



MINUTES OF THE REGULAR WORK SESSION AND ACTION MEETING OF THE LAKE LURE TOWN COUNCIL HELD WEDNESDAY, JANUARY 24, 2024, 8:30 A.M. AT THE LAKE LURE MUNICIPAL HALL

PRESENT: Mayor Carol C. Pritchett
Mayor Pro Tem David DiOrio
Commissioner Scott Doster

William Hank Perkins, Jr., Town Manager
William Morgan, Jr., Town Attorney
Brian Houston, PE, LaBella Associates
Richard Carpenter, Dev. & Envir. Review Specialist
Michael Williams, Community Development Director
Michael Dydula, Project Manager
Dustin Waycaster, Fire Chief
Laura Krejci, Communications Director
Jonathan Pittman, PE, Schnabel Engineering
Brendan Stepek, PE, Schnabel Engineering
Laura Shearin-Feimster, Sr. Engr., Schnabel Engineering
Jason Fischer, Morgan Corporation
Gary Johanik, Ruby-Collins
Corey Shull, Ruby-Collins
John Metcalf, the Policy Group
Eric Josey, the Policy Group

ABSENT: Commissioner Jim Proctor
Commissioner Patrick Bryant

I. CALL TO ORDER

Mayor Carol C. Pritchett called the work session and action meeting to order at 8:30 a.m.

II. AGENDA ADOPTION

Commissioner David DiOrio made a motion to adopt the agenda, as presented. Commissioner Scott Doster seconded and the motion carried 4-0.

III. PUBLIC COMMENT

There were no comments from the public.

IV. WASTEWATER TREATMENT PLANT MASTER PLAN PRESENTATION

Brian Houston, PE, LaBella Associates presented the Wastewater Treatment Plant (WWTP) master plan overview (Attachment A). Mr. Houston explained that the purpose of the GLS project is to solve the Town's sewer collection system problems, but there are still issues related to the WWTP that will need to be solved as well. Mr. Houston explained that the WWTP was originally designed to hold a smaller amount of gallons per day (GPD), but current limits are higher. Mr. Houston explained that there are factors that need to be determined including future capacity, site selection, costs, and when the project needs to begin. Mr. Houston detailed that one of the first tasks in the master plan was to determine the service area and total build out flows. It was noted that it is important to account for future development. Mr. Houston explained that he used a comprehensive plan map to determine flow capacity per land use which determines the total build out. Commissioner DiOrio asked if Mr. Houston considered if the design criteria should be the maximum number of hook ups per maximum use, which will likely be during the peak season. Mr. Houston answered that he used the maximum amount based on development and estimated growth rate. It was noted that the Town needs the flexibility to handle larger flows. Project Manager Dydula asked if Chimney Rock Village users were accounted for and Mr. Houston answered yes. Mr. Houston displayed census data from 2020 and detailed a moratorium growth of two percent. Mr. Houston also noted that it is estimated that the population will be around 3,426 by the year 2050. Commissioner DiOrio expressed that once that Town is able to treat the full capacity, the moratorium will likely be released. Mr. Houston agreed and noted that moratorium is connected to the Special Order by Consent (SOC), so the moratorium should be released when the SOC is no longer in place. Manager Perkins agreed with Commissioner DiOrio and Mr. Houston, but noted that staff will find out for certain. Mr. Houston explained that he considered residential growth and how empty lots in Town will develop. It was noted that any lake front property will have to hook up to the new system. Mr. Houston noted that lots with septic were also discussed and that some may connect to the new system and some may not. Project Manager Dydula stated that every homeowner that he has spoken to with septic have expressed that they would prefer to hook on to the new system if they are able. Mr. Houston noted that all of the factors discussed thus far are considered when calculating estimated flows. Mr. Houston noted that based on whether or not the census is accurate, the baseline may or may not need to change. Mr. Houston reviewed total 2050 estimated wastewater flows and total buildout estimated wastewater flows. Mr. Houston added that he considered potential for commercial development growth as well. Manager Perkins noted that the Town may need to review how this connects to the sewer agreement with 1970s Chimney Rock Village. Mr. Houston expressed that he thinks that the

convoluted nature of estimation is complex and advised that Council and staff to read the entire WWTP master plan document thoroughly and note any numbers that may need to be changed. Commissioner DiOrio noted that it seems that other similar communities are comparable and questioned if Mr. Houston looked at similar communities. Commissioner DiOrio noted that the current flow is about 300k without rain or lake effluent, so he feels that the predicted flow numbers are high. Mr. Houston noted that he used DEQ numbers which are 100k per person and that they likely are high. Commissioner DiOrio asked if there are breakpoints and Mr. Houston answered that there is one large breakpoint. Mr. Houston reviewed DEQ's 80/90 rule which entails that when you reach an average flow of 80% of capacity, you must submit a plan for expansion and at 90% you must have construction plans ready to bid. Mr. Houston also reviewed estimations for 2050 related to the 80/90 rule. Mr. Houston explained that engineers generally look at flow numbers through million gallons per day (MGD).

Mr. Houston began reviewing site selection criteria including how much space is needed, what type of process is needed, and what limits to expect. Mr. Houston expressed that the Town needs to plan for major municipal expansion. Mr. Houston discussed ammonia levels are a factor in determining what limits to expect and it was noted that ammonia levels are the Town's main concern. Mr. Houston explained that the site selection needs to be suitable for secondary effluents, have a compact footprint, be flexible for variable flowrates, be efficient in operation and maintenance, and be relatively cost effective.

Mr. Houston reviewed three process alternatives including Integrated Fixed Film Activated Sludge (IFAS), Sequencing Batch Reactor (SBR), and Rotating Biological Compactor (RBC). Mr. Houston reviewed pros and cons of each alternative related to maintenance, odor, and operational complexity. Mr. Houston concluded that IFAS is the recommended alternative. Mr. Houston noted that smallest possible footprint would be 60' x 175', but a plant this compact would ideal.

Mr. Houston reviewed further information regarding site selection. It was noted that three private sites had been evaluated. Mr. Houston detailed that site #1 is a difficult site, gravity feed, and the Town is already discussing purchasing the property. Mr. Houston stated that site #2 is also a difficult site, gravity feed, and is space-limited by a creek. Mr. Houston explained that site #3 is a good site, but requires an influent pump station.

Mr. Houston reviewed capital costs and it was stated that the bottom line for the entire project is \$33.4M. Mr. Houston reviewed various line items.

Commissioner Doster asked if the Town will be required to demolish or decommission the existing plant and Mr. Houston answered that the Town would need to decommission and clean up the existing plant, but the concrete tanks could remain in place if the Town wanted them to.

