

State of Florida



## Public Service Commission

CAPITAL CIRCLE OFFICE CENTER • 2540 SHUMARD OAK BOULEVARD  
TALLAHASSEE, FLORIDA 32399-0850

**-M-E-M-O-R-A-N-D-U-M-**

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**DATE:** November 30, 2015  
**TO:** Carlotta S. Stauffer, Commission Clerk, Office of Commission Clerk  
**FROM:** Melinda Watts, Engineering Specialist, Division of Engineering *MW* *TS*  
**RE:** Docket No. 150102-SU - Application for increase in wastewater rates in Charlotte County by Utilities, Inc. of Sandalhaven.

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Please file the attached in the above mentioned Docket File.

Thank you.

## Patti Zellner

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**From:** Melinda Watts  
**Sent:** Monday, November 30, 2015 9:53 AM  
**To:** Patti Zellner  
**Subject:** FW: Sandalhaven I&I and U&U, Docket No. 150102-SU  
**Attachments:** image002.wmz; SANDALHAVEN -I&I Corrected 7-10-15 Final for STAFF.XLSX; SH - EWD FM pipe size alternatives analysis 062607.pdf; PSC Clerk 08 (4th Data Request Responses) ltr.pdf

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**From:** Dale Buys  
**Sent:** Tuesday, November 24, 2015 8:21 AM  
**To:** Melinda Watts  
**Cc:** Robert Graves; Laura King; Andrew Maurey; Patti Daniel  
**Subject:** FW: Sandalhaven I&I and U&U

Melinda,  
I don't know why this was not sent to you as I&I and U&U are engineering issues.

Sincerely,

Dale R. Buys  
Public Utilities Supervisor  
Division of Accounting and Finance  
Florida Public Service Commission  
[dbuys@psc.state.fl.us](mailto:dbuys@psc.state.fl.us)  
850-413-6536

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**From:** Jared Deason [<mailto:JDeason@uiwater.com>]  
**Sent:** Monday, November 23, 2015 5:18 PM  
**To:** Dale Buys; Patti Daniel; Andrew Maurey  
**Cc:** John Hoy; Patrick Flynn; Christie H. Kincaid  
**Subject:** Sandalhaven I&I and U&U

Patti/Dale;

We appreciate the opportunity to have another meeting to discuss various issues in the Sandalhaven recommendation. In anticipation of the meeting we would like to go ahead and provide information for you to review in relation to two of the most significant issues, I&I and U&U.

For I&I, please see the attached corrected F-6 schedule. I am not sure if this was provided previously.

For U&U, we addressed the issue of FM capacity in our response to SDR 4, item 8, see attached.

The attached letter from CPH, also provided in response to SDR 4.8, identified the interconnect FM capacity at buildout conditions was designed for 900,000 gpd AADF. The 1,000,000 gpd figure referred to in the CPH letter is pumping capacity in the initial and current condition of 760 gpm, which represents instantaneous flow condition equivalent to 1 mgd but not hydraulic capacity of the pipe itself. Based on this the revised U&U should increase from 74.9% to 83.3%.

Also we believe, staff erred in applying the adjustment to the Collection Plant, Power Generation Equipment account, 355.2, which includes the value of the emergency generator installed in 2007 at the master lift station. Since the master lift station is considered 100% by staff, the generator located there should be 100% as well. We had a very old generator at the WWTP that was retired as part of the decommissioning effort, but the plant generator was booked to 355.4.

We look forward to discussing the above issues as well as other issues on December 1<sup>st</sup>.

If you have any questions, please let me know.

Thanks,

Jared Deason  
Financial Analyst II



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Altamonte Springs, FL 32714  
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Phone: 407-697-5865

June 26, 2007

Reprinted  
AUG 07 2012



Mr. Patrick Flynn  
Regional Director  
Utilities, Inc. of Sandalhaven  
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RE: Sandalhaven Master Lift Station and Force Main Project Summary

Dear Mr. Flynn:

Pursuant to your request, this letter is intended to summarize the lift station and force main project recently completed in the Utilities, Inc. of Sandalhaven's (Sandalhaven) service area. The lift station and force main were constructed to divert a portion of the Sandalhaven service area's flows to the Englewood Water District's (EWD) Wastewater Treatment Facility. Sandalhaven's current wastewater treatment facility is rated at 0.150 million gallons per day (MGD), and flows during peak season exceed 0.135 MGD. Instead of expanding the wastewater treatment facility to meet future growth requirements, Sandalhaven opted to install approximately three miles of 12-inch force main and construct a master lift station to divert flow to EWD.

