FINDING OF NO SIGNIFICANT IMPACT
AND ENVIRONMENTAL ASSESSMENT

TOWN OF LAKE LURE
SUBAQUEOUS SANITARY SEWER REPLACEMENT PROJECT

RESPONSIBLE AGENCY: NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY

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October 27, 2021

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FINDING OF NO SIGNIFICANT IMPACT

Article I, Chapter 113A of the North Carolina General Statutes requires an action to be subject to the requirements of the North Carolina Environmental Policy Act (NCEPA) if it involves the expenditure of public funds and if a potential impact is anticipated to the environment. The project has been evaluated for compliance with the NCEPA and is determined to be a major agency action, which will affect the environment.

Project Applicant:	Town of Lake Lure, North Carolina
Project Description:	The Town of Lake Lure's sewer collection system and wastewater treatment plant (WWTP) are in need of significant repairs, which will be constructed in multiple phases. This Finding of No Significant Impact applies to Phase 1, which will include installation of a sewer access valve in the Lake Lure dam, rehabilitation of the Town's existing wastewater treatment plant (WWTP), and replacement of a portion of the existing Subaqueous Sewer System (SASS).
Project Number:	CS370489-05
Project Cost:	$12,750,000 (Phase 1 only)
Clean Water State Revolving Loan Fund:	$12,500,000
Local Funds:	$250,000

The review process indicated that significant adverse environmental impacts should not occur if mitigative measures are implemented, and an environmental impact statement will not be required. The decision was based on information in the Engineering Report/Environmental Information Document (ER/EID) submitted by the applicant and reviews by governmental agencies. The attached Environmental Assessment (EA), prepared by the Division based on the ER/EID, supports this action and outlines mitigative measures that must be followed. This Finding of No Significant Impact (FONSI) completes the environmental review record, which is available for inspection at the State Clearinghouse.

No administrative action will be taken on the proposed project for at least 30 days after notification that the FONSI has been published in the North Carolina Environmental Bulletin.

Sincerely,

Jon Risgaard

Jon Risgaard, Section Chief
State Revolving Fund Section
Division of Water Infrastructure

ENVIRONMENTAL ASSESSMENT

A. Proposed Facilities and Actions

The Town of Lake Lure's sewer collection system and wastewater treatment plant (WWTP) are in need of significant repairs to address inflow and infiltration and compliance issues. Due to the magnitude of issues with the system and limited funding available, the project will be constructed in multiple phases.

The proposed improvements associated with Phase 1 include installation of a sewer access valve in the Lake Lure dam, rehabilitation of the Town's existing wastewater treatment plant (WWTP), and replacement of a portion of the existing Subaqueous Sewer System (SASS). The Phase 1 construction area for the SASS improvements will begin at the dam and will run along the north and south shorelines for approximately 15,450 linear feet (lf). Existing sewer flows will be collected via a network of gravity sewers running parallel to the lake sure line. The HDPE manholes and HDPE pipe are designed for long-term elimination of infiltration of lake water into the collection system.

Phase 1 work at the WWTP will include correcting the fine screen installation, installing a grit removal system, and replacing the existing digester with a new digester of the same size. That plant's capacity of 0.995 million gallons per day (MGD) will not be changed.

Dewatering of the construction area is required for construction of the sewer collection system. The existing gates allow for the lake to be lowered by twelve feet. A sewer access valve will be installed in the base of the dam to allow the lake level to be lowered an additional eight feet. The valve can be used for construction and as needed for future repairs.

Phases 2 through 5 will include construction of the rest of the gravity lift sewer system. Each phase is expected to take approximately two years with Phase 5 completion anticipated in 2032. Phase 6 will convert the existing WWTP to an Integrated Fixed Film Activated Sludge system, with completion anticipated in April 2034. Completion of the future phases is dependent on financing.

This environmental assessment covers construction of Phase 1 only, for which funding has been secured. Note that the Engineering Report/Environmental Information Document (ER/EID) that was used as the basis for this environmental assessment included rehabilitation of approximately 40 existing manholes. That portion of the project has been removed from the scope of this project and is not included in this environmental assessment.

Funding Status: The estimated total cost for the entire project is $62,480,757. Phase 1 has been determined based on available funding with a project cost of $12,750,000. The Town is applying for a Clean Water State Revolving Fund (CWSRF) loan of $12,500,000. Closing costs/administrative fees of $250,000 will be paid with local funds.

B. Existing Environment

Topography and Soils. The Town of Lake Lure is located in the Mountain Physiographic Province with elevations ranging from 800 feet to 1,150 feet mean sea level. The project area is in the Inner Piedmont, Chauga, Smith River Allochthon, and Saurtown Mountain Belts geographic formations.

