

Request for Qualifications

Engineering Services

For

**Clyde, Canton, Waynesville Water Interconnect Design,
Bid and Construction**

**16 South Main Street
Waynesville, NC 289786
Phone: (828) 452-2491**

Email: pmccurry@waynesvillenc.gov

OVERVIEW & PURPOSE

Clyde, Canton, and Waynesville, North Carolina (herein, known as the “Towns”) are jointly requesting statements of qualifications from qualified professional civil engineers for the preparation of a Preliminary Engineering Report that meets NCDEQ’ s format for submitting a SRF approval, and application for a Finding of No Significant Impact. Should the project be approved to go forward, provide design, bidding, and construction oversight of a potable water interconnect in Haywood County. The project would consist of construction of approximately 35,000 linear feet of 12” water transmission lines and related appurtenances along both public and private road right of ways. The project will be funded through three NC State Revolving Loans (SRF) awarded as follows: Canton, \$10,000,000 SRF Loan, Clyde \$4,316,538 SRF Loan, Waynesville, \$2,841,800 SRF Loan, Haywood County, \$2,006,840 grant. Total project budget \$19,165,178.

The project will be funded through NC State Revolving Loans and an appropriation from Haywood County. The scope of the project is outlined on a map attached as Exhibit “1”.

The overall objectives of this project include the following phases:

PHASE I:

- Preparation of a Preliminary Engineering Report that meets NC DEQ’s format for review and approval of the Town’s State Revolving Loans (SRF) .
- Prepare the application for submission of an environmental review that would result in a “Finding of No Significant Impact (FONSI).

PHASE II:

SHOULD THE PROJECT BE APPROVED BY NC DEQ AND THE TOWNS.

- Plan, design, and achieve permits for the proposed water interconnection line.
- Provide a list of necessary easements and cooperate with the Towns to acquire them.
- Preparing bid documents and specifications.
- Conducting the bid process on behalf of the Towns.
- Construction phase administration and observation.
- Providing Administration of the State Revolving Loan programs.

PROJECT DESIGN SCHEDULE

The time schedule is dependent on the final approval of the agreements between the Towns and the Department of Environmental Quality (DEQ). The Towns plan to carry out the project expeditiously once the above steps are in place. The goal would be to design and bid Phase I of the project and have it constructed within fifteen months. The remaining phases would be designed and bid within a year of contract approval. Priority will be given to firms that meet the above deadline.

SCOPE OF WORK

To be considered for selection, the firm/team shall be qualified and capable of providing the necessary professional services associated with project tasks and conformance with local, state, and federal requirements listed herein.

1. Extensive experience drafting engineering reports and FONSI application with NC DEQ.
2. Planning, field surveys and mapping, geotechnical investigations, utility location, design and preparation of sealed drawings and construction documents (plans and specifications), and cost estimations. Phase I would be designed, reviewed by DEQ, bid and constructed within fifteen months of engineering contract execution.
3. Perform all project management and quality control duties for the survey, design, bidding, and construction oversight.
4. Provide necessary documentation needed to prepare descriptions for easements and other property acquisition.
5. Prepare all necessary applications to secure required permits and approvals for construction by NCDEQ, NCDOT, or other necessary permitting agencies.
6. Organize pre-bid conference, reply to requests for information, prepare advertisements for bid solicitations, conduct bid opening, prepare certified bid tabulations, prepare a formal recommendation for award, and issue the notice to proceed.
7. Construction Administration duties shall include review of project progress (inspections), review of shop drawings and submittals, certification of contractor requests for payment, processing of change orders, preparation of pre-final and final punch lists and project closeout. Provide hard and digital copies of as-built drawings.

QUALIFICATION SUBMITTAL INSTRUCTIONS

SUBMISSION DEADLINE

Qualification submittals must be received by 3:00 p.m. eastern time on Wednesday, September 30, 2026.

SUBMITTAL INSTRUCTIONS

Qualification Submittals should be submitted in PDF format to Page McCurry – Waynesville Assistant Town Manager (on behalf of the Towns) as follows: One hard copy and other via email or thumb drive to pmccurry@waynesvillenc.gov or mailed or delivered to 16 S. Main Street, Waynesville, NC 28786. Proposals should be titled *"Submittal for Water Interconnect Line Design and Construction"*, no later than the submission deadline noted above. Submittals received after the submission deadline will not be considered.

RFQ CONTACT

Inquiries regarding this RFQ process should be directed at Page McCurry, Assistant Town Manager, Waynesville (on behalf of the Towns). Prospective firms may make inquiries to obtain clarification of the requirements contained within this Request for Qualifications (RFQ). All inquiries shall be submitted in writing via email to the following address: rhites@waynesvillenc.gov **All inquiries must be received by 5:00 p.m. eastern time on Thursday, September 24th, 2026.**

SUBMITTAL FORMAT

Submittals should be limited to fifteen (15) numbered pages excluding front and back cover pages. Please include a letter which identifies a contact person for your firm as well as legal firm name and address information. The following format is encouraged in order to provide consistency between submittals, aiding in evaluation and comparison. If the format below is modified, please ensure to include the following information at a minimum:

- **Cover Letter:** Project statement, legal name of firm, and the name, address, telephone number, and email address of a contact person for questions concerning the qualification submittal.
- **Firm/Team Background:** Provide a narrative of your firm's prior experience and qualifications with projects of similar size and complexity. A general description of the team's capabilities,

including information related to the history, overall size of the firm, location of firm headquarters, and local offices.

- **Project Team:** Provide a list of the project team members, including the office location where they currently work, and identify the responsibility of each team member. For proposed sub-consultants, please provide the name of each firm, the office location, contact name, telephone number, and the services to be provided. Only staff who will be directly involved with the execution of the project should be included.
- **Firm/Team Experience & References:** Briefly summarize the firm/team's experience with public water utility distribution system planning, design, and construction. Provide references for recently completed waterline projects of similar scope or size to this proposed project including past team member experience, if any, with those projects. For past project references please provide a contact name, position, physical address, phone number, and email address.
- **Project Delivery Approach:** Based upon the information contained herein, provide a brief narrative explaining the overall approach your firm/team will take to complete this project.
- **Other Supporting Data:** Please include any other information that you feel is relevant to the evaluation of your firm for this project.

EVALUATION CRITERIA

Qualification submittals should address all aspects of this RFQ and clearly express an understanding of the requirements and qualifications for conducting these services in a thorough and efficient manner. Evaluation of qualification submittals will be performed by representatives of the Towns and Haywood County.