As detailed in the Master Plan developed in 2004, the service area's flow at buildout is projected to be approximately 900,000 gallons per day (gpd). The new force main and master lift station were designed to deliver all of the flow from the southern portion of the service area. This ultimately equates to approximately 665,000 gpd (or 462 gallons per minute), about 70% of the total service area flow. To handle this expected flow, the lift station design must allow for a peaking factor of 4.0, yielding a flow rate of 2.660 MGD or 1,850 gpm. The lift station is set up as a triplex (three pump) station to ultimately pump the peak rate to the EWD wastewater facility. The pipeline was modeled to determine the most efficient pipeline size based on the need to produce velocity sufficient to carry solids through the pipe as well as meet the total head condition (pressure) on the pump. The 12-inch pipeline was selected because it reduces the head condition down to approximately 125 feet at 950 gpm, and 105 feet at 750 gpm. This equates to a power requirement of 88 Horsepower for each pump. Had a smaller pipe size been selected to maximize velocity through the pipeline in order to minimize solids deposition, the pump horsepower would have been significantly higher – an estimated 300 Horsepower. This would have drastically increased the operating cost of the station. This would also have required installation of a larger wet well and a larger emergency generator for backup power. Therefore, the smaller 10-inch pipeline was not considered feasible based on the increased pumping and power requirements compared to the relatively small gain in capital cost.

While the pump station was designed and sized for ultimate capacity, the project was constructed to meet the Utility's more immediate needs. Two 45 Horsepower pumps

were installed initially to provide an interim pumping capacity of 760 gpm or 1.0 MGD peak flow. This equates to an average daily flow rate of 0.275 MGD. The current flow generated by the existing customers in the southern portion of the Sandalhaven service area is estimated to be approximately 0.050 MGD. While this initial flow rate will require periodic maintenance of the pipeline due to possible solids deposition caused by low velocities, the low head condition made this interim size feasible and more cost effective.

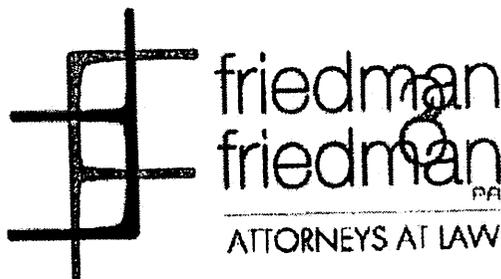
If you have any further questions or need any additional clarifications, please let me know. Thank you.

Sincerely,

CPH ENGINEERS, INC.

*STEPHEN NEIL ROMANO*  
*57579*  
STEPHEN NEIL ROMANO, P.E.  
No. 57579  
Vice President





October 15, 2015

VIA E-FILING

Carlotta S. Stauffer, Commission Clerk  
Office of Commission Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399

RE: Docket No. 150102-SU; Application for an increase in wastewater rates in Charlotte County by Utilities, Inc. of Sandalhaven  
Our File No. 30057.221

Dear Ms. Stauffer:

The following are the responses of Utilities, Inc. of Sandalhaven, ("Utility") to the Staff's Fourth Data Request dated October 7, 2015:

1. In Staff's Second Data Request, Question No. 17, the utility was asked to provide a list of all general service customers by meter size. In response, the utility provided a list that identified the general service customers by meter size as either "256 Sandalhaven Wastewater General Service" or "256 Sandalhaven Wastewater Multi-Residential". For the list provided by the utility in its response, please specify the names and addresses of the general service and multi-residential customers. For multi-residential customers, please indicate the number of units.

**RESPONSE:** See Revised List of Sandalhaven GS customers Spreadsheet – Attachment "4-1".

2. For each general service and multi-residential customer, please provide the test year gallons associated with the respective customer.

**RESPONSE:** See Revised List of Sandalhaven GS customers Spreadsheet – Attachment "4-1".

3. Please provide the name and address of the general service customer that requested to down-size its meter from 1.5" to 5/8" x 3/4".

**RESPONSE:** Ace Hardware of Cape Haze Inc. - 8501 Placida Rd. Unit 5, Placida, FL, 33946.

4. In Staff's Second Data Request, Question No. 14, the utility was asked to provide a schedule showing the number of equivalent residential connections (ERCs) connected, to date, by year since the implementation of the Allowance for Funds Prudently Invested (AFPI) charges established by Charlotte County. The Utility provided a table indicating the number of ERCs at year end from 2010 through 2014. Please provide a response to the following questions in regards to the table.

- a. The year-end number of ERCs for 2010 was indicated as 1,006.5. The note provided in Table 24 of the Charlotte County recommended rate report indicated the number of existing ERCs

as of December 31, 2010 were 1,123, which included the Reserve Capacity ERCs. Please explain the difference in the number of ERCs.

**RESPONSE:** The 1,006.5 number of ERCs previously provided did not include Reserve Capacity ERCs.

- b. The year end number of ERCs for 2012 decreased from the year end number for 2011. The number of ERCs would not decrease when evaluating the ERCs for AFPI. AFPI charges are a one-time charge paid per ERC at the time of an initial connection. Therefore, the number of ERCs would increase over time. However, when counting ERCs based on existing customers, the number may fluctuate. Please explain why the number of ERCs provided for purposes of AFPI fluctuated.

**RESPONSE:** The number of ERCs provided were based on year end existing customers. However, upon further review, the table did not include inactive accounts which should be counted for AFPI purposes. See Attachment "4-4b"

- c. Please provide the number of ERCs remaining to build out.

