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PARE Project No. 06190.00

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**EAST SMITHFIELD WATER DISTRICT  
WATER SUPPLY SYSTEM MANAGEMENT PLAN  
EXECUTIVE SUMMARY**

**PREPARED FOR:  
EAST SMITHFIELD WATER DISTRICT  
SMITHFIELD, RHODE ISLAND**

**PREPARED BY:  
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**SUBMITTED JANUARY 2007  
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## EXECUTIVE SUMMARY

### General

The East Smithfield Water District (ESWD) has completed the Water Supply System Management Plan in accordance with the State of Rhode Island Water Resources Rules and Procedures for Water Supply System Management Planning. This Executive Summary is developed to highlight the historical operations and future considerations of the Board of Directors of the ESWD.

### Goals

The ESWD is organized and operates to serve the water supply needs of the owners of the system; i.e. the citizens and businesses of the service area that generally consists of the sections of the Town of Smithfield commonly referred to as Esmond and Georgiaville and the village of Greystone in the Town of North Providence. As such the ESWD complies with all laws, rules, regulations, and directives of appropriate legal authorities and operates the system in accordance with generally accepted standards for water systems.

### System Overview

The ESWD's water system consists of approximately 33 miles of looped transmission lines served from four separate interconnections and two booster pump stations, all of which encompass six separate pressure zones. Two primary interconnections, Waterman Avenue and Dean Avenue, are located in the southern portion of the system near Route 44 and are served directly from the Providence Water Supply Board (PWSB). These two interconnections serve four separate pressure zones, two through each interconnection with the PWSB and through two separate booster pumping stations, North Elmore and Farnum Pike, both downstream of these interconnections. The two other primary interconnections are from the PWSB and the Smithfield Water Supply Board (SWSB) both on Ridge Road, located on the northeast boundary of the system. The PWSB interconnection on Ridge Road is served by the PWSB tank on a separate pressure zone and directly serves the Village at Summerfield. The SWSB interconnection at Ridge Road is also on a separate pressure zone served by the Town of Smithfield pumping station at the Longview Reservoir. Appendix H includes a map describing the service area and a schematic representation of the water system.



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### **System Production and Water Use Data**

The ESWD obtains water solely from three interconnections with the PWSB and a fourth interconnection with the SWSB. Over the past eleven years, (2005-1995), the wholesale purchases have ranged from 320 to 230 million gallons. The ESWD purchased 262.92 millions gallons in the year 2005 with an average day demand of 720,000 gallons per day. The data was developed from a review of the system's master meter records.

The water used in the ESWD is primarily residential type use. Commercial, industrial and government use had historically accounted for a large portion of the total use. However, closed commercial and industrial accounts have resulted in declines in water usage for commercial users. Previous reports also provided information for residential and commercial users (commercial users contained industrial usage).

The ESWD maintains a policy (as identified in the Goals statements) of complying with all Federal and State regulations, policies, and guidelines. As such, the ESWD strives to maintain Non-Account Water below the 15% guideline identified in the State Guide Plan Element 721. The ESWD also has identified its long-term goal of maintaining its Non-Account Water below 10% as recommended by the Water Supply Management Plan regulations. The current year non-account was determined to be 13%.

The ESWD recently contracted with Pare Corporation on updating their computerized water system hydraulic model and it is scheduled to be completed in early 2007. The updated hydraulic model will assist the ESWD in identifying hydraulic weaknesses in the system as well as in the decision making process regarding system improvements and extensions. One of the District's highest priorities is to strengthen the hydraulic capability of the system, thereby improving fire flows within the distribution system.



**Anticipated Future Demands and Available Water**

**Table 4-1**  
**SUMMARY OF ANTICIPATED WATER DEMANDS**

Year	Actual/Est	MG	MGD
2005	Actual	262.46	0.72
2010	Estimated	303.93	0.83
2025	Estimated	427.55	1.17

The water available to the ESWD is limited by state law and agreements with the PWSB. Currently, there is no specific agreement with PWSB. Consequently, State law prevails as to the amount of water available to the ESWD. Chapter 1278 of the Public Laws of 1915 as amended, provide for Providence to supply 150 gallons per capita per day on a monthly basis. Therefore, the ESWD calculates the safe yield of its system at 150 gallons per capita per day. For the year ending December 31, 2005, the safe yield is 0.91 mgd. Table 4-2 compares the 2005 available water to the 2005 water use. Table 4-3 compares the anticipated future demand to the available water in the 5 and 20 year planning scenarios.

**Table 4-2**  
**AVAILABLE WATER VS WATER USE – 2005**

Available Water (MGD)	Actual Use (MGD)
0.91	0.72

**Table 4-3**  
**AVAILABLE WATER VS FUTURE WATER USE**

Planning Year	Estimated Available (MGD)	Estimated Demand (MGD)
2010 (5 yr)	1.04	0.83
2025 (20 yr)	1.46	1.17

**Current and Future Revenue Sources and Coordination**

The ESWD has two sources for operation, maintenance, and capital improvements of the system. Operations and maintenance is funded through water sales and general operations of the ESWD. The new management of the ESWD has developed an annual budget and future forecast budgets to assess revenues and expenses. A capital improvements plan and reserve fund has also been developed to help finance future work and projects that will exceed operations and maintenance funding within the annual budget. The ESWD implemented an increased rate schedule in 2006



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due to continued annual operating income losses. Most recently, the ESWD has begun discussions with the SWSB on developing a similar rate structure for more uniform rates between both suppliers. The ESWD also has recently approved (Jan. 2007) a change to their residential billing cycles. Effective for the 2007 year, the ESWD will be billing residential customers on a semi-annual basis, September 15 and March 15. With regard to coordination, the ESWD has and will make continued efforts to coordinate with the SWSB and the GWD on pertinent regionalization issues.

