



5.0 Infrastructure and Utilities

5.1 Introduction


The Town of Holly Springs' rapid growth provides for challenges with respect to funding, environmental permitting, and installation of infrastructure utilities – water, wastewater, reclaimed water, stormwater, natural gas, electric, and telecommunications – needed to support existing citizens as well as future growth. The Town must prioritize existing and future infrastructure improvements and the dollars associated with those improvements to maintain quality service to existing citizens and promote growth consistent with its growth objectives while protecting the environment. For those infrastructures that the Town does not directly control – natural gas, electric, and telecommunications – the Town must progressively lobby those utility companies to insure good infrastructure access and networks.

5.2 Infrastructure and Utilities Objectives

- 1) Provide infrastructure to meet the needs of residents and development while protecting the environment.
- 2) Prioritize infrastructure investments to promote desired development patterns consistent with the planning elements of the Comprehensive Plan.
- 3) Encourage development in accordance with the Long Range Water and Wastewater Master Plans, and the annual Capital Improvement Plans.
- 4) Require new development to make equitable contributions commensurate with project impacts towards infrastructure, including revisiting fees periodically.
- 5) Promote the undergrounding of utility lines where practicable.
- 6) Promote new development and redevelopment to incorporate conservation-oriented building techniques to minimize impact on utility infrastructures.
- 7) Work with other utility purveyors to supply and upgrade modern and competitive facilities within the Town.
- 8) Maximize use of reclaimed water for non-potable uses.

5.3 Water Supply

Prior to the mid-90's, Holly Springs drinking water was provided solely by community wells, residents and businesses in the city limits portion of the Study Area today all have access to public drinking water. For some residents and



businesses outside the study area, water is available by proximity. The long range Water Master Plan covers the rest of the Study Area. Wells can be used for irrigation purposes if they meet specific Town criteria with respect to location and proximity to public water lines and services, and must also be approved by Wake County. Holly Springs had about 15,500 water customers in 2017. 1,800 of these water customers also have irrigation meters.

The Town of Holly Springs can currently supply 10 million gallons per day (MGD) of potable water to its residents and businesses. The Town purchases drinking water from both Harnett County. The Town actively participates in the Regional Water Supply from Jordan Lake which secures an additional 2.2 million gallons a day for future use . The Town is directly interconnected with several water sources besides Raleigh and Harnett County, including Cary, Fuquay-Varina, and Apex. Through a shared Wake County waterline loop and these various interconnections, it is possible to transfer water through those connections from even more sources.

Water supplied by Harnett County is obtained from the Cape Fear River and is purified at a water treatment plant in Lillington. The water is conveyed to a booster pumping station south of Town via a shared 36-inch transmission line and then on to Holly Springs via a 30-inch water transmission main that is owned by the Town. The Town is presently allocated 10.0 MGD of water capacity from Harnett County,

During an emergency water obtained from the Town of Cary originates from Jordan Lake and is purified at the Cary Water Treatment in Cary and is then piped into Holly Springs via a 16-inch transmission line along Holly Springs Road, as well as a 12-inch transmission line from Apex along NC 55. The transmission line is capable of supplying up to 2.5 MGD.

Two pump stations, one on the Harnett County transmission main and one on the Town of Cary transmission main, and three water towers are included in the Town's water system. The three water towers are capable of storing a total of 2.5 million gallons of water.

The Town of Holly Springs water supply is tested annually for over 150 contaminants to insure compliance with federal and state laws.

The Town plans to prolong the life of its potable water supply source through the use of reclaimed water from the Utley Creek Water Reclamation Facility.



5.4 Wastewater

The Town of Holly Springs owns and operates its wastewater collection and treatment system, which includes approximately 203 miles of pipe and 18 wastewater lift stations that convey flows to a central Holly Springs Utley Creek Water Reclamation Facility (WRF). All homes within the Town's jurisdiction are served by public wastewater. All new development must tie into the Town's wastewater system if service is available in the area.

The Town-owned and operated WRF facility presently has a total treatment capacity of 6.0 MGD, and in 2018 treated approximately 2.8 MGD. The Town has a permit to expand the treatment up to 8.0 MGD. The WRF is an activated sludge plant that discharges into Utley Creek, which is in the Cape Fear River Basin.¹

The 6.0 MGD WRF will serve an estimated population of up to approximately 65,000 (depending on the mix of residential and non-residential users).