Soil types along the perimeter of Lake Lure include the following: Evard-Cowee Complex consisting of moderately deep, well drained, moderately rapidpermeable soils on mountain slopes, hillslopes, and ridges; Greenlee soils consisting of very deep, well drained, moderately rapidly permeable soils on benches, fans, and footslopes; Pacolet soils consisting of very deep, well drained, moderately permeable soils that from in residuum weathered mostly from felsic igneous and metamorphic rocks of the Piedmont uplands; Rion soils consisting of very deep, very well drained, moderately permeable soils that formed in mostly weathered saprolite derived from granite and gneiss, acid crystalline rock; Rion-Ashlar Rock Outcrop Complex consisting of Rion soils and Ashlar soils (coarse-loamy, mixed, semiactive, thermic Typic Dystrudepts) which consists of a moderately deep, excessively drained, moderately rapid permeable soils that formed in residuum from felsic igneous or high-grade metamorphic rock; Tate consisting of deep, well drained, moderately permeable soils on benches, fans, and toe slopes; and Udorthents Soils consisting of well drained, moderate to slowpermeable soils of loamy and clayey human-transported material, mine spoil, or earthly fill derived from igneous, metamorphic and sedimentary rock.

Surface Water. Lake Lure was created by construction of two dams across the Broad River. The lake's water classification is "B" and "Tr" and Broad River's classification is "C". The project area includes Buffalo Creek, Cane Creek, Island Creek, Pool Creek, and Rock Creek. Island Creek is classified as "C". The other creeks are all "C" and "Tr.'

Water Supply. The primary source of drinking water for the Town is a series of wells located around the Town and a large well located in Chimney Rock Village.

C. Existing Wastewater Facilities

The Town owns and operates a WWTP, triplex pump station, sanitary collection and conveyance system, and the SASS. Several private collection systems discharge into the SASS, including Rutherford County's system serving Chimney Rock Village, Rumbling Bald Resort, Blue Heron Point, and Firefly Cove.

The entire system collects wastewater from approximately 1,032 service connections serving a population of approximately 1,150. The collection system in the Lake Lure sewershed includes approximately 6.6 miles of 10-inch to 18-inch diameter gravity sewer interceptors, 200 feet of 12-inch forcemains, approximately 7.2 miles of 4-inch to 10-inch laterals, and one lift station with capacity of 915 gallons per minute (gpm). The gravity pipes and forcemains are made of

cast iron pipe System components range in age from 51 years to 93 years old. The sewer shed also includes 445 residences with septic tanks.

The WWTP was originally constructed in 1969 as a 0.350 MGD activated sludge plant. It was renovated in 1991 and converted into a physical/chemical process permitted for 0.995 MGD. The WWTP struggles to meet the NPDES permit limits during winter months, and routinely fails to meet the limits in the summer, primarily due to lake infiltration into the SASS and inflow and infiltration (I&I) into the land-based collection systems. The dilution of flow by lake water requires a physical chemical treatment process that cannot remove ammonia. The WWTP is considered noncompliant and has received numerous notices of violation (NOVs). The most frequent causes of NOVs are total suspended solids, ammonia, and flow. The single first step screen is installed incorrectly and allows solids to bypass the screen. The digester is at the end of its useful life and structurally deficient. Several components are located below the 100-year floodplain elevation, aging, and do not meet current recommendations for treatment. Sludge from the plant is handled by hiring septic haulers to remove and haul sludge to a disposal site as needed.

The pump station was originally constructed in 1969 as the influent pump station for the plant. It was moved in 2000 to the current location. It has three 15-horsepower pumps and rated at 459 GPM. Due to elevation of the WWTP, running all three pumps results in sanitary sewer overflow (SSO) at the plant.

The SASS was constructed simultaneously with the hydroelectric dam that created Lake Lure. It initially consisted of fourteen miles of cast iron gravity sewer ranging from 8-inches to 20-inches diameter. Flow enters into the system through 65 manholes located along and/or within the lake perimeter. Laterals run from the manholes to the main line that was installed to the north of what was the Broad River bed prior to creation of the lake. The main interceptor is 10-inch to 18-inch diameter cast iron pipe. Much of the line is no longer visible due to silt and sediment, and the exact location is unknown. In 2009, a joint pipe wrapping project was undertaken to reduce inflow of lake water. While a noticeable reduction in lake inflow was realized, the joint wrap used for the project is nearing the end of its 15-year service life. Town staff have observed lake inflow increasing as the pipe wrap and cast iron age and degrade. The SASS experiences I&I through the land-based collection system, lake water entering through manholes and private laterals during high lake level, and infiltration entering through deeper laterals and the main interceptor at lower lake levels. The system experiences approximately 0.40 MGD of lake infiltration at all times, with additional I&I into the system during rain events. The WWTP's headworks pumping station is overwhelmed by the flow and leads to SSOs. The system is considered non-compliant. Due to the location and inaccessibility of the SASS, assessment of the system, rehabilitation, and repairs are very limited. The collection system is considered noncompliant due to excessive I&I and risk of catastrophic failure as the cast iron pipe continues to deteriorate. The Town is currently negotiating a Special Order by Consent (SOC).

D. Need for Proposed Facilities and Actions

Lake infiltration into the Town's wastewater system dilutes wastewater and prevents compliance with the WWTP's NPDES permit and makes treatment of wastewater with a biological process

impossible. Both the SASS and the WWTP need replacement and rehabilitation to provide for current and long term regulatory compliance.

The proposed project will replace the SASS to provide a dependable collection system, relieve stress on existing infrastructure to allow for more dependable wastewater collection and treatment, and eventually allow the WWTP to be converted to biological process to meet permit limits. Improvements to the WWTP will allow for improved operation in the interim.