- **Qualifications of the Firm/Team (20%)**: Preference shall be given to those firms/teams and personnel with experience in municipal water distribution system planning, design, permitting, and construction.
- **Overall Qualifications of the Project Manager and Project Team (25%)**: Identify the Project Manager/Engineer and Project Team who will be assigned to the project. Preference will be given to those with direct experience in items listed in the Scope of Work above and familiarity with the region and permitting agencies.
- **Experience with State Revolving Loan Projects (10%)**: Preference shall be given to firms/teams who demonstrate prior experience working on public water projects that are funded through NC State Revolving Loan funding, specifically with regards to working with project owners to meet required State procurement and reporting guidelines.
- **Project Delivery Approach (25%)**: Preference shall be given to the firm that demonstrates the most time sensitive and cost -effective approach to carrying the project to completion. Emphasis should be given to the initial fifteen- month phase where a portion of the funding is tied to a tight timetable. Firm shall work with committee to determine the most critical elements of Phase I.
- **Office Location & Availability of Key Firm Personnel (20%)**: The proximity of the Project Manager/Engineer and Project Team office location to Haywood County will be evaluated along with the stated availability of key project team personnel. Preference will be given to those firms/teams who are well-positioned geographically to effectively fulfill all requirements set forth in this Request for Qualifications.

All firms who choose to respond with a Qualifications Submittal will be evaluated by the Towns' representatives based on the criteria set forth above. The Towns reserves the right to reject any or all Qualifications Submittals received in response to this Request for Qualifications and to select the firm/team who are most advantageous to the Towns. Candidate firms may be asked to deliver a qualifications presentation to the Towns before a final selection is made. ***Final selection and contracting will be subject to approval by the Elected bodies of Clyde, Canton and Waynesville.***

NONDISCRIMINATION & EQUAL OPPORTUNITY EMPLOYER

The Towns are Equal Opportunity Employers and invite the submission of qualifications from all entities. The Towns comply with all civil rights provisions of federal statutes and related authorities which prohibit discrimination in programs and activities receiving state and federal assistance. The Towns do not discriminate on the basis of race, sex, color, age, national origin, religion, or disability, in employment or provision of services.

ADMINISTRATIVE INFORMATION

All qualification submittals shall become the property of the Towns once submitted for consideration and will only be returned to the submitting firm at the Town's option and discretion. Any restrictions on the use of the information and data contained within the qualification submittal must be clearly stated in the submittal itself.

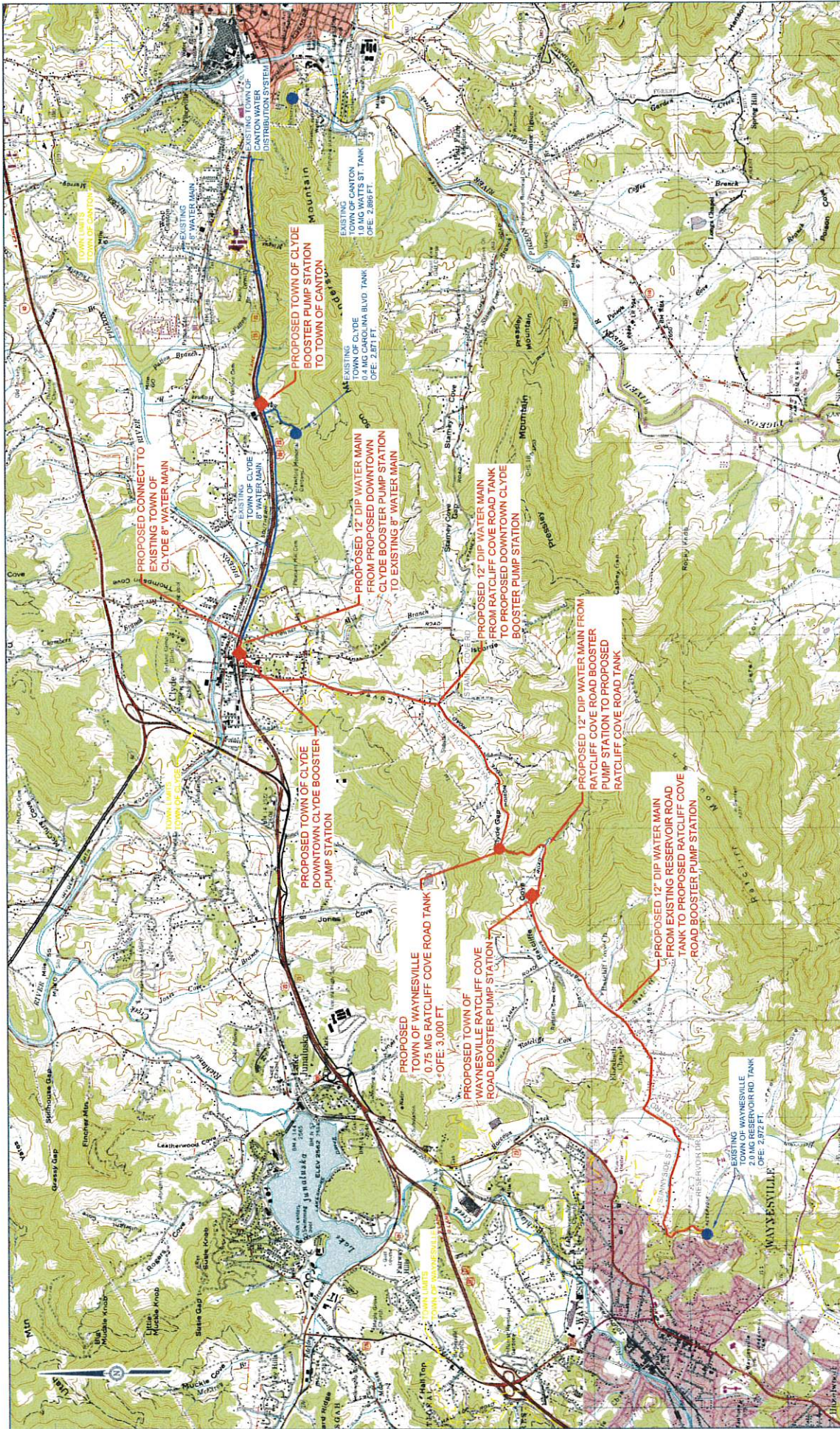
The cost of preparing, submitting, and presenting a submittal is the sole responsibility of the submitting firm. The Towns shall not be held liable for any costs, direct or indirect, associated with the development, submission, or presentation of any submittal in response to this Request for Qualifications.

The Towns reserve the right to reject any and all qualification submittals, to consider alternatives, to waive irregularities, and to re-solicit a Request for Qualifications. The Towns further reserve the right to cancel the RFQ in part or in whole at any time. This Request for Qualifications shall in no way obligate the Towns to award a contract for this project. The Towns make no guarantees to any proposing firm until such time as they jointly approve a contract for engineering services for this project.

The Towns, through Waynesville will provide information and clarification related to this Request for Qualifications where available.