**RESPONSE:** The master sewer plan, as provided to the staff as Exhibit 2.25 in response to SDR #2, identifies the buildout flow as 938,000 gpd. Based on an average flow of 200 gpd/ERC, the number of ERC's at buildout would be  $938,000 \text{ gpd} / 200 \text{ gpd/ERC} = 4,690$  ERC's. Therefore, the number of ERC's remaining at buildout is 3,585 (4,690 - 1,105 ERCs at end of test year).

5. To follow up on questions from staff's September 15, 2015 site visit, please complete the following table. Please make necessary corrections, if any, for the lift station power meters.

SANDALHAVEN				
LIFT STATIONS				
Lift Station No.	Address/Location	Power Meter Number	Pump Motor (hp)	Capacity (gpm)
LS-1		KJ14780		
LS-2		AC83591		
LS-3		KJ15654		
LS-4				
LS-5		ACD1553		
LS-6		ACD9841		
LS-7		ACD8684		
LS-8		AC74086		
LS-9		KJ15653		
LS-10		AC74135		
LS-11		KJ16694		
LS-12		KJ15642		
LS-13		6NL4409		

**RESPONSE:** See Attachment "4-5".

6. When did the Utility realize that the growth it had projected during its 2006 rate case with the Commission was not going to materialize?

**RESPONSE:** In early 2008, approximately one year after the revised MFRs for Docket No. 060285-SU were filed on December 28, 2006.

7. Since that time, what steps has the Utility taken to mitigate the cost impact(s) of the unrealized growth?

**RESPONSE:** Sandalhaven took the only actions it had available to mitigate cost impacts. First, it contacted EWD on January 25, 2008 to request an indefinite postponement of the option to purchase an additional 200,000 gpd of treatment and disposal capacity, which EWD agreed to do. Second, the Utility optimized its operation of the collection system to direct as much flow as it could to its own treatment plant rather than to EWD to avoid the higher EWD gallonage charge while maintaining compliance with the treatment and disposal constraints specified in the plant's operating permit. It should be noted that although Sandalhaven requested a postponement to purchase an additional 200,000 gpd, there was substantial basis for the purchase of the initial 300,000 gpd at the time of the purchase and, in hindsight, the facts still support that decision. In December, 2006, MFR Schedule A-12, page 3 was submitted in Docket No. 060285-SU, to support the purchases. It showed the flow commitments for which CIAC was prepaid at that time. That schedule has been brought up to date. Attachment "4-7" compares current prepaid commitments for demand with those presented in 2006, showing the portions of the prepaid commitments used and not used. This comparison substantiates the need for the capacity purchased and for Sandalhaven's position that the 300,000 gpd purchase from EWD is 100% used and useful. An important point to consider that is not reflected in the schedule is that the current flow shown is not indicative of the total capacity that was purchased and reserved for the current customer base due to its seasonal nature. The reserved capacity that is included in the tariff is 190 gpd per ERC and compares to the actual flow of 92 gpd per ERC for the current customers on an annual average basis due to the seasonal occupancy. But the full capacity must be available for those customers in the event the occupancy trend changes since the utility still has the obligation to provide that service.

8. Please refer to the Utility's response to questions 20-23 of Staff's Second Data Request dated August 25, 2015. Staff understands that the services provided by some of the vendors involved in constructing the interconnection force main would be unaffected by the size of the force main.. Given this, please estimate the incremental cost difference, if any, between having a 1,000,000 gallons per day (gpd) force main and a 500,000 gpd force main. Please explain your response.

**RESPONSE:** There seems to be some confusion as to capacity of the force main and the basis for its design. The utility was never faced with a choice between constructing a force main able to provide for either a 500,000 gpd average system demand or a 1,000,000 gpd day average system demand. The 2004 Master Plan projected a 900,000 gpd buildout demand for the entire system, including all undeveloped areas. Of this amount, it was estimated that 70%, or 630,000 gpd would flow through this force main at buildout conditions. That is what the force main is designed for. The 1,000,000 gpd is not related to force main capacity. Instead, it describes the master lift station's peak or instantaneous flow capacity for near term projected flows of approximately 275,000 gpd using a peaking factor of 4.0.

Much attention has been paid to the difference in the cost of installing a 10" force main versus a 12" force main, as if that cost differential is significant or relevant. It is not. The Utility will concede that, all else being equal, the installed cost of a 10" main is slightly less than the installed cost of a 12" main. But what is relevant, and what was the major consideration in selecting a 12" force main, is the significantly higher operating cost of the lift station if the build out design flows were pumped through a 10" force main instead of a 12" force main.

In a letter from the design engineer dated June 26, 2007 and reinforced by the clarification letter of October 9, 2015 summarizing the force main and master lift station project, it was stated that the force main was "modeled to determine the most efficient pipeline size based on the need to produce velocity sufficient to carry solids through the pipe as well as meet the head condition (pressure) on the pump." See Attachment "4-8".