E. Alternatives Analysis

The alternatives analysis considered five alternatives for replacing the SASS and four alternatives for the WWP as follows:

SASS Alternative 1 – No Action: This alternative would continue operating the SASS with no improvements. This alternative was rejected because it would increase the number of SSOs and NOVs and eventually result in catastrophic failure of the system.

SASS Alternative 2 – Backshore Gravity/Lift Station: This alternative would collect flow through a network of gravity-flowing sewers parallel to the entire shoreline of Lake Lure (over nineteen miles). The sewer system would include HDPE manholes and pipe designed for complete and long term elimination of infiltration, with sewer manholes spaced less than 1,000 lf apart to allow for maintenance as needed. Unlike conventional sewers, the mains will follow the approximate curvature of the shoreline using HDPE pipe bending. This system can continue downstream as a gravity sewer system for up to a mile or more with the limit driven by the elevation to which the lake level will be lowered to accommodate construction. This alternative, and all backshore alternatives, will include installation of a sewer access valve in the dam to allow for lowering the lake level to accommodate construction. The Town anticipates lowering the lake level by approximately 20 feet. The system will be augmented with simplex lift stations at each depth-limited manhole. The first segment of pipe downstream from each lift station will be sized to accept the pump flow. Each pump station will include a stand-by generator. Provisions for possible pump failure will include sizing the first downstream pipe segment to convey flow by gravity that would be received from the system upstream of the pump station in het event of a failure. The full project would include approximately 101,000 lf of HDPE sewer and approximately 110 manholes, some of which would be the anticipated 15 pump stations along the shoreline. Due to funding limitations, this and other alternatives would need to be constructed in phases. Currently funding allows for construction of Phase 1 only, which will include approximately 8,500 lf along the north shoreline and 7,000 lf along the south shoreline and eliminate reliance on the existing SASS for all properties adjacent to the Phase 1 construction area. This phase is not expected to include lift stations. This alternative is preferred because it carries the lowest cost compared to other alternatives

SASS Alternative 3 – Backshore Pump Stations: This alternative would have similar gravity sewer components as Alternative 2, including over 19 miles of HDPE sewers, manholes, and service laterals. Pump stations in this alternative would take flows from the gravity system and pump them into a pressure pipe network running parallel to the gravity system. Under this

alternative, approximately 22 pump stations would be installed along the shoreline. Stations farthest from the dam would require higher horse powers with the pressure network discharging into a gravity system closer to the dam. This alternative would also include the sewer access valve in the dam to allow for lowering the lake level for installation. This alternative has somewhat higher capital cost and substantially higher operation cost, and would likely require property acquisition and easements for generators to support the pump stations. For these reasons, this alternative is rejected.

SASS Alternative 4 – Backshore Low Pressure Sewer System: This alternative would use individual grinder pump stations at each residence or tie-in location installed above the lake elevation that would pump to a common forcemain. The system would include approximately 19 miles of HDPE forcemain ranging from 2-inch to 10-inch diameter, 1,112 grinder pump stations, and four traditional duplex pump stations. A sewer access valve would be installed in the dam to allow for construction of the forcemain in the backshore area. This alternative is more likely to have negative environmental impacts due to the risks of failure when relying on so many pump stations. This alternative has higher capital cost, higher operating cost associated with pump stations, and would require the town to acquire a large number of rights-of-way. This system is also not well suited to the intermittent use that is typical as the Town is a resort community. This alternative is rejected due to higher costs and increased risk of failures.

SASS Alternative 5 – Land Based Low Pressure System: This alternative would use individual grinder pump stations at each residence or tie location to pump to a common forcemain, similar to Alternative 4, but under this alternative, the forcemain would run along perimeter roads and drives rather than being installed in the backshore area. The system would include approximately 28 miles of HDPE forcemain ranging from 2-inch to 6-inch diameter and 760 individual grinder pump stations and two traditional duplex pump stations. The pressure networks would discharge into gravity sewer to flow to the WWTP. Similar to Alternative 4, this alternative also has higher risk of negative environmental impacts due to risks of pump station failures and has higher costs than the preferred alternative. This alternative would also require installation of the forcemain along roads and drives that are not currently maintained by the Town and with no existing rights-of-way. Construction would also require open cutting highways for significant lengths, including substantial amount of rock excavation and disruption to residents. This alternative is considered infeasible because of the substantial acquisition of rights-of-way that would be required.

Phase 1 of the overall project will include only limited rehabilitation work at the WWTP with the more substantial replacement work to occur in future phases not covered by this environmental assessment. The Town has considered multiple alternatives for the WWTP which are briefly summarized to provide context for the overall project.

WWTP Alternative 1 – No Action: The No-Action alternative would continue operation of the existing WWTP without improvements. This alternative is infeasible because the WWTP cannot meet existing NPDES permit limits.

WWTP Alternative 2 – Sequencing Batch Reactor (SBR): This alternative would include modifications to all existing WWTP structures to enable the plant to operate with an SBR

process. This alternative was rejected because it has the highest total present worth cost and requires utilization of a temporary treatment plant.

WWTP Alternative 3 – Moving Bed Biological Reactor (MBBR): This alternative would modifications to all WWTP structures to enable the plant to operate with an MBBR process. This alternative has only slighter higher total present worth cost compared to the preferred alternative, but it is rejected due to more difficult operations and maintenance related to capturing free floating media and maintenance of fixed diffuser.