EXHIBITS

- 1 PROJECT MAP**
- 2 PRELIMINARY ENGINEERING REPORT**



WATER SYSTEMS INTERCONNECTION
CANTON - CLYDE -
WAYNESVILLE
 HAYWOOD COUNTY, NORTH CAROLINA

FIGURE
1

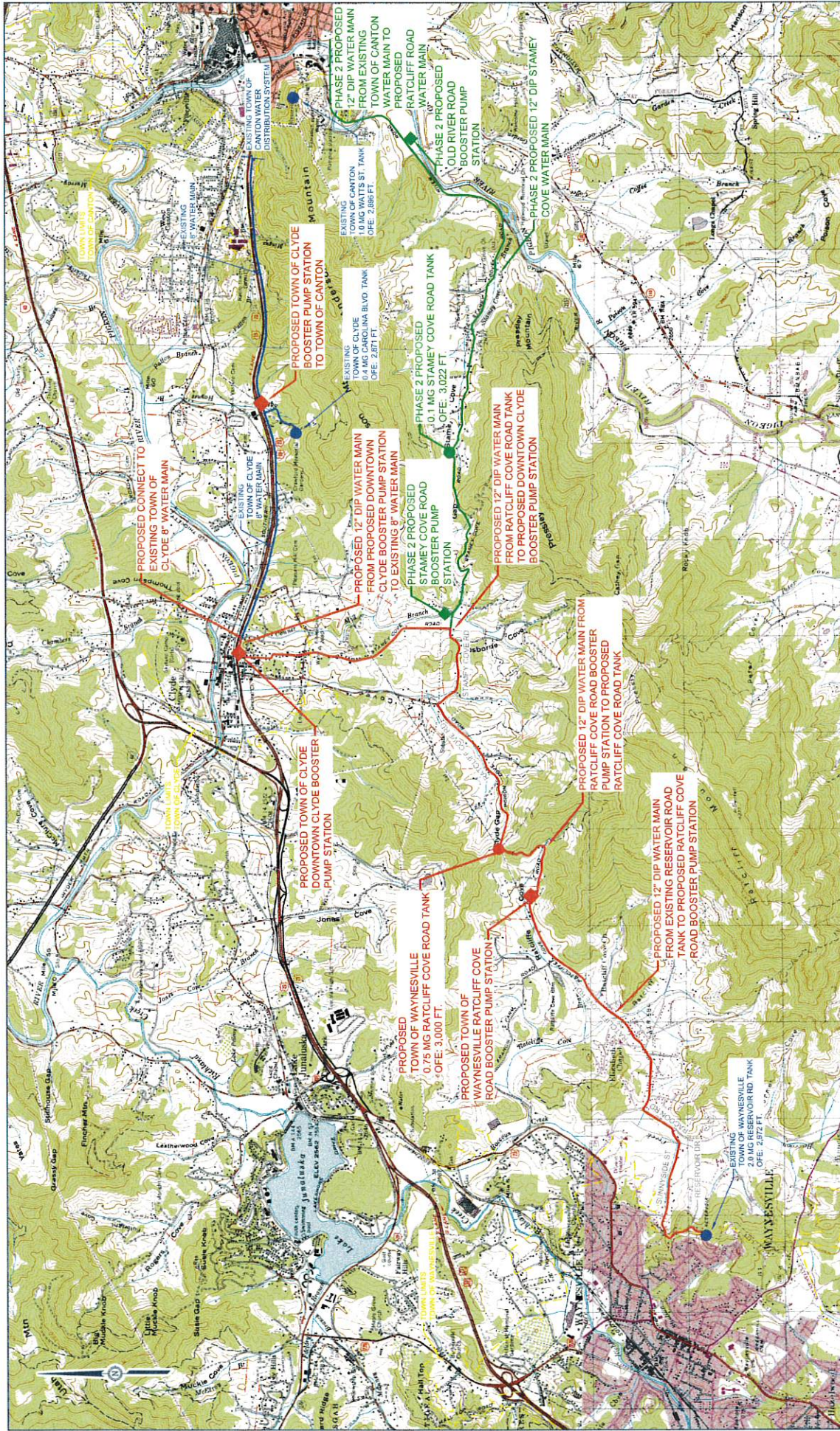
ALTERNATIVE 1

PROJECT # 25-00320
 DATE JULY 2025
 OFFICE MANAGER M. CATHEY
 DESIGNER
 PROJECT MANAGER
 REVIEWER

GRAPHIC SCALE
 3000 0 1500 3000 6000
 DIVISION VALUE = 3000 FEET

mcgill
 55 Broad Street
 Raleigh, NC 27601
 828.252.0775
 NC Firm License # C-0858
 mcgillassociates.com