The power required to pump the flow generated at buildout and at peak demand conditions through a 12" force main can be met with two 88-Hp pumps. In comparison, two 300-Hp pumps would be required to meet peak flow conditions when pumping through a 10" force main. This would have a drastic ongoing cost impact, far offsetting any onetime saving in the installed cost of the force main. During the initial years of operation, when full projected demand was not yet evident, some savings were achievable by sizing the lift station pumps to serve current demand. The utility realized that savings by initially installing two 45-Hp pumps. Once the peak flow approaches the pumping capacity of the existing 45-Hp pumps the utility would otherwise face the choice of incurring very high operating costs after upgrading the pumping capacity of the master lift station by installing ever larger pumps or by constructing a parallel main, which would virtually double capital costs while also require the installation of larger pumps.

In its argument that the force main should be considered 100% used and useful, the utility differentiated this case from the previous docket in that FDEP is now requiring that the Sandalhaven WWTP be abandoned in 2015 and all flows diverted to EWD. This is significant, not because it changes the projected flows through the plant per the Master Plan, but because it accelerates the increased use of the force main; it now makes the force main the sole means of obtaining an alternative treatment and disposal method that is necessary in order to continue providing wastewater service to its customers.

9. Please refer Schedule F-7 of the Minimum Filing Requirements.

- a. In the paragraph pertaining to the force main, the Utility states it "constructed a 12" force main, adequate to handle anticipated demand." Please explain the Utility's basis at that time for anticipating a demand of 1,000,000 gpd for the force main while negotiating a contract with Englewood Water District for a maximum capacity of 500,000 gpd.

**RESPONSE:** Please see response to No. 8 above. In addition, it should be understood that the EWD maximum capacity is on an annual average basis compared to the force main which must handle instantaneous peak flow conditions.

- b. In the paragraph pertaining to the master lift station serving the force main, the Utility states it "constructed a receiving well for the master lift station adequate for total demand," and equipped it with "pumping capacity adequate for current demand and near term growth." Please provide the capacities, in gallons per day, of the receiving well constructed and the pumps installed in the master lift station.

Carlotta S. Stauffer, Commission Clerk  
October 15, 2015  
Page 5

**RESPONSE:** There are two 45-Hp pumps currently installed in the master lift station's wet well (receiving well), which provide 760 gpm of pumping capacity at peak flow conditions. The master lift station was designed for the operation of three 88-Hp pumps at buildout conditions, which would provide 1,850 gpm of pumping capacity. The receiving well is designed to house the three pumps in the ultimate configuration. When we refer to the receiving well, we are referring to the concrete structure or lift station wet well. According to the documents provided in response to questions 20-23 of the staff's second data request, the wet well cost comprises only \$139,920 of the total \$546,920 lift station contract. All other portions of this project cost are related to current and near term flow requirements.

Should you or Staff have any questions regarding this filing, please do not hesitate to give me a call.

Very truly yours,



MARTIN S. FRIEDMAN  
For the Firm

MSF/  
Enclosures

cc: John Hoy (via email,  
Patrick Flynn (via email)  
Suzanne Brownless, Esquire (via email)  
Erik Saylor, Esquire (via email)