WWTP Alternative 4 – Integrated Fixed Film Activated Sludge (IFAS): This alternative would modifications to all WWTP structures to enable the plant to operate with an IFAS process. This alternative is preferred because it offers the lowest total present worth, small foot print, redundancy, and a modular submerged fixed film for easier operations and maintenance.

For Phase 1, the preferred overall alternative is the combination of SSAS Alternative 2 Backshore Gravity/Lift Station WWTP Alternative 4 IFAS WWTP.

F. Environmental Consequences and Mitigative Measures

Note that the Engineering Report/Environmental Information Document (ER/EID) that was used as the basis for this environmental assessment included rehabilitation of approximately 40 existing manholes. That portion of the project has been removed from the scope of this project; therefore, the minor impacts associated with that construction work in the ER/EID are not included here.

Topography and Soils: Construction activities for the project will have minimal impact on topography and soils. The lake level will be lowered to accommodate construction in the backshore area to replace the SASS. Upon completion, disturbed areas will be under water. A small amount of construction will occur outside of the backshore area for lateral connections with minimal impacts. Minimal, temporary impacts to the 100-year floodplain and floodway will include open-cut to install lines. Disturbed areas will be restored to pre-construction conditions and stabilized with native vegetation. Installation of the sewer access valve will occur within the footprint of the existing dam and will have limited disturbed area. Improvements to the WWTP will be done on the existing plant site with minimal land disturbance. No soils will be moved offsite and no soil contamination is expected. Proper erosion and sedimentation controls will be implemented.

Land Use: Impacts to land use are not expected to be significant. Most of the construction will take place on land already used for sewer infrastructure. The project does not directly provide sewer service to any new areas and replaces the existing SASS. The original SASS was intended to serve all lots adjacent to and surrounding the lake; however, many property owners chose to install septic tanks rather than connect to the SASS. The proposed project is sized to provide service to the same area initially intended to be served by the SASS, so there is capacity to add additional connections and potential for some growth and development in the sewershed. Any

future development would be required to comply with the Town's Comprehensive Plan and Land Use Regulations in the Rutherford County Planning and Development Ordinance.

Wetlands: Significant impacts to wetlands are not anticipated. One wetland area has been identified on the west side of the lake. This area will not be disturbed for construction of the project. Sediment and erosion control measures will be implemented.

Important Farmlands: Significant impacts to important farmlands are not anticipated. The project area includes a two-mile stretch of prime and unique farmland along the southeast perimeter of the lake, but the land is not in agricultural use.

Public Lands and Scenic, Recreational, and State Natural Areas: Significant impacts to public lands, scenic, recreational, or state natural areas are not expected. Thirteen state or federal natural areas have been identified within a five-mile radius of the project area: Lost Colony Coves/Raven Cliffs, Cloven Cliffs/The Pinnacles, Weed Patch Mountain/Joel Ridge, Rattlesnake Knob, Chimney Rock Natural Area, Stony Mountain/Rich Mountain, Bat Cave/Bluerock Mountain, Bald Mountain/Round Top Mountain, Rumbling Bald/Shumont Mountain/Cedar Knob, Youngs Mountain/Kens Rock, Worlds Edge/Sugarloaf Mountain, Cane Creek Mountain, and Rotten Creek Headwater Slopes. None of these areas are expected to be impacted by the project.

Cultural Resources: Impacts to cultural and historic resources are not anticipated. The North Carolina State Historic Preservation Office (SHPO) is not aware of any historic resources that will be impacted by the project (January 3, 2017, ER 16-2351). Pine Gables is located 1.8 miles west of the project area and is included on the North Carolina National Register. It will not be impacted by the project. No other cultural and historic resources have been identified.

Air Quality: No significant impacts to air quality are anticipated. Construction activities will have temporary and localized impacts related to exhaust from construction equipment and dust from exposed construction areas. Disturbed areas will be promptly reseeded to minimize impacts. Periodic odor complaints may be expected with any wastewater collection and treatment system, no increase in odor complaints is anticipated.

Noise Levels: No significant permanent noise impacts are anticipated. Construction activities will be limited to daylight hours (weekdays from 7:00 am to 6:00 pm). Operation of the WWTP may have noise impacts, but these impacts would be similar to existing operations.

Water Resources: No significant impacts to water resources are anticipated. Construction of the SASS will require lowering the lake level. Currently the lake can be lowered by 12 feet. Installation of the sewer access valve will allow an additional 8 feet of lower. The lake is lowered as a rate of 1-foot per day, as required by the NPDES permit. By following the same rate that has been used in the past, the environmental impact of the additional 8 feet is not expected to result in any additional impact. Installation of the valve will be confined to the footprint of the dam. Sediment and erosion control measures will be implemented to minimize impacts from construction activities. The stream bed and banks will be regraded and restored to original conditions following construction. The Rutherford County Stormwater Ordinance requirements

and the Lake Lure Soil Erosion and Sedimentation Control Regulations must be followed for any future development along with Section 404/401 of the Clean Water Act.

Forest Resources: Direct impacts to forest resources are not anticipated. Any future development would be required to comply with the Town's Comprehensive Plan and Land Use Regulations in the Rutherford County Planning and Development Ordinance.