FIGURE
1



mcgill

35 Broad Street
Durham, NC 27601
820.252.0675
NC Firm License # C-0459
mcgillassociates.com

DATE	PROJECT #
JULY 2025	28 00320
OFFICE MANAGER	DESIGNER
M. GATHEY	
PROJECT MANAGER	REVIEWER

WATER SYSTEMS INTERCONNECTION

CANTON - CLYDE - WAYNESVILLE

HAYWOOD COUNTY, NORTH CAROLINA

3000 0 1500 3000 6000

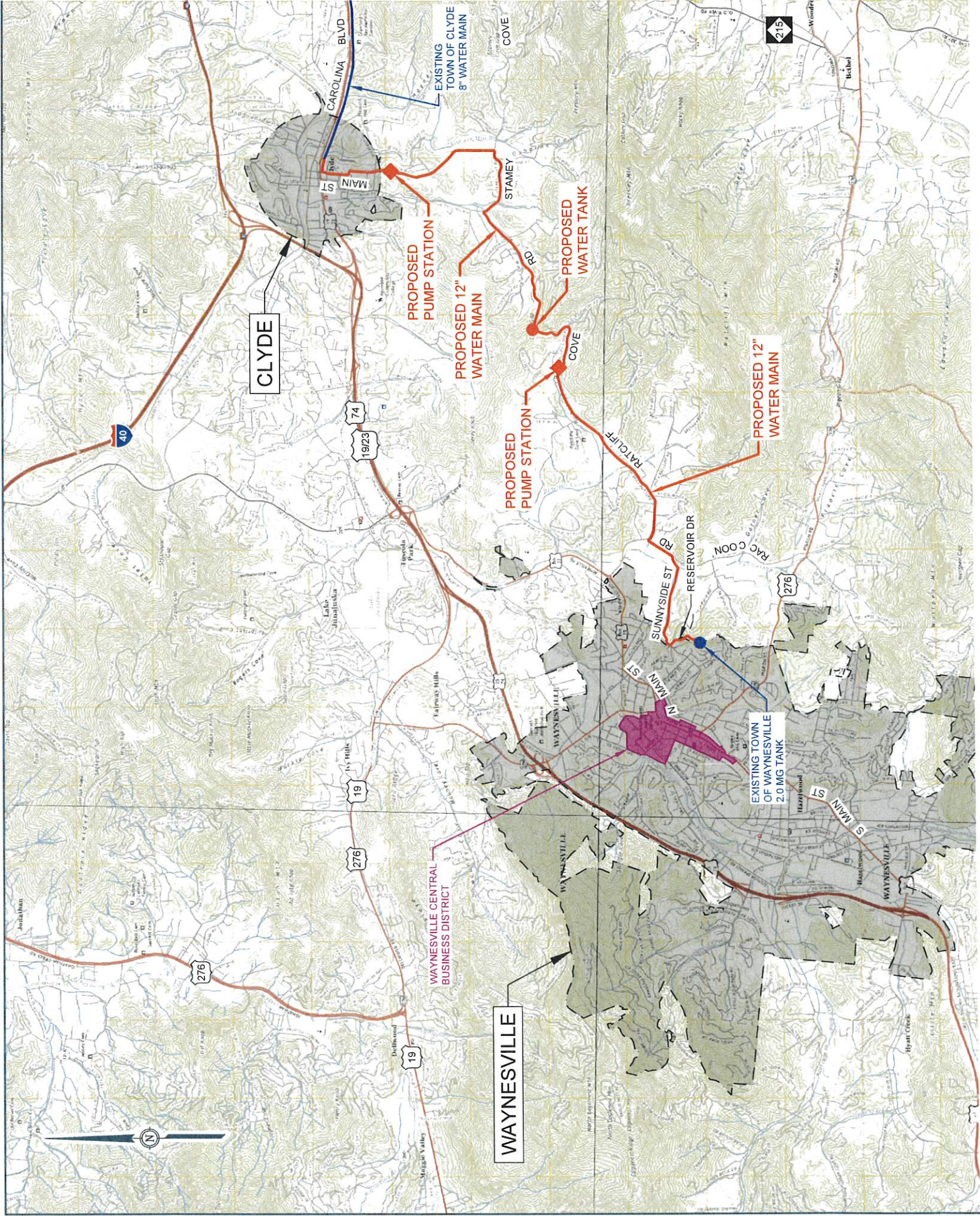
GRAPHIC SCALE

DIVISION VALUE = 3000 FEET

FIGURE

2

ALTERNATIVE 2



PRELIMINARY ENGINEERING REPORT

WATER SYSTEMS INTERCONNECTION

**TOWNS OF CANTON, CLYDE AND
WAYNESVILLE**

MIKE WARESAK, PE



55 Broad Street
Asheville, North Carolina 28801
828-252-0575

Firm License No.: C-0459

REVISED SEPTEMBER 2025

PROJECT NO. 25.00313



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- Figure 1 – Alternative 1 Plan
- Figure 2 – Alternative 2 Plan with Stamey Cove Road

EXECUTIVE SUMMARY

The Towns of Canton, Clyde and Waynesville operate separate, independent public water systems in Haywood County, North Carolina. The Town of Clyde purchases potable water from the Town of Canton. The Town of Waynesville operates an 8.0 million gallon per day (MGD) water treatment plant (WTP) and a water distribution system capable of storing 7.75 million gallons (MG) of finished water. The Town of Canton can meet the Town of Clyde's average daily water demand under normal conditions, however during periods of peak demands, fire flow conditions, or disruption of service from the Canton WTP, the Town of Canton is unable to effectively supply water to Clyde without an interruption of service. Additionally, on separate occasions, disruptions to the Town of Canton's WTP and distribution system have caused several days of water shortages and low water pressure for the Town of Clyde. A direct interconnection between the water distribution systems of the Town of Clyde and the Town of Waynesville would better prepare the municipalities for emergency situations. Additionally, this would provide an alternate water supply for the Town of Canton and the Junaluska Sanitary District (JSD).

The proposed water supply project includes directly connecting the water distribution systems of the Town of Clyde and the Town of Waynesville. Two primary alternatives were considered with slightly different alignments for a portion of the water line. An additional water line was also reviewed to allow a direct interconnection between Waynesville and Canton, and to serve customers in the Stamey Cove area.

ALTERNATIVE 1

Alternative 1 includes installing approximately 33,200 LF of 12-inch ductile iron pipe (DIP) water main along Carolina Boulevard, Main Street, Poison Cove Road, Ratcliff Cove Road, Raccoon Road, Sunnyside Street, and Reservoir Drive. Three booster pump stations, one 750,000-gallon water storage tank, and SCADA systems would also be installed. Lastly, four plots of land, totaling an estimated 2.8 acres, would be purchased. This alternative has an estimated total capital cost of \$15,369,400.

ALTERNATIVE 2

Alternative 2 is very similar to Alternative 1, except for a different alignment for a segment of water line. Alternative 2 includes installing approximately 36,600 LF of 12-inch DIP water main along Carolina Boulevard, Mulberry Street, Stamey Cove Road, Ratcliff Cove Road, Raccoon Road, Sunnyside Street, and Reservoir Drive. Three booster pump stations, one 750,000-gallon water storage tank, and SCADA systems would also be installed. Lastly, four plots of land, totaling an estimated 2.8 acres, would be purchased. This alternative has an estimated total capital cost of \$16,058,500.

STAMEY COVE WATER LINE ADDITION

For the potential to provide direct water supply interconnection between the Towns of Waynesville and Canton, an additional water line has been considered in this report along Stamey Cove Road. When this additional water line is added, Alternative 2 becomes the preferred option since it continues

partially along Stamey Cove Road.

The Stamey Cove water line includes installing approximately an additional 21,900 LF of 12-inch DIP water main along Stamey Cove road, Old River Road, and Penland Street to connect to the Town of Canton's existing water distribution system. Two booster stations, one 100,000-gallon water tank, and two SCADA systems would also be installed. The 100,000 gallon tank is needed only if potable water service to the potential customers in the Stamey Cove area is desired. Lastly, three plots of land totaling an estimated 2.5 acres would be purchased. This alternative has an additional estimated capital cost of \$7,902,600.

RECOMMENDATIONS

Alternative 2 is the recommended alternative. With the proposed improvements, the Town of Waynesville would be capable of supplying water to the Towns of Clyde and Canton should there be disruptions to the Town of Canton's water production or distribution facilities. Likewise, the Town of Canton would be capable of supplying water to the Towns of Clyde and Waynesville should there be disruptions to the Town of Waynesville's water production or distribution facilities. Additionally, the proposed improvements would create a secondary pressure zone for the Town of Clyde and would enable the Town of Waynesville to serve new customers in the region northwest of the Clyde Gap.

If adequate funding can be secured, it is also recommended the additional water line interconnection along Stamey Cove Road be constructed to provide a direct water supply between Waynesville and Canton. The combined cost of Alternative 2 and the Stamey Cove Road water line is shown below.

**Preliminary Opinion of Probable Costs
Recommended Project
Water System Interconnection
Canton, Clyde and Waynesville**

Description	*Cost
Water System Interconnection Project (Alternative 2)	\$16,058,500
Stamey Cove Road Water Line Interconnection	\$7,902,600
TOTAL	\$23,961,100

*Note: Above preliminary opinion of probable costs include construction, contingency, engineering, property/easement acquisition, and other anticipated project costs.