Rate	Dist	Acct	Rev Class	Bill Cycle	Dist	EE	Mr. Name	Address	Previous Customer	Previous Year	Test Year
250WVGEN	250 Sandshaven Wastewater General Service	2302510000	COML	M05	1	2302510000	HACIENDA DEL MAR ASSOCIATION INC	11220 HACIENDA DEL MAR BLVD BLDG A, ENGLEWOOD, FL, 34224	Clubhouse next to Pool	1	67000
250WVGEN	250 Sandshaven Wastewater General Service	7420510000	COML	M05	1	7420510138	FIDDLERS GREEN ASSN CLUBHOUSE	6820 PLACIDA RD, ENGLEWOOD, FL, 34224	Don Pedro State Park Reception Area	1	12000
250WVGEN	250 Sandshaven Wastewater General Service	1727802903	COML	M05	1	0530030322	1st Don Pedro State Island State Park	6450 PLACIDA RD, Englewood, FL, 34224		1	225000
250WVGEN	250 Sandshaven Wastewater General Service	4130510000	COML	M05	1	4450510274	MARINA @ CAPE HAZE LLC	6230 HARBORSIDE CIR, PLACIDA, FL, 33948		1	225000
250WVGEN	250 Sandshaven Wastewater General Service	7084200000	COML	M05	1	7084200047	CAPE HAZE RESORT COM ASS INC	3401 PLACIDA RD, CAPE HAZE, FL, 33948		1	271000
250WVGEN	250 Sandshaven Wastewater General Service	7080084337	COML	FLO7	1	0780810701	VILLA CARRI			1	204000
250WVGEN	250 Sandshaven Wastewater General Service	202510000	COML	M05	1	0302510519	HACIENDA DEL MAR ASSOCIATION INC	11220 HACIENDA DEL MAR BLVD BLDG A, ENGLEWOOD, FL, 34224		1	380000
250WVGEN	250 Sandshaven Wastewater General Service	3670817888	COML	M05	1	1828022438	HACIENDA DEL MAR ASSOCIATION INC	11100 HACIENDA DEL MAR BLVD BLDG G, ENGLEWOOD, FL, 34224		1	391000
250WVGEN	250 Sandshaven Wastewater General Service	4147115201	COML	M05	1	0031147121	HACIENDA DEL MAR ASSOCIATION INC	11140 HACIENDA DEL MAR BLVD BLDG E, ENGLEWOOD, FL, 34224		1	307500
250WVGEN	250 Sandshaven Wastewater General Service	0026200000	COML	M05	1	0026200025	HACIENDA DEL MAR ASSOCIATION INC	11130 HACIENDA DEL MAR BLVD BLDG G, ENGLEWOOD, FL, 34224		1	69000
250WVGEN	250 Sandshaven Wastewater General Service	0006810000	COML	M05	1	0006810516	PALM ISLAND MARINA INC	7090 PLACIDA RD, PLACIDA, FL, 33948		1	348000
250WVGEN	250 Sandshaven Wastewater General Service	7128200000	COML	M05	1	7128200038	HACIENDA DEL MAR ASSOCIATION INC	11180 HACIENDA DEL MAR BLVD BLDG D, ENGLEWOOD, FL, 34224		1	205000
250WVGEN	250 Sandshaven Wastewater General Service	7806498848	COML	M05	1	8041000050	HACIENDA DEL MAR ASSOCIATION INC	11130 HACIENDA DEL MAR BLVD BLDG F, ENGLEWOOD, FL, 34224		1	221000
250WVGEN	250 Sandshaven Wastewater General Service	8801510000	COML	M05	1	8801510284	HACIENDA DEL MAR ASSOCIATION INC	11200 HACIENDA DEL MAR BLVD BLDG E, ENGLEWOOD, FL, 34224		1	398000
250WVGEN	250 Sandshaven Wastewater General Service	060002500	COML	M05	1	3071940003	CAPE HAZE RESORT B 3/5 CNDO ASC	6403 PLACIDA RD, CAPE HAZE, FL, 33948		1	370000
250WVGEN	250 Sandshaven Wastewater General Service	2544000000	COML	M05	1	2544200893	CAPE HAZE RESORT A 1/1/3 CNDO ASC INC	6411 PLACIDA RD, CAPE HAZE, FL, 33948		1	443000
250WVGEN	250 Sandshaven Wastewater General Service	3344200000	COML	M05	1	3344200078	CAPE HAZE RESORT C 7/9 CNDO ASC INC (Club)	6407 PLACIDA RD, CAPE HAZE, FL, 33948		1	333000
250WVGEN	250 Sandshaven Wastewater General Service	4264200000	COML	M05	1	4264200058	CAPE HAZE RESORT B 3/5 CNDO ASC	6405 PLACIDA RD, CAPE HAZE, FL, 33948		1	420000
250WVGEN	250 Sandshaven Wastewater General Service	4684200000	COML	M05	1	4684200007	CAPE HAZE RESORT A 1/1/3 CNDO ASC INC	6419 PLACIDA RD, CAPE HAZE, FL, 33948		1	370000
250WVGEN	250 Sandshaven Wastewater General Service	5484200000	COML	M05	1	5484200028	CAPE HAZE RESORT C 7/9 CNDO ASC INC (Club)	6409 PLACIDA RD, CAPE HAZE, FL, 33948		1	210000
250WVGEN	250 Sandshaven Wastewater General Service	30280000	COML	M05	1	000810295	TALL PINES REALTY	6000 PLACIDA RD UNIT D7, ENGLEWOOD, FL, 34224		1	0
250WVGEN	250 Sandshaven Wastewater General Service	708010000	COML	M05	1	0780810201	MARINA @ CAPE HAZE LLC	6300 BAY FORTE DR East Dock, ENGLEWOOD, FL, 34224		1	0
250WVGEN	250 Sandshaven Wastewater General Service	1428171717	COML	M05	1	0080810785	SOUTHWEST PROPERTIES	6301 PLACIDA RD UNIT A3, PLACIDA, FL, 33948		1	61300
