



After



Before

PIKESVILLE RESERVOIR

Protect, Improve and Keep it Flowing

Part of the greater Baltimore area's finished water storage was handled by the uncovered Pikesville Reservoir located adjacent to the Baltimore Beltway Inner Loop. Baltimore County determined that to protect its water supply from natural and manmade contamination - both accidental and deliberate - and to replace an 80-year old structure in poor condition, it had to find alternatives to replace the open reservoir with covered facilities. The County retained Buchart Horn to plan and design a solution to address the risks associated with the uncovered reservoir.

Working in concert with the County's Project Engineer, Buchart Horn's team of engineering professionals developed plans for two very large covered concrete storage tanks. The project had to overcome some very difficult constraints: limited site space, considerable earthwork, stormwater management issues, existing aging site infrastructure, and maintaining operations during construction. The project was further complicated by the need to satisfy two points of water supply and three discharge points.

The tank designs themselves are significant. Two pre-stressed wire wound concrete tanks of 5 and 15 million gallons, each 18

feet tall, one 220 feet in diameter and the other 380. The 380 foot tank is believed to be one of the largest of its kind in the United States. The 15 million gallon tank will be completely buried to accommodate stormwater management requirements at the site.

The \$23.5 million construction project was awarded to Natgun Corporation, which is working with a team of specialty contractors to phase the project construction to meet ongoing drinking water supply needs of the region's customers. The 5 MG tank went into service in early 2006 with the second and larger tank scheduled for completion in mid-2007.

Buchart Horn's design includes more than 2,000 feet of 36-inch pipe, 18 valve and equipment vaults, and complete upgrade of the SCADA and control system for the site facilities. In addition, new chlorination system piping was designed to accommodate the future switch to hypochlorite from gas chlorination.

The new covered, finished drinking water facilities provide metropolitan Baltimore with a safe, good tasting, and reliable storage asset for its water system customers well into the future.