Shellfish or Fish and Their Habitats: Significant impacts to shellfish, fish, and their habitats are not expected. The Lake will be lowered for construction at a steady, controlled rate of 1-foot per day to minimize environmental impacts. There may be temporary impacts as a result of the lake lowering but re-establishment of natural stream elevations will allow for recovery of habitat and species in the lake and area streams. There is no evidence of threatened or endangered aquatic species in or downstream of the project area.

Wildlife and Natural Vegetation: No significant impacts to wildlife and natural vegetation are expected. Construction activities may temporarily disturb wildlife behavior, but conditions will be restored following construction. Eight threatened and endangered species have been identified surrounding the project area: American Peregrine Falcon (Falco Peregrinus Anatum), Indiana Bat (Myotis Sodalist), Northern Long-Eared Bat (Myotis Septentrionalis), Bald Eagle (Haliaeetus Leucocephalus), Dwarf-flowered heartleaf (Hexastylis naniflora), Small Whorled Pogonia (Isotria Medeoloides), White Irisette (Sisyrinchium Dichotomum), and Rock Gnome Lichen (Gymnoderma Lineare). None of these species have been identified within or immediately adjacent to construction areas, and impacts to these species are not anticipated. Although the project is not intended to serve undeveloped areas, the system does have capacity to support possible development. The Town has agreed to consult with the U.S. Fish and Wildlife Service prior to future development to identify avoidance and/or minimization efforts that might be needed for protected species.

Introduction of Toxic Substances: The project is not expected to introduce toxic substances into the environment. During construction, fuels and lubricants needed for equipment will be located in a contained area to control any spills. Contractors will be required to perform vehicle inspections and maintenance to minimize pollution. The WWTP operation already includes measures to prevent toxic substances from entering the environment.

The U.S. Fish and Wildlife Service reviewed the proposed project and did not object to the project. The North Carolina Wildlife Resources Commission, Natural Heritage Program, and DWR Asheville Regional Office do not object to the proposed project. The U.S. Army Corps of Engineers was consulted and did not object to the project. The North Carolina Department of Natural and Cultural Resources is aware of no historic resources that would be affected by the project (January 23, 2017, ER 16-2351).

G. Public Participation, Sources Consulted

The Town of Lake Lure held a virtual public meeting via Zoom on September 14, 2021. The meeting was advertised in advance with time allowed for submittal of comments and questions

following the meeting and included a presentation based ER/EID prepared for this project. A summary of questions and answers from the public meeting is provided in Attachment 1.

Note that at the time of the public meeting and when the ER/EID was prepared for this project, the project scope included rehabilitation of approximately 40 existing manholes. That portion of the project has been removed from the scope of this project. The Town intends to proceed with that rehabilitation as a separate project with separate funding.

The current user charge for a typical residential customer is $120.45 per month for water and sewer service combined, based on consumption of 5,000 gallons per month. The proposed project will not increase user rates because the Town had previously raised rates to cover anticipated debt service for the SRF loan.

Sources consulted about this project for information or concurrence included:

1) Town of Lake Lure
2) Rutherford County
3) North Carolina Department of Environmental Quality
   -Wildlife Resources Commission
   -Natural Heritage Program
   -DEQ Asheville Regional Office
   -Division of Air Quality
   -Division of Water Resources
   -Division of Forest Resources
   -Division of Environmental Assistance and Customer Service
   -Division of Waste Management
6) North Carolina Department of Natural and Cultural Resources
7) North Carolina State Clearinghouse
8) North Carolina Department of Public Safety
9) U.S. Fish and Wildlife Service
10) U.S. Army Corps of Engineers

Subaqueous Sanitary Sewer Replacement
Town of Lake Lure, Rutherford County, North Carolina
LaBella Commission Number: 2200559
SRF Project No.: CS370489-05

September 14, 2021 @ 5:00 pm

Location: Zoom

Public Meeting Questions and Answers:

The meeting was closed, so no questions were taken during the meeting. All questions were submitter prior to or after the public meeting. The questions below are from citizens or property owners of Lake Lure.

Question:
Does the $12.5m loan cover the total sewer replacement cost or only Phase 1? What is the latest estimate of total cost for sewer replacement? What are the plans for presumably passing the cost on to residents?

Answer:
The $12.5M loan is for phase 1 only, the capital cost for the total sewer replacement is $56,395,285. The utility rates have been adjusted to cover the debt service of Phase 1. The Town and its consultants are actively seeking funding for future phases that minimizes the rate increases necessary to fund the total project cost.

Question:
On page 10 of the report, “this additional lowering is not anticipated to have any greater environmental effect than the previous lake level reductions.” I have a concern about the “gulleys” formed in the past during lake drawdown runoffs and any other lake bottom disturbances that occur in coves and other areas exposed during drawdown.

Answer:
As the report stated, the additional lowering will not have a greater impact. The project site will be inspected during the construction to monitor changes in lake bottom settlement.

Question:
On page 14 “The Town of Lake Lure (Town) is also looking to impose sewer development fees to new customers and would set rates consistent with the size of living space for the new customer. . . Sewer Development Fees and Availability Fees would provide a significant and immediate source of new revenues to form a capital reserve and increase cash flow to source follow-on phases of design and construction.” My hope is that those on septic systems are looked at as a significant source of revenue to install the SASS.

