

## **Unicoi Springs Water Treatment Plant**

In 1905, mules, picks, and shovels were used to construct a 20-mile, cast-iron water main to tap the springs at Unicoi. This spring source, with a daily production of 4 million gallons per day (MGD), served the City of Johnson City as its sole source of water until World War II.

Population growth over the years made it necessary to tap additional water sources. In 1945, the North Indian Creek Filter Plant was constructed to augment the Unicoi Spring supply by treating water from North Indian Creek. The North Indian Creek Filtration Plant added an additional 2 MGD capacity to Johnson City's available water supply. The combined total water production of 6 MGD served the needs of Johnson City until the late 1960s. In 1968, the 8 MGD capacity Watauga Water Treatment Plant was built to provide a new water source for the citizens of Johnson City from the Watauga River. When combined with the 4 MGD supplied from the Unicoi Springs, this doubled the water production capability of the City to 12 MGD. With the addition of the Watauga Water Treatment Plant, the North Indian Creek plant was no longer necessary and the plant was decommissioned in the early 1970s.

By 1994, filtration of ground water sources under the influence of surface water became mandated by law. After consideration of numerous alternatives, the most economical option for filtration was to reconstruct and put the North Indian Creek Filtration Plant back into service. In 1996, renovations and upgrades of the previously decommissioned facility were completed. The newly renovated facility, located off Highway 107 in Unicoi, was renamed the Unicoi Springs Water Treatment Plant. The facility uses coagulation, flocculation, sedimentation, filtration, chlorination, and fluoridation to produce approximately 4 MGD of potable drinking water for the public. In 2010, a treatment upgrade converted the disinfection process from chlorine gas to a much safer chemical feed of sodium hypochlorite (bleach).

The City of Johnson City takes pride in the fact that for more than 100 years the Unicoi Springs have consistently produced safe drinking water that meets or exceeds stringent federal and state regulations associated with producing drinking water for the public. It is the goal of the Johnson City Water and Sewer Services Department to utilize proper operational procedures of treatment, storage, and distribution of drinking water to provide a safe, reliable, and sustainable source of water for the citizens we serve.