250WVGEN	250 Sandshaven Wastewater General Service	1588010000	COML	M05	1	1588010776	JOSEPH DICIANO DDS PA	6561 PLACIDA RD UNIT A1, PLACIDA, FL, 33948-3427		1	9000
250WVGEN	250 Sandshaven Wastewater General Service	1717814804	COML	M05	1	1799310121	ACE HARDWARE OF CAPE HAZE INC	6021 PLACIDA RD UNIT 6, PLACIDA, FL, 33948-3427		1	80000
250WVGEN	250 Sandshaven Wastewater General Service	1878710000	RES	ALOP	1	1878710071	BREWER, CAROL			1	1200
250WVGEN	250 Sandshaven Wastewater General Service	2634084388	COML	ALOP	1	7590510702	SOUTHWEST PROPERTIES	6400 PLACIDA RD Grand Home, ENGLEWOOD, FL, 34224		1	32000
250WVGEN	250 Sandshaven Wastewater General Service	3402510000	COML	M05	1	3402510041	HACIENDA DEL MAR ASSOCIATION INC	6400 PLACIDA RD Grand Home, ENGLEWOOD, FL, 34224	Pool	1	110000
250WVGEN	250 Sandshaven Wastewater General Service	3620810000	COML	M05	1	3620810280	GOLDEN TEE ASSOCIATION	6610 GASPARELLA PINES BLVD POOL - POOL, ENGLEWOOD, FL, 34224, Pool		1	100000
250WVGEN	250 Sandshaven Wastewater General Service	4830010000	COML	M05	1	4830010271	GOLDEN TEE THE SANCTUARY	6610 GASPARELLA PINES BLVD POOL-CARANA, ENGLEWOOD, FL, 34224, Pool		1	302000
250WVGEN	250 Sandshaven Wastewater General Service	0508810000	COML	M05	1	0508810885	MARINA @ CAPE HAZE LLC	7082 PLACIDA RD N BLDG, PLACIDA, FL, 33948		1	0
250WVGEN	250 Sandshaven Wastewater General Service	8670810000	COML	M05	1	5078010080	MARINE MAX PALM ISLAND	6082 PINEMAVEN WAY, ENGLEWOOD, FL, 34224		1	51200
250WVGEN	250 Sandshaven Wastewater General Service	681369045	COML	M05	1	0710810034	The Pines at Sandshaven POA	6750 GASPARELLA PINES BLVD, ENGLEWOOD, FL, 34224, Pool		1	34000
250WVGEN	250 Sandshaven Wastewater General Service	6308810000	COML	M05	1	6308810712	WILDFLOWER CONDO ASSN	6300 PLACIDA RD/FIDDLERS GREEN POOL, ENGLEWOOD, FL, 34224, Pool		1	67000
250WVGEN	250 Sandshaven Wastewater General Service	6820810000	COML	M05	1	6820810184	FIDDLERS GREEN			1	7000
250WVGEN	250 Sandshaven Wastewater General Service	6144184912	COML	ALOP	1	1730318121	Ace of Cape Haze Inc			1	2000
250WVGEN	250 Sandshaven Wastewater General Service	7242263328	COML	M05A	1	0080810785	FIDDLERS GREEN REALTY			1	513000
250WVGEN	250 Sandshaven Wastewater General Service	7708831190	COML	ALOP	1	4102182208	Cape Haze Car Wash (TERRY SMITH)			1	87000
250WVGEN	250 Sandshaven Wastewater General Service	6130810000	COML	M05	1	6150810423	LEMON BAY GOLF CLUB INC	6600 EAGLE PRESERVE DR - MAIN BLDG, ENGLEWOOD, FL, 34224		1	38000
250WVGEN	250 Sandshaven Wastewater General Service	6170000823	COML	M05	1	2430810221	B.F.S.G (MARIE)	6600 PLACIDA RD UNIT C4, ENGLEWOOD, FL, 34224		1	310000
250WVGEN	250 Sandshaven Wastewater General Service	6791010000	COML	M05	1	6791010002	LEMON BAY GOLF CLUB	6600 EAGLE PRESERVE DR, ENGLEWOOD, FL, 34224		1	182000
250WVGEN	250 Sandshaven Wastewater General Service	9481972516	COML	M05	1	6630810254	PLACIDA GRILL (BOOTT GORDON)	6800 PLACIDA RD UNIT B1, ENGLEWOOD, FL, 34224		1	10000
250WVGEN	250 Sandshaven Wastewater General Service	8768810000	COML	M05	1	8768810428	MARINE MAX PALM ISLAND	7080 PLACIDA RD, PLACIDA, FL, 33148			
Rate	Dist	Acct	Rev Class	Bill Cycle	Dist	EE	Mr. Name	Address		Final	Test Year
250WVVAL	250 Sandshaven Wastewater Multi-Residential	488818703	RES	M05	1	1320020007	ETARE SEASIDE LLC	7095 PLACIDA RD, ENGLEWOOD, FL, 34224		4	41000
250WVVAL	250 Sandshaven Wastewater Multi-Residential	872480114	RES	ALOP	1	1320020007	1st FORET REAL ESTATE GROUP LLC			101	2300000
250WVVAL	250 Sandshaven Wastewater Multi-Residential	8600810000	RES	M05	1	6000810028	CHRISTIAN CITY OF FL	6433 GASPARELLA PINES BLVD, ENGLEWOOD, FL, 34224			1438000
250WVVAL	250 Sandshaven Wastewater Multi-Residential	2317810000	RES	M05	1	2317810084	HARBORTOWN VILLAGE	7070 PLACIDA RD, PLACIDA, FL, 33948	Shown on map & Charlotte City needs on 7070 28	148	4840000
250WVVAL	250 Sandshaven Wastewater Multi-Residential	7178710000	RES	M05	1	7178710510	THE HAMMOCKS OF CAPE HAZE LLC	6886 PLACIDA RD, ENGLEWOOD, FL, 34224			

