Town of Pilot Mountain
Town Hall 124 West Main Street Pilot Mountain, NC 27041
Monday, September 09, 2019, 7:00 PM

BOARD OF COMMISSIONERS REGULAR MEETING AGENDA

Call to Order/Moment of Silence/Pledge of Allegiance

Adoption of Agenda

Public Comment

Anyone may speak on any issue. Before speaking, please state your name and address. Please limit comments to three minutes.

Consent Agenda

1. Approval of Minutes from August 2019 Board of Commissioners Meeting

Board & Committee Reports

2. ABC Board Report
3. TDA Quarterly Report
4. Main Street Report
5. Pilot Mountain Business Council

Unfinished Business

6. AIA Project Contract Approval
7. Water & Sewer Regionalization Study

New Business

8. Mt. Airy Interconnect Funds Acceptance
9. Towing and Storage Ordinance
10. Paint-A-Hydrant (Downtown Public Art) Program

Administrative Reports

11. Town Manager and Staff Reports

Mayor and Commissioners Comments

Closed Session

Adjourn

Town of Pilot Mountain
Board of Commissioners Meeting
Monday, August 12, 2019
Regular Meeting 7:00 PM

Members Present: Mayor Evan Cockerham, Commissioner Kim Quinn, Commissioner Donna Kiger, Commissioner Hilda Willis and Commissioner Scott Needham.

Staff Present: Town Manager, Michael Boaz, Town Attorney, Ed Woltz and Town Clerk, Holly Utt

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Call to order/Moment of Silence/Pledge of Allegiance – 7:00 PM
Mayor Cockerham called the meeting to order at 7:00 PM. All in attendance observed a moment of silence and recited the pledge of allegiance.

Adoption of Agenda
Commissioner Quinn made a motion to add approval of the resolution for the Water Supply Plan to the agenda and the remaining agenda as presented and it was unanimous.

Public Comment
No one present to speak

Consent Agenda

- July 8, 2019 Regular Meeting Minutes

Commissioner Needham made a motion to approve and adopt the consent agenda and the items there upon and it was unanimous.

ABC Board Report
Billy Pell stated that the ABC sales were up by 15.41% over July 2018. Total sales for the month was $100,659 compared to $87,222 in the previous year.

Chief Bottoms introduced K9 Patrol Officer Blizard and the new K9 Jeffery. He stated that Officer Blizard had recently completed training and finished in the top part of the class. K9 Jeffery is a trained drug dog and tracker.

New Business
WWTP & Pump Station Rehabilitation Capital Project Ordinance
Mr. Boaz stated that the Board would need to approve a capital project ordinance in order to start using the loan and grant funds for the WWTP rehabilitation and some work at the WTP. Commissioner Needham made a motion to approve the Capital Project Ordinance and it was unanimous.

FY 2019-2020 Budget Amendment 1
Mr. Boaz explained that the town had unexpended funds from FY 18-19 that would need to be used in FY 19-20. There is money left for the library repairs and benches had been sold in FY 18-19 that would

be ordered in the current fiscal year. Commissioner Willis made a motion to approve FY 19-20 Budget Amendment 1 and it was unanimous.

Planning & Zoning Board Appointment

Mr. Boaz stated that there was an opening on the Planning Board to fill the vacant seat of Steve Tilman. Mayor Cockerham recommended that Rachel Collins be appointed to fill the vacancy. Commissioner Quinn asked what the requirements were to be on that board. Mr. Boaz explained that for this seat, the only requirement was to live inside the city limits. There are also ETJ members on that Board but none of those seats are open. Commissioner Quinn made a motion to appoint Rachel Collins to the Planning and zoning Board and it was unanimous.

Resolution – Water Supply Plan

Mr. Boaz explained that this was an annual plan that has to be filed giving the status of the water system. It covers information pertaining to number of customers, miles of water line, and types of pipe that are in the ground, where we get out water and what we project future water usage to be. Commissioner Needham made a motion to approve the resolution and it was unanimous.

Administrative Reports

Commissioner Kiger asked Chief Bottoms if there were more incidents during the events as compared to a weekend with no events. Chief Bottoms stated that incidents were consistent but there may be more citations during an event like the cruise-in.

Town Manager's Report

- There will be a concert in downtown on Saturday, August 17th. Commissioner Willis will have more information on that
- Shrek will be the Movie on Main set for August 17th
- The loan for the inter-connect project has been approved by the LGC. In addition to that, the plans have been approved by the Public Water Supply. The next step is to get the easements, somewhere between 75 and 100 and to get the soil and erosion permits before it can go out to bid. The plan is to have it out for bid by the end of year. Commissioner Kiger asked if there was a plan in place to get the easements. Mr. Boaz stated that there was a preliminary plan in place.
- The final streetscape plan should be ready in September. It will then need to be approved by the NC DOT. Fundraising will begin soon after that.

Financial Report

Mr. Boaz stated that the first month of the fiscal year was as expected, not a lot going in at this time.

Mayor and Commissioners Comments

Mayor Cockerham: Commended Commissioner Willis for her efforts in the benefit concert and the arts community in Pilot Mountain. He noted that the sales tax revenues have increased. He also thanked the Police Department for them handling special request he has relayed to them on behalf of the public.

Commissioner Quinn: Commended the Police Department for some of the items that were listed on the police report. It must be hard for them to have to deal with some of those issues. She is glad to see that more people are getting involved in downtown and the events. Sunday was her highest sale day on a weekend without an event in town.

Commissioner Needham: He has noticed more activity in downtown. He also thanked the Public Works department and staff for implementing projects that were discussed in the goal setting meeting, such as the rubbish being picked up garbage cans being emptied.

Commissioner Kiger: It was nice to see people out on Main Street on Sunday without an event. People are taking notice.

Commissioner Willis: Agreed with the observations of people coming to downtown. There will be a benefit concert this Saturday, August 17th, from 6-8 PM. She had quite a few volunteers and is hoping to garner more support. Tickets are available online or at Hilda's Place. Student prices are $10, regular admission is $25 and VIP access is $125.

Closed Session Pursuant to NCGS 143-318 (a)(3) Attorney Client Privilege
Commissioner Kiger made a motion to go into closed session and it was unanimous.

Commissioner Needham made a motion to come out of closed session and it was unanimous.

Other Business
No other business to discuss

Adjourn or Recess
Commissioner Willis made a motion to adjourn and it was unanimous.

Respectfully Submitted:

_____
Holly Utt
Town Clerk

Attest:

_____
Evan Cockerham
Mayor

ABC Board Report	
Background Information:	
ABC Board Chairman Billy Pell will give the monthly ABC report.	
Staff Recommendation:	Information only
Possible Board of Commissioner Actions	
• Take no action	
Attachments	
• None	

TDA Quarterly Report	
Background Information:	
TDA Chairwoman Christy Craig will give the quarterly report on the TDA.	
Staff Recommendation:	Information only
Possible Board of Commissioner Actions	
• Take no action	
Attachments	
• None	

Main Street Report	
Background Information:	
Main Street Coordinator will give an update on the activities of the Main Street Coordinating Committee and the Downtown Development department.	
Staff Recommendation:	Information only
Possible Board of Commissioner Actions	
• Take no action	
Attachments	
• Main Street Activity Report	

March 2019 –August 2019

Main Street Coordinating Committee

Meets Quarterly

4 subcommittees (Events, Design, Promotion, & Economic Vitality)

I. Events

Old- Cruise Ins, Mayfest, Christmas Parade

New –9 new since 2017

Phased out the Farmers Market

Introduced a Summer Concert Series

II. Promotion

Town Calendars- discontinued instead a year at a glance calendar list was sent with the water bill

Town Wayfinding Signs – Temp wayfinding& direction signage for help with streetscape

Town Promo – Exxon Sign, Yard Signs Marketing events through spingo, ws journal & charlotte observer

Facebook presence/ promotions – Streamline business advertising posts (one bus gets 3 a day) need to expand to Instagram & youtube

Town Brochures – Project Wrap Up- ready to be printed

DOT Signage for Downtown on hwy 52 Contact has been made

Marketing/Branding Process – Pending until after Thread Capital's Assessment & Architecture work from Streetscape

Billboard Campaigns- gotten a few price quotes and interested in partnering with Yadkin Valley- presented to Promotions & TDA decided to explore App development instead

App Development- reviewed SimpleSite features & pricing, has a meeting set for the Mobile Town Guide.

III. Economic Development & Vitality

Façade Grant- created online application form – submitted information to get 13,000 in design assistance grant from NC Dept of Commerce for 5 downtown properties

PM –DRIG program- created online application form

Downtown Strong- submitted application for this program, assisted with the planning & facilitation of these meetings, currently working towards the implementation of planning process

National Historic Register- assisted with the property owner meeting with Gene Rees, assisted with property research- received quotes for doing historic plaques for contributing buildings

3rd Party Grants- Walmart Grants, the creative giveback, state farm, Lowes home improvement

New Businesses in 2019

2/19 Grace & Sparrow
2/19 Elliot's Therapeutic Massage
2/19 Sugarville Sweet Shoppe
3/19 The Pilot Diner
3/19 All Sauced Up
7/19 The Tilted Ladder
8/19 Liv for Sweets

IV. Design

Adopt- A Bench- 3 benches to be ordered

Street Furniture/ Recycling Grant- assisted with application- received grant- in process of finalizing order

Landscaping for downtown (Planters/Pots & Street Receptacles)- beautification at town hall

WithersRavenel Engineering and Architectural work for Streetscape – finalized by Nov

New Website for the Town- updates & business inventory to be live in September

Pilot Mountain Business Council	
Background Information:	
The Board will hear a report about the newly formed Pilot Mountain Business Council.	
Staff Recommendation:	Information only
Possible Board of Commissioner Actions	
• Take no action	
Attachments	
• None	

AIA Project Contract Approval

Background Information:

At the July 2019 Board meeting the Board approved acceptance of a $300,000 grant from the NC DEQ to conduct an asset inventory and assessment project. At that time, the Board decided to wait to authorize staff to sign the contracts for this project until WithersRavenel could present detailed contracts. We have worked with WR over the past few weeks to refine the scope of work for the project.

