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QUESTION 18 - WASTEWATER MANAGEMENT

- A. Provide, in the table given below, the projected wastewater generation at the end of each phase of development and proposed wastewater treatment. Identify the assumptions used to project this demand.**

The projected total wastewater generation and treatment will be 1.052 MGD at project build-out of the Elkton DRI. All wastewater treatment will occur off-site. The following assumptions were used to estimate the demand information in Table 18-1.

<u>Land Use</u>	<u>Wastewater Generation</u>
Single-family Residential	280 gpd/DU
Multi-family Residential	240 gpd/DU
Retail	100 gpd/ksf
Flex Industrial/Professional Office	150 gpd/ksf
Elementary School	15 gpd/student
High School	15 gpd/student
Park	250 gpd/restroom

**Table 18-1  
PROJECTED WASTEWATER GENERATION**

TABLE 18-1

LAND USE	DEVELOPMENT	WASTEWATER GENERATION (MGD)	ON-SITE WASTEWATER TREATMENT (MGD)	OFF-SITE WASTEWATER TREATMENT (MGD)
<b>Phase 1</b>				
Single-family Residential	1,000	0.280	0.000	0.280
Multi-family Residential	245	0.059	0.000	0.059
Retail	90,000	0.009	0.000	0.009
Flex Industrial	28,000	0.004	0.000	0.004
Office	40,000	0.006	0.000	0.006
Elementary School	650	0.010	0.000	0.010
<b>Phase 1 Total</b>		<b>0.368</b>	<b>0.000</b>	<b>0.368</b>
<b>Phase 2</b>				
Single-family Residential	1,080	0.302	0.000	0.302
Multi-family Residential	185	0.044	0.000	0.044
Retail	50,000	0.005	0.000	0.005
Flex Industrial	42,000	0.006	0.000	0.006
Office	40,000	0.006	0.000	0.006
Park	10	0.003	0.000	0.003
<b>Phase 2 Total</b>		<b>0.367</b>	<b>0.000</b>	<b>0.367</b>
<b>Phase 3</b>				
Single-family Residential	520	0.146	0.000	0.146
Multi-family Residential	570	0.137	0.000	0.137
High School	1,500	0.023	0.000	0.023
Elementary School	650	0.010	0.000	0.010
Park	10	0.003	0.000	0.003
<b>Phase 3 Total</b>		<b>0.317</b>	<b>0.000</b>	<b>0.317</b>
<b>Total Buildout</b>		<b>1.052</b>	<b>0.000</b>	<b>1.052</b>

Prepared by Prosser Hallock, Inc., (July 2006)

**B. If applicable, generally describe the volumes, characteristics and pre-treatment techniques of any industrial or other effluents prior to discharge from proposed industrial-related use(s).**

Not applicable for this project. All wastewater flows will be from residential, civic, educational, office, and commercial uses. Even though there will be flex-industrial land uses, they will be more commercial/wholesale in nature, and no water-intensive industries are anticipated for any component of the Elkton DRI.

**C.1. If off-site treatment is planned, identify the treatment facility and attach a letter from the agency or firm providing the treatment outlining present and projected excess capacity of the treatment and transmission facilities through buildout, any other commitments that have been made for this excess and a statement of ability to provide service at all times during or after development.**

Off-site wastewater treatment will be provided by St. Johns County Utility Department (SJCUD). SJCUD's statement indicating its ability to provide service to the Elkton DRI development is provided on the subsequent page.

**ST. JOHNS COUNTY, FLORIDA**

Board of County Commissioners



P.O. Box 3006  
St. Augustine, Florida 32085-3006  
Phone: (904) 471-8486 / Fax: (904) 471-8993

**PROSSER HALLOCK, INC.**

June 16, 2006

JUN 20 2006

RECEIVED

*Via Fax (904-730-3413) & U.S. Mail*

Ryan Stilwell  
Prosser Hallock, Inc.  
13901 Sutton Park Drive South, Suite 200  
Jacksonville, FL 32224

**RE: Elkton Development of Regional Impact (DRI) – Tax Parcel ID (see attached)  
Water & Sewer Availability**

Dear Mr. Stilwell,

This letter summarizes the ability of the St. Johns County Utility Department (SJCUD) to serve the proposed Elkton DRI. According to your correspondence on May 18, 2006, the proposed development includes 2,873 single family units, 746 multi-family units, 2,800 students, 20 restrooms associated with parks, and 405,400 sf of commercial space. This development is scheduled in five phases over 15 years, as indicated in your availability request. The projected water and sewer usage for phase 1 is approximately 346,340 gpd and 286,550 gpd, respectively and is anticipated to build out at 1,326,365 gpd and 1,080,495 gpd, respectively.