Mr. Houston explained that determining when to complete the new plant, the GLS replacement will need to be considered. It was noted that the existing plant can treat diluted wastewater, but the new plant will not be able to. Mr. Houston explained that any connections to the existing sewer system will need to be treated at the existing plant. Mr. Houston further explained that this means that as long as the Town has diluted wastewater, the existing plant must stay in use. Mr. Houston expanded that the new plant can be online whenever it is built, but it does

not need to be until the GLS project is completed. Commissioner DiOrio questioned if the Town should run the existing plant and the new plant at the same time because each addition to the new system should reduce effluent and improve issues related to the moratorium. Mr. Houston explained that running two plants at once may or may not mitigate issues. Commissioner DiOrio expressed that it thinks that it would help significantly. Mr. Houston estimated that it will take four years total to start design of the new WWTP. Commissioner DiOrio summarized the big phases for completing the WWTP are design, land procurement, construction. Commissioner DiOrio stated that the Town would have to procure the site location before design. Manager Perkins noted that the Town also needs to establish a capital improvement plan. It was noted that the cost estimates are conservative and in today's dollars. Commissioner DiOrio expressed the importance of procuring land and obtaining funds.

Commissioner Doster made a motion to adjust the agenda to move project manager updates to Item V and renumber subsequent items accordingly. Commissioner DiOrio seconded and all voted in favor.

V. PROJECT MANAGER UPDATES

Project Manager Dydula explained that Morgan Corporation is having a difficult time working with the Town to minimize amount of water below the dam during rain events. It was noted that the valves are currently the top priority, so it is being proposed to leave the gates closed during rain events which makes it hard for Ruby-Collins to complete their work because they need the lake to be drawn down 12 feet at all times. Project Manager Dydula noted that parties from Ruby-Collins, Morgan Corporation, Schnabel Engineering, and LaBella Associates are in attendance. Project Manager Dydula explained that it would be best to pull Ruby-Collins of the project at this time because the Town cannot keep the lake down 12 ft. for Ruby-Collins and account for the valve project at the same time. It was noted that there is usually a fee to break contracts and Ruby-Collins is currently looking at numbers but estimated that the cost will be about \$200,000. Commissioner DiOrio noted that all of pre work for the valve installation ran the normal run of river and asked what had changed. Project Manager Dydula explained that the culverts and the road to go over the dam was designed to handle 500 CFS which was previously thought to be sufficient. It was noted that the Town can sometimes run the small generator during rain events while Morgan Corporation is working, but the large generator floods the bottom of the dam. Jason Fischer with Morgan Corporation explained that the scope of the project was originally meant to happen during a dryer part of the year and that there have been three rain events that have impacted the project. Mr. Fischer added that once Morgan Corporation has completed current scope, they will be able to handle more water. Commissioner DiOrio noted that Morgan's delay ended up overlapping with Ruby-Collins and Project Manager Dydula disagreed and stated that land transaction pushed back the schedule. Commissioner DiOrio asked if Morgan Corporation and Ruby-Collins can operate simultaneously when at normal river rate without rain event and Mr. Fischer answered yes. Project Manager Dydula explained that it will be at least two weeks of work duration to get to that point where they can operate with more water, but after the two weeks bay 5 work will be done which will take an additional two weeks. Project Manager Dydula added that if Ruby-Collins is kept on the job, it would realistically be a month until they could work property during a rain event and that they would only have a month left in the drawdown which would not

allow them to accomplish much work. Project Manager Dydula noted Town he and Ruby-Collins have been brainstorming if they could do any other work during this time and it was inconclusive. Commissioner DiOrio asked what the plan is for the water rate between now and April 1st to allow Morgan Corporation to work. Project Manager Dydula answered that the lake will be kept down 12 feet and the Town will let the lake absorb any of the rainfall instead of opening the gates or using the large generator. It was noted that Schnabel is modeling rain water events to help. It was further explained that if there is more than 6 ft. filled up out of the 12 ft., Town staff will then have to use the gates or generators. Manager Perkins noted that people are working on seawall repairs, but these could continue being worked on with up to a 6 ft. drawdown. Commissioner DiOrio expressed that it is his understanding that this decision is results in the Town managing the safety factor below 6 ft. and limiting to that low flow throughout the valve installation. Commissioner Doster asked Jonathan Pittman with Schnabel had any comments and Mr. Pittman stated that a lot of the factors during critical work were originally scheduled during a dryer time and the rain events that could not have been predicted impacted the project. Mr. Pittman expressed that he thinks that this is the best course to take in order to get the valves installed on time. Commissioner DiOrio expressed that he understood that they are building a safety barrier by making this decision. Commissioner DiOrio asked about the implications for this decision related to Ruby-Collins. Project Manager Dydula explained that the Town will incur costs for time and material, it will be in writing that work is being suspended and that the work will be completed next year. Commissioner DiOrio asked where the pre procured equipment would be stored and Ruby-Collins answered that they are already using laydown area and Public Works. Project Manager Dydula added that all of the equipment should remain on Town property. Commissioner DiOrio expressed that at this point, the Town must support the drain valve installation in order to draw the lake down 20 ft. next year. Mr. Houston expressed that ARPA funds must be spent by 2026 and that he is not concerned about this impacting the spending of funds, but he will be concerned if no work could be done next year. Commissioner DiOrio mentioned that the ARPA money can also fund WWTP work. Commissioner DiOrio expressed appreciation for Ruby-Collins and their increased manpower. Commissioner DiOrio noted that there is now a strategic communication issue and the Town must communicate with citizens. Commissioner DiOrio added that the Town will also need to communicate with DEQ and Mr. Houston agreed to speak with DEQ, but expressed that he does not think that they will have any concerns. Project Manager Dydula stated that he thinks that the residents of the Town understand that the two projects are related and that the valve installation is the current priority and Commissioner Doster agreed. Commissioner DiOrio asked that Morgan Corporation complete the concrete work by the end of March because the lake must come up after that. Mr. Fischer explained that it is also in Morgan Corporation's best interest to complete concrete work before because they will eventually need the lake raised to access their barge. Project Manager Dydula said a couple of additional weeks of draw down could be requested. Mayor Pritchett responded that Council would need to be notified of that request as soon as possible. Mayor Pritchett stated that the community understands the importance of the valve installation. Project Manager Dydula expressed that Morgan Corporation and Schnabel Engineering have done a fantastic job at figuring out how to make the valve installation project continue to proceed.

Project Manager Dydula noted that the only other topic that he has to report is that he is meeting with the North Carolina School of Government in the near future to discuss whether or not the Town can sole-source LaBella Associates for dredging.