WR has submitted 1 contract for the sewer portion of the project that totals $150,000 and 1 contract for the water portion of the project that also totals $150,000. Staff believes that this work will get us a full picture of what assets we have and what condition they are in. This will also help to get us better mapping for our system, help us to find valves that have been paved over, and start to keep better, digital records of the work that we do on our system. This information will help the staff and the Board make decisions about which infrastructure projects to prioritize and seek funding for.

Staff Recommendation: Staff recommends the approval of both contracts.

Possible Board of Commissioner Actions

- Approve one or both contracts
- Deny approval to one or both contracts
- Take no action
- Table to a later meeting

Attachments

- WithersRavenel Sewer AIA Contract
- WithersRavenel Water AIA Contract

WithersRavenel
Our People. Your Success.

September 5, 2019

Town of Pilot Mountain
124 W Main Street
Pilot Mountain, NC 27041

Attn: Mr. Michael Boaz

RE: WR 06190685.00
Engineering Services Agreement
2019 AIA Water Project

Dear Mr. Boaz:

WithersRavenel is pleased to provide this Agreement for Engineering Services to the Town of Pilot Mountain for the 2019 AIA Water Project. If you have any questions or concerns about the agreement please do not hesitate to call me at the number listed below.

Sincerely
WithersRavenel

Kevin Eason, P.E.
Senior Project Manager

424 Gallimore Road, Suite C | Greensboro, NC 27409
Office: 336.605.3009 | Direct: 919.238.0361
Email: keason@withersravenel.com

Attachments:

Agreement for Professional Services

Town of Pilot Mountain
2019 AIA Water Project
Agreement for Professional Services

This AGREEMENT, the Standard Terms and Conditions (Exhibit I), and Fee and Expense Schedule (Exhibit II), are hereby included as part of the Agreement for Professional services dated_____between the Town of Pilot Mountain (CLIENT) and WithersRavenel, Inc. (CONSULTANT) for Professional Engineering Services to be rendered in connection with the 2019 AIA Water Project (PROJECT).

A. Project Description

CONSULTANT will provide professional services for mapping and compiling an inventory of the CLIENT's water system assets into an ESRI GIS geodatabase along with attribute information. Collected data will be supplemented with information gathered from the CLIENTS existing construction drawings, work order records and operational data to the extent possible.

The collected data will be used to prepare an Asset Management Plan in order to create a work management plan based on the likelihood of failure of the asset and the consequence of a failure.

The list of projects identified through the AMP process will be integrated within the City's MS Excel based Capital Improvement Plan and Asset Management Plan.

This study includes approximately 30 miles of water lines, no booster stations, 3 tanks, approximately 207 fire hydrants and 268 valves.

CONSULTANT will prepare a report summarizing the components of the AIA Water Study along with a description of the deliverable and/or outcomes.

The approximate schedule for the project is:

- **September 2019** - Complete contracting, form project team, and begin work by meeting with selected consultant to begin records review and system assessment
- **December 2019** - Complete GPS location of system features and import to GIS
- **March 2020** - Complete attribute population in GIS database
- **August 2020** - Complete Asset Management Plan
- **December 2020** – Deliver geodatabase to the City, complete the update of the City's CIP and AMPs, and deliver final report.

The CLIENT is a recipient of an Asset Inventory and Assessment (AIA) grants for 2019. AIA grants are authorized by NC Session Law 2015-241 in the changes made to NCGS 159G. The purpose of the grants is to encourage water and wastewater utilities to become more viable and more proactive in the management and financing of their systems.

A local match is required based on how Local Government Unit indicators of percent population change, poverty rate, median household income (MHI), percent unemployment, and property valuation per capita compare with the state benchmarks. For this grant, the City's match is believed to be 5%.

B. Scope of Services

Task 1 – Data Acquisition, Assessment, & Database Design

A. Assess currently available GPS data, equipment specifications, and collection workflows to assure accuracy of data that has been or continues to be collected. Review data, layer definitions and attribute requirements.

B. Design and implement a file geodatabase using industry standards in database design. The database will house all the sewer GIS data. The intention is to use the industry standard ESRI Water Utilities Database Information Model as the starting point for the Pilot Mountain Database. Changes will be made to the database with the goal of meeting current needs and allowing for future growth.

Task 2 – Georeferencing and Linking of Drawings & As-builts

C. The CLIENT currently houses drawings and as-built plans that need to be scanned and georeferenced. The CONSULTANT will georeference and link up to 250 views The CONSULTANT will provide the CLIENT with appropriate information regarding file naming conventions and index creation for their scanning of the drawings.

Task 3 – GPS Inventory of Utility Features

The CONSULTANT employs a two-pass process for the collection of field data to support the mapping process.

A. The first pass through of the system will serve to collect the location and elevation data of the structures. The CONSULTANT will utilize survey grade GNSS equipment where it is estimated 85% of locations will be of survey quality and the remaining 15% will be of mapping grade Class B GPS quality of all above ground structures. GPS locations will be of all water utility features, including but not limited to: hydrants, valves, ARV, wells, and pumps. In addition, the CONSULTANT will attribute all fire hydrants with: manufacturer, fire ID, year, and general condition. Other attributes will be added to features based on knowledge gleaned from as-built plans. This attribute data could include: date of install, engineer of records, specification information (pump curve, tank controls, and meter specifications). Attributes collected will be determined in Task 1. The cost estimate is based on 30 miles of water utility with an anticipated 600 above ground water utility features located.

B. The second pass through the system will be for the purpose of performing the assessment of the features and the collection of attributes as shown on the next page.

Control Valves	Hydrants	System Valves	Water Mains	Casing
Diameter	Barrel Size	At_Grade	Comments	Age
Field Comments	Bonnet Color	Buried	Diameter	Comments
Location Description	Bury Depth	Condition	Diameter_Notes	Diameter
Point ID	Condition	Diameter	Diameter_text	Material
Valve Type	Cut_Off_Va	Field Status	Location	
Vertical Precision	Field Status	Field Comments	Material	
	Field Comments	Location Description	Material_Notes	
	Fire ID	Not Found	Transmission	
	Install Date	Original Field Status	System	
	Last Service Date	Revisit	Water Type	
	Manufacturer	Revisit Comments	WR_Comment	
	Nozzles	Size		
	Operable	Size Notes		
	Original Field Status	Source		
	Revisit	Valve Type		
	Revisit Comments	Visible		
	WR Comments	WR Comments		
	Year			

Notes:

1. The geodatabase will contain additional attribute information which is automatically recorded at the time of the observation (i.e. date of observation, survey quality, etc.)
2. The complete data dictionary will be supplied as part of the geodata bases deliverable showing additional pre-formatted data fields that may be collected in the future to increase the robustness of the dataset.

Task 4 – Develop Hydraulic Model

A. Based on the GIS Model of the system, the CONSULTANT will construct a hydraulic water model using WaterGEMS software.

B. The model will incorporate the City's water billing records to distribute demand through the system model.

C. The CONSULTANT will conduct 10 tests of the system to determine the appropriate roughness coefficients to use in the model. The CONSULTANT will coordinate the test dates and durations with the CLIENT. Post model construction the CONSULTANT will conduct up to 10 hydrant tests to verify model performance.

D. The model will be used to calculate system pressures, pipe velocities and water age for a typical average day, max day and max hour scenario.

E. The CONSULTANT will deliver the data files of the model to the CLIENT at the conclusion of the PROJECT.

Task 5 – Valve Testing and Assessment Program

A. The CONSULTANT will schedule and conduct a valve assessment program for the Town.

B. Valves will be located and operated to confirm operability and opening/closing counts.

C. A report will be prepared of the work detailing the findings and listing defective valves in need of repair.

D. The CONSULTANT will work to identify a firm capable of providing the service, will secure a proposal for the work and will execute the work for a partial or full valve assessment depending on the availability of the funding.

E. The CONSULTANT will execute a subcontract with the firm, subject the CLIENT'S approval, and will invoice the CLIENT the cost of the work plus 15% for overhead.

Task 6 – GIS Connectivity, QA/QC and Data Delivery, Implementation and Training

A. Water System Connectivity, Network Topology

The CONSULTANT will utilize the scanned as-built plans and other drawing to connect the water line utility. The CONSULTANT will flag any utility features that are shown on the as-builts, but that were not identified in the field. The CONSULTANT will make a good faith effort to find the missing features, but any features not found will be passed to CLIENT staff to verify their existence and uncover for GPS capture.

B. Implementation and Training: The CONSULTANT will also provide (1) one day of onsite GIS training. Training topics could include but are not limited to: usage of database management, viewing data in ArcGIS, data editing procedures in ArcGIS, tracking data updates, etc.

Task 7 – Develop an Asset Management Plan

A. Risk Analysis: Based on the information gathered through GPS/GIS collection, an analysis of predictive deterioration and failure will be completed.

B. Capital Improvement Needs and Prioritization: Assets identified as having high probability of failure will be identified and prioritized. Generalized and system-wide asset replacement cost will be developed. Prioritization will be based on the expectation of failure and the impact to the community due to failure. The CONSULTANT will use the AMP to develop a 20-year CIP plan for the CLIENT.

C. The CONSULTANT will provide the Capital Improvement Plan recommendations and the Asset Management Plan update in a MS Excel format that is compatible with the City's existing templates.

Task 8 – Perform Water Rate Study

A. Data Collection:

1. Collect all relevant technical, organizational, and financial information required for the project.

2. Review financial information for the water enterprise fund, including current budget and past audits, current user information, debt status, and previously prepared plans, cost estimates prepared by the CLIENT or CLIENT's engineering partners and capital improvement programs.

3. Discuss key project assumptions and key project considerations that relate to the present or future financial standing of the fund.

B. Capital Improvement Planning and Financial Strategies

1. Assist the CLIENT in updating its 10-Year Capital Improvement Plan (CIP) for the water system and summarize capital financing assumptions for each proposed project and related debt service requirements.

2. Formulate assumptions related to certain financial issues and events. Review relevant questions and assumptions with CLIENT staff and summarize all assumptions regarding capital outlay and debt funded capital projects. Obtain CLIENT approval on summary of project assumptions.

3. Define the Capital Financing Strategy for implementing the CIP.

C. Financial Analysis Model

1. Develop a 10-year Financial Analysis model for the CLIENT's water fund.

2. Develop key financial benchmarks for unrestricted net assets, annual net income, reserves, and debt ratios as measures of fund stability.