EXISTING FACILITIES

The Town of Clyde (PWS ID 01-44-025) purchases 100% of its potable water demand through two metered interconnections with the Town of Canton (PWS ID 01-44-015). The Town of Clyde's water distribution system consists of 23 miles of 1-inch to 12-inch diameter water lines. According to the Town of Clyde's 2024 Local Water Supply Plan, the water system has 1,271 metered connections with a service area population of approximately 3,264 individuals.

The Town of Clyde's primary water pressure zone is regulated by the 400,000-gallon Carolina Boulevard water storage tank with an overflow elevation (OFE) of 2,871 feet. This tank fills by gravity flow from the Town of Canton's 1 MG Watt Street Tank (OFE 2,896 feet) through the two metered water system interconnections.

As a result of the elevation difference of the two water systems, and the 25-feet of hydraulic head that drives water flow by gravity from Canton to Clyde, the existing Canton-Clyde system interconnections are incapable of supplying water from Clyde to Canton. Additionally, according to the Town of Clyde's Water System Asset Inventory and Assessment Report, completed by McGill Associates in 2017, the Canton-Clyde interconnections are unable to effectively supply water to the Town of Clyde under peak and fire flow conditions.

The Town of Waynesville (PWS ID 01-44-010) operates an 8.0 MGD WTP that draws raw water from the Waynesville Allens Creek Reservoir, a manmade lake formed by the Allens Creek Dam. The Town of Waynesville's water distribution system consists of approximately 144 miles of 1-inch to 30-inch diameter water lines. In 2020, the Town of Waynesville's water system had 6,733 metered connections and a service area population of approximately 17,000 individuals. The Town of Waynesville operates three (3) 2.0 MG ground level water storage tanks, one (1) 0.75 MG clearwell, and 11 storage tanks, for a combined water storage capacity of 7.75 MG. The Reservoir Road 2.0 MG ground level reservoir has an OFE of 2,972 feet and has the capacity to provide storage for the proposed Clyde/Waynesville water system interconnection.

The Town of Clyde has a water purchase agreement with the Town of Canton requiring Clyde to purchase 100% of its potable water demands from Canton. However, several significant storm events in recent years caused disruptions in Canton's water supply and Clyde utilized an emergency interconnection with Junaluska Sanitary District. In 2024, the Town of Clyde purchased an average of 0.226 MGD from the Town of Canton.

In the event the Town of Canton is unable to supply adequate amounts of potable water to Clyde, the Town of Clyde has an emergency interconnection with JSD. This interconnection is located on New Clyde Highway (US 19/23). Historically, JSD has allowed the use of this interconnection for short periods of time. JSD does not have the capacity to supply water to the Town of Clyde when supplying water to its larger customers, notably the Haywood Regional Medical Center and the Haywood Community College. When this interconnection is in operation, the Town of Clyde's water pressure zone is defined by the JSD tank near Tuscola High School (OFE 2,880 feet). In 2024, the Town of Clyde purchased water from JSD for 67 days, according to the Town of Clyde's Local Water Supply Plan.

The Town of Waynesville sells water on a wholesale basis thorough metered interconnections with JSD, Lake Junaluska Assembly (LJA), and Maggie Valley Sanitary District (MVSD). The Town of Waynesville supplies 100% of JSD's and LJA's daily water system demands. Additionally, the Town of Waynesville provides emergency water supply to MVSD. A direct water system interconnection between the Town of Clyde and the Town of Waynesville does not exist.

PURPOSE AND NEED

The purpose of the proposed water distribution system project is to increase the resiliency of public water systems in Haywood County, specifically the Clyde and Canton water systems, by directly connecting the water systems of the Town of Clyde and the Town of Waynesville. This interconnection will allow Waynesville to supply up to 1.0 MGD of potable water to Canton in the event of an emergency. In addition, the proposed interconnection will allow Canton to supply 1.0 MGD of water to Waynesville in the event of a similar water supply emergency.

The Town of Clyde is dependent on the Town of Canton for its daily water demands. In emergency situations, the Town of Clyde may purchase water from the Town of Waynesville through its interconnection with JSD; however, as previously mentioned, the interconnection with JSD is only operational for short periods of time. The Town of Canton is dependent on its own water production facilities for its daily water demands. This leaves the Town of Clyde and the Town of Canton vulnerable to water shortages should there be a disruption to the Town of Canton's water production or water distribution systems.

This vulnerability has become apparent in recent years, especially during Tropical Storm Fred and Hurricane Helene. According to the Haywood County Public Water Systems Resiliency Study Report, prepared by McGill Associates in February 2021, a series of water line breaks in 2018 left several Town of Clyde customers without adequate water supply for five days. The Town of Canton was unable to fill the Town of Clyde's Carolina Boulevard storage tank or directly supply the Town of Clyde through the two Canton-Clyde interconnections during this period. No backup water supply was available. More recently, in August 2021, Tropical Storm Fred caused devastating flooding that rendered the Town of Canton's WTP inoperable for approximately 16 hours, and Canton's WTP was inoperable for an extended period of time beginning in September 2024 during Hurricane Helene. Consequently, the Town of Clyde experienced water shortages during these periods of time, and for several days afterwards, until Clyde's Carolina Boulevard tank could be refilled.

The proposed project would benefit the Towns of Canton, Clyde, and Waynesville. Should there be a disruption to the Town of Canton's water production or water distribution facilities, the proposed project would enable the Town of Waynesville to provide water to the Towns of Canton and Clyde. Likewise, should there be a disruption to the Town of Waynesville's water production or water distribution facilities, the proposed project would enable the Town of Canton to provide water to the Towns of Clyde and Waynesville.

Additionally, under normal and emergency conditions, the proposed project would create a secondary pressure zone for the Town of Clyde capable of supplying water under peak and fire demands. This secondary pressure zone would also better serve the downtown and northern regions of the town. Lastly, the installation of a water storage tank near along Ratcliff Cove Road near the Clyde Gap would create an additional pressure zone that could serve new Waynesville customers northwest of the gap.

ASSUMPTIONS

The following assumptions were considered during the preliminary design phase:

- The Town of Canton and the Town of Waynesville both require 1.0 MG of potable water under emergency conditions.
- As projected in the Water Systems Resiliency Study Report, the 2040 maximum demand for the Town of Clyde is 0.36 MGD.
- The Town of Waynesville could serve 100 new homes (at 400 gpd per home) in the region northwest of the Clyde Gap created by an extension of the water system to interconnect with Clyde.

DESCRIPTION OF ALTERNATIVES

Two alternatives were considered for directly connecting the water systems of the Town of Clyde and the Town of Waynesville.

Alternatives 1 and 2 are very similar, differing only in the alignment of a segment of water line from Ratcliff Cove Road to downtown Clyde. Alternative 1 follows Poison Cove Road, while Alternative 2 follows Stamey Cove Road.