VI. ARBOR DAY 2024 PROPOSAL PRESENTATION

Specialist Carpenter noted that the Town has lost more trees than have been planted in recent years and recommended holding an Arbor Day event in which the community plants trees in Morse Park. Mr. Carpenter explained that he is working with Parks, Recreation, and Trails Coordinator Dana Bradley on a tree project and that he has been responsible for tree planting and planning at former locations. Specialist Carpenter added that he has the background to manage this type of event, but will have the help of the Parks and Recreation Department. Specialist Carpenter requested Council's approval to allow him to proceed with hosting an Arbor Day event with key stakeholders in the community, such as the Lake Lure Classical Academy and the Lake Lure Flowering Bridge. Specialist Carpenter expressed that there is a need for additional canopy and that a good location for increased canopy would be along the creek bank. Specialist Carpenter added that it would be beneficial to plant different types of species that are good for tree banks and buffer/sedimentation control. Mayor Pritchett asked if the trees would be donated or if the Town would pay for them. Specialist Carpenter noted that the Town would likely have to pay, but the most expensive species would be about \$170. Commissioner DiOrio expressed that he loves the idea and thinks that it could create a larger movement that encourages residents to clean their properties and plant trees. Manager Perkins noted that he had a similar event held in a park at a prior Town and that the trees had sponsorships. Commissioner Doster noted that Morse Park plan amenities would need to be accounted for when planting trees. Specialist Carpenter stated that they would only be planted along the riparian buffer or were there were trees previously. Council members expressed support. Commissioner DiOrio recommended that Specialist Carpenter present this to the regular Council meeting in the future.

VII. REVIEW TEXT AMENDMENT FOR CODE OF ORDINANCES SECTION 36-70

Director Williams explained that the proposed text amendment basically corrects a discrepancy within the ordinances. Director Williams expanded that there is a schedule that shows setbacks which references R-4 district as having the same side and rear setbacks as most other residential districts, but R-4 is specifically called out as having different side and rear setbacks in a different section. Director Williams expressed that because R-4 is specifically called out as having different setbacks, staff feels that there was a specific reason in doing so and that the schedule should be amended to reflect the setbacks that are specified for R-4. It was noted that R-4 is residential office district.

VIII. REVIEW PRELIMINARY DRAFT OF LEASE FOR 2654 MEMORIAL HIGHWAY

Manager Perkins explained that he and Town Attorney William Morgan have been working on a base lease draft for 2654 Memorial Highway based on other leases that Attorney Morgan had drafted and elements from Mr. Paul Brock and Mr. Wade Oppliger's proposal. It was detailed that Mr. Brock's LLC will be signing the lease and that he will work with Mr. Oppliger under a separate agreement. Manager Perkins noted that the dates listed are fluid and that Mr. Brock and Mr. Oppliger had not yet seen the draft lease. Manager Perkins pointed out that the price of rent is \$4000 per month

and that the concession fees are detailed. Manager Perkins added that there will be annual increases based on CPI. It was noted that the proposal acts as an exhibit that is cited in the lease. Manager Perkins made note that an element that is not yet included is the Town's responsibilities because there are three components that still have yet to be determined including the deck which the Town has not received requested details about, three to four parking spaces, and horizontal grooves in boat ramp. Manager Perkins noted that there is a land use component that will have to be resolved because they cannot fit a deck without encroaching on property lines, so Mr. Brock and Mr. Oppliger are working with Community Development to figure out a solution.

Mayor Pritchett noted that it is her understanding that Council's approval was for negotiations rather than all details in the proposal. Commissioner DiOrio expressed that he does not think the proposal should be part of the lease. Commissioner DiOrio recommended providing a mechanism to allow the Town review and approve any temporary or permanent structures or structural improvements on a case by case basis, rather than citing the proposal. Commissioner DiOrio noted that with his recommended caveat, it establishes a mechanism that allows Mr. Brock and Mr. Oppliger to decide what they want to do and for the Town to make final approvals. Attorney Morgan noted that it would be possible to remove the proposal as an exhibit and Commissioner DiOrio expressed support for removing the proposal. Commissioner Doster asked where the WNC Collective is detailed in this lease. Commissioner DiOrio expressed that it is his understanding the current draft of the lease lists Mr. Brock's LLC as the tenant and allows him to sublet the building and Attorney Morgan agreed, but added that they cannot sublet without the Town's permission. Council members expressed that they would like the lease to mention the WNC Collective.

Council discussed the role of the Parks and Recreation Board in determining what activities are permitted on the property. It was concluded that Council would only like the Board to make recommendations specifically related Pool Creek Park or similar land use. It was noted that all other approvals will go directly to Council who will be provided with information from Community Development.

Manager Perkins noted that Parks, Recreation, and Lake Director Dean Givens had mentioned that there may be a need to detail the lake use model in the lease. Commissioner DiOrio recommended establishing a minimum annual concession fee equivalent to \$5,000. Commissioner DiOrio noted that Mr. Brock and Mr. Oppliger have already been informed that their non-motorized operations would require commercial permits, a concession agreement, and must be in the commercial model. Commissioner DiOrio recommended detailing this in the lease.

Mayor Pritchett asked why they would halt rent for 90 days upon entering into the lease agreement. Attorney Morgan noted that it is common for commercial to allow a 90 day period without rent, but this detail can be removed from the lease.

Manager Perkins noted that there is a 180 day notice for the five year option prior to the expiration of the initial five year term. Council discussed that the tenants will not be able to break the initial five year lease without consequences.

It was discussed that all improvements aside from trade fixtures would become town property after the end of the lease.

Commissioner DiOrio recommended removing the proposal as the exhibit aside from the graphic. Commissioner DiOrio also recommended that Mr. Brock's LLC, Mr. Oppliger's boat operations, and the WNC Collective should all be addressed in the lease. Commissioner DiOrio asked that all of the parties be signatories on the lease. Manager Perkins agreed to discuss with Mr. Brock and Mr. Oppliger that the Town would like for WNC Collective to be involved in the lease because it was a big part of the reason that Council opted for negotiations for their proposal. Commissioner DiOrio noted that it is in Mr. Brock's best interest to include the Collective in the lease because it would hold them accountable as well.

Manager Perkins and Attorney Morgan will meet with Mr. Brock and Mr. Oppliger to further discuss details.

IX. REVIEW VOLUNTEER BOARD APPLICATIONS

It was discussed that the applications were provided for Council's review prior to making appointments during the regular February meeting. It was also noted that there may be one vacancy on the Board of Adjustment / Lake Structure Appeals Board and that there is not an urgent need to fill the vacancy because the Board has alternative members.

X. TOWN MANAGER UPDATES

Manager Perkins announced has arranged a community meeting with Duke Energy on February 20th at 3:00 p.m. It was noted that Chimney Rock Village should be involved, as well.

Manager Perkins recalled past discussions regarding electric vehicle (EV) chargers and explained that staff will be re-visiting the maintenance agreement with NovaCHARGE that was previously reviewed. Manager Perkins explained that it has been determined that it would be beneficial to enter into this agreement rather than a more complex agreement with another company because of future updates to Morse Park that could impact the chargers. There was consensus to approve the maintenance agreement with NovaCHARGE under the consent agenda at the next regular meeting. Manager Perkins expressed that the agreement needs to be in place soon, so the chargers can be ready for use during the peak season.

Commissioner Doster noted that he received a message about the Town's voting precinct and that the County made the decision to have the precinct located in Bills Creek.