3. Define project fund revenues from operating and non-operating sources and fund costs attributable to operations and capital investments over the ten-year time period.

4. Determine the extent to which revenues exceed expenditures for each year of the project period.

5. Establish annual estimates of new revenue requirements necessary to sustain the fund over the project period.

D. Rate Modeling

1. Establish a water rate model for the CLIENT's existing rate structures and calibrate the model to current revenues.

2. Based on the projected revenue requirement that has been projected, provide the capability to forecast total revenues produced by hypothetical rate structures providing for certain user categories and their associated rates.

3. Examine alternatives for rate structure revisions including changes to the minimum charge and project subsequent impacts of said revisions on the fund and on rate payers of various quantities of consumption.

4. Summarize potential rate adjustments based on the new revenue requirements established in the financial analysis.

5. Provide the information to conduct rate benchmarking for similar water municipal programs.

6. Review rate recommendations with CLIENT Staff.

E. Final Deliverables

1. A draft memorandum of findings and conclusions.

2. Review of the draft report with CLIENT Staff and incorporate comments and input into a final Memorandum.

Task 9 – Final Report and Deliverables

A. The CONSULTANT will prepare a final report, estimated at 10 pages exclusive of exhibits, describing the AIA tasks and presentation of the results. The CONSULTANT will prepare a presentation to accompany the final report and be prepared to present it to the elected officials and City staff upon project completion.

B. The CONSULTANT will coordinate with the CLIENT for access to the CLIENT's computer system for the purpose of installing the collected GIS database to the system. The CONSULTANT will provide copies of all photographs and scanned records to the CLIENT in a mutually acceptable digital format.

C. Additional Services

Services that are not included in Section B or are specifically excluded from this AGREEMENT shall be considered Additional Services. The CONSULTANT will furnish or obtain from others Additional Services if requested in writing by the CLIENT and accepted by the CONSULTANT. Additional Services shall be paid by the CLIENT in accordance with the Fee & Expense Schedule outlined in Exhibit II.

- Valve pavement dig outs or accessing fenced in hydrants
- Surveying services beyond those identified
- Meter testing
- Modeling software

D. Client Responsibilities

During the performance of the CONSULTANT's services under this AGREEMENT, the CLIENT will:

- Be responsible for scanning the drawings, naming, and indexing the files into an inventory
- Provide any information needed to complete the PROJECT not specifically addressed in the Scope of Services
- Provide all available information pertinent to the PROJECT, including any GIS information, reports, maps, drawings, and any other data relative to the PROJECT
- Examine all proposals, reports, sketches, estimates and other documents presented by the CONSULTANT and render in writing decisions pertaining thereto within a reasonable period so as not to delay the services of the CONSULTANT.
- The CLIENT will be responsible for scanning the drawings, naming and indexing the files into an inventory.
- Give prompt written notice to the CONSULTANT whenever the CLIENT observes or otherwise becomes aware of any defect in the PROJECT
- Handle matters requiring an attorney at law

Any changes to the alternatives or PROJECT requirements after CONSULTANT has begun work may require additional fees.

E. Compensation for Services

A. Lump Sum Fee

CONSULTANT proposes to provide the Scope of Services previously outlined on a lump sum fee basis as described in the following table. Compensation shall not exceed the total estimated compensation amount unless approved in writing by CLIENT.

Task Number	Task Name	Lump Sum Fee
1	Data Acquisition, Assessment, & Database Design	$5,000
3	GPS Inventory of Utility Features	$20,000
4	GIS Connectivity	$10,500
5	Develop Hydraulic Model	$25,000
6	Valve Testing and Assessment Program	$50,000
7	Develop an Asset Management Plan	$14,000
8	Perform Water Rate Study	$11,500
9	Final Report and Deliverables	$10,000
Total		**$146,000**

1. CONSULTANT may alter the distribution of compensation between individual phases noted herein to be consistent with services rendered but shall not exceed the total Lump Sum amount unless approved in writing by the CLIENT.
2. The Lump Sum includes compensation for CONSULTANT's services. Appropriate amounts have been incorporated in the Lump Sum to account for labor costs, overhead, profit, expenses, and Consultant charges.
3. The portion of the Lump Sum amount billed for CONSULTANT's services will be based upon CONSULTANT's estimate of the percentage of the total services completed during the billing period.
4. Includes a 15 percent markup for the Subconsultant for Task 5.

B. Hourly Fee

CONSULTANT proposes to provide the Scope of Services previously outlined on an hourly basis with an estimated budget as described in the following table. Compensation shall not exceed the total estimated compensation amount unless approved in writing by CLIENT.

Task Number	Task Name	*Hourly Fee Budget
2	Georeferencing and Linking of Drawings & As-builts	$4,000
Total		**$4,000**
***These Tasks are presented as an hourly fee with a budget due to the difficulty in estimating the hours required to adequately perform the task(s).**		

1. CLIENT shall pay CONSULTANT for Basic Services by an amount equal to the cumulative hours charged to the PROJECT by each class of CONSULTANT's personnel times Standard Hourly Rates for each applicable billing class for all services performed on the PROJECT.

2. CONSULTANT may alter the distribution of compensation between individual phases of the work noted herein to be consistent with services rendered but shall not exceed the total estimated compensation amount unless approved in writing by CLIENT.

3. The Standard Hourly Rates charged by CONSULTANT constitute full and complete compensation for CONSULTANT's services, including labor costs, overhead, and profit; the Standard Hourly Rates do not include Reimbursable Expenses or CONSULTANT's Consultants' charges.

4. CONSULTANT's estimate of the amounts that will become payable for specified services are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to CONSULTANT under the Agreement.

5. When estimated compensation amounts have been stated herein and it subsequently becomes apparent to CONSULTANT that the total compensation amount thus estimated will be exceeded, CONSULTANT shall give CLIENT written notice thereof, allowing CLIENT to consider its options, including suspension or termination of CONSULTANT's services for CLIENT's convenience. Upon notice, CLIENT and CONSULTANT promptly shall review the matter of services remaining to be performed and compensation for such services. CLIENT shall either exercise its right to suspend or terminate CONSULTANT's services for CLIENT's convenience, agree to such compensation exceeding said estimated amount, or agree to a reduction in the remaining services to be rendered by CONSULTANT, so that total compensation for such services will not exceed said estimated amount when such services are completed. If CLIENT decides not to suspend the CONSULTANT's services during the negotiations and CONSULTANT exceeds the estimated amount before CLIENT and CONSULTANT have agreed to an increase in the compensation due CONSULTANT or a reduction in the remaining services, then CONSULTANT shall be paid for all services rendered hereunder.

C. Fee Summary

Fee Type	Estimated Fee/Budget
Lump Sum Fee	$146,000
Hourly Budget	$4,000
Total	**150,000**

F. Timeline for Services

The professional services described herein shall be completed and submitted within a timeframe mutually agreed upon between the CLIENT and CONSULTANT.

G. Acceptance

Receipt of an executed copy of this agreement will serve as the written agreement between CONSULTANT and CLIENT for the services outlined.

Submitted by CONSULTANT:	**Accepted by CLIENT:**
WithersRavenel, Inc. 115 MacKenan Drive Cary, NC 27511	Town of Pilot Mountain 124 W. Main Street Pilot Mountain, NC 27041
Authorized Signature	Authorized Signature
Jeffrey J. Wing, PE, LEED AP Printed Name	Printed Name
Vice President, Director - Utilities Title	Title
jwing@withersravenel.com Email Address	Email Address
919.469.3340 Phone	Phone

PREAUDIT STATEMENT: *This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act (NC G.S. 159-28(a)).*

Signature of Finance Officer: _____

Printed Name: _____

Date: _____

Exhibit I – Standard Terms and Conditions
Exhibit II – Fee & Expense Schedule

WithersRavenel
Our People. Your Success.

August 9, 2019

Town of Pilot Mountain
124 W Main Street
Pilot Mountain, NC 27041

Attn: Mr. Michael Boaz

RE: WR 06190687.00
Engineering Services Agreement
2019 AIA Sewer Project

Dear Mr. Boaz:

WithersRavenel is pleased to provide this Agreement for Engineering Services to the Town of Pilot Mountain for the 2019 AIA Sewer Project. If you have any questions or concerns about the agreement please do not hesitate to call me at the number listed below.

Sincerely
WithersRavenel

Kevin Eason, P.E.
Senior Project Manager

424 Gallimore Road, Suite C | Greensboro, NC 27409
Office: 336.605.3009 | Direct: 919.238.0361
Email: keason@withersravenel.com

Attachments:

Agreement for Professional Services

Town of Pilot Mountain
2019 AIA Sewer Project
Agreement for Professional Services

This AGREEMENT, the Standard Terms and Conditions (Exhibit I), and Fee and Expense Schedule (Exhibit II), are hereby included as part of the Agreement for Professional services dated_____between Town of Pilot Mountain (CLIENT) and WithersRavenel, Inc. (CONSULTANT) for Professional Engineering Services to be rendered in connection with the 2019 AIA Sewer Project (PROJECT).

A. Project Description

CONSULTANT will provide professional services for mapping and compiling an inventory of the CLIENT's sanitary sewer assets into an ESRI GIS geodatabase along with attribute information. Collected data will be supplemented with information gathered from the CLIENTS existing construction drawings, work order records and operational data to the extent possible.

The collected data will be used to prepare an Asset Management Plan in order to create a work management plan based on the likelihood of failure of the asset and the consequence of a failure.

The list of projects identified through the AMP process will be integrated within the City's existing Capital Improvement Plan and Asset Management Plan. Data will be provided to the City in a MS Excel spreadsheet format.

This study includes approximately 19 miles of sanitary sewer, approximately 475 manholes and 19 sewer pump stations.

The CONSULTANT will prepare a report summarizing the components of the AIA Sewer Study along with a description of the deliverable and/or outcomes.

The approximate schedule for the project is:

- **August 2019** - Complete contracting, form project team, and begin work by meeting with selected consultant to begin records review and system assessment
- **December 2019** - Complete GPS location of system features and import to GIS
- **March 2020** - Complete attribute population in GIS database
- **August 2020** - Complete Asset Management Plan
- **December 2020** – Deliver geodatabase to the City, complete the update of the City's CIP and AMPs and deliver final report.

