

EXHIBIT A
PROJECT DESCRIPTION

Grantee: Town of Grottoes

Grant: #440-S-13-09

The Town of Grottoes presently owns and operates a wastewater collection system and a wastewater treatment plant (WWTP) with a design flow of 0.4 MGD which provides secondary treatment. The collection system is a septic tank effluent gravity (STEG) system where the effluent from each service connection flows through a septic tank to settle and remove solids prior to discharging to the sewer collection system. The WWTP also receives septage from Town residents which is collected and transported by the Town's own hauler. Major components of the WWTP include a septage holding station, mechanical screening, two aerated lagoons (Lagoon A and Lagoon B operated in series), positive displacement blowers, effluent pumping, and UV disinfection. Discharge is to the South River.

Due to the fact that the Grottoes WWTP has a new phosphorus limit of 1,381.5 kg per year (with a compliance date of September 1, 2014) predicated on a TMDL established for the South River, the Town plans to upgrade its facility to meet these new limits at design capacity. Being proposed is the installation of a chemical feed system to remove phosphorus from the WWTP effluent and an inclined plate clarifier for floc removal. Discharge from this unit would flow to the UV treatment system and the underflow sludge from the clarifier would be routed back to Lagoon A for settling.

Additionally, other operational improvements are also proposed as part of the project. These include improving the handling and processing of septage, potable water supply to the plant, replacement of process blowers, replacement of effluent pumps, conversion of all unit processes to 480 volts, installation of variable speed drives for the new effluent pumps, and demolition of the old chlorine contact chamber.

The following major project elements are proposed, along with all necessary piping, wiring, and other attendant costs:

- Installation of an inclined plate clarifier with an alum feed system (grant eligible). This includes installation of an inclined plate clarifier, an access road, chemical feed pump, sludge pump, sludge piping, pre-engineered building to house the clarifier and chemical feed system, eyewash and shower, and pertinent electrical and instrumentation improvements.
- Installation of new septage receiving and handling facilities and other improvements (not grant eligible). This involves installation of a new septage receiving unit with a 40,000 gallon pre-aeration tank, both housed in a new pre-engineered building. Other upgrades include ultraviolet disinfection system modifications, replacement of three existing blowers with positive displacement blowers to aerate stored septage, new plug valves to the lagoons from MH 207A, replacement of a potable water line, replacement of submersible pumps, demolition of the chlorine contact tank, decanter cleaning improvements, and pavement work.