250WRTB 250 Sandhaven Wineshop Restaurant  
250WRTB 258 Sandhaven Wineshop Restaurant

03204038 RES MOD 1  
05001000 RES MOD 1

0021007311 1/F ZYDECO GRILLE, LLC  
0050010400 6/F LEVEROIS AT PALM ISLAND

6907 PLACIDA RD UNIT 14, PLACIDA, FL 33098  
7002 PLACIDA RD, PLACIDA, FL 33098

1 221000  
1 005000

**Sandalhaven ERC's Yr End**  
*per CC&B Rpt 30*

<b>Year</b>	<b>ERC's</b>
<b>2010</b>	<b>1,155</b>
<b>2011</b>	<b>1,196</b>
<b>2012</b>	<b>1,314</b>
<b>2013</b>	<b>1,301</b>
<b>2014</b>	<b>1,302</b>

Utilities, Inc. of Sandalhaven  
 Docket No. 150102-SU  
 October 13, 2015  
 Lift Station Roster

Lift Station No.	Address/Location	FP&I Meter Number	Pump (hp)	Phase	Voltage	Pumping Capacity (gpm)
L/S SH-01	6811 PLACIDA RD @ FIDDLERS GREEN, PH. 2	KJ14780	5.0	3	240	35
L/S SH-02	6800 PLACIDA RD @ FIDDLERS GREEN, PH. 1	AC83591	5.0	1	240	*
L/S SH-03	7070 PLACIDA RD @ LEVEROCK'S .	KJ15654	3.0	3	240	181
L/S SH-04	6833 GASPARILLA PINES BLVD @ GOLDFINCH DR	KJ12429	3.0	3	240	41
L/S SH-05	6796 GASPARILLA @ WILDFLOWER VILLAGE	ACD1553	7.5	3	240	63
L/S SH-06	6600 GASPARILLA @ GOLDEN TEE	ACD9841	5.0	1	240	75
L/S SH-07	9047A BANTRY BAY @ SHAMROCK SHORES	ACD8684	1.5	1	240	*
L/S SH-08	9860 EAGLE PRESERVE DR @ EAGLES PRESERVE, PH. 1	AC74086	4.0	1	240	*
L/S SH-09	10064 EAGLE PRESERVE DR @ EAGLES PRESERVE, PH. 2	KJ15653	3.0	3	240	*
L/S SH-10	8600 ESTHER ST @ CAPE HAZE MARINA	AC74135	7.6	3	240	103
L/S SH-11	8501 PLACIDA RD @ CAPE HAZE PLAZA	KJ16694	4.0	1	240	209
L/S SH-12	8581 AMBERJACK CIRCLE @ HAMMOCKS	KJ15642	10.0	3	240	190
L/S SH-13	8401 PLACID ROAD - MASTER L/S	KNL6465	45.0	3	480	760

Notes:

1. As of 11/2/15, L/S SH-04 pumps will be 35 Hp, 240V, 3-phase
2. \* indicates pumping capacity is not documented.



June 26, 2007

*Reprinted*  
AUG 07 2012



Mr. Patrick Flynn  
Regional Director  
Utilities, Inc. of Sandalhaven  
200 Weathersfield Avenue  
Altamonte Springs, FL 32714

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Phone: 386.736.4142  
Fax: 386.736.8412  
[www.cphengineers.com](http://www.cphengineers.com)

**RE: Sandalhaven Master Lift Station and Force Main Project Summary**

Dear Mr. Flynn:

Pursuant to your request, this letter is intended to summarize the lift station and force main project recently completed in the Utilities, Inc. of Sandalhaven's (Sandalhaven) service area. The lift station and force main were constructed to divert a portion of the Sandalhaven service area's flows to the Englewood Water District's (EWD) Wastewater Treatment Facility. Sandalhaven's current wastewater treatment facility is rated at 0.150 million gallons per day (MGD), and flows during peak season exceed 0.135 MGD. Instead of expanding the wastewater treatment facility to meet future growth requirements, Sandalhaven opted to install approximately three miles of 12-inch force main and construct a master lift station to divert flow to EWD.

As detailed in the Master Plan developed in 2004, the service area's flow at buildout is projected to be approximately 900,000 gallons per day (gpd). The new force main and master lift station were designed to deliver all of the flow from the southern portion of the service area. This ultimately equates to approximately 665,000 gpd (or 462 gallons per minute), about 70% of the total service area flow. To handle this expected flow, the lift station design must allow for a peaking factor of 4.0, yielding a flow rate of 2.660 MGD or 1,850 gpm. The lift station is set up as a triplex (three pump) station to ultimately pump the peak rate to the EWD wastewater facility. The pipeline was modeled to determine the most efficient pipeline size based on the need to produce velocity sufficient to carry solids through the pipe as well as meet the total head condition (pressure) on the pump. The 12-inch pipeline was selected because it reduces the head condition down to approximately 125 feet at 950 gpm, and 105 feet at 750 gpm. This equates to a power requirement of 88 Horsepower for each pump. Had a smaller pipe size been selected to maximize velocity through the pipeline in order to minimize solids deposition, the pump horsepower would have been significantly higher – an estimated 300 Horsepower. This would have drastically increased the operating cost of the station. This would also have required installation of a larger wet well and a larger emergency generator for backup power. Therefore, the smaller 10-inch pipeline was not considered feasible based on the increased pumping and power requirements compared to the relatively small gain in capital cost.

