

SECTION 3

Purpose of and Need for Proposed Infrastructure

The purpose of and need for proposed infrastructure are a function of the Town of Cary's commitment to its residents. Part of the Town's mission is to provide responsible leadership for controlled infrastructure development. The Town ensures orderly expansion of the utility system through development and implementation of the Town Standard Specifications and Details manual. Through effective planning, the Town has anticipated infrastructure problems and needs by developing cost-effective, viable solutions implemented as part of the Town's capital improvements budget. The Town plans for capital improvements in 10-year increments (Appendix B). Through proper planning, the Town ensures that infrastructure meets the expectations and needs of the Town's residents.

The Town integrates its transportation and land use planning with its other planning processes, and understands that infrastructure planning strategies must be formulated and implemented in a manner to pursue the goals of service provision and environmental protection.

By integrating its growth management strategies, land use planning strategies, and infrastructure plans, the Town preserves important ecological areas in the form of open space; ensures that its residents have adequate recreational resources; and meets water, wastewater, and transportation demands. By integrating these processes, the Town ensures that infrastructure is commensurate with the projected population within the Planning Area. Also, proper planning ensures that Jordan Lake water quality is protected, wastewater is treated to levels that protect surface water quality, and enables the use of reclaimed water for non-potable uses.

The Town's departments are responsible for planning, design, and construction of the capital improvements for the Town, including street improvements, right-of-way acquisitions, stormwater and utility system improvements, treatment plant expansions, thoroughfare planning, and management of development contract and easement releases.

The three main infrastructure elements are wastewater, water and reclaimed water, and transportation. The projects in each element are evaluated against the established goals of the Town.

The primary goals of wastewater projects are to:

- Provide adequate collection and treatment (reclamation) of wastewater produced by the system's customers to a level that meets the permit limits issued by regulatory authorities as cost-effectively as possible.
- Discharge treated wastewater from each WRF in a manner that protects the receiving streams from pollutants and contamination and protects groundwater supplies from land application of reclaimed water.

- Ensure that continuing sufficient capacity of wastewater collection and treatment exists to serve the Town’s customers.
- Ensure that facilities are provided for adequate conveyance of existing and planned wastewater flows.
- Provide for orderly development of the Town’s wastewater collection and treatment systems.
- Ensure that strict environmental and regulatory requirements are met in the design and construction of the Town’s wastewater system.

The primary goals of water projects are to:

- Provide the residents of Cary with a safe, cost-effective, and adequate supply of treated water.
- Ensure that continuing sufficient capacity of water treatment exists to serve the Town’s customers.
- Establish facilities for an adequate distribution system to meet existing and planned water demands at adequate pressure.
- Provide for the orderly development of the Town’s water treatment, storage, and distribution systems.
- Ensure that strict environmental and regulatory requirements are met in the design and construction of the Town’s water system.

TABLE 3-1
Town of Cary Population Projections

Year	Population
2010	135,234 ¹
2015	148,100 ²
2020	162,800 ²
2025	177,800 ²
2030	190,800 ²
2035	203,100 ²
2040	209,200 ²
2045	215,350 ²

The primary goals of transportation projects are to:

- Provide capacity to improve level of service on existing roadways and provide additional capacity in advance of future growth.
- Maintain efficient and safe traffic patterns.
- Offer a variety of means to move people, goods, and information.
- Provide for the maintenance of infrastructure and prepare for projects in advance to reduce cost and provide better community acceptance as individual decisions can be made with plans in mind.

¹ U.S. Census Bureau, 2010
² CH2M HILL and Brown and Caldwell, 2013

To meet these infrastructure goals, the Town develops and implements infrastructure plans. These plans are based on the projected population and the land use plan to ensure adequate capacity exists at the proper locations.

The Town grew rapidly in the 1980s, 1990s, and 2000s, but growth has slowed in recent years. The population was estimated to be 21,763 in 1980, 94,536 in 2000, and 135,234 in 2010

(U.S. Census Bureau, 2010). Population projections (Table 3-1) include about 215,350 residents by the year 2045. These populations are for the Planning Area and correspond to the Town's LRWRP projection of future water demand and wastewater flows (CH2M HILL and Brown and Caldwell, 2013). This information gives the Town a measure with which to guide development and infrastructure improvements in coordination with its land use plan, described in Sections 5 and 6.

The Town periodically reviews and updates its population, wastewater, and water supply projections. While minor differences in population projections may occur with these updates, the methodologies and numbers are consistent. The environmental documents that are developed to evaluate direct impacts of specific infrastructure projects will contain thorough justification on why the projects are needed to support the Town's growing demands. Providing services while protecting the environment is critically important to the Town.

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