

Remote Telemetry: Managing Remote Reuse Sites

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Abstract. The Town of Surf City, an island town located in Coastal North Carolina, began the process of expanding their wastewater facilities to meet the demands of a growing population and increasing seasonal tourism. The Town's treated wastewater is designed and permitted to meet North Carolina Reclaimed Water standards. The Town owns and operates an 88-acre sprayfield that uses small impact sprinklers to irrigate a grass receiving crop. The existing fields operate at maximum capacity, which is less than half of the Town's 10-year flow projection capacity needs. This existing sprayfield site is also bound on all sides by properties that are either unusable or unattainable by the Town for use in expansion of the non-discharge irrigation system. After an extensive search for available and usable property, the Town acquired a 2,200-acre tract under managed pine that would serve the Town's long-term needs. However, this tract of land is eight miles from the Town's wastewater facilities, in a remote, rural area. The project has recently been constructed, and this paper describes the challenges presented in managing this remote site that has limited access and coverage by conventional telecommunications infrastructure, and the strategies implemented to overcome these challenges; including solar-powered radio controls system and custom-designed irrigation management system.