XI. LEGISLATIVE UPDATE WITH THE POLICY GROUP

Mr. John Metcalf and Mr. Eric Josey with The Policy Group thanked Council for allowing them to come speak today. Mr. Metcalf explained that he would like to begin discussing the 2024 legislative session. Mr. Metcalf explained that the general assembly will be starting the short legislative session in April or May, and that The Policy Group would like to provide the Town with an expected timeline and discuss legislative needs. Mr. Metcalf explained that they would also like to discuss strategies and manage expectations. Mr. Metcalf explained that North Carolina

operates a biennium budget. It was detailed that the most recent legislative session was longer than expected because of unexpected topics emerging, but the state did pass the budget. Mr. Metcalf added that the short sessions, which happen during even years, have a main purpose of tweaking the existing budgets. Mr. Metcalf explained that short sessions typically last three months and usually conclude on time. It was noted that with the upcoming election season, legislators are eager to complete the legislative session and begin working on campaigning. Mr. Metcalf expressed that it will be a competitive election season and a lot of money will be raised, and when legislators are in session it prohibits them from receiving any PAC money or participating in other campaigning mechanisms. Mr. Metcalf explained that the budgeting process should start now and that about 70 percent of the budget will be completed prior to the session, while the remaining 30 percent will be determined during the session. It was discussed that there is potential that the budget will be passed with a few spending bills, but municipal spending will likely be off the table. Mr. Metcalf added that when it is time to begin considering legislative bills, it is important to have them prepared to the level that they will be passed. Mr. Metcalf explained that only a handful of bills get passed through the assembly and many do not even move. It was noted that republicans have super majorities in both chambers. Mr. Metcalf stated that The Policy Group is happy to help the Town, but there are also great legislators that the Town can work with right now.

Commissioner DiOrio noted that the big picture is that the Town is making progress on multiple projects. Commissioner DiOrio explained that the Town previously received \$16 million for the dam replacement, but costs have tripled since then. Commissioner DiOrio explained that there is a long way to go on infrastructure projects, but Lake Lure is doing all that is possible to keep the projects on track including contributing and utilizing a number of appropriations, but more funding will be necessary in the future. Commissioner DiOrio asked what the Town's approach should be to continue to be on the bill. Mr. Metcalf explained that the Town would have to be on a budget bill, but there are sometimes non-local standalone bills. Mr. Metcalf added that he would recommend approaching budget bills unless it is a bill in regard to a policy. Commissioner DiOrio asked if the Town has a play in the budget bill and what the Town would need to provide to The Policy Group to make that happen. Mr. Metcalf answered he Town always has a play, but there is a strategy that since it is election season, it would behoove legislators to run bills prior to elections and be in good standing with constituencies. Mr. Metcalf explained that the Town would need to provide The Policy Group a realistic number request and Mr. Metcalf would approach legislators and start lobbying.

Manager Perkins mentioned the public safety building and fire apparatus that the Town currently has studies and reports on and asked if it would be better to seek funding for these items rather than major projects since there are existing funds and a longer timeline associates with those projects. Commissioner DiOrio expressed that as the Town continues to invest in infrastructure, it might be beneficial to have a near term focus on public safety based on the space needs study. Commissioner DiOrio explained that medical services in Rutherford County are currently chaotic because there was a non-profit structure that stopped operations, leaving medical services to the responsibility of the government and that hiring issues in the field have negatively impacted response times. Commissioner DiOrio added that this would be mitigated in Lake Lure with better accommodations for emergency services personnel. Mayor Pritchett and Commissioner Doster noted that Town staff is currently the only medical care in the Town, and they are constantly gaining more certifications to provide better services. Manager Perkins expressed that he thinks

that the Town has a good plan to enhance public safety facilities through the recent studies conducted. Mayor Pritchett asked Fire Chief Dustin Waycaster how many paramedics are in Rutherford County. Chief Waycaster explained that there are a limited number and that the County and municipalities are having issues retaining staff because other areas are recruiting with the ability to pay higher wages. Chief Waycaster noted that being able to upgrade the public safety facility would make the Town eligible for a Staffing for Adequate Fire and Emergency Response (SAFER) grant. Chief Waycaster added that a SAFER grant would help the Town with funding for recruitment and retention. Mr. Metcalf explained that there will be less money involved in the legislative short session it will be less money, so he thinks that it is wise to go after public safety funds during this session rather than funding for infrastructure. Mr. Metcalf added that it seems that public safety is an urgent matter for the community. Mr. Metcalf requested that the Town gather information to present to legislators to ask for public safety funds. Manager Perkins explained that the Town already has studies including costs and alternatives. It was discussed that the Town would like a facility for both fire and police at some point, but fire is the main priority at this time. Mr. Metcalf asked how much the Town would like to ask for funding for public safety and Manager Perkins answered that Town staff is in the process of looking at debt service and determining how much to ask for supplementation. Mr. Metcalf recommended asking for an attainable number such as \$1 million or less. It was noted that the Town would need to prove to legislators that the funds are necessary. Mr. Metcalf advised that the Town provide him with a couple of different numbers to ask for and he will speak with Senator Moffitt. Chief Waycaster stated that the fire apparatus will cost about \$760,000 and it will cost about \$120,000 for equipment to outfit the apparatus. Manager Perkins noted that it would be beneficial to receive state funding to help with the design of the public safety facility, as well. Manager Perkins mentioned the capital reserve that the Town has established for buildings and land and detailed that \$50,000 was earmarked for the public safety facility. Chief Waycaster explained that the Lake Lure department responds to the calls from Chimney Rock State Park and that the Town does not receive any revenues from the State Park. Communications Director Laura Krejci agreed and noted that the State Park's numbers have increased significantly this year. There was consensus ask for public safety funds during this session. It was noted that the Town has documents and will build additional supporting details to present to legislators. Commissioner DiOrio asked when the Town would need to provide The Policy Group with the necessary information and Mr. Metcalf answered that it would be needed by early February. Mr. Metcalf recommended that Council invite legislators to speak at a Council meeting. Council thanked the Policy Group.

XII. ADJOURNMENT

Commissioner DiOrio made a motion to adjourn. Commissioner Doster seconded and all voted in favor. The meeting was adjourned at 12:06 p.m.

ATTEST:

Olivia Stewman, Town Clerk

Mayor Carol C. Pritchett



Town of

Lake Lure

est. 1927

North Carolina

Attachment A

WASTEWATER TREATMENT PLANT MASTER PLAN

OVERVIEW
JANUARY 24, 2024



LaBella
Powered by partnership.



WHY?

GLS will solve the Town's sewer collection system problems, but the WWTP

...sits on a tiny site in the flood plain

...has no process redundancy

...was designed for only 350,000 gpd

...struggles to meet current limits

...can't treat undiluted wastewater

...is 55 years old



‘MASTER PLAN’ - LEVEL ISSUES

Capacity to serve now and future

Where to put it – i.e., Site Selection

How much space is needed?

What type of process is needed?

What limits do we expect?

How much will it cost?

When do we need to start?