Answer:
You are correct, all current and potential new connections to the GLS are viewed as a revenue source for the SASS replacement.

Question:
Are there any provisions for a “blanket” permit for portions or all of the connections required for septic system owners? i.e. Trout Buffer, Lake Structure Permits, County plumbing permits, etc.

Answer:
We are not aware of any current no provision to provide a “blanket” permit. All necessary permits should be pursued under applicable statutes and ordinances.

Question:
The statement on page 179 indicates that many people chose to install septic tanks due to issues involved with connecting to the existing sewer with only 65 manholes. While this may indeed be true, there are those who were not allowed to connect with the sewer system due to a moratorium placed on any additional connections to the sewer system (around 1998 for my house according to the builder.)

Answer:
Thank you for this information, the statement on page 179 was a general statement based on conversations with property owners and NCDEQ-DWR. I do not believe the builder was correct in their assessment of the implications of the moratorium. As the proposed system is put into service current and potential customers will be able to connect to the system.

Question:
While the land disturbance of the replacement of the direct components of SASS as mentioned on page 182 and 183 will be minimal; connection to the SASS by those residences currently on a septic tank may involve significant land disturbance.

Answer:
The scope of work and land disturbance for each particular customer depends greatly on current sewer layout of that residence. These projects would be handled by the individual residences and would be subject to all relevant statutes and ordinances.

Question:
How are lift stations powered? What is visible/involved with the location of a lift station? According to the C201 map on page 693 of the Engineering Report, there will be a lift station in the shallow portion of our cove. Will this affect the use of the cove?

Answer:
The lift stations will be powered through electrical connections. A detail of the manholes and pump station are shown in figures 5.1 and 5.2 of the ER-EID. The pump station locations are selected based on the location and sewer design. They will be located close to the shore and will be visibly indicated to prevent damage from boating and other traffic. The locations of manholes and pump stations show in the report are schematic and do not reflect the final design locations. The final locations will be based on the final design and field investigations. The placement will not result in blocked coves or structures.

Question:
I'm also concerned about the availability of contractors that are qualified and available to make the required connections. I would hate to pay for "availability fees" when waiting 6-9 months for a contractor.

Answer:
It is beyond the scope of the ER-EID to evaluate the ability and quantity of available contractors. The "availability fees" are dependent on the GLS construction and not related to the availability of private contractors.

Question:
I assume that the location of the new replacement damn does not conflict with the location of the sewage treatment plant and therefore will remain an acceptable location.

Answer:
The location of the replacement dam is being coordinated with both the GLS and WWTP. The current placement downstream of the existing dam will not interfere with the WWTP or GLS.

Question:
What are the development options for the land that is intended(?) to be used as a State Park (South of Blue Heron Point.) Is there an option proposed for that area? (I realize this is not in Phase I, but consideration must be taken when designing the treatment facility.)

Answer:
It is beyond the scope of this report to make recommendations on land use, however current and project land uses will be used in sizing the GLS and WWTP.

Comment:
The town's elected leadership is dealing with overwhelming infrastructure problems bequeathed to them by several generations of previous office holders. There is no solution to

those problems that is not dependent on massive amounts of funding from state and federal governments. The Town is simply attempting to marshal the funds necessary to "match" or provide seed monies to prime the pump for funding decisions made by higher levels of government.

Response:
The Town is using a holistic approach to the infrastructure needs of Lake Lure. They are aggressively pursuing multiple funding sources and types. The Town fully realizes the magnitude of the infrastructure demands and is using a variety of strategies to minimize the impact to residents.

Comment:
In regards to the new sewer system, the Town plans to partially fund the project with increased user and connection fees. Unfortunately, as part of the opening gambit of a 12-year strategy, the Town is also contemplating the use of funds from ad valorem (general) property taxes. That would require residents who will never derive any benefit from the new sewer system to help pay for it.

Using general property taxes for the benefit of only one segment of a general population is acknowledged by North Carolina law as unfair. Accordingly, the state legislature would have to pass specific legislation allowing the move. That would be a bad result for a number of reasons.

Response:
The statutes related to ad valorem taxes is beyond the scope of this report. The Town plans to fund the project in part through user and connection fees. The Town is investigating numerous potential revenue sources simultaneously to seek the best options for the Town.

Comment:
First, there is no projection of the amount of any shortfall based on real numbers. Revenues from usage fees and connection fees should at least be estimated before seeking authorization for a blank check drawn on taxpayers who will never derive any benefit from this piece of the Town's infrastructure.

Response:
The timing and scope of the current phase is based on the available funding, debt service, revenues, and projected capital cost. The timing and scope of future phases will be based on the same metric.

Comment:
Second, the Report notes that projected sewer usage fees will be among the highest in the state. It also purports to compare those fees to the median household income for the area and reaches a conclusion that they will not be excessive. If fees are be kept lower by relabeling the extra amounts collected as ad valorem taxes charged to the same people, that renders the Report's analysis of these two points meaningless.

