

**CLIENT:** Estes-Simmons Silverplating, Ltd.  
Wastewater Treatment Plant (WWTP)



**BACKGROUND:**

Estes-Simmons Silverplating, in Atlanta, GA, specializes in the repair and restoration of precious and semi-precious metal antiques and art objects. The company uses caustic cleaning, metal plating, buffing, polishing, and painting operations, yielding wastewater with high concentration of metals and cyanide.

**Complete Water Services (CWS) was retained to design and build a physically small but effective WWTP to meet stringent local wastewater discharge requirements.**

**PROJECT REQUIREMENTS:**

- Low flow rate (4,500 gpd)
- Design/Build system with small footprint
- Minimum operating costs
- Minimum operator attention and maximum ease of operations
- Effectively treat a wide range of contaminants including precious metals and cyanide
- Recover precious metals such as silver and gold
- Aggressive schedule, coincident with planned building refurbishment
- Tight budget



**SYSTEM COMPONENTS:**

- Flow equalization
- pH neutralization
- Safe cyanide destruction
- Chemical flocculation/ coagulation
- Clarification
- Cartridge filtration
- Ion exchange
- Precious metal precipitation and recovery



- Design maximized ease of operation
- Brought on-line with no interruption of business
- Stringent effluent standards met under low-flow conditions