CAPACITY

Define Service Area

Identify Density and Use Types

Ultimate / Build-Out

Estimate Growth Rate

Planning Horizon (25 years – 2050)

CAPACITY

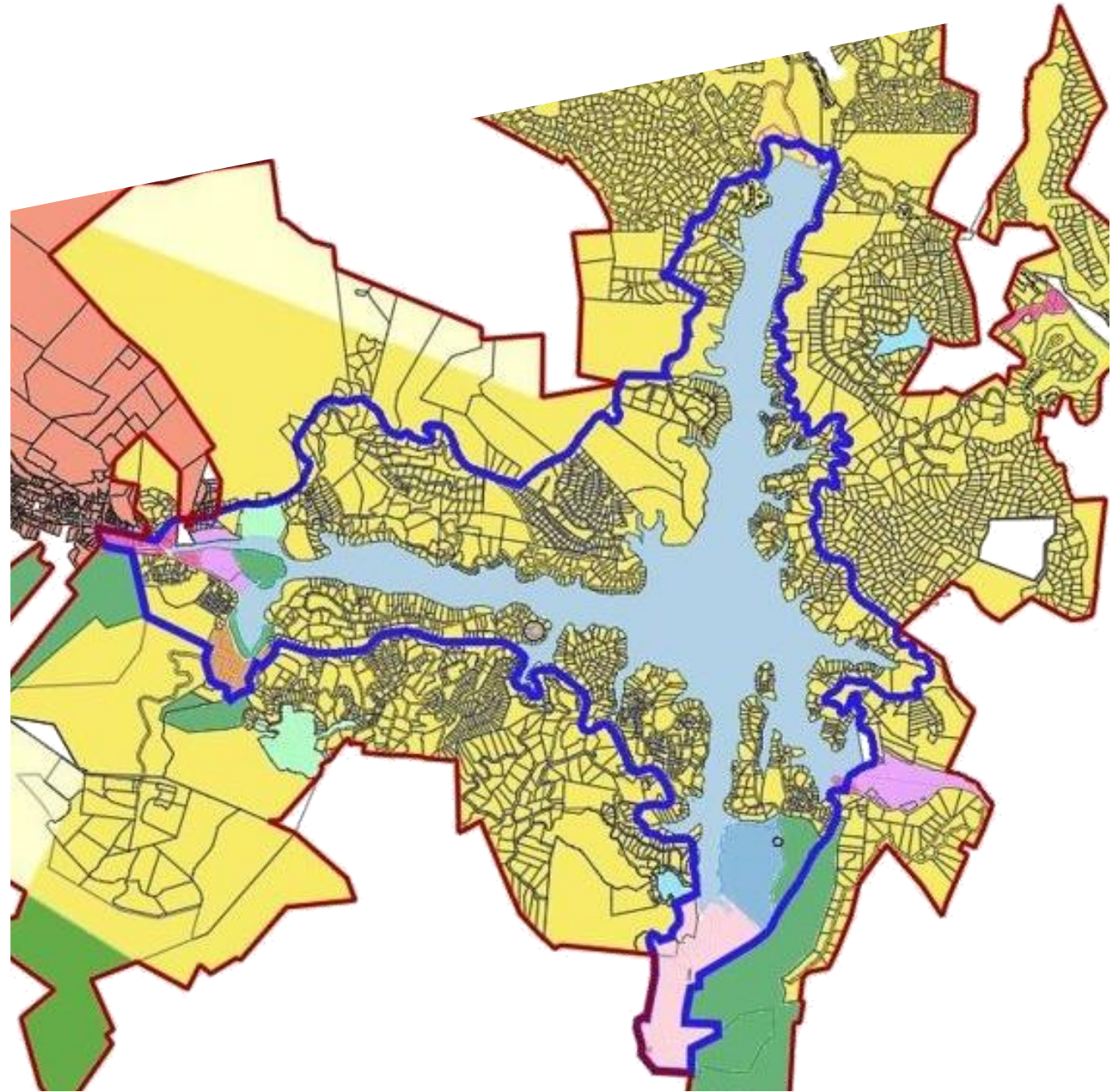
Define Service Area

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CAPACITY

Define Service Area

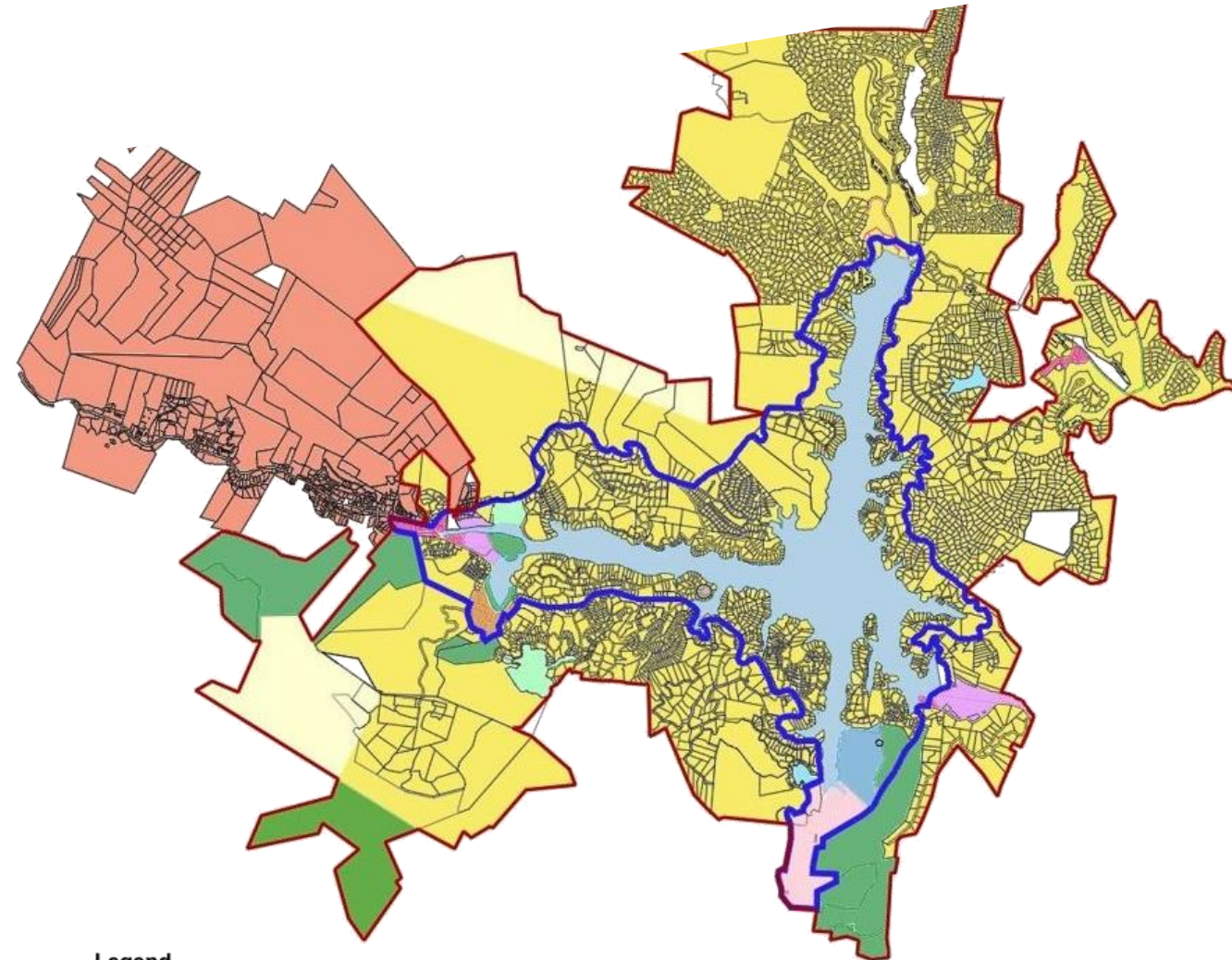
Identify Density and Use Types

Ultimate / Build-Out

(Entire Service Area 100% Developed)