The CLIENT is a recipient of an Asset Inventory and Assessment (AIA) grants for 2019. AIA grants are authorized by NC Session Law 2015-241 in the changes made to NCGS 159G. The purpose of the grants is to encourage water and wastewater utilities to become more viable and more proactive in the management and financing of their systems.
A local match is required based on how Local Government Unit indicators of percent population change, poverty rate, median household income (MHI), percent unemployment, and property valuation per capita compare with the state benchmarks. For this grant, the City's match is believed to be 5%.

B. Scope of Services

Task 1 - Data Acquisition, Assessment, & Database Design

A. Assess currently available GPS data, equipment specifications, and collection workflows to assure accuracy of data that has been or continues to be collected. Review data, layer definitions, and attribute requirements.

B. Design and implement a file geodatabase using industry standards in database design. The database will house all the sewer GIS data. The intention is to use the industry standard ESRI Sewer Utilities Database Information Model as the starting point for the Pilot Mountain Database. Changes will be made to the database with the goal of meeting current needs and allowing for future growth.

Task 2 - Georeferencing and Linking of Drawings & As-builts

The CLIENT currently houses drawings and as-built plans that need to be scanned and georeferenced. The CONSULTANT will georeference and link up to 500 views. The cost estimate is based on a total of up to 200 views at $15.00 per view. The CLIENT will be responsible for scanning the drawings, naming, and indexing the files into an inventory. The CONSULTANT will provide the CLIENT with appropriate information regarding file naming conventions and index creation.

Task 3 - GPS Location & Assessment

The CONSULTANT employs a two-pass process for the collection of field data to support the mapping process.

A. The first pass through of the system will serve to collect the location and elevation data of the structures. The CONSULTANT will locate and survey all above ground sewer features, which is estimated to include 900 sewer utility features. Utilize survey grade GNSS equipment where it is estimated 85% of locations will be of survey quality and the remaining 15% will be of mapping grade Class B GPS quality. Any structures not meeting Class B survey standards due to GPS interference will be documented as such and CLIENT will be given the option of obtaining those structures at Class A survey as an Additional Service.

B. The second pass through the system will be for the purpose of performing the assessment of the features and the collection of attributes as shown below:

Control Points	Force Mains	Gravity Mains
Comments	Age	Age
Control Name	Comments	Comments
Easting	Dia.	Dia.
Elev.	From MH	Downstream Elev.
Northing	Material	From MH
Obsv. Date	To MH	Main Shape
Obsv. Time		Material
Point ID		Slope
Survey Quality		To MH
Vertical Precision		Upstream Elev.

Manholes	Manholes (cont.)	Pipe Casings	Pump Stations
Age	Inv. Out Depth	Age	Age
Cover Material	Inv. Out Dia.	Comments	Easting
Cover Size	Inv. Out Elev.	Dia.	Elev.
Cover Type	Inv. Out Position	From MH	Inlet Dia.
Depth	Lined	Material	Name
Easting	Location	To MH	Northing
Elev.	MH Condition		Pump Type
Inv. Ins Depth	MH ID		
Inv. Ins Dia.	MH Material		
Inv. Ins Drop Depth	MH Type		
Inv. Ins Elev.	Northing		
Inv. Ins Position	Point ID		
	Rim Elev.		
	Surcharge Evidence		

Notes:

1. The geodatabase will contain additional attribute information which is automatically recorded at the time of the observation (i.e. date of observation, survey quality, etc.)
2. The complete data dictionary will be supplied as part of the geodata bases deliverable showing additional pre-formatted data fields that may be collected in the future to increase the robustness of the dataset.

C. The CONSULTANT will perform an initial condition assessment of the manholes as they are opened for data collection. For manholes in less than fair condition, digital photographs will be taken of the manholes to visually document condition, damage, deterioration, and presence of debris or sediment. CONSULTANT will use a 360° camera submersed in structures (as long as structure allows) to collect high resolution, detailed 360° view photos. We have budgeted for 10% of the manholes (120) for which this additional level of assessment will be performed.

Task 4 - Lift Station Assessment

A. The CONSULTANT will perform a site visit to each of the City's pump station to photograph and document the condition of the station.

B. The CONSULTANT will perform a pump down test of each station to estimate the pump capacity of the station.

C. The CONSULTANT will prepare itemized list of the needed repairs for each pump station along with an estimated rehabilitation budget for each station.

Task 5 – Sewer System Smoke Testing

A. Based on the results of the Lift Station Assessment, and in cooperation with the Town staff, the CONSULTANT will identify areas for smoke testing of the collection system.

B. The CONSULTANT will provide the CLIENT with English and Spanish templates for smoke testing public notification. Public Notification includes publishing a notice in the local paper, distributing door hangers and coordinating with the City the use of any available public notification system (Reverse 911, etc.).

C. The CONSULATANT will partner with NC Rural Water to provide the labor and materials to perform smoke testing of the sewer system.

D. The CONSULTANT will utilize electronic devices to capture and log the location and pictures of defects found by smoke testing. The data is captured in a format compatible with the City's GIS system to be developed.

E. The CLIENT will aid the CONSULTANT in the transport of equipment and the opening of the manholes. The associated cost of Town equipment and labor is eligible for the Town's "in-kind" participation.

Task 6 - GIS Connectivity & QA/QC

A. Utilize the GPS located utility features, record drawings and staff input to connect the sewer line utility and develop network topology. Connectivity questions and concerns will be flagged and passed to CLIENT for review.

B. Add attributes to features based on CLIENT knowledge of the system and review of as-built records (to the extent of record drawing availability and the extent that the AIA Grant budget allows) to include pipe size, material, invert elevation, slope and digital images captured under Task 2. The panoramic images collected during Task 2 will be used to determine manhole condition, damage, deterioration, and presence of debris.

C. The CONSULTANT will incorporate the CLIENT's previous work of smoke testing results, repair records and similar documents into the database to the extent allowed by the budget.

Task 7 - Develop an Asset Management Plan

A. Risk Analysis: Based on the information gathered through GPS/GIS collection, an analysis of predictive deterioration and failure will be completed.

B. Capital Improvement Needs and Prioritization: Assets identified as having high probability of failure will be identified and prioritized. Generalized and system-wide asset replacement cost will be developed. Prioritization will be based on the expectation of failure and the impact to the community due to failure. 20-year CIP development.

C. The CONSULTANT will provide the Capital Improvement Plan recommendations and the Asset Management Plan update in a MS Excel format that is compatible with the City's existing templates.

Task 8 – Perform Sewer Rate Study

A. Data Collection:

1. Collect all relevant technical, organizational, and financial information required for the project.

2. Review financial information for the sewer enterprise fund, including current budget and past audits, current user information, debt status, and previously prepared plans, cost estimates prepared by the CLIENT or CLIENT's engineering partners and capital improvement programs.

3. Discuss key project assumptions and key project considerations that relate to the present or future financial standing of the fund.

B. Capital Improvement Planning and Financial Strategies

1. Assist the CLIENT in updating its 10-Year Capital Improvement Plan (CIP) for the sewer system and summarize capital financing assumptions for each proposed project and related debt service requirements.

2. Formulate assumptions related to certain financial issues and events. Review relevant questions and assumptions with CLIENT staff and summarize all assumptions regarding capital outlay and debt funded capital projects. Obtain CLIENT approval on summary of project assumptions.

3. Define the Capital Financing Strategy for implementing the CIP.

C. Financial Analysis Model

1. Develop a 10-year Financial Analysis model for the CLIENT's sewer enterprise fund.

2. Develop key financial benchmarks for unrestricted net assets, annual net income, reserves, and debt ratios as measures of fund stability.

3. Define project fund revenues from operating and non-operating sources and fund costs attributable to operations and capital investments over the ten-year time period.

4. Determine the extent to which revenues exceed expenditures for each year of the project period.

5. Establish annual estimates of new revenue requirements necessary to sustain the fund over the project period.

D. Rate Modeling

1. Establish a sewer rate model for the CLIENT's existing rate structures and calibrate the model to current revenues.

2. Based on the projected revenue requirement that has been projected, provide the capability to forecast total revenues produced by hypothetical rate structures providing for certain user categories and their associated rates.

3. Examine alternatives for rate structure revisions including changes to the minimum charge and project subsequent impacts of said revisions on the fund and on rate payers of various quantities of consumption.

4. Summarize potential rate adjustments based on the new revenue requirements established in the financial analysis.

5. Provide the information to conduct rate benchmarking for similar sewer municipal programs.

6. Review rate recommendations with CLIENT Staff.

E. Final Deliverables

1. A draft memorandum of findings and conclusions.

2. Review of the draft report with CLIENT Staff and incorporate comments and input into a final Memorandum.

3. A final project working session with CLIENT Staff to provide opportunity for discussion and input into the study process.

4. Prepare the final project Memorandum.

Task 9 - Final Report and Deliverables

A. The CONSULTANT will prepare a final report, estimated at 10 pages exclusive of exhibits, describing the AIA tasks and presentation of the results. The CONSULTANT will prepare a presentation to accompany the final report and be prepared to present it to the elected officials and City staff upon project completion.

B. The CONSULTANT will coordinate with the CLIENT for access to the CLIENT's computer system for the purpose of installing the collected GIS database to the system. The CONSULTANT will provide copies of all photographs and scanned records to the CLIENT in a mutually acceptable digital format.

C. Additional Services

Services that are not included in Section B or are specifically excluded from this AGREEMENT shall be considered Additional Services. The CONSULTANT will furnish or obtain from others Additional Services if requested in writing by the CLIENT and accepted by the CONSULTANT. Additional Services shall be paid by the CLIENT in accordance with the Fee & Expense Schedule outlined in Exhibit II.

- In-line inspections.
- Data collection and inspection of cleanouts / laterals.
- Manhole or line cleaning
- Manhole pavement dig outs or accessing bolted manholes
- Surveying services beyond those identified
- Flow Metering, smoke testing, CCTV inspection or other I&I type investigations.

