joint Water and Sewer Commission

Discussion Memo

To: BGJWSC Board Members, James Junkin (Exec. Director)
From: Todd Kline, P.E. (Planning & Construction, Senior Engineer)
Date: 18 August 2016
Re: Discussion on sewer system capacity analysis.

Background

- Provide a short summary of the JWSC methods used in designing for anticipated average and peak flows.
- Methods used to plan for existing and ultimate conditions must be established.
- Per EPD: Must use industry standard practices as the benchmark for acceptance.

Regulatory Measurement

- GA Environmental Protection Division.
- Regulates the JWSC on Operational & Design standards.
- EPD reviews all wastewater infrastructure projects: conveyance & treatment, capacity expansions
- Design document- "EPD Guidelines for Sewage Collection Systems" (2010):
 - "Sewers must be designed in accordance with acceptable provisions of recognized design references in general use."
 - EPD cited design references:
 - 10-State Standards, ASCE Manuals, EPA Publications, etc.
- 10-State Standards is recognized by the JWSC.
- Other regional communities/utilities that recognize the 10-State Standards:
 - City of Savannah, Macon Water Authority, JEA (Jacksonville).

Development of Anticipated Flow- Hydraulic Capacity

- Design Average Flow or Average Daily Flow (ADF).
 - How much water the system is expected to see on an average day.
 - In absence of sufficient empirical (measured) data, industry standards are used.
 - Developed from industry standard figures (100-150 gal/capita/day).
 - "The average American uses 150 gallons of water a day in the kitchen, the laundry room and especially the bathroom; Georgia residents use about 10 percent more water per capita than the national average, according to the GA Environmental Protection Division."- GeorgiaTrend
 - Best policy:
 - "Projections shall be made from actual flow data to the extent possible."- 10-State Standards
 - Historical/ measured flow data is preferred; used to develop actual flow characteristics.

- Peaking Factor
 - Industry standard multiplier used to incorporate a factor of safety when designing wastewater collection and treatment systems.
 - Used to approximate the peak anticipated flow condition the station may see; must be capable of handling.
 - Used to design for unforeseen flows, sustained wet weather flow/storm events, etc.
 - Peak Flow= Average Daily Flow x Peaking Factor
 - Several methods used to develop:
 - Fair-Geyer (10-State Standards); JWSC Master Plan
 - Babbitt Equation (ASCE)
 - Design example using both methods.

JWSC Master Plan

- Presented in March 2015 (ATM/ 4 Waters Engineering); update of 2009 Master Plan (ATM).
- Adopted by the JWSC Board as guiding document for system health and planning.
- Did not rely on assumed per capita usage; utilized a developed usage from population and measured flow.
- Population data:
 - Provided by Glynn County from the Brunswick Area Transportation Study (BATS).
 - BATS established specific Traffic Areas Zones (TAZs) throughout the whole county.
 - Sewer basin populations were established by overlaying the basin outlines over the TAZs.
 - Detailed manual count of homes within each basin was established.
- Flow data:
 - Utilized measured from measured flow data.
 - Treatment plant flows (DMR; EPD).
- Per Capita Usage = Total Influent at the WWTP (dry weather) / Total Base Population served by that WWTP
 - Used 3 years of WWTP flow data.
 - Per capita rates should not be heavily influenced by significant I&I events; only the driest months of WWTP flows were used.
 - Develops existing customer usage; assists with projecting future sewer generation rates.
 - Shows different per capita sewer rate for each WWTP basin; basin specific.
 - Focused on permanent domestic flow with commercial uses that support residential areas (schools, grocery, retail, etc.).
 - Used water billing records to remove large commercial/industrial users; then added back into the individual basin.
- Development of Individual Sewer Basin Flows
 - Population, base flow and peaking factor established for each sewer basin.
 - Peaking Factor using Fair-Geyer (10-State Standards).
 - Created individual/custom analysis for each basin.

JWSC Design Standards

- Latest revision (2012).
- Section 3.2.2 Gravity Sewer Systems:
 - Dictates peaking factor to be calculated using Babbitt equation.
 - 2.6 persons per household @ 300 gpd= 1 REU (Residential Equivalency Unit)
- Section 4.2.2 Sanitary Sewer Lift Stations and Forcemains
 - Dictates a peaking factor of 2.0 to be applied.
 - References developed from a flow monitoring study; do not have documentation to reference.
- Contradictions in design standards; recommend revision:
 - Update to EPD recognized design standards.
 - Consistency with Master Plan as adopted by the JWSC Board of Commissioners.
- Dictates to use historical data from flow monitoring, etc.
- Last pumpstation design approved by the JWSC used a PF=4.0; Canal Crossing

Summary

- There are several acceptable methods used to calculate expected flows.
- Empirical or measured historical data is recognized as the most accurate.
- The methods used in the Master Plan (2015) to calculate existing and projected flows utilized industry design standards and measured historical data in great detail.
- Staff recommends the JWSC Standards for Water & Sewer Design and Construction be updated for consistency with accepted industry design standards and the Master Plan (2015).
- Staff recommends that the design standards continue to be verified and adjusted accordingly through the use of actual measured flow data.