Response:
The comparison of user fees in surrounding communities is a common metric to assess the general affordability and sustainability of a community's rate structure. The comparison of MHI to user fees is a typical metric of affordability. The report details the current loan and debt service and mentions various possible funding methods for future phases. The implementation of future rate increases or other financial obligations is beyond the scope of this report.

Comment:
Finally, the observation is offered that a new sewer system will increase property values throughout the community. As a truism from a text book, that works. However, it is unsupportable here. A review of current and past real estate listings in the Town indicates that very, very few listings (if any) tout being on city services as a positive selling point. Moreover, as the cost of Town sewer services increases, potential buyers will compare the monthly/annual expenditures to those of maintaining a septic system and find the latter is a far more economical option.

Response:
An analysis of current and future property values is beyond the scope of this report. We are unsure of the specific reference, which is not cited. The general consensus among those involved in the writing of the report is that the proposed sewer system will preserve property values by eliminating the reliance on the existing high risk collection system.

Comment:
I have a tremendous amount of empathy and admiration for the Town's current elected officials and support their efforts to remedy problems caused by decades of sloth and indecision. However, enabling legislation that would allow the use of ad valorem taxes will likely be fought by local residents (those whose political acumen reaches beyond wake surfing) and generate a major distraction from their efforts to resolve infrastructure problems. I encourage the Town to develop a more specific budget indicating that 1) there is simply no other alternative and 2) what the amount of funds necessary might be before making any attempt to move this question into a contentious public arena.

Response:
The identification and political implications of future funding sources is beyond the scope of this report. However, your comments and concerns are being documented for consideration.

Question:
What is the exact location for phase one? Is it past the dam to the Lake House Restaurant?

Answer:
The phase one area is shown on figure 2.3A and figure 3.1 in the ER-EID. The intent is to begin and the dam and go south to the Highway 9 corridor just past the Lake House Restaurant. The

work would continue to the north of the dam toward Sunset Cove. The work would also involve gravity sewer behind the dam.

Question:
When completed, will the sewer system be available for homes located in the phase one area when the lake is filled?

Answer:
Yes, the respective phases will be available for connection upon their completion. The project includes a lateral connection that will be installed in the shoreline and above the lake elevation. This lateral connection will be the connection point for residents and can be connected to regardless of lake elevation.

Question:
Will there be an impact, user, or any other fee to tap into the system? If yes, will it be required?

Answer:
Yes, there will be fees associated with the new system. The existing sewer collection system will be abandoned over the course of the future phases. The result is that all current users who directly connect to the existing sewer system will be required to connect to the proposed sewer system when it becomes available.