Estimate Growth Rate

Planning Horizon (25 years – 2050)



Legend

- | | |
|------------------------------|--------------------------------|
| Service Area | Residential |
| Parcels | Residential/Office |
| Town Boundary | Local Commercial |
| <u>Future Land Use</u> | |
| Open Space | Mixed-Use Specialty Commercial |
| Recreational | Mixed-Use Service Commercial |
| Resort Residential | School/Camp |
| Very Low Density Residential | Government |
| | Chimney Rock |

CAPACITY

Define Service Area

Identify Density and Use Types

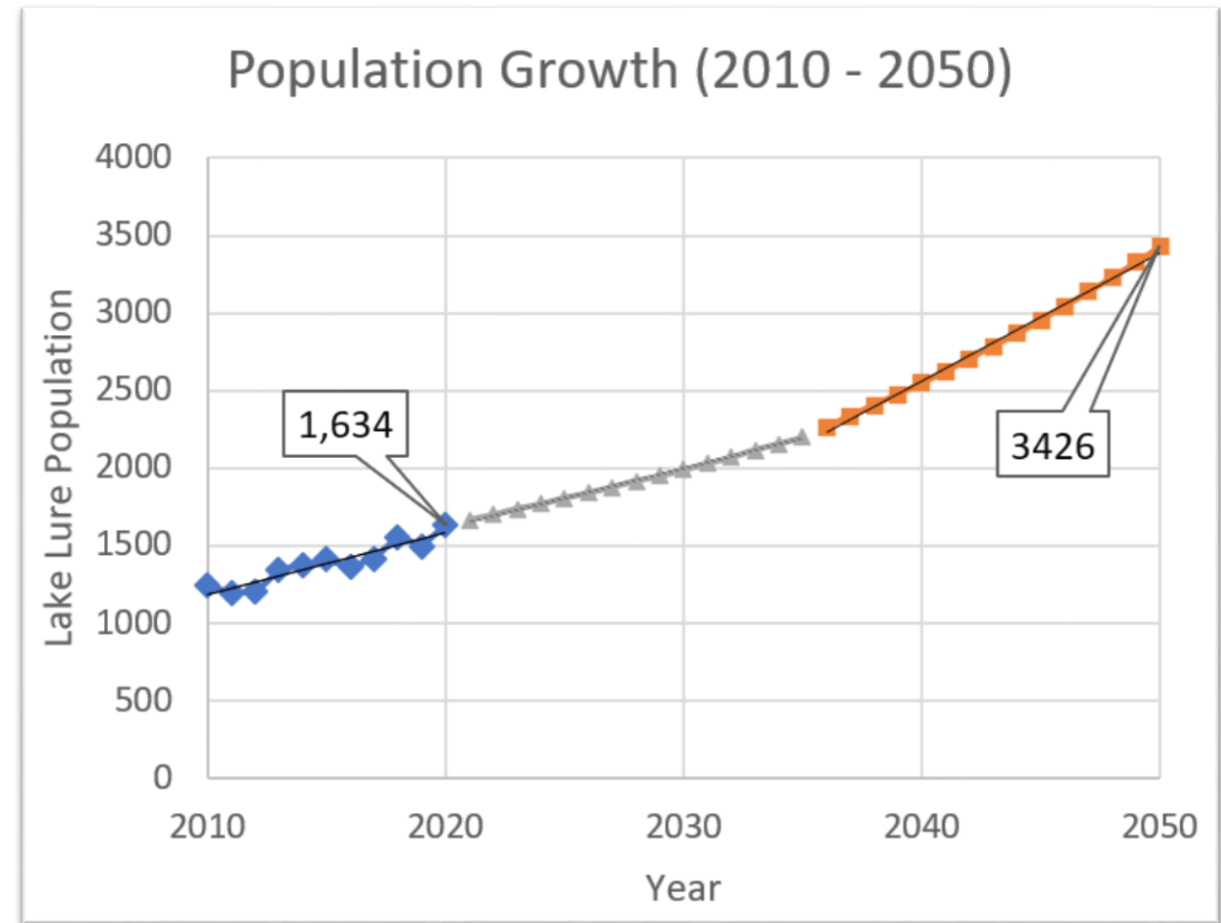
Ultimate / Build-Out

(Entire Service Area 100% Developed)

Estimate Growth Rate

Planning Horizon (25 years – 2050)

(Some of Service Area not fully Developed)



*2010 – 2020: data given by Census (2.8% average)
2020 – 2035: moratorium-limited growth of 2.0% annual average
2036 – 2050: annual growth of 3.0% post-moratorium*

CAPACITY

Planning Horizon (25 years – 2050)

(Some of Service Area not fully Developed)

Ultimate / Build-Out

(Entire Service Area 100% Developed)

Table 9. Total 2050 Estimated Wastewater Flows

Wastewater Source	Flow (gpd)
Residential	335,000
Commercial, Institution, Government	63,400
Vacationers	140,000
Chimney Rock Village	38,400
Rumbling Bald Resort	146,000
Total Estimated Flow	722,800

Table 7. Total Buildout Estimated Wastewater Flows

Wastewater Source	Flow (gpd)
Residential	335,000
Commercial	408,500
Vacationers	205,000
Chimney Rock Village	38,400
Rumbling Bald Resort	146,000
Total Estimated Flow	1,132,900

CAPACITY

DEQ's '80/90 Rule'

*Once average flows reach 80% of capacity, you must submit a plan for expansion
(At 90%, you must have construction plans ready to bid)*

Table 9. Total 2050 Estimated Wastewater Flows

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$$\frac{722,800}{80\%} = 903,500$$

(round up to 0.995 MGD)

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Rumbling Bald Resort	146,000
Total Estimated Flow	1,132,900

$$\frac{1,132,900}{80\%} = 1,416,125$$

(round up to 1.5 MGD)

An aerial photograph of a forested area with a yellow highlighted path. The path starts at the bottom left, curves right, then left, then right, and ends at the bottom right. It passes near several roads: Buffalo Shoals Rd (top left), Justice Dr (bottom left), 64 (middle), ALT 74 (bottom left), ALT 74 (bottom right), 1185 (bottom right), and Finch St (right). There are also some buildings and a small pond visible.