D. Client Responsibilities

During the performance of the CONSULTANT's services under this AGREEMENT, the CLIENT will:

- Provide any information needed to complete the PROJECT not specifically addressed in the Scope of Services
- Provide all available information pertinent to the PROJECT, including any GIS information, reports, maps, drawings, and any other data relative to the PROJECT
- Examine all proposals, reports, sketches, estimates and other documents presented by the CONSULTANT and render in writing decisions pertaining thereto within a reasonable period so as not to delay the services of the CONSULTANT
- Give prompt written notice to the CONSULTANT whenever the CLIENT observes or otherwise becomes aware of any defect in the PROJECT
- Handle matters requiring an attorney at law

Any changes to the alternatives or PROJECT requirements after CONSULTANT has begun work may require additional fees.

E. Compensation for Services

A. Lump Sum Fee

CONSULTANT proposes to provide the Scope of Services previously outlined on a lump sum fee basis as described in the following table. Compensation shall not exceed the total estimated compensation amount unless approved in writing by CLIENT.

Task Number	Task Name	Lump Sum Fee
1	Data Acquisition & Assessment and Database Design	$4,500
3	GPS Location & Assessment	$38,000
4	Lift Station Assessment	$19,500
5	Sanitary Sewer Smoke Testing	$45,000
6	GIS Connectivity & QA/QC	$6,000
7	Develop an Asset Management Plan	$14,000
8	Perform Sewer Rate Study	$10,000
9	Final Report and Deliverables	$10,000
Total		**$147,000**

1. CONSULTANT may alter the distribution of compensation between individual phases noted herein to be consistent with services rendered but shall not exceed the total Lump Sum amount unless approved in writing by the CLIENT.
2. The Lump Sum includes compensation for CONSULTANT's services. Appropriate amounts have been incorporated in the Lump Sum to account for labor costs, overhead, profit, expenses, and Consultant charges.
3. The portion of the Lump Sum amount billed for CONSULTANT's services will be based upon CONSULTANT's estimate of the percentage of the total services completed during the billing period.

B. Hourly Fee

CONSULTANT proposes to provide the Scope of Services previously outlined on an hourly basis with an estimated budget as described in the following table. Compensation shall not exceed the total estimated compensation amount unless approved in writing by CLIENT.

Task Number	Task Name	*Hourly Fee Budget
2	Georeferencing and Linking of Drawings & As-builts	$3,000
Total		**$3,000**
***These Tasks are presented as an hourly fee with a budget due to the difficulty in estimating the hours required to adequately perform the task(s).**		

1. CLIENT shall pay CONSULTANT for Basic Services by an amount equal to the cumulative hours charged to the PROJECT by each class of CONSULTANT's personnel times Standard Hourly Rates for each applicable billing class for all services performed on the PROJECT.

2. CONSULTANT may alter the distribution of compensation between individual phases of the work noted herein to be consistent with services rendered but shall not exceed the total estimated compensation amount unless approved in writing by CLIENT.

3. The Standard Hourly Rates charged by CONSULTANT constitute full and complete compensation for CONSULTANT's services, including labor costs, overhead, and profit; the Standard Hourly Rates do not include Reimbursable Expenses or CONSULTANT's Consultants' charges.

4. CONSULTANT's estimate of the amounts that will become payable for specified services are only estimates for planning purposes, are not binding on the parties, and are not the minimum or maximum amounts payable to CONSULTANT under the Agreement.

5. When estimated compensation amounts have been stated herein and it subsequently becomes apparent to CONSULTANT that the total compensation amount thus estimated will be exceeded, CONSULTANT shall give CLIENT written notice thereof, allowing CLIENT to consider its options, including suspension or termination of CONSULTANT's services for CLIENT's convenience. Upon notice, CLIENT and CONSULTANT promptly shall review the matter of services remaining to be performed and compensation for such services. CLIENT shall either exercise its right to suspend or terminate CONSULTANT's services for CLIENT's convenience, agree to such compensation exceeding said estimated amount, or agree to a reduction in the remaining services to be rendered by CONSULTANT, so that total compensation for such services will not exceed said estimated amount when such services are completed. If CLIENT decides not to suspend the CONSULTANT's services during the negotiations and CONSULTANT exceeds the estimated amount before CLIENT and CONSULTANT have agreed to an increase in the compensation due CONSULTANT or a reduction in the remaining services, then CONSULTANT shall be paid for all services rendered hereunder.

C. Fee Summary

Fee Type	Estimated Fee/Budget
Lump Sum Fee	$147,000
Hourly Budget	$3,000
Total	**$150,000**

F. Timeline for Services

The professional services described herein shall be completed and submitted within a timeframe mutually agreed upon between the CLIENT and CONSULTANT.

G. Acceptance

Receipt of an executed copy of this agreement will serve as the written agreement between CONSULTANT and CLIENT for the services outlined.

Submitted by CONSULTANT:	**Accepted by CLIENT:**
WithersRavenel, Inc. 115 MacKenan Drive Cary, NC 27511	Town of Pilot Mountain 124 W Main Street Pilot Mountain, NC 27041
Authorized Signature	Authorized Signature
Jeffrey J. Wing, PE, LEED AP Printed Name	Printed Name
Vice President, Director - Utilities Title	Title
jwing@withersravenel.com Email Address	Email Address
919.469.3340 Phone	Phone

PREAUDIT STATEMENT: *This instrument has been preaudited in the manner required by the Local Government Budget and Fiscal Control Act (NC G.S. 159-28(a)).*

Signature of Finance Officer: _____

Printed Name: _____

Date: _____

Exhibit I – Standard Terms and Conditions
Exhibit II – Fee & Expense Schedule

WithersRavenel
Our People. Your Success.

EXHIBIT I

Standard Terms and Conditions

WithersRavenel, Inc.

The proposal submitted by WithersRavenel, INC. ("CONSULTANT") is subject to the following terms and conditions (collectively referred to as the "Agreement") and, by accepting the proposal, the services, or any part thereof, the CLIENT agrees and accepts the terms and conditions outlined below:

1. **Payment:**

   a) The CLIENT will pay CONSULTANT for services and expenses in accordance with periodic invoices to CLIENT and a final invoice upon completion of the services. Each invoice is due and payable in full upon presentation to CLIENT. Invoices are past due after 30 days. Past due amounts are subject to interest at a rate of one and one-half percent per month (18% per annum) on the outstanding balance from the date of the invoice.

   b) If the CLIENT fails to make payment to the CONSULTANT within 45 days after the transmittal of an invoice, the CONSULTANT may, after giving 7 days written notice to the CLIENT, suspend services under this Agreement until all amounts due hereunder are paid in full. If an invoice remains unpaid after 90 days from invoice date, the CONSULTANT may terminate the Agreement and/or initiate legal proceedings to collect the fees owed, plus other reasonable expenses of collection including attorney's fees.

2. **Notification of Breach or Default:** The CLIENT shall provide prompt written notice to the CONSULTANT if CLIENT becomes aware of any breach, error, omission or inconsistency arising out of CONSULTANT's work or any other alleged breach of contract by the CONSULTANT. The failure of CLIENT to provide such written notice within ten (10) days from the time CLIENT became aware of the fault, defect, error, omission, inconsistency or breach, shall constitute a waiver by CLIENT of any and all claims against the CONSULTANT arising out of such fault, defect, error, omission, inconsistency or breach. Emails shall be considered adequate written notice for purposes of this Agreement.

3. **Standard of Care:** CONSULTANT shall perform Agreement for CLIENT in a professional manner, using that degree of care and skill ordinarily exercised by and consistent with the standards of professionals providing the same services in the same or a similar locality as the project. THERE ARE NO OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE THAT WILL OR CAN ARISE OUT OF THE SERVICES PROVIDED BY CONSULTANT OR THIS AGREEMENT.

4. **Waiver of Consequential Damages/Limitation of Liability:** CLIENT agrees that CONSULTANT's aggregate liability for any and all claims that may be asserted by CLIENT is limited to $50,000 or to the fee paid to CONSULTANT under this Agreement, whichever is greater. Both CLIENT and CONSULTANT hereby waive any right to pursue claims for consequential damages against one another, including any claims for lost profits.

5. **Representations of CLIENT:** CLIENT warrants and covenants that sufficient funds are available or will be available upon receipt of CONSULTANT's invoice to make payment in full for the services rendered by CONSULTANT, and that such payments shall be made in a timely fashion.

6. **Ownership of Instruments of Service:** All reports, plans, specifications, field data and notes and other documents, including all documents on electronic media, prepared by the CONSULTANT as instrument of service, shall remain the property of the CONSULTANT. The CONSULTANT shall retain all common law, statutory and other rights, including the copyright thereto. In the event of termination of this Agreement and upon full payment of fees owed to CONSULTANT, CONSULTANT shall make available to CLIENT copies of all plans and specifications.

7. **Change Orders: CONSULTANT** will treat as a change order any written or oral order (including directions, instructions, interpretations or determinations) from CLIENT which request changes in the Agreement or CONSULTANT's scope of work. CONSULTANT will give CLIENT written notice within ten (10) days of a Change Order of any resulting increase in CONSULTANT's fees.

8. **Opinion of Cost/Cost Estimates:** Since the CONSULTANT has no control over the cost of labor, materials, equipment of services furnished by others, or over methods of determining prices, or over competitive bidding or market conditions, any and all opinions as to costs rendered hereunder, including but not limited to opinions as to the costs of construction and materials, shall be made on the basis of its experience and qualifications and represent its best judgment as an experienced and qualified professional familiar with the construction industry; but the CONSULTANT cannot and does not guarantee the proposals, bids or actual costs and will not vary significantly from opinions of probable costs prepared by it. If at any time the CLIENT wishes greater assurances as to the amount of any costs, he shall employ an independent cost estimator to make such determination.

9. **Assignment and Third Parties:** Nothing under this Agreement shall be construed to give any rights or benefits in this Agreement to anyone other than the CLIENT and CONSULTANT, and all duties and responsibilities undertaken pursuant to this Agreement will be for the sole and exclusive benefit of the CLIENT and the CONSULTANT and not for the benefit of any other party. Neither the CLIENT nor the CONSULTANT shall assign, sublet, or transfer any rights under or interests in this Agreement without the written consent of the other which shall not be unreasonably withheld. However, nothing contained herein shall prevent or restrict the CONSULTANT from employing independent subconsultants as the CONSULTANT may deem appropriate to assist in the performance of services hereunder.