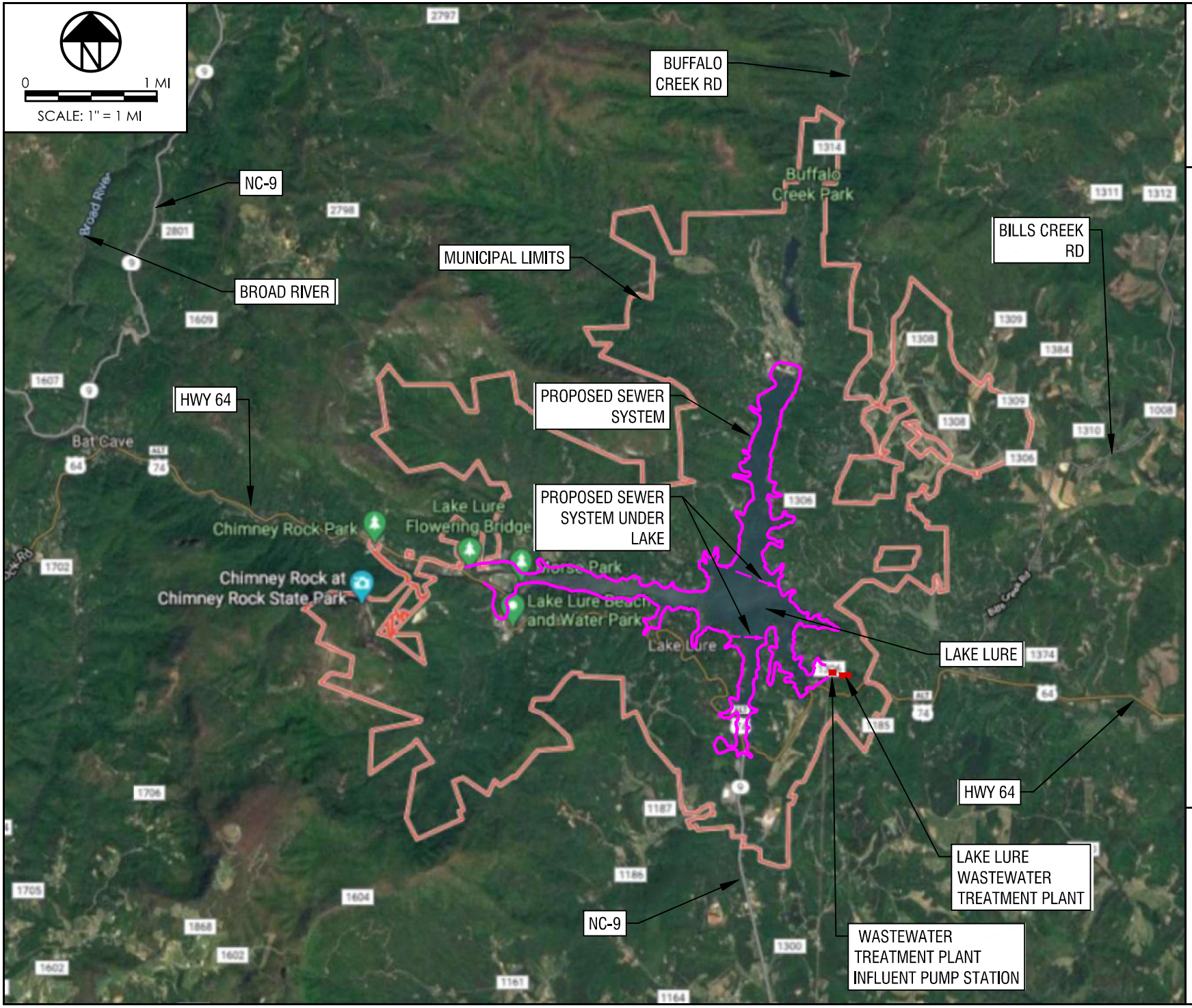

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Figure 1.1

September 2020

Project Vicinity Map
Lake Lure Sewer System
Lake Lure, North Carolina

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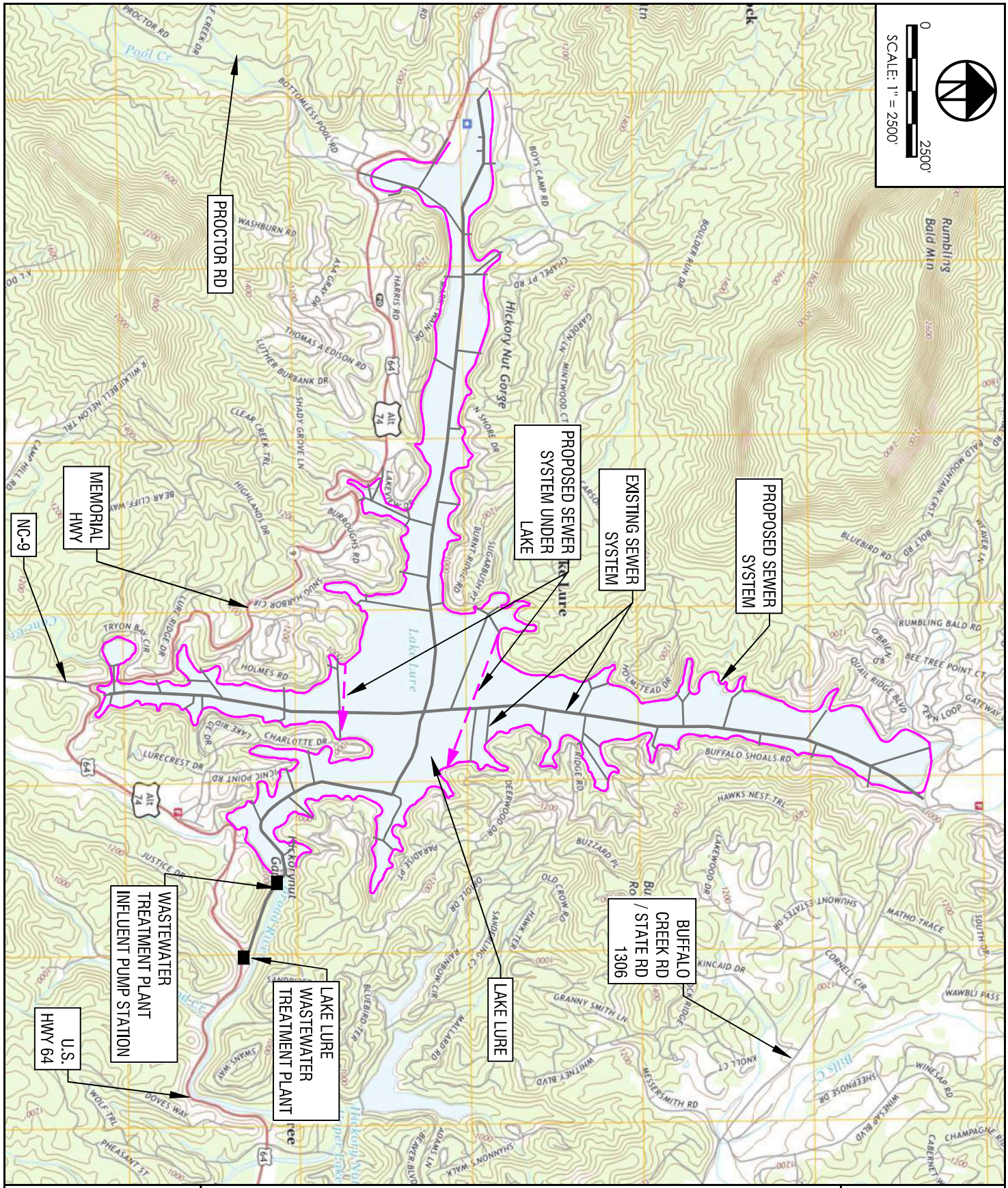

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Project Location Map
Lake Lure Sewer System

Lake Lure, North Carolina

Comm. No. 2200559

Figure 1.2

September 2020