SITE SELECTION

How much space is needed?

What type of process is needed?

What limits do we expect?

SITE SELECTION

How much space is needed?

What type of process is needed?

What limits do we expect?

DEQ Indicated that as long as

...discharge is to Broad River itself near existing
...flow continues to be *minor* municipal (<1 mgd)

then we should expect limits similar to existing*
(no Phosphorus or Nitrogen limit; maybe tighter Ammonia)



SITE SELECTION

How much space is needed?

What type of process is needed?

What limits do we expect?

Suitable for Secondary effluent
Compact footprint
Flexible for variable flowrates
Efficient in Operation & Maintenance
Relatively cost-effective

PROCESS ALTERNATIVES

INTEGRATED FIXED FILM ACTIVATED SLUDGE (IFAS)



SEQUENCING BATCH REACTOR (SBR)



ROTATING BIOLOGICAL CONTACTOR (RBC)



PROCESS ALTERNATIVES - PROS

INTEGRATED FIXED FILM ACTIVATED SLUDGE (IFAS)

Dense Biomass
(smaller reactor)

Attached Biomass
(ok for variable loads)

Higher Sludge Age
(less sludge)

Less Suspended Biomass
(smaller clarifier)

Less Aerated Volume
(lower energy)

Adaptable Process
(ok for stricter limits)

Smaller Basins
(lowest capital cost)

SEQUENCING BATCH REACTOR (SBR)

Reconfigurable Process
(ok for variable loads)

Single-Basin Process
(no separate clarifier)

Reconfigurable Process
(ok for stricter limits)

Fewer Basins (but EQ req'd)
(lower capital cost)

ROTATING BIOLOGICAL CONTACTOR (RBC)

Dense Biomass
(smaller reactor)

Attached Biomass
(ok for variable loads)

Higher Sludge Age
(less sludge)

No Suspended Biomass
(smallest clarifier)

No Mechanical Aeration
(lowest energy)

Minimal # of Motors
(quietest operation)

Smaller Basins
(lower basin cost)

PROCESS ALTERNATIVES - CONS

INTEGRATED FIXED FILM ACTIVATED SLUDGE (IFAS)

Maintenance
*Typical for Activated
Sludge WWTPs, except...*
*Media replacement
every 15-20 years*

Odor
Typical of aerated WWTPs

Operational Complexity
*Typical for
Activated Sludge WWTPs*

SEQUENCING BATCH REACTOR (SBR)

Maintenance
*Difficult for multiple items
of in-basin equipment*
*Complex automation = many
points of possible failure*

Odor
Typical of aerated WWTPs

Operational Complexity
*Highly dependent on
computer automation*

ROTATING BIOLOGICAL CONTACTOR (RBC)

Maintenance
*Contactors require frequent
inspection & maintenance*
*Normal operation can lead
to shaft imbalance & failure*

Odor
Highest potential odor

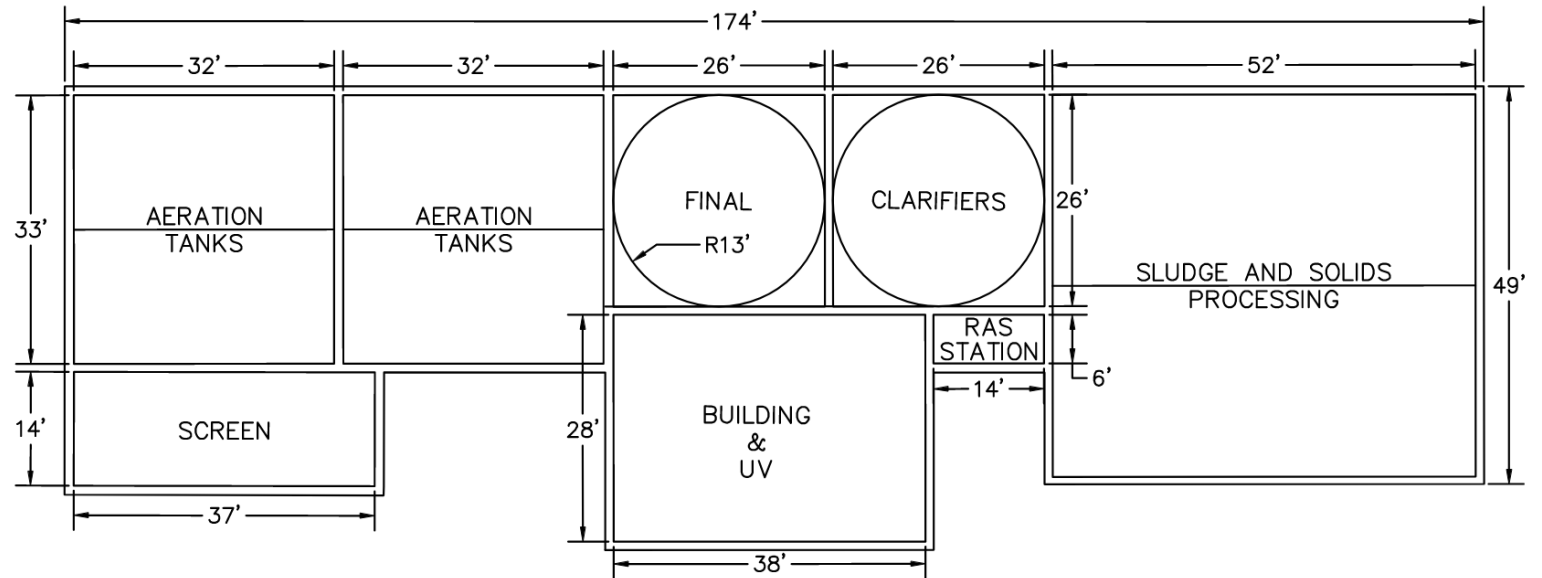
Operational Simplicity
*...but sensitive to
cold temperatures*

RECOMMENDED ALTERNATIVE

INTEGRATED FIXED FILM ACTIVATED SLUDGE (IFAS)



Most compact layout (common-wall everything)
60' x 175' – overall similar to existing WWTP site