10. **Project Site:** Should CLIENT not be owner of the project site, then CLIENT agrees to notify the site owner of the possibility of unavoidable alteration and damage to the site. CLIENT further agrees to indemnify, defend and hold CONSULTANT harmless against any claims by the CLIENT or persons having possession of the site through the Owner which are related to such alteration or damage.

11. **Access to Site:** CLIENT is responsible for providing legal and unencumbered access to site, including securing all necessary site access agreements or easements, to the extent necessary for the CONSULTANT to carry out his services.

12. **Survival:** All of CLIENT's obligations and liabilities, including but not limited to, its indemnification obligations and limitations, and CONSULTANT's rights and remedies with respect thereto, shall survive completion of the expiration or termination of this Agreement.

13. **Termination:** Either party may terminate the Agreement with or without cause upon ten (10) days advance written notice, if the other party has not cured or taken reasonable steps to cure the breach giving rise to termination within the ten (10) day notice period. If CLIENT terminates without cause or if CONSULTANT terminates for cause, CLIENT will pay CONSULTANT for all costs incurred, non-cancelable commitments, and fees earned to the date of termination and through demobilization, including any cancellation charges of vendors, subcontractors, as well as demobilization costs.

14. **Severability:** If any provision of this Agreement, or application thereof to any person or circumstance, is found to be invalid then such provision shall be modified if possible, to fulfill the intent of the parties as reflected in the original provision, the remainder of this Agreement, or the application of such provision to persons or circumstances other than those as to which it is held invalid, shall not be affected thereby, and each provision of this Agreement shall be valid and enforced to the fullest extent permitted by the law.

15. **No Waiver:** No waiver by either party of any default by the other party in the performance of any provision of this Agreement shall operate as or be construed as a waiver of any future default, whether like or difference in character.

16. **Merger, Amendment:** This Agreement constitutes the entire Agreement between the CONSULTANT and the CLIENT and all integrated negotiations, written and oral understandings between the parties are merged herein. This Agreement can be supplemented and/or amended only by a written document executed by both the CONSULTANT and the CLIENT

17. **Unforeseen Occurrences:** If, during the performance of services hereunder, any unforeseen hazardous substance, material, element of constituent or other unforeseen conditions or occurrences are encountered which, affects or may affect the services, the risk involved in providing the service, or the recommended scope of services, CONSULTANT will promptly notify CLIENT thereof. Subsequent to that notification, CONSULTANT may: (a) if practicable, in CONSULTANT's sole judgment and with approval of CLIENT, complete the original scope of services in accordance with the procedures originally intended in the Proposal; (b) Agree with CLIENT to modify the scope of services and the estimate of charges to include study of the previously unforeseen conditions or occurrences, such revision to be in writing and signed by the parties and incorporated herein; or (c) Terminate the services effective on the date of notification pursuant to the terms of the Agreement.

18. **Force Majeure:** Should completion of any portion of the Agreement be delayed for causes beyond the control of or without the fault or negligence of CONSULTANT, including force majeure, the reasonable time for performance shall be extended for a period at least equal to the delay and the parties shall mutually agree on the terms and conditions upon which Agreement may be continued. Force majeure includes but is not restricted to acts of God, acts or failures of governmental authorities, acts of CLIENT's contractors or agents, fire, floods, epidemics, riots, quarantine restrictions, strikes, civil insurrections, freight embargoes, and unusually severe weather.

19. **Safety:** CONSULTANT is not responsible for site safety or compliance with the Occupational Safety and Health Act of 1970 ("OSHA"). Job site safety remains the sole exclusive responsibility of CLIENT or CLIENT's contractors, except with respect to CONSULTANT'S own employees. Likewise, CONSULTANT shall have no right to direct or stop the work of CLIENT's contractors, agents or employees.

20. **Dispute Resolution/Arbitration:** Any claim or other dispute arising out of or related to this Agreement shall be subject to Arbitration under the Federal Arbitration Act. Such claims and disputes shall first be subject to non-binding mediation, and if mediation is unsuccessful, shall be subject to Arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect. Any demand for Arbitration shall be filed in writing with the other party and with the American Arbitration Association.

21. **Independent Contractor:** In carrying out its obligations, CONSULTANT shall be acting at all times as an independent contractor and not an employee, agent, partner or joint venturer of CLIENT. CONSULTANT's work does not include any supervision or direction of the work of other contractors, their employees or agents, and CONSULTANT's presence shall in no way create any liability on behalf of CONSULTANT for failure of other contractors, their employees or agents to properly or correctly perform their work

22. **Hazardous Substances:** CLIENT agrees to advise CONSULTANT upon execution of this Agreement of any hazardous substances or any condition existing in, on or near the Project Site presenting a potential danger to human health, the environment or equipment. By virtue of entering into the Agreement or of providing services, CONSULTANT does not assume control of, or responsibility for, the Project Site or the person in charge of the Project Site or undertake responsibility for reporting to any federal, state or local public agencies, any conditions at the project site that may present a potential danger to the public, health, safety or environment except where required of CONSULTANT by law. In the event CONSULTANT encounters hazardous or toxic substances or contamination significantly beyond that originally represented by CLIENT, CONSULTANT may suspend or terminate the Agreement. CLIENT acknowledges that CONSULTANT has no responsibility as a generator, treater, storer, or disposer of hazardous or toxic substances found or identified at a site and CLIENT agrees to defend, indemnify, and hold harmless CONSULTANT, from any claim or liability, arising out of CONSULTANT's performance of work under the Agreement and made or brought against CONSULTANT for any actual or threatened environmental pollution or contamination except to the extent that CONSULTANT has negligently caused such pollution or contamination.

23. **Choice of Law:** The validity, interpretation, and performance of this Agreement shall be governed by and construed in accordance with the law of the State of North Carolina, excluding only its conflicts of laws principles.

24. **Construction Services:** If construction administration and review services are requested by the CLIENT, CLIENT agrees that such administration, review, or interpretation of construction work or documents by CONSULTANT shall not relieve any contractor from liability in regard to its duty to comply with the engineering standards for the Project, and shall not give rise to a claim against a contractor's failure to hold in accordance with the applicable plans, specifications or standards.

25. **Field Representative:** If CONSULTANT provides field services or construction observation services, the presence of the CONSULTANT's field personnel will only be for the purpose of providing observation and field testing of specific aspects of the Project. Should a contractor be involved in the Project, the CONSULTANT's responsibility does not include the supervision or direction of the actual work of any contractor, its employees or agents. All contractors should be so advised. Contractors should also be informed that neither the presence of the CONSULTANT's field representative nor the observation and testing by the CONSULTANT shall excuse contractor in any way for defects in contractor's work. It is agreed that the CONSULTANT will not be responsible for job or site safety on the Project and that the CONSULTANT does not have the right to stop the work of any contractor.

26. **Submittals:** CONSULTANT's review of shop drawings and other submittals is to determine conformity with the design concept only. Review of shop drawings and submittals does not include means, methods, techniques or procedures of construction, including but not limited to, safety requirements.

WithersRavenel
Our People. Your Success.

EXHIBIT II

Fee & Expense Schedule

Description	Rate
Engineering / Planning	
Principal	$ 200
Senior Technical Consultant	$ 185
Senior Project Manager	$ 170
Project Manager	$ 155
Assistant Project Manager	$ 135
Project Coordinator	$ 95
Senior Staff Professional	$ 155
Staff Professional IV	$ 130
Staff Professional III	$ 120
Staff Professional II	$ 110
Staff Professional I	$ 95
Senior Designer	$ 135
Designer II	$ 115
Designer I	$ 105
Senior CAD Technician	$ 110
CAD Technician II	$ 95
CAD Technician I	$ 85
Senior Land Planner	$ 120
Land Planner II	$ 110
Land Planner I	$ 100
Planning Technician	$ 90
Senior Construction Manager	$ 150
Construction Manager II	$ 130
Construction Manager I	$ 120
Senior Resident Project Representative	$ 110
Resident Project Representative II	$ 100
Resident Project Representative I	$ 95
Expenses	
Bond Prints (Per Sheet)	$1.75
Mylar Prints (Per Sheet)	$11.00
Mileage	Per IRS
Delivery - Project Specific (Distance & Priority)	
Subcontractor Fees (Markup)	1.15
Expenses / Reprod. / Permits (Markup)	1.15

Description	Rate
Geomatics	
Principal	$ 195
Senior Technical Consultant	$ 180
Geomatics Senior Manager	$ 170
Geomatics Project Manager II (SR PM)	$ 140
Geomatics Project Manager I	$ 130
Geomatics Project Professional II	$ 135
Geomatics Project Professional I	$ 120
Geomatics CAD III	$ 105
Geomatics CAD II	$ 90
Geomatics CAD I	$ 70
Geomatics GIS Specialist	$ 115
Geomatics GIS Tech III	$ 100
Geomatics GIS Tech II	$ 85
Geomatics GIS Tech I	$ 70
Geomatics Remote Sensing Crew (2 Man)	$ 250
Geomatics Remote Sensing Crew (1 Man)	$ 175
Geomatics Survey Crew III (3 Man)	$ 195
Geomatics Survey Crew II (2 Man)	$ 155
Geomatics Survey Crew I (1 Man)	$ 130
Geomatics Survey Tech IV	$ 100
Geomatics Survey Tech III	$ 90
Geomatics Survey Tech II	$ 65
Geomatics Survey Tech I	$ 40
Administrative	
Office Administrator III	$ 95
Office Administrator II	$ 90
Office Administrator I	$ 85
Administrative Assistant III	$ 80
Administrative Assistant II	$ 70
Administrative Assistant I	$ 65

Description	Rate
Environmental / Geology	
Principal	$ 195
Senior Technical Consultant	$ 180
Environmental Project Professional V	$ 165
Environmental Project Professional IV	$ 150
Environmental Project Professional III	$ 135
Environmental Project Professional II	$ 125
Environmental Project Professional I	$ 115
Environmental Staff Professional III	$ 110
Environmental Staff Professional II	$ 100
Environmental Staff Professional I	$ 90
Environmental Technician II	$ 85
Environmental Technician I	$ 70
Senior Biologist/Wetlands Scientist	$ 140
Biologist/Wetlands Scientist III	$ 120
Biologist/Wetlands Scientist II	$ 110
Biologist/Wetlands Scientist I	$ 100
Senior Hydrogeologist	$ 160
Project Geologist II (Sr. Proj. Geologist)	$ 135
Project Geologist I	$ 115
Staff Geologist II	$ 105
Staff Geologist I	$ 95
WR-Martin Consulting	
WR Martin Principal Consultant	$ 160
WR Martin Senior Project Manager II	$ 130
WR Martin Senior Project Manager	$ 125
WR Martin Project Manager II	$ 110
WR Martin Project Manager	$ 100
WR Martin Project Consultant II	$ 95
WR Martin Project Consultant I	$ 85