**Potable Water**

The water service will be provided by the CR 214 water treatment plant and can be made available along Vermont Blvd approximately 2,000 feet north of SR 207. Infrastructure to the connection point must be provided. The developer will be required to install a 24" water main along Vermont Blvd and a minimum 20" water main along SR 207 to the proposed Elkton DRI entrance (near Parcel 15). Please note that pipe sizes are preliminary and could change based on more relevant information. Also note that work along SR 207 will require a FDOT permit.

Water mains must be looped within the proposed Elkton DRI and along CR 305 to ensure availability of adequate fire flow and level of service. In addition, the SJCUD requests that the developer propose a minimum 2-acre site for dedication to the SJCUD for a potable water booster tank. The site should be located in the northwest section of the DRI with access to SR 207 or CR 305.

**Sewer**

Sewer capacity will not be immediately available for the proposed Elkton DRI; however, the SJCUD will work with the developer to provide such service. The SJCUD has plans to construct a new wastewater treatment plant within the vicinity of SR 205 and CR 305 for developments

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primarily west of the I-95 corridor. A meeting will have to be scheduled to discuss this further. At a minimum, the developer will be required to pay for the development's share of the treatment capacity. Transmission mains will be required from the development to the wastewater treatment plant.

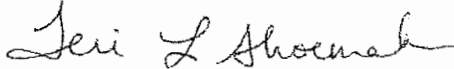
### Reuse

The proposed Elkton DRI is required to be a residential reuse community. Reuse will be provided from the wastewater treatment plant referenced above. Initially, reuse will be provided from Floridan wells until such time that the DRI's reuse flow needs are met by sewer collected from this corridor. The developer will also be required to propose a minimum 2-acre site for dedication to the SJCUD for a reuse water storage tank. The site should be located in the central section of the development.

Water and sewer conveyance and treatment are not absolutely guaranteed until the proposed development is issued a Concurrency Certificate. At that time, the developer must contact the SJCUD to confirm any infrastructure upgrades previously identified to accommodate water, sewer and reuse service to the proposed development. Please note that most of the infrastructure upgrades listed above may qualify for reimbursement from SJCUD water and sewer unit connection fees. More information can be provided at your request.

If you should have any questions, please do not hesitate to contact me at (904) 471-8486 ext. 226 or [tshoemaker@co.st-johns.fl.us](mailto:tshoemaker@co.st-johns.fl.us).

Sincerely,

A handwritten signature in cursive script that reads "Teri L. Shoemaker".

Teri L. Shoemaker, P.E.  
St. Johns County Utility Department

cc: Bill Young, Utility Director  
Neal Shinkre, Utility Engineering Manager  
Mickhael Sulayman, Chief Engineer

**C.2 If service cannot be provided, identify the required capital improvements, cost, timing, and proposed responsible entity necessary to provide service at all times during and after development.**

Based upon the availability letter from SJCUD, it is anticipated that service to the Elkton DRI is not currently available. The developer will be required to participate in a cost share program to assist SJCUD in developing a new facility currently in the planning stage. At this time, cost and timing cannot be identified due to the preliminary nature of the project.

**D. If septic tanks will be used on site, indicate the number of units to be served, general locations and any plans for eventual phase-out.**

Septic tanks are not proposed for wastewater treatment for the development with the exception for the possibility of a limited number of restrooms associated with recreational uses at the parks. Additionally, temporary tanks and drain fields may be proposed for temporary uses such as construction trailers, sales trailers or other temporary uses.

**E. Indicate whether proposed wastewater service will be provided within an established service area boundary.**

The Elkton DRI property is within the existing franchise area for SJCUD.