While the pump station was designed and sized for ultimate capacity, the project was constructed to meet the Utility's more immediate needs. Two 45 Horsepower pumps

were installed initially to provide an interim pumping capacity of 760 gpm or 1.0 MGD peak flow. This equates to an average daily flow rate of 0.275 MGD. The current flow generated by the existing customers in the southern portion of the Sandalhaven service area is estimated to be approximately 0.050 MGD. While this initial flow rate will require periodic maintenance of the pipeline due to possible solids deposition caused by low velocities, the low head condition made this interim size feasible and more cost effective.

If you have any further questions or need any additional clarifications, please let me know. Thank you.

Sincerely,

CPH ENGINEERING, INC.

STEPHEN NEIL ROMANO 57579

STATE LICENSE SEP 12

Stephen N. Romano, P.E.  
No. 57579



# Kimley»Horn

October 9, 2015

Patrick Flynn  
Vice President  
Utilities Inc. of Sandalhaven  
200 Weathersfield Ave  
Altamonte Springs, FL 32714

Re: Sandalhaven Master Lift Station and force main clarification

Patrick:

As requested, this letter is to provide a clarification of the June 26, 2007 Sandalhaven Master Lift Station and Force Main Project Summary letter. In the second paragraph of the letter the following was asserted:

*"The 12-inch pipeline was selected because it reduces the head condition down to approximately 125 feet at 950 gpm, and 105 feet at 750 gpm. This equates to a power requirement of 88 Horsepower for each pump. Had a smaller pipe size been selected to maximize velocity through the pipeline in order to minimize solids deposition, the pump horsepower would have been significantly higher – an estimated 300 Horsepower."*

The pump design points are associated with the specific pump curve for each pump. To achieve the peak design point of 1850 gpm, the design point with a 12-inch pipeline called for a triplex pump station with each pump's design point being at 950 gpm at 125 feet TDH. This yields three 88-Hp pumps, with two operating and one as a standby. This is a total of 176-Hp with two pumps operating. The reduction of the pipeline to a 10-inch increases the pump design point to 950 gpm at approximately 275 feet TDH. This yields a horsepower per pump of approximately 150-Hp for a total 300-Hp with two pumps operating.

The comparison made in the June 26, 2007 letter was based on two pumps operating with a rated horsepower of 176 as compared to 300, a 70% increase in required motor size.

I hope this clarification provides you with the information you needed. If you need any additional information please contact me any time.

Very truly yours,  
KIMLEY HORN AND ASSOCIATES, INC.

  
By: Stephen N. Romano, PE  
Sr. Project Manager

**A. Infiltration allowance, excluding service laterals**

	Main dia. inches	Type	Main length feet	Allowance @ 500 gpd/inch-dia.-mile	
				miles	gpd
1	4		0	0.000	0
	6	PVC	2,325	0.440	1,321
2	6		0	0.000	0
3	8	PVC	11,670	2.210	8,841
	8	VCP	26,935	5.101	20,405
4	10		0	0.000	0
5	12		0	0.000	0
6	15		0	0.000	0
7	Total		40,930	7.752	30,567
8	Estimated Inflow @ 10% of flows (L.10)				4,963,200
9	Allowable I&I				16,120,241

**B. Calculation of Actual Inflow & Infiltration (I&I)**

10 Wastewater treated 49,632,000 F-2

**Water Gallons (not capped) sold to:**

		<u>Estimated returned *</u>	
11 Residential WW SFR	19,164,000	90%	17,247,600 F-10
14 General Service	17,359,000	96%	16,664,640
15 Estimated flows returned	36,523,000	93%	33,912,240 F-10

16 Estimated I&I (treated less returned) [L.10-L.15] 15,719,760

17 Actual less allowable [L.16-L.9] -400,481

18 Excess, if any [L.17, if positive] 0

19 Excess as percent of wastewater treated 0.00%

20 Excess as percent to be used for filing 0.00%

NOTE: Until the WWTP goes off line and there is a true accounting of sewer flow compared to water use, it is difficult to confirm I&I. Throughout the transition, the path of sewer flows are changing. An I&I investigation was completed in 2014 followed by remedying the deficiencies found in mains and manholes. Relatively little excess I&I was found at that time. Looking forward, we believe that there will be no excess I&I.

Corrected: 7-10-15 \*

1. Added 26,935 LF of VCP, which had been left off original filing.
2. Increased Residential return to 90%. This is borne out by the capped residential flows of 17,284,000 and consistent with the flows used and accepted in Docket No. 060285-SU.
3. General Service return to 96%. This is consistent with flows used and accepted in Docket No. 060285-SU.
4. These results are consistent with the NOTE above wherein little excess I&I was found after an investigation followed by repairs.