Alternative 1

Both Alternatives 1 and 2 include the installation of the proposed Clyde/Canton water booster pump station situated near the Carolina Boulevard tank. This pump station would be a two-way pump station designed to pump water from the Town of Canton's Watts Street Tank into the Town of Clyde's Carolina Boulevard Tank, or to transport water from the Town of Clyde's water system to the Town of Canton's water system.

Alternative 1 also includes of one (1) booster pump station (Downtown Clyde) with two (2) 300 gpm booster pumps and three (3) 750 gpm booster pumps at the corner of Main Street and Carolina Boulevard; one (1) booster pump station with two (2) 1,500 gpm booster pumps along Ratcliff Cove Road; two (2) SCADA systems, one at each of the proposed booster pump stations; one (1) 750,000- gallon water storage tank along Ratcliff Cove Road near the Clyde Gap; and approximately 33,200 LF of 12-inch DIP water main. The proposed 12-inch DIP water main would connect the existing 8-inch water main along Carolina Boulevard to the proposed downtown Clyde booster pump station, the proposed Ratcliff Cove Road tank, the proposed Ratcliff Cove Road booster pump station, and the existing Reservoir Road tank. Additionally, the proposed project includes the purchase of approximately 0.3 acres of land for the proposed downtown Clyde booster pump station, approximately 0.2 acres of land for the proposed Ratcliff Cove Road booster pump station, approximately 0.3 acres of land for the Clyde/Canton booster pump station, and approximately 2 acres for the proposed Ratcliff Cove Road tank. See Figure 1 for a map showing the proposed infrastructure for Alternative 1.

Under normal conditions, Alternative 1 would enable the proposed downtown Clyde booster pump station to pump approximately 40% of its demand (0.144 MGD (100 gpm)) to the proposed Ratcliff Cove Road tank. This water, which would gravity flow back into Clyde's existing water distribution system, would create the secondary pressure zone necessary to better serve Clyde customers. Additionally, approximately 0.04 MGD would gravity flow from the existing Reservoir Road tank to the proposed Ratcliff Cove Road booster pump station before being pumped to the proposed Ratcliff Cove Road tank. This water would then gravity flow to the new Waynesville customers in the region northwest of the Clyde Gap.

When Canton needs water, Alternative 1 would enable 1.4 MGD (972 gpm) to gravity flow from the existing Waynesville Reservoir Road tank to the proposed Ratcliff Cove Road booster pump station. The proposed Ratcliff Cove Road booster pump station would pump 1.4 MGD (1,458 gpm) from the proposed Ratcliff Cove Road booster pump station to the proposed Ratcliff Cove

Road tank. Approximately 0.04 MGD of this water would gravity flow to the new Waynesville customers in the region northwest of the Clyde Gap. The remaining 1.36 MGD (944 gpm) would gravity flow from the proposed Ratcliff Cove Road tank to the proposed downtown Clyde booster pump station. Approximately 0.144 MGD (100 gpm) of this water would flow directly into Clyde's existing water distribution system. The proposed downtown Clyde booster pump station would pump the remaining 1.216 MGD (844 gpm) to the proposed Clyde/Canton booster pump station. The Carolina Boulevard booster pump station would then pump 1 MGD (694 gpm) to the existing Watts Street tank and 0.216 MGD (150 gpm) to the existing Carolina Boulevard tank.

When Waynesville needs water, Alternative 1 would enable 1.4 MGD (972 gpm) to gravity flow from the existing Watts Street tank to the Clyde/Canton booster pump station, which would pump 0.36 MGD (250 gpm) of this water into Clyde's existing water system. The remaining 1.04 MGD (722 gpm) would be pumped from the Clyde/Canton booster pump station to the proposed downtown Clyde booster pump station. The proposed downtown Clyde booster pump station would then pump 1.04 MGD (1,444 gpm) to the proposed Ratcliff Cove Road tank. Approximately 0.04 MGD of this water would gravity flow to the new Waynesville customers in the region northwest of the Clyde Gap. The remaining 1 MGD (694 gpm) would gravity flow from the proposed Ratcliff Cove Road tank to the existing Reservoir Road tank.

Alternative 2

Like Alternative 1, Alternative 2 also includes the installation of the proposed two-way Clyde/Canton water booster pump station situated near the Carolina Boulevard tank.

Alternative 2 also includes the installation of one (1) booster pump station with two (2) 300 gpm booster pumps and three (3) 750 gpm booster pumps at the corner of Mulberry Street and Carolina Boulevard; one (1) booster pump station with two (2) 1,500 gpm booster pumps along Ratcliff Cove Road; two (2) SCADA systems, one at each of the proposed booster pump stations; one (1) 750,000-gallon water storage tank along Ratcliff Cove Road near the Clyde Gap; and approximately 36,600 LF of 12-inch DIP water main. The proposed 12-inch DIP water main would connect the existing 8-inch water main along Carolina Boulevard to the proposed downtown Clyde booster pump station, the proposed Ratcliff Cove Road tank, the proposed Ratcliff Cove Road booster pump station, and the existing Reservoir Road tank. Additionally, the proposed project includes the purchase of approximately 0.3 acres of land for the proposed downtown Clyde booster pump station, approximately 0.2 acres of land for the proposed Ratcliff Cove Road booster pump station, approximately 0.3 acres of land for the proposed Clyde/Canton booster pump station, and approximately 2 acres for the proposed Ratcliff Cove Road tank. Figure 2 details the preliminary design layout for Alternative 2.

Under normal conditions, Alternative 2 would enable the proposed downtown Clyde booster pump station to pump approximately 40% of its demand (0.144 MGD (100 gpm)) to the proposed Ratcliff Cove Road tank. This water, which would gravity flow back into Clyde's existing water distribution system, would create the secondary pressure zone necessary to better serve Clyde

customers. Additionally, approximately 0.04 MGD would gravity flow from the existing Reservoir Road tank to the proposed Ratcliff Cove Road booster pump station before being pumped to the proposed Ratcliff Cove Road tank. This water would then gravity flow to the new Waynesville customers in the region northwest of the Clyde Gap.

When Canton needs water, Alternative 2 would enable 1.4 MGD (972 gpm) to gravity flow from the existing Waynesville Reservoir Road tank to the proposed Ratcliff Cove Road booster pump station. The proposed Ratcliff Cove Road booster pump station would pump 1.4 MGD (1,458 gpm) from the proposed Ratcliff Cove Road booster pump station to the proposed Ratcliff Cove Road tank. Approximately 0.04 MGD of this water would gravity flow to the new Waynesville customers in the region northwest of the Clyde Gap. The remaining 1.36 MGD (944 gpm) would gravity flow from the proposed Ratcliff Cove Road tank to the proposed downtown Clyde booster pump station. Approximately 0.144 MGD (100 gpm) of this water would flow directly into Clyde's existing water distribution system. The proposed downtown Clyde booster pump station would pump the remaining 1.216 MGD (844 gpm) to the proposed Clyde/Canton booster pump station. The Carolina Boulevard booster pump station would then pump 1 MGD (694 gpm) to the existing Watts Street tank and 0.216 MGD (150 gpm) to the existing Carolina Boulevard tank.