Effective January 1, 2019 – Schedule is subject to change

Water & Sewer Regionalization Study
Background Information:
The Town received a grant in 2016 to conduct a study about the potential to regionalize our water and sewer systems with either the City of Mt. Airy or the City of King. This project was essentially completed some time ago and a previous Board heard the recommendations from the engineers and directed staff to further pursue the interconnection of our water system with Mt. Airy. We have done this and currently have funding to construct this interconncection. This is the final report from our engineers on both studies. The Board does not need to take any action on this, just to receive the reports.
Staff Recommendation: Information only
Possible Board of Commissioner Actions
• Take no action
Attachments
• Water Regionalization Study Final Report • Sewer Regionalization Study Final Report

WATER REGIONALIZATION STUDY

AUGUST 2019

TOWN OF PILOT MOUNTAIN

SURRY COUNTY, NORTH CAROLINA

CONSULTING ENGINEERS
HICKORY, NORTH CAROLINA

WATER REGIONALIZATION STUDY

AUGUST 2019

TOWN OF PILOT MOUNTAIN

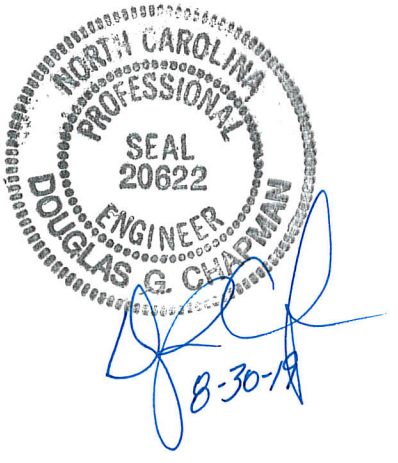
SURRY COUNTY, NORTH CAROLINA

DOUGLAS G. CHAPMAN, PE

mcgill Shaping Communities Together

1240 19th Street Lane NW
Hickory, North Carolina 28601
828.328.2024

Firm License No.: C-0459



AUGUST 2019

PROJECT NO. 17.01102

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION

The Town of Pilot Mountain owns and operates its own water utility system. The system serves residents and businesses within the Town of Pilot Mountain as well as Surry County customers outside of the town limits.

The Town of Pilot Mountain treats water from Toms Creek at the Pilot Mountain Water Treatment Plant (WTP) which has a permitted capacity of 1.6 million gallons per day (MGD) under PWSID 02-86-025. Currently, the system treats an annual average of 0.250 MGD. The Town currently has three elevated water storage tanks with a finished water storage capacity of 0.800 million gallons (MG). The water system is comprised of approximately 30 miles of 2-inch to 12-inch diameter water lines. The Town's water system demand includes residential and commercial customers.

This Regionalization Study seeks to consider some form of partnering with a neighboring utility to meet the Town's need for provision of water to its customers. As part of this effort, McGill will analyze the Town's existing water infrastructure and consider adjacent systems for partnering. Once alternatives are developed, capital and operating costs for each alternative will be developed and a 10-year financial model presented showing the impact to user rates for each scenario. Finally, funding opportunities will be presented to implement portions of the needed capital improvements. A summary of conclusions and recommendations will complete this report.

2.1 Existing Water Treatment Plant

The Town of Pilot Mountain owns and operates a conventional WTP. The facility withdraws water from Toms Creek and has a permitted treatment capacity of 1.6 MGD with an on-site raw water twenty (20) MG capacity reservoir. The reservoir is utilized as off-stream raw water storage. The Town's treatment process includes the raw water intake pump station, a reservoir pump station, flash mixers, flocculation, sedimentation, filtration, and disinfection. Chemical treatment is performed using soda ash, aluminum sulfate hydrate, and chlorine gas. Treated water is stored within a 500,000 gallon clearwell and is then pumped to three (3) elevated storage tanks. Figure 2.1 shows the average daily flows of the WTP. Figures 2.2 and 2.3 shows the process of flow for the water treatment train. Table 2.1.1 is a list of the WTP equipment and the current condition of each item.

Figure 2.1 - Water Treatment Plant Average Daily Flows per Month (2018)