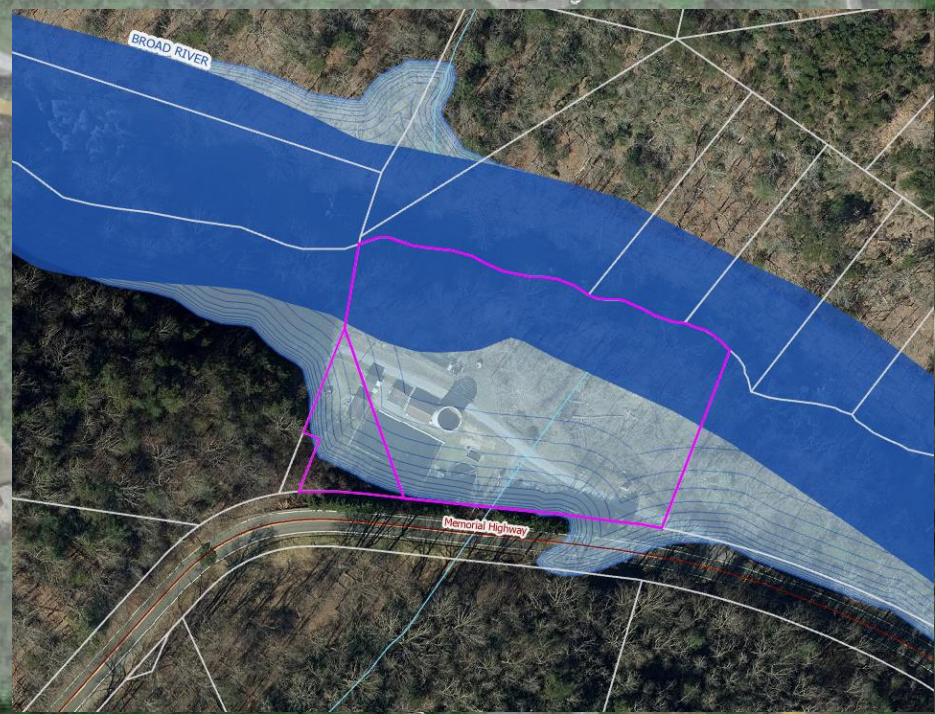
...but likely more space needed to enable vehicle access to all areas for major maintenance, and for future expansion

SITE SELECTION

How much space is needed?

What type of process is needed?

What limits do we expect?



SITE SELECTION

How much space is needed?

What type of process is needed?

What limits do we expect?

1

Three private sites evaluated

#1 (shown) – Difficult site, gravity feed, Town is already purchasing

#2 – Difficult site, gravity feed, space-limited by a creek

#3 – Good site, requires influent pump station

Table 13. Recommended WWTP Project Budget

<u>Item Description</u>	<u>Cost</u>
IFAS WWTP Facility (Generic Site)	-
Influent Screen	\$700,000
Aeration Basins	\$2,750,000
Clarifiers	\$1,450,000
Return Pump Station	\$175,000
Disinfection	\$1,560,000
Building	\$400,000
Blowers	\$1,300,000
Aerobic Digester Tank	\$975,000
Plant Piping	\$3,200,000
Electrical	\$3,200,000
WWTP Facility Subtotal	\$15,710,000
Site-Specific Costs	(Site 1)
Influent Sewer	\$600,000
Effluent Sewer	\$66,000
Excavation	\$1,250,000
Ruggedness Premium	\$2,000,000
Site Development (drainage, pavement, etc)	\$1,300,000
Demolition of Existing WWTP	\$500,000
Site Subtotal	\$5,716,000
Construction Costs	\$21,426,000
Contractor's OH&P @ 15%	\$3,210,000
Contingency @ 20%	\$4,290,000
Construction Total (2023 Dollars)	\$28,926,000
Engineering Design @ 10%	\$2,890,000
Construction Engineering @ 5%	\$1,450,000
Property Acquisition	\$100,000
Project Total (2023 Dollars)	Approx. \$33.4M

CAPITAL COST

Considerations

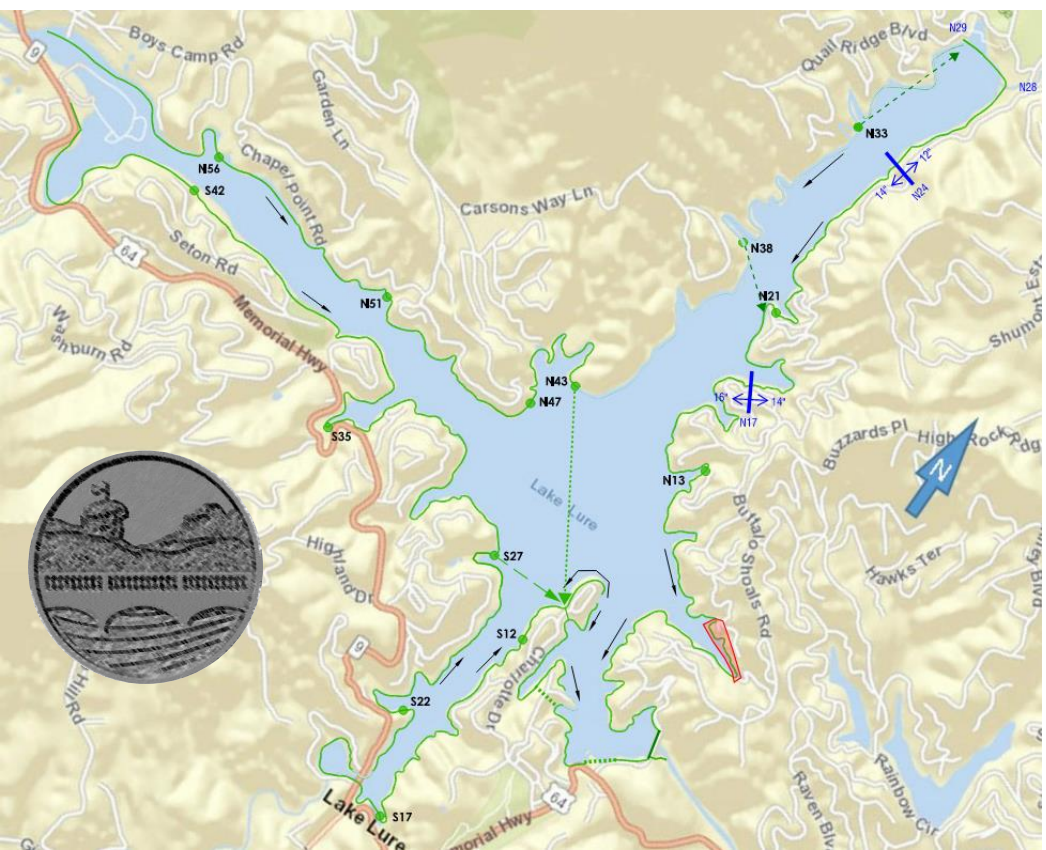
Common-wall construction as much as possible

Gravity to & thru WWTP, except for sludge pumping

Large 'Ruggedness Premium' due to difficult site

Sludge processing via pending press equipment

2023 values (inflation to construction mid-point needed)



WHEN?

Existing WWTP *can* treat diluted wastewater



New WWTP *won't* treat diluted wastewater

Diluted wastewater continues until existing SASS is cut off

Task Name	Year -5				Year -4				Year -3				Year -2				Year -1				Year 1			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Design of WWTP					█																			
Permitting of WWTP									█															
Contractor Procurement													█											
Construction of New WWTP													█											
Commissioning New WWTP																					█			
Completion of GLS																								
Operation of Existing WWTP	▨																							

O&M for TWO WWTPs



Town of

Lake Lure

est. 1927

North Carolina

WASTEWATER TREATMENT PLANT MASTER PLAN

OVERVIEW
JANUARY 24, 2024



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