

Water Division Operations

Where Our Water Comes From

The water we use, which averages approximately 44.3 million gallons a day, comes to us from the Yadkin River Basin, located along the western border of Forsyth County, and from Salem Lake, a reservoir located on the eastern side of Winston-Salem.



Yadkin River

The river basin draws its water from the mountains of North Carolina and Virginia and moves an average of more than 1.6 billion gallons of water into Forsyth County each day. Sustained drought conditions (1999-2002) reduced that average to about 170 million gallons per day, which is still more than adequate to meet our current and intermediate-term water needs. For more information about the Yadkin River Basin, visit the NCSU site:

<http://www.water.ncsu.edu/yadkin.html>.

The safe yield of Yadkin River is 145 MGD (both intakes).



Salem Lake

Salem Lake occupies approximately 300 acres of land, which is primarily fed by rainfall and native streams. When full, the lake has a capacity of approximately 700 million gallons of water. It serves as a feeder source of water for eastern and southeastern Winston-Salem, and as a reserve water basin to the Yadkin River.

The safe yield of Salem Lake is 10 mgd.



Boating at Salem Lake

Where and How Our Water is Treated

The Utilities Division operates three strategically located, conventional water treatment plants:

The **R.W. Neilson Plant** is located in the southwestern portion of the county and treats raw water supplied by the 95 million gallon per day capacity Idol's Pump Station.



R.W. Neilson Plant

The **R.A. Thomas Plant** is located near the downtown area and can treat both river water and water from the city-owned Salem Lake.



R.A. Thomas Plant

The **Northwest Water Treatment Plant**, located in northwest Winston-Salem, that was brought on line in July, 2004 and will produce approximately 25 million gallons of water per day.



Northwest Water Treatment Plant

The three plants have a combined capacity of 97 million gallons per day. They also have reservoirs that can store 20 million gallons of treated water for use as needed. Additionally, water is stored through a network of water towers, located throughout the service area.

All water distributed by the Utilities Division is treated with a combination of compounds and chemicals, as mandated by federal and state regulatory authorities, to assure its safety for public consumption. Each year, the Division publishes a Water Quality Report that describes the process, the compounds and chemicals used and results of the annual analysis of water quality.

How Water is Delivered

Our water distribution system roughly covers the entire county with the exception of the northeastern portion. The distribution system consisted of approximately 1,944 miles of water mains (July 2004).

The Division also maintains the water distribution system including mains, valves, hydrants, connections and meters. It installs water connections at the request of customers, services and changes water meters, performs cut-ons and cut-offs at the request of customers and/or the Billing Office, and oversees the backflow prevention program.

Administration

Meeting our area's water needs is a shared responsibility of the City of Winston-Salem and Forsyth County. Operating responsibility for the system is a function of the City of Winston-Salem Utilities Division, with governance provided by the City/County Utility Commission, whose members are appointed by the Winston-Salem City Council and the Forsyth County Board of County Commissioners. For more information about the history, organization, members and work of the City/County Utility Commission.

Water Division Administrative Contacts

Ron Hargrove
City/County Utilities Deputy Director
RonH@cityofws.org
(336) 727-8418

William Brewer
Utility Plants Superintendent
BillB@cityofws.org
(336) 945-1179

Tom Johnson
Utilities Plant Supervisor
TomJ@cityofws.org
(336) 766-4272

Sam Tuttle
Utilities Plant Supervisor
SamT@cityofws.org
(336) 945-1179