When Waynesville needs water, Alternative 2 would enable 1.4 MGD (972 gpm) to gravity flow from the existing Watts Street tank to the Clyde/Canton booster pump station, which would pump 0.36 MGD (250 gpm) of this water into Clyde's existing water system. The remaining 1.04 MGD (722 gpm) would be pumped from the Clyde/Canton booster pump station to the proposed downtown Clyde booster pump station. The proposed downtown Clyde booster pump station would then pump 1.04 MGD (1,444 gpm) to the proposed Ratcliff Cove Road tank. Approximately 0.04 MGD of this water would gravity flow to the new Waynesville customers in the region northwest of the Clyde Gap. The remaining 1 MGD (694 gpm) would gravity flow from the proposed Ratcliff Cove Road tank to the existing Reservoir Road tank.

It should be noted that Alternative 2 provides the opportunity for a future direct interconnection between the Towns of Waynesville and Canton. This interconnection could be installed along Stamey Cove Road.

Stamey Cove Road Water Line Addition

For the potential to provide direct water supply interconnection between the Towns of Waynesville and Canton, an additional water line along Stamey Cove Road is considered as an additional phase of this project.

The Stamey Cove water line includes installing approximately an additional 21,900 LF of 12-inch DIP water main along Stamey Cove Road, Old River Road, and Penland Street to connect to the Town of Canton's existing water distribution system. Two booster stations, one 100,000-gallon water tank, and two SCADA systems would also be installed. Lastly, three plots of land totaling an estimated 2.5 acres

would be purchased. The 100,000 gallon tank is only needed if it is desired to provide water service to the potential customers in the Stamey Cove area. Depending on the actual elevation of the water tank, it may be necessary to provide a small booster pump station to serve customers at higher elevations near the tank.

The additional Stamey Cove water line includes the installation of one (1) booster pump station at the corner of Stamey Cove road and Mulberry Street to pump water from Waynesville to Canton; one (1) booster pump station along Old River Road to pump water from Canton to Waynesville; two (2) SCADA systems, one at each of the proposed booster pump stations; one (1) 100,000-gallon water storage tank along Stamey Cove Road near the Stamey Cove Gap; and approximately 21,900 LF of 12-inch DIP water main. The proposed 12-inch DIP water main would connect the existing 12-inch water main along Penland Street to the proposed Old River Road booster pump station, the proposed Stamey Cove Road tank, the proposed Mulberry Street booster pump station, and the proposed 12-inch DIP water main near Stamey Cove Road and Mulberry Street intersection included in Alternative 2. Additionally, the proposed project includes the purchase of approximately 0.3 acres of land for the proposed Old River road booster pump station, approximately 0.2 acres of land for the proposed Stamey Road booster pump station, and approximately 2 acres for the proposed Stamey Cove Road water storage tank.

ALTERNATIVE 1 – PRELIMINARY OPINION OF PROBABLE COSTS

Alternative 1 itemized construction, contingency, contract administration, and engineering design/permitting costs are estimated as follows:

PRELIMINARY OPINION OF PROBABLE COST ALTERNATIVE NO. 1 WATER SYSTEMS INTERCONNECTION STUDY TOWNS OF CANTON, CLYDE AND WAYNESVILLE, NORTH CAROLINA SEPTEMBER 2025					
ITEM	DESCRIPTION	QUAN.	UNIT	UNIT PRICE	TOTAL
1	Mobilization (3.0%)	1	LS	3%	\$304,800
2	12" DIP Water Main	33200	LF	\$147	\$4,880,400
3	Downtown Clyde Booster Pump Station	1	LS	\$2,060,600	\$2,060,600
4	Ratcliff Cove Road Booster Pump Station	1	LS	\$659,400	\$659,400
5	Booster Pump Station - Clyde to Canton	1	LS	\$515,200	\$515,200
6	750,000 Gallon Water Storage Tank	1	LS	\$1,516,600	\$1,516,600
7	Connection to Existing 8-inch Water Main Along Carolina Blvd.	1	LS	\$4,100	\$4,100
8	SCADA	1	LS	\$220,000	\$220,000
CONSTRUCTION SUBTOTAL					\$10,161,100
CONTINGENCY					\$2,540,275
PRELIMINARY ENGINEERING					\$65,000
ENVIRONMENTAL					\$50,000
ENGINEERING DESIGN AND PERMITTING					\$1,200,000
BID AND AWARD					\$20,000
CONSTRUCTION OBSERVATION & ADMINISTRATION					\$970,000
PROPERTY/EASEMENT ACQUISITION					\$200,000
FUNDING ADMINISTRATION					\$163,000
TOTAL PROJECT					\$15,369,400

ALTERNATIVE 2 – PRELIMINARY OPINION OF PROBABLE COSTS

Alternative 2 itemized construction, contingency, contract administration, and engineering design/permitting costs are estimated as follows:

PRELIMINARY OPINION OF PROBABLE COST ALTERNATIVE NO. 2 WATER SYSTEMS INTERCONNECTION STUDY TOWNS OF CANTON, CLYDE AND WAYNESVILLE, NORTH CAROLINA SEPTEMBER 2025					
ITEM	DESCRIPTION	QUAN.	UNIT	PRICE	TOTAL
1	Mobilization (3.0%)	1	LS	3%	\$320,300
2	12" DIP Water Main	36600	LF	\$147	\$5,380,200
3	Downtown Clyde Booster Pump Station	1	LS	\$2,060,600	\$2,060,600
4	Ratcliff Cove Road Booster Pump Station	1	LS	\$659,400	\$659,400
5	Booster Pump Station - Clyde to Canton	1	LS	\$515,200	\$515,200
6	750,000 Gallon Water Storage Tank	1	LS	\$1,516,600	\$1,516,600
7	Connection to Existing 8-inch Water Main Along Carolina Blvd.	1	LS	\$4,100	\$4,100
8	SCADA	1	LS	\$220,000	\$220,000
CONSTRUCTION SUBTOTAL					\$10,676,400
CONTINGENCY					
PRELIMINARY ENGINEERING					
ENVIRONMENTAL					
ENGINEERING DESIGN AND PERMITTING					
BID AND AWARD					
CONSTRUCTION OBSERVATION & ADMINISTRATION					
PROPERTY/EASEMENT ACQUISITION					
FUNDING ADMINISTRATION					
TOTAL PROJECT					\$16,058,500

STAMEY COVE ROAD WATER LINE – PRELIMINARY OPINION OF PROBABLE COSTS

The Stamey Cove Road Water Line itemized construction, contingency, contract administration, and engineering design/permitting costs are estimated as follows:

PRELIMINARY OPINION OF PROBABLE COST STAMEY COVE ROAD WATER LINE INTERCONNECT TOWNS OF CANTON, CLYDE AND WAYNESVILLE, NORTH CAROLINA SEPTEMBER 2025					
ITEM	DESCRIPTION	QUANT.	UNIT	UNIT PRICE	TOTAL
1	Mobilization (3.0%)	1	LS	3%	\$ 160,000
2	12" DIP Stamey Cove Road Water Line	22,600	LF	\$ 147	\$ 3,322,200
3	Old River Road Booster Pump Station	1	LS	\$ 640,000	\$ 640,000
4	Stamey Cove Road Booster Pump Station	1	LS	\$ 500,000	\$ 500,000
5	SCADA	1	LS	\$ 200,000	\$ 200,000
6	100,000 Gallon Water Storage Tank	1	LS	\$ 500,000	\$ 500,000
CONSTRUCTION SUBTOTAL					\$ 5,322,200
CONTINGENCY (25%)					\$ 1,330,600
PRELIMINARY ENGINEERING					\$ 50,000
ENVIRONMENTAL					\$ 30,000
ENGINEERING DESIGN AND PERMITTING					\$ 572,100
BID AND AWARD					\$ 20,000
CONTRACT ADMINISTRATION					\$ 457,700
PROPERTY/EASMENT ACQUISITION					\$ 70,000
FUNDING ADMINISTRATION					\$ 50,000
TOTAL PROJECT					\$ 7,902,600

PROPOSED PROJECT

The proposed project consists of directly connecting the potable water distribution systems of the Town of Clyde and the Town of Waynesville. Due to the possibility of a future direct interconnection along Stamey Cove Road between the Towns of Waynesville and Canton, Alternative 2 is the preferred alternative.

In summary, Alternative 2 includes the installation of:

- One (1) booster pump station with two (2) 300 gpm booster pumps and three (3) 750 gpm booster pumps at the intersection of Mulberry Street and Carolina Boulevard
- One (1) booster pump station with two (2) 1,500 gpm booster pumps along Ratcliff Cove Road
- One (1) 750,000-gallon ground water storage tank along Ratcliff Cove Road near the Clyde Gap
- Two (2) SCADA systems, one for each of the proposed booster pump stations
- One (1) connection to the existing 8-inch water main along Carolina Boulevard
- Approximately 36,600 LF of 12-inch ductile iron water main along Carolina Boulevard, Mulberry Street, Stamey Cove Road, Ratcliff Cove Road, Raccoon Road, Sunnyside Street, and Reservoir Drive
- Approximately 0.3 acres of land for the proposed downtown Clyde booster pump station
- Approximately 0.2 acres of land for the proposed Ratcliff Cove Road booster pump station
- Approximately 2 acres of land for the proposed Ratcliff Cove Road water storage tank

The Stamey Cove Road Water Line addition includes the installation of:

- One (1) booster pump station at the intersection of Stamey Cove Road and Mulberry Street to pump water from Waynesville to Canton.
- One (1) booster pump station along Old River Road to pump water from Canton to Waynesville.
- One (1) 100,000-gallon ground water storage tank along Stamey Cove Road near the Stamey Cove Gap
- Two (2) SCADA systems, one for each of the proposed booster pump stations
- One (1) connection to the existing 12-inch water main along Penland street
- Approximately 22,600 LF of 12-inch ductile iron water main along Stamey Cove Road, Ratcliff Cove Road, Old River Road, Penland Street.
- Approximately 0.3 acres of land for the proposed downtown East Stamey Cove Road booster pump station
- Approximately 0.2 acres of land for the proposed West Stamey Cove Road booster pump station
- Approximately 2 acres of land for the proposed Stamey Cove Road water storage tank

The 100,000 gallon tank is only needed if it is desired to provide water service to the potential customers in the Stamey Cove area. Depending on the actual elevation of the water tank, it may be necessary to provide a small booster pump station to serve customers at higher elevations near the tank.

With the proposed improvements, the Towns of Clyde, Canton, and Waynesville would be better prepared for emergency situations. Additionally, the proposed improvements would create a secondary pressure zone for the Town of Clyde and would enable the Town of Waynesville to serve new customers in the region northwest of the Clyde Gap.

Under normal conditions, the Town of Clyde could pump approximately 40% of its daily demand (purchased from the Town of Canton) from the proposed downtown Clyde booster pump station to the proposed Ratcliff Cove Road tank. This would create the secondary pressure zone for the downtown and northern sections of the Town of Clyde. Simultaneously, the Town of Waynesville could send approximately 0.04 MGD of water to the proposed Ratcliff Cove Road tank to serve its new customers in the region northwest of the Clyde Gap.

If the Town of Canton needed water, the Town of Waynesville could supply 1.0 MGD to the Town of Canton, 0.36 MGD to the Town of Clyde, and 0.04 MGD to its new customers northwest of the Clyde Gap. Likewise, if the Town of Waynesville needed water, the Town of Canton could supply 1.0 MGD to the Town of Waynesville's existing customers, 0.36 MGD to the Town of Clyde, and 0.04 MGD to the Town of Waynesville's new customers northwest of the Clyde Gap.

It should be noted that the Town of Clyde would also have the option of purchasing a portion of its daily demand from the Town of Waynesville. This would alleviate the need to operate the downtown Clyde booster pump station on a regular basis; however, this would require the Town of Clyde to revise its water purchase agreement with the Town of Canton.

CONCLUSIONS

The Towns of Canton, Clyde and Waynesville have an opportunity to address a major vulnerability within the public water systems of Haywood County. The installation of a direct connection between the Town of Clyde's water system and the Town of Waynesville's water system would ensure sufficient water supply in the event of a disruption to the water production or water distribution systems of the Towns of Canton or Waynesville. Additionally, the proposed improvements would create a secondary pressure zone for the Town of Clyde, capable of meeting peak and fire demands, and would enable the Town of Waynesville to serve new customers in the region northwest of the Clyde Gap.

If adequate funding can be secured, it is also recommended the additional water line interconnection along Stamey Cove Road be constructed to provide a direct water supply between Waynesville and Canton. The construction of a water tank along Stamey Cove Road would also provide water service to potential customers in the Stamey Cove area. The combined cost of the recommended alternative (Alternative 2) and the Stamey Cove Road water line is shown below.

**Preliminary Opinion of Probable Costs
Recommended Project
Canton, Clyde and Waynesville
Water System Interconnection**

Description	*Cost
Water System Interconnection Project (Alternative 2)	\$16,058,500
Stamey Cove Road Water Line Interconnection	\$7,902,600
TOTAL	\$23,961,100

*Note: Above preliminary opinion of probable costs include construction, contingency, engineering, property/easement acquisition, and other anticipated project costs.