

Eric Fryson

From: Dana Rudolf [drudolf@sflaw.com]
Sent: Monday, April 16, 2012 12:12 PM
To: Filings@psc.state.fl.us
Cc: Martin Friedman; SAYLER.ERIK@leg.state.fl.us; sandymchase@comcast.net
Subject: Docket No. 110200-WU; Application for increase in water rates in Franklin County by Water Management Services, Inc.

Attachments: PSC Clerk 04.ltr.pdf

- a) Martin S. Friedman, Esquire
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- b) Docket No. 110200-WU
Application for increase in water rates in Franklin County by Water Management Services, Inc.
- c) Water Management Services, Inc.
- d) 5 pages
- e) Filing of Letter from Les Thomas, WMSI's Engineer.

DOCUMENT NUMBER-DATE

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4/16/2012

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April 16, 2012

VIA E-FILING

Ann Cole, Commission Clerk
Office of Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Docket No. 110200-WU; Application for increase in water rates in Franklin
County by Water Management Services, Inc.
Our File No.: 46023.01

Dear Ms.Cole:

In further response to Staff's Second Data request, I am submitting a letter from
Les Thomas, WMSI's engineer. The attachments referred to in his letter were submitted
with our previous response.

Very truly yours,

MARTIN S. FRIEDMAN
For the Firm

cc: Sandy Chase (w/enclosures - via e-mail)
Erik Sayler, Esquire (w/enclosures - via email)

DOCUMENT NUMBER DATE

02300 APR 16 2012

LES THOMAS CONSULTING ENGINEERS

Mr. Gene Brown
Water Management Services, Inc.
245 John Knox Road
Tallahassee, Fl. 32303

April 13, 2012

Re: Response to:
Docket No. 110200-WU - In re: Application for increase in water rates in Franklin
County by Water management Services, Inc.
Capital Improvement Program
Water System Hydraulic Analysis and Capacity Study
St. George Island, Florida

Dear Mr. Brown,

The following is in direct response to the questions from the PSC in regards to the above referenced project.

1. Status of existing generator at Well #3.

The inspection and report of PBSJ identified well #3 as requiring repairs and well #4 requiring replacement. Upon investigation it was learned that their report had reversed the well numbering system and in fact well #4 generator was in need of repairs and well #3 generator was in need of replacement. Since the last rate request, well #4 has been repaired. Well #3 was evaluated by Ring Power. They presented a proposal to repair number 3 which was greater than the cost to purchase a new one, therefore a new one is included in this project. See attached correspondence from Catepillar

2. (a) Provide all supporting documentation related to the requirement of a fifth well:

In accordance with the rules of the Florida Department of Environmental Regulation -

62-555.315 Public Water System Wells -- Security; Number; Capacity; Under the Direct Influence of Surface Water; Control of Copper Pipe Corrosion and Black Water; and Disinfection and Bacteriological Surveys and Evaluations.

In addition to the rules set forth in Chapters 62-524 and 62-532, F.A.C., the requirements of this section apply to public water system wells.

- (1) Well Security. Wellheads shall be enclosed by fences with lockable access gates,

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housed in lockable buildings or enclosures, or otherwise protected against tampering, vandalism, and sabotage.

(2) **Number of Wells.** A minimum of two wells shall be connected to each community water system that is using only ground water and that is serving, or is designed to serve, 350 or more persons or 150 or more service connections.

(3) **Well Capacity.** The total well capacity connected to a water system using only ground water shall equal at least the system's design maximum-day water demand (including design fire-flow demand if fire protection is being provided). In addition, if the water system is a community system serving, or designed to serve, 350 or more persons or 150 or more service connections, the total well capacity with the largest producing well out of operation shall equal at least the design average daily water demand, and preferably the design maximum-day water demand, for the system.

Therefore, the current system's capacity of the well field with the largest well out of service = #1 @ 250 gpm + #2 @ 250 gpm, plus either #3 or #4 @ 500 gpm = 1,000 gpm = 1,000 gpm x (1,440 minutes/day) = a capacity of 1,440,000 gpd.

This system demand exceeds the projected existing well field capacity in 2017 and therefore a new well will be required during this planning period.