Brunswick-Glynn County Joint Water and Sewer Commission

Commission Memo

To: BGJWSC Chairman, Commissioners, Executive Director Jimmy Junkin
From: Todd Kline, P.E. (Planning & Construction, Senior Engineer)
Date: August 18, 2016
Re: Calculation of Peaking Factor

Fair-Geyer Equation (10 State Standards)

$$Q \text{ Peak Hourly}/Q \text{ Design Ave} = \frac{18+\sqrt{P}}{4+\sqrt{P}}$$

Q peak hourly – Maximum Rate of Wastewater Flow (Peak Hourly Flow)

Q Design Ave – Design Average Daily Wastewater Flow

P – Population in thousands

Babbitt Equation (American Society of Civil Engineers)

$$\text{Peak Factor} = \frac{5}{p^{0.2}}$$

P – Population in thousands

Step 1: To Determine Total Existing (Base) Population

Determined by the Brunswick Area Transportation Study (BATS) and Population Estimates by Traffic Analysis Zones (TAZ).

- BATS was developed by Glynn County community Development Department and represented a Long Range Transportation Study for 2005-2030.
- This study was implemented in SSI 2006 Master Plan and built upon for the 2009 and 2015 JWSC Master Plan.

Step 2: Calculation of Per Capita Rate:

$$\text{Per Capita (usage per person)} = \frac{\frac{\text{Monthly Total Gallons (Millions)}}{\text{Days in the Month}}}{\text{Population (2015)}}$$

2015 Master Plan Per Capita = 153.65 (Average based on influent data from dry weather months) (Saint Simons Island)

2015 Master Plan Per Capita = 161.34 (Average based on influent data from dry weather months) (North Mainland)

Step 3: Determination of Lift Station Basin Flow and Peak Factor

Upon obtaining the population for each individual basin, the peaking factor is obtained using the Fair-Geyer formula or the Babbitt Equation above.

Example:

Basin 2035 (Basin with a low population density) = 280 (Derived from the Brunswick Area Transportation Study (BATS) and Population Estimates by Traffic Analysis Zones (TAZ) (Population in thousands – 0.28)

Peaking Factor calculation based on Fair-Geyer Equation

$$\frac{18+\sqrt{0.28}}{4+\sqrt{0.28}} = \mathbf{4.091}$$

Peaking Factor calculation based on Babbitt Equation

$$\frac{5}{0.28^{0.2}} = \mathbf{6.449}$$

Basin 4048 (Basin with a high population density) = 3,552 Derived from the Brunswick Area Transportation Study (BATS) and Population Estimates by Traffic Analysis Zones (TAZ) (Population in thousands – 3.552)

Peaking Factor calculation based on Fair-Geyer Equation

$$\frac{18+\sqrt{3.552}}{4+\sqrt{3.552}} = \mathbf{3.379}$$

Peaking Factor calculation based on Babbitt Equation

$$\frac{5}{3.552^{0.2}} = \mathbf{3.880}$$

Step 4: Total Lift Station Basin Flow

Basin population (obtained from the BATS Study) is then multiplied by the Per Capita Rate obtained from the 2015 Master Plan.

For Basin 2035:

Basin Population X 2015 Master Plan Per Capita = Average Daily Flow (ADF)

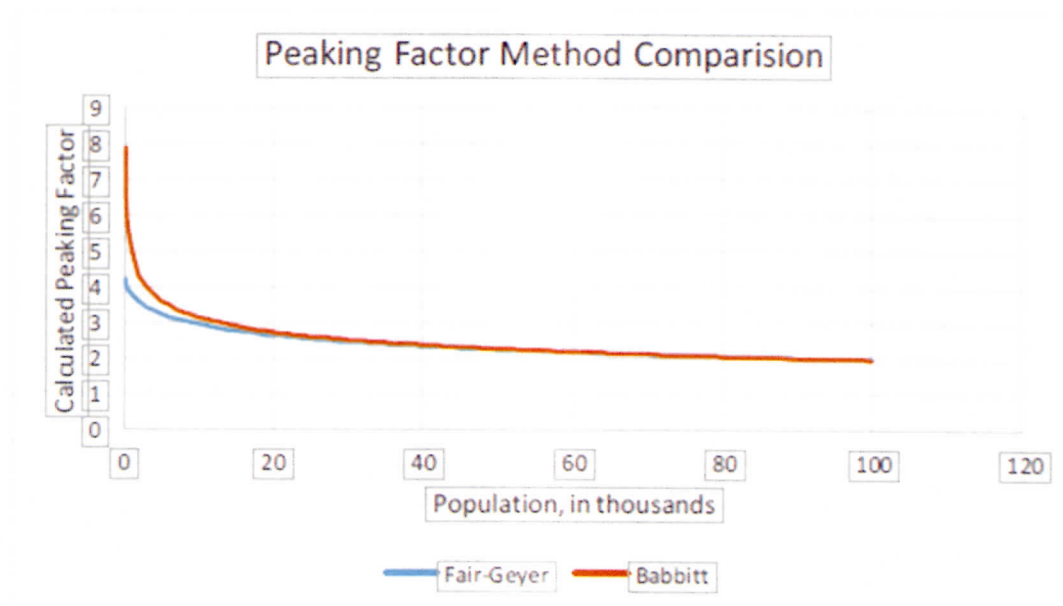
$$ADF = 280 \times 153.65 = 43,022.00 \text{ Gallons per Day (GPD)}$$

Which is then converted to Gallons per Minute (GPM)

$$ADF = 43,022.00 / 1440 = 29.88 \text{ Gallons per Minute (GPM)}$$

The ADF x Peaking Factor = Peak Hourly Flow (PHF)

$$29.88 \times 4.091 = 122.23 \text{ (PHF)}$$



The chart above is a comparison between the Fair-Geyer Equation and the Babbitt Equation. In basins/areas of low density, the difference in peaking factors is greater between the two equations.