As growth occurs outside the tributary areas of the treatment plant and existing pumping stations, regional pumping stations are planned to serve those areas as shown on the Town's Long Range Wastewater Plan. Proposed pump stations will be initiated and funded by private development, with the possibility of some Town participation for oversizing to meet larger basin needs.

The Town plans to limit discharge from the WRF through the use of reclaimed water from the Utley Creek WRF.

5.5 Reclaimed Water

The Town of Holly Springs constructed a 2.0 MGD reclaimed water distribution system project in order to reduce the potable water volume that is presently used for irrigation and cooling towers while reducing the amount of effluent that is discharged from the WRF into Utley Creek. The Town project utilizes reclaimed water by distribution lines and use of a reclaimed bulk use filling station located at the Town's WRF. The Town provides approximately 0.4 MGD a day to just under 1,000 customers.

¹ Town of Holly Springs 2006 Annual Wastewater Performance Report

5.6 Stormwater

Stormwater is a term that describes controlling water from rain or snowmelt that flows over the land surface and is not absorbed into the ground (nonpoint source runoff), and stormwater that is discharged through conveyances, such as separate storm pipes, ditches, channels or other conveyances (point source runoff). The goal of stormwater is the reduction of downstream erosion, water quality degradation, and flooding plus the mitigation of the adverse effects that land use changes have on the aquatic environment. Under the Clean Water Act (CWA), both point and non-point sources are subject to regulation through the National Pollutant Discharge Elimination System (NPDES) permit program. Communities are required by the Environmental Protection Act (EPA) to develop NPDES Phase II Stormwater Programs and secure an associated permit in order to manage stormwater runoff.

The Town of Holly Springs' NPDES Phase II Stormwater Permit became effective December 1, 2005. The stormwater permit regulations require the Town to implement six minimum control measures to reduce the discharge of pollutants in stormwater to the maximum extent practicable and to protect water quality:

- Public education and outreach on stormwater impacts
- Public involvement/ participation
- Illicit discharge detection and elimination
- Construction site stormwater runoff control
- Post-construction stormwater management for new development and redevelopment
- Pollution prevention/good housekeeping for municipal operations

In order to meet these requirements, the Town has created a Stormwater Management Plan (SWMP). The plan includes: Stormwater Control Measures (SCMs) proposed to achieve each of the six minimum control measures; measurable goals for each minimum control measure; the timeline for starting, completing and addressing each minimum control measure, and identifies the persons responsible for implementing the stormwater management program.

Holly Springs is also a participant in a process to evaluate the feasibility of forming a countywide regional stormwater management programs to achieve improvements in performance, cost-effectiveness, and watershed health.



5.7 Proposed Infrastructure Projects

The 2018 Town of Holly Springs Capital Improvement Plan (CIP) included 22 water, sewer and environmental projects which have a total projected cost of \$87.5 million. These projects will provide the infrastructure necessary to accommodate future needs. The CIP is updated annually to insure that capital projects keep pace with planned development, and is available for reference to view individual projects.

5.8 Natural Gas

Public Service of NC (PSNC Energy) supplies natural gas to the Town of Holly Springs. PSNC Energy is a regulated public utility that is headquartered in Gastonia, N.C.

5.9 Electric


Duke Energy Progress supplies electricity to the Town of Holly Springs.

5.10 Town-wide Fiber Network

The Town of Holly Springs Information Technology (IT) Department operates and manages a town-wide fiber optic network that connects all Town facilities. The network is state of the art and redundant to provide Town staff and facilities with the connected services they require to efficiently serve the community's needs. The network is also envisioned to connect existing and future SCADA monitoring and control systems for the Town's water and wastewater infrastructure, migrating from radio connected systems. It is also envisioned to be the backbone of a synchronized traffic signal control system. The network supports the town governmental functions and does not provide direct access to citizens or individual businesses.

5.11 Private Telecommunications

The Town is serviced by four high speed internet providers. The companies are Ting, AT&T, CenturyLink, and Spectrum. Ting and Spectrum are widely available in Holly Springs; however, CenturyLink and AT&T split their service areas based on the location of the Town someone is in. All of these companies provide top tier



internet service with some of the areas being offered gigabit internet service. The entirety of Holly Springs is offered at least one internet provider.

Spectrum, AT&T, and CenturyLink offer television service in Holly Springs. These three companies also offer landline phone service to residences and businesses.