Water Management Services, INC.
St. George Island Water System
Capacity Analysis

Planning Year	Customers		Population @ 100 gpcd @ 3.5/conn.	Peak Population 175%	AADF GPD 350 gpd/ERC	Max Month Avg Day 150% x AADF	Max Day @ AADF x GPD 175%	Finish Water Storage % Required Max. Day 25%	Storage Volume Fire Flow 1000 2 Hrs	Storage Finish & FF 25% 1,000 2 Hrs Gallons	Well Field Capacity Required Max Day + fire demand	Well Field Capacity Available With largest well out of service	
	# Customers = #ERCs	Usage gpd											
present (7-4-11)	1,980	270	6,930	12,128	534,800	801,900	935,550	25%	233,688	120,000	353,688	1,055,650	1,440,000
2011	1,980	350	6,930	12,128	693,000	1,039,500	1,212,750	25%	303,188	120,000	423,188	1,332,750	1,440,000
2012	1,995	350	6,983	12,219	698,250	1,047,375	1,221,938	25%	305,484	120,000	425,484	1,341,938	1,440,000
2013	2,020	350	7,070	12,373	707,000	1,060,500	1,237,250	25%	309,313	120,000	429,313	1,367,250	1,440,000
2014	2,050	350	7,175	12,558	717,500	1,076,250	1,255,625	25%	313,908	120,000	433,908	1,376,625	1,440,000
2015	2,085	350	7,298	12,771	729,750	1,094,625	1,277,063	25%	318,288	120,000	438,288	1,397,063	1,440,000
2016	2,125	350	7,438	13,016	743,750	1,115,625	1,301,563	25%	325,391	120,000	445,391	1,421,563	1,440,000
2017	2,170	350	7,596	13,291	759,500	1,139,250	1,329,125	25%	332,281	120,000	452,281	1,449,125	2,160,000

2.(b) The proposed 5th well will supply the needs of approximately 1,000 additional customers.

3.(a) The requests of the Fire Department have been for the entire island (see attached correspondence from the Fire Chief). However, to provide that level of service would require major modifications to the entire system costing millions of dollars. The hydraulic analysis of the capacity of the proposed system resulting from the modifications indicated in the application will provide up to 1,000 gpm in the more densely populated areas nearer the water plant and would be reasonable to accomplish with no significant financial impact to the current users.

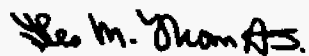
3.(b) The question is whether or not changing from 1,000 gpm to 500 gpm fire flow capacity would have any effect on the distribution system. The answer is no because the 1,000 is only for the area nearest the water plant and the existing piping network can deliver that. We were never attempting to design the system to accomplish that.

The reason for the modifications to the distribution system are that the FDEP has changed their rules in late 2010 requiring water systems to provide fire protection (500 gpm) and maximum day demands in-lieu of the old regulation which required fire protection (500) and 1/2 of maximum day demands. This may seem insignificant but this rule change is really major. When it was 1/2 maximum day demand it was basically the same as meeting peak hour demands which is relatively easy to comply with. When we read these changes we wrote the FDEP for clarification - that correspondence is presented on the following page.

3.(c) The distribution modifications proposed in this program are for the peak flow demands at the far ends of the system. The majority of projected growth will require new or parallel lines as are addressed in the proposed next expansion.

If you have any questions, or if we may be of further assistance, please feel free to call.

Sincerely,

A handwritten signature in black ink that reads "Les M. Thomas". The signature is written in a cursive, slightly slanted style.

Les M. Thomas, P.E., C.V.S.
President

email from:

John H. Pope
Potable Water Section Supervisor
FL Dept. of Environmental Protection
Northwest District
(850) 595-0633

Mr. Thomas: Cliff McKeown forwarded your email message below to me for a response. The sentence you highlighted in blue does indeed require a water system to provide maximum day demand in addition to the demand required for fire protection. In designing a distribution system, project designers must first establish design flow demands. It is standard practice to use peak-hour demand and, if fire protection is being provided, maximum-day demand plus fire flow as the design flow demand(s) when sizing water mains (see Section 3.2.2.4 in Water Distribution Systems Handbook). Peak-hour demand is usually estimated by multiplying average daily demand by an appropriate peaking factor. Per Table 3.6 in Water Distribution Systems Handbook, the peak-hour:average-day peaking factor typically ranges from 2.0-7.0:1.0. Whenever possible, the peak-hour:average-day peaking factor should be developed from actual data for an individual community, and some water systems may establish the peak-hour:average-day peaking factor to be used for design. The decision about whether to size a water system for fire protection is made by the water system and the governing body of the community being served by the water system, and the responsibility for determining needed fire flow usually rests with local fire officials. The needed fire flow for single-family residential areas is typically 500 to 1,500 gpm for 2 hours.

John H. Pope
Potable Water Section Supervisor
FL Dept. of Environmental Protection
Northwest District
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