

Wastewater Treatment System

Village Green

15 Great Road, LLC

Town of Littleton Board of Health

July 17, 2012

Project Team:

Ian B. Catlow, P.E., Project Manager

Karla L. King, P.E., Project Engineer (presenting)

Wastewater Treatment Quality

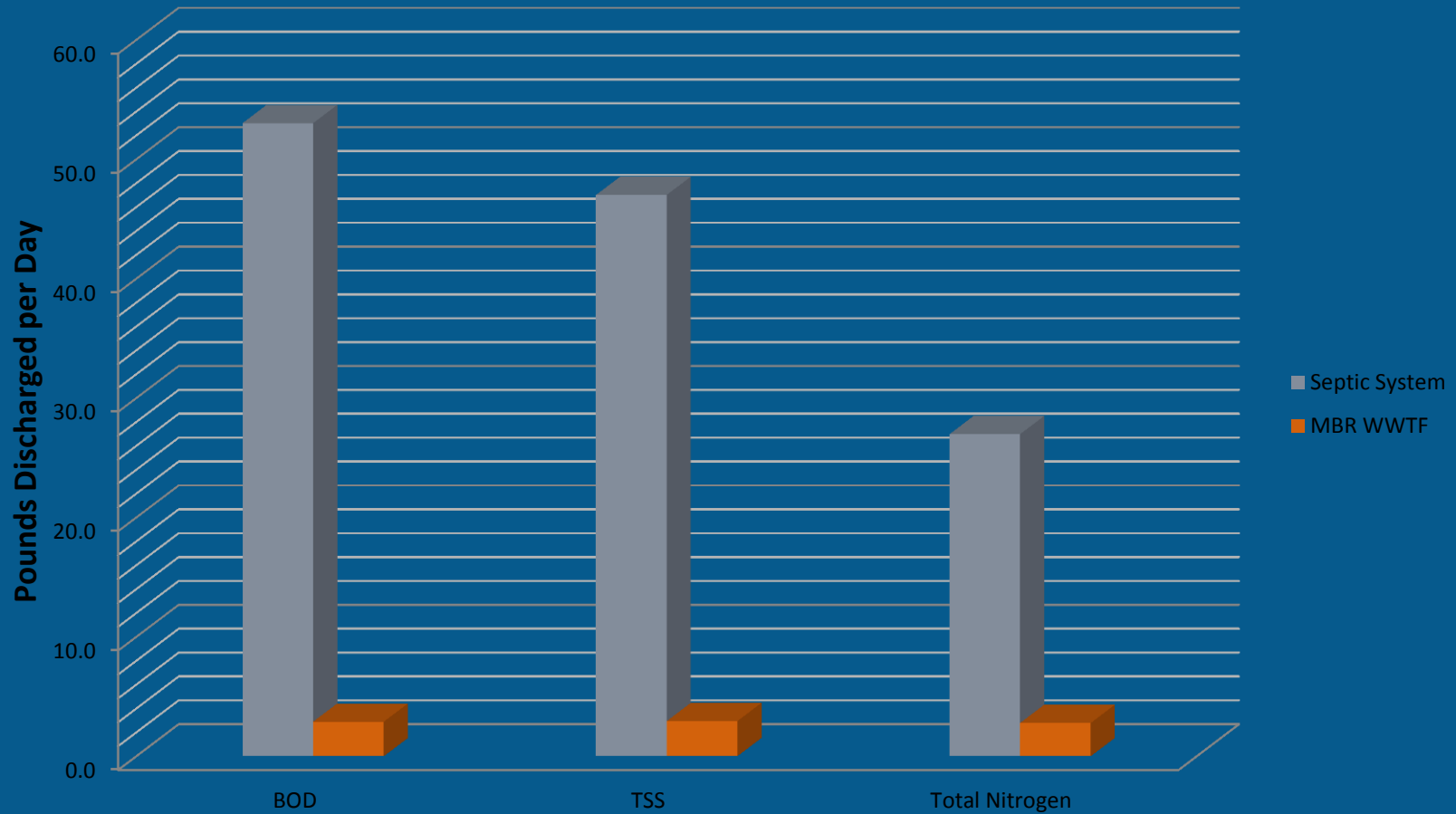
Parameters	Effluent Limits Required under Littleton Board of Health Regulation #18	Anticipated MassDEP Effluent Limits under Groundwater Discharge Permit
Nitrogen (mg/L)	30	<10
Phosphorous (mg/L)	30	<10
Total Suspended Solids (mg/L)	30	<30

Impact To Water Quality



- **Reuse Quality Water**
- **Significantly Less Impact Than Septic**
- **Project Will Discharge 10 Times LESS Nitrogen Per Housing Unit Than Typical Septic System**

Performance Comparison



Note: Performance comparison based on typical residential strength wastewater and a design flow rate of 55,000 gpd. Pollutant removal rates based on observed performance at similar facilities.

Reduced Waste Output

Number of Title V homes that produce same contaminants as 200 Apartments with a WWTF:

	Homes Served by WWTF	Title V-Houses
BOD	200	7
TSS	200	8
Nitrogen	200	13

Financial Assurances

- **Under 314 CMR 5.15 – Requirements for Privately Owned WWTF**
 - **Immediate Repair and Replacement Account** = 15% of the estimated mechanical equipment associated with the WWTF and Collection System
 - **Capital Reserve Account** = 25% of the estimated mechanical equipment associated with the WWTF and Collection System
 - Accounts Monitored by DEP via Annual Report

Financial Assurances

- **Under 314 CMR 5.15 – Requirements for Privately Owned WWTF**
 1. Owns and/or controls the land under the treatment facility and leach field.
 2. Has the obligation to maintain the system including the collection system.
 3. Has agreements giving the WWTF all rights required to maintain the collection system.
 4. Collects revenues to cover all expenses from everyone connected to the system with the right to lien the property of users in the event that payments are not made.
 5. Is required to have a contract with a licensed operator to operate the system.

Low Pressure Sewer (LPS) System

■ Road Crossing

- Sleeve will significantly decrease likelihood of ever having to dig up this portion of the system

■ Environmental Benefits of LPS and WWTF

- Reduced Risk of Collection System Infiltration
- Regulated Monitoring and Reporting
 - Daily Flow and pH Monitoring
 - Monthly Reporting of Water Quality (BOD, TSS, TN, TP)
 - Equipment Maintenance and Monitoring
- Operator Oversight
 - » Under MassDEP regulations – Operator will be on site 5 days a week for at least 2 hours per day