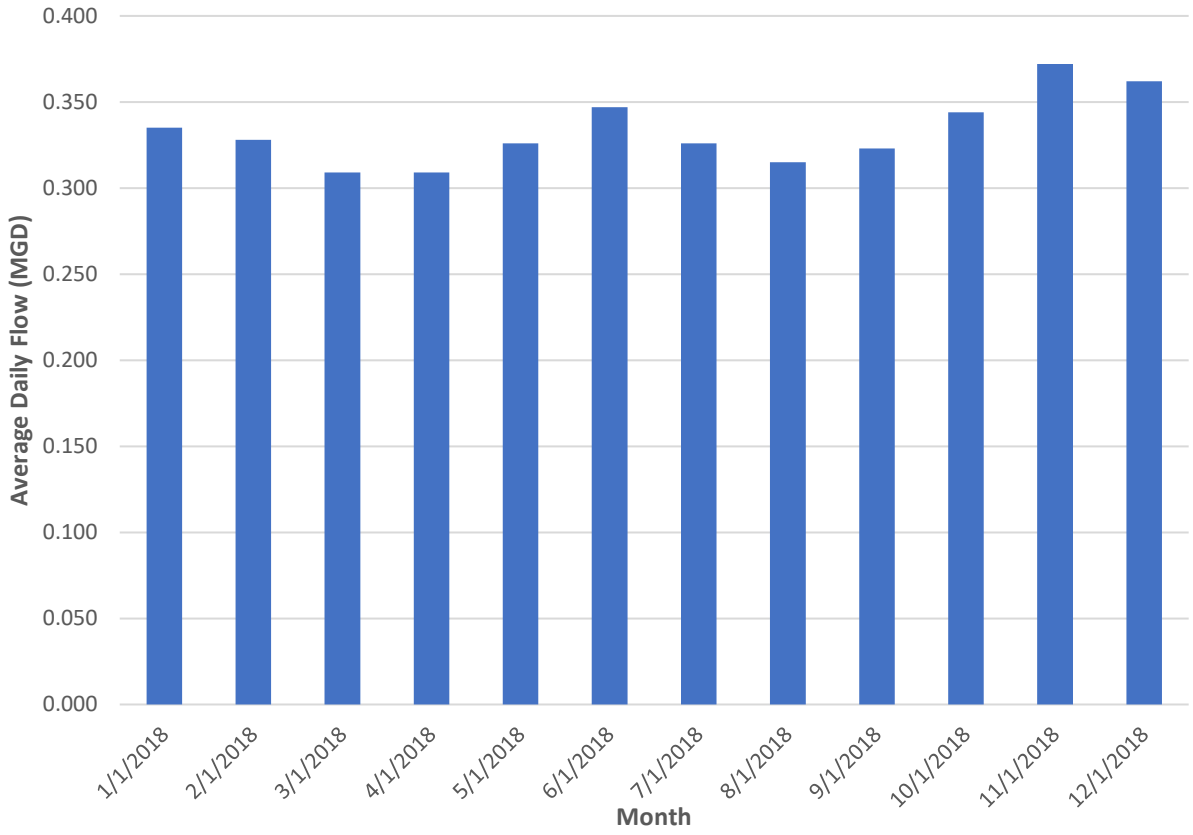


Figure 2.2 - WTP Process Flow Diagram

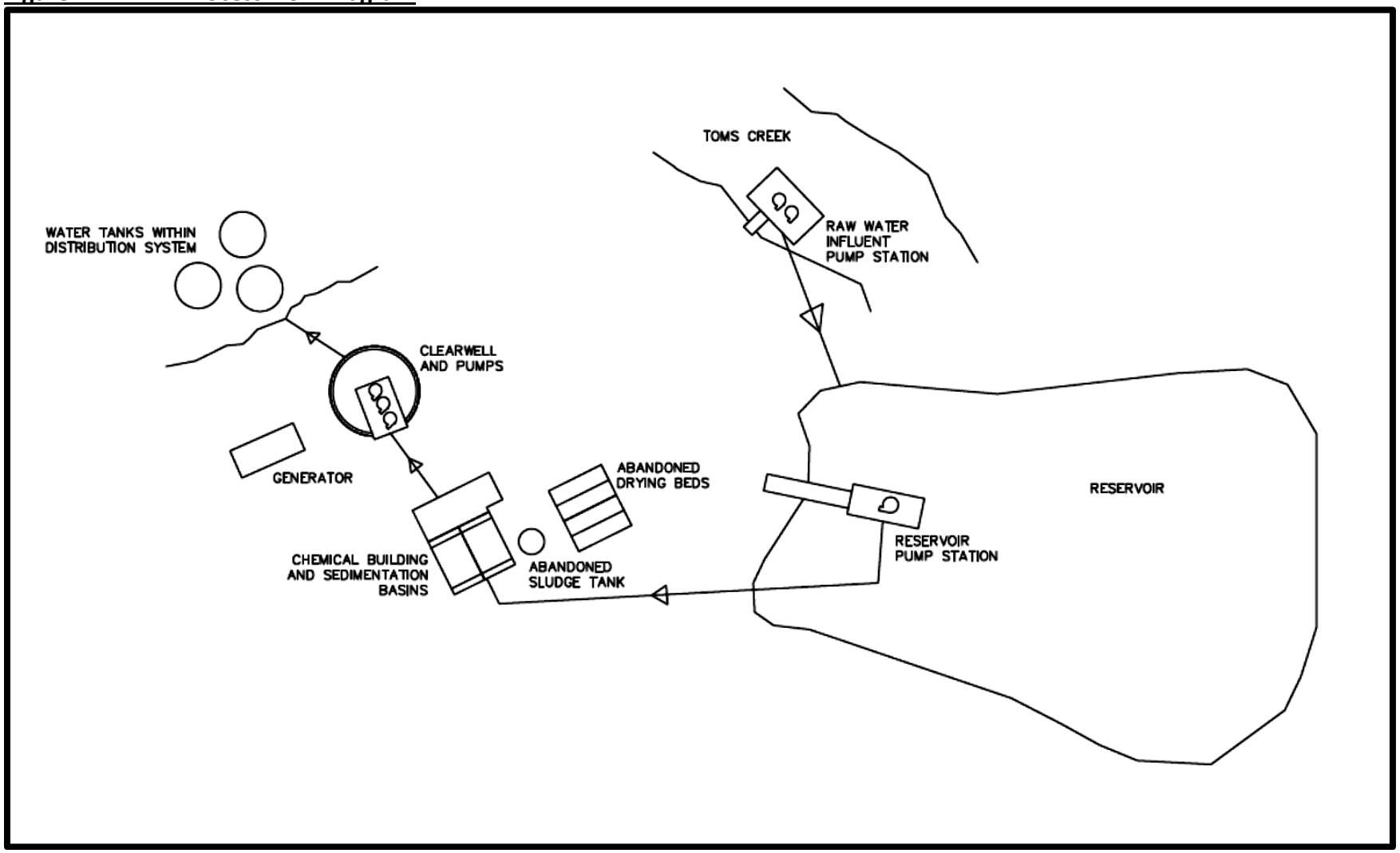


Figure 2.3 – WTP Process Flow Diagram Detail of Treatment Train

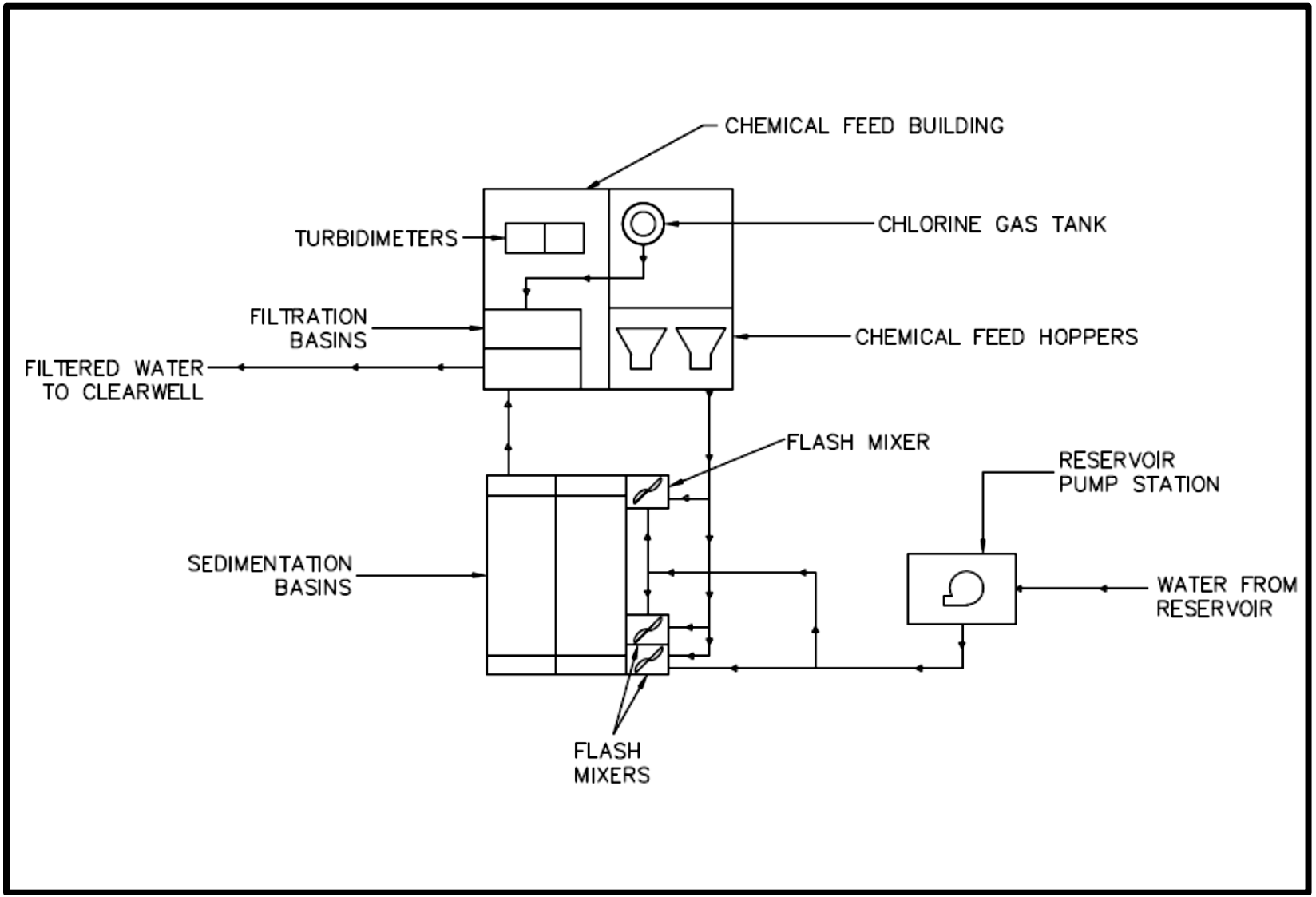


Table 2.1.1 – WTP Equipment Inventory

Equipment	Age	Condition
Raw Water Intake Facility	55 years	Good
Reservoir Pump Facility	Unknown	Good
Flash Mixers (3)	Unknown	Good
Chemical Feed System – Soda Ash	Unknown	Good
Chemical Feed System – Aluminum Sulfate Hydrate	Unknown	Good
Sedimentation Basin	55 years	Good
Trac-Vac® Sludge Collection System	Unknown	Good
Turbidimeters (2)	Within last 5 years	Good
Chlorine Tank and Scale	Unknown	Good
Clearwell	55 years	Good
Clearwell Pumps	Over 30 years	Good
Generator	Unknown	Poor - Inoperable
PolyBend Chem Feed System	Unknown	Abandoned
Backwash Storage Tank	30+/- years	Abandoned
Sludge Drying Beds (8)	30+/- years	Abandoned

The water treatment plant has been well operated and maintained over the years. At this time the most immediate concern for plant staff is getting the existing generator repaired and back on line. Although the Town has substantial storage capacity within the system, the plant's stand-by generator is a critical element in providing a sufficient and dependable source of drinking water to the Town residents.

For the Town to continue providing safe and reliable potable drinking water through its WTP, critical needs within the treatment facility would have to be itemized and addressed in the future. A portion of the existing process treatment systems have been in service without any major upgrades since the 1960s, including equipment and building facilities. Any improvements made to the treatment plant should focus upon needs associated with the raw water intake facility, sedimentation basins, sludge collection and removal, chemical feed facilities, high service pump station, and laboratory renovations. However, as stated previously the stand-by generator repair should be the Town's most immediate concern for the WTP. Overall, the Town should focus upon maximizing the facility's treatment reliability and operational effectiveness.

Figure 2.4 - Raw Water Intake Pump Station

Figure 2.5 - WTP Reservoir and Abandoned Drying Beds

Figure 2.6 - WTP Chemical Feed Room

Figure 2.7 - Clearwell Pumps

Figure 2.8 - Sedimentation Basin

Figure 2.9 - WTP Generator

2.2 Existing Water Distribution Lines

The water distribution system consists of a total of 1,054 metered connections and approximately thirty (30) miles of water line. The water lines are comprised of asbestos cement, cast iron, ductile iron, galvanized iron, and polyvinyl chloride ranging in size from 2 inches to 12 inches. There are approximately 200 fire hydrants and nearly 280 valves within the distribution system, with some portions of the distribution system being over 85 years old.

Based on the typical number of repairs required, it is assumed that the water lines are in 'Poor to Fair' condition as shown in Table 2.2.1.

The Town has recently replaced all water meters. According to the Local Water Supply Plan, the system's oldest water meters are 2 years old. For this reason, water meters are in 'Good' condition.

Table 2.2.1 - Water Line Inventory

Line Type	Size Range (in)	Estimated Length (feet)	Condition
Asbestos Cement	4-12	22,200	Poor
Cast Iron	6-8	38,000	Fair
Ductile Iron	4-12	79,200	Fair
Galvanized Iron	2	3,200	Poor
Polyvinyl Chloride	2-8	15,800	Fair

The Town of Pilot Mountain used a combination of water system GIS mapping, visual observation, and operator/staff knowledge to assess the condition of the distribution system. The condition varies greatly depending upon the location of the system. Generally, the water lines which are located within the older, central locations of Town tend to have more problems related to leaks and pipe deterioration. The Town's Public Works staff typically repairs leaks as they are discovered, particularly when water line breaks occur.

The Town of Pilot Mountain has sufficient manpower, tools, and equipment to repair nearly every leak that is found within the system. When repair operations are deemed too severe for Town staff to perform, outside contractors could be utilized.

2.3 Storage Water Tanks

Pilot Mountain has three (3) water storage tanks. The first elevated tank was built in 1932 with a capacity of 0.10 MG and is currently out of service. The second elevated tank was built in 1962 with a capacity of 0.20 MG. The third ground mounted tank was built in 1980 with a capacity of 0.50 MG. The two (2) tanks in service have a combined total off-stream storage capacity of 0.20 MG. The in-service tanks are in good condition as shown in Table 2.2.2.

Table 2.2.2 - Elevated Water Storage Tank Inventory

Tank	Capacity	Year	Condition
School Street	0.10 MG	1932	Fair (Out of Service)
Main Street	0.20 MG	1962	Good
Golf Course Road	0.50 MG	1980	Good

Water storage tanks are kept on a regular maintenance program, with cleaning and painting performed as needed.

3.0 WATER SUPPLY ALTERNATIVES

Alternatives for future water supply include upgrading Pilot Mountain's existing water treatment plant or constructing an interconnection with one of the adjacent towns. Neighboring water sources considered for supplying water to the town include Mount Airy and the City of King. Both municipalities have the capacity to provide the average daily demand need of 0.24 MGD.

3.1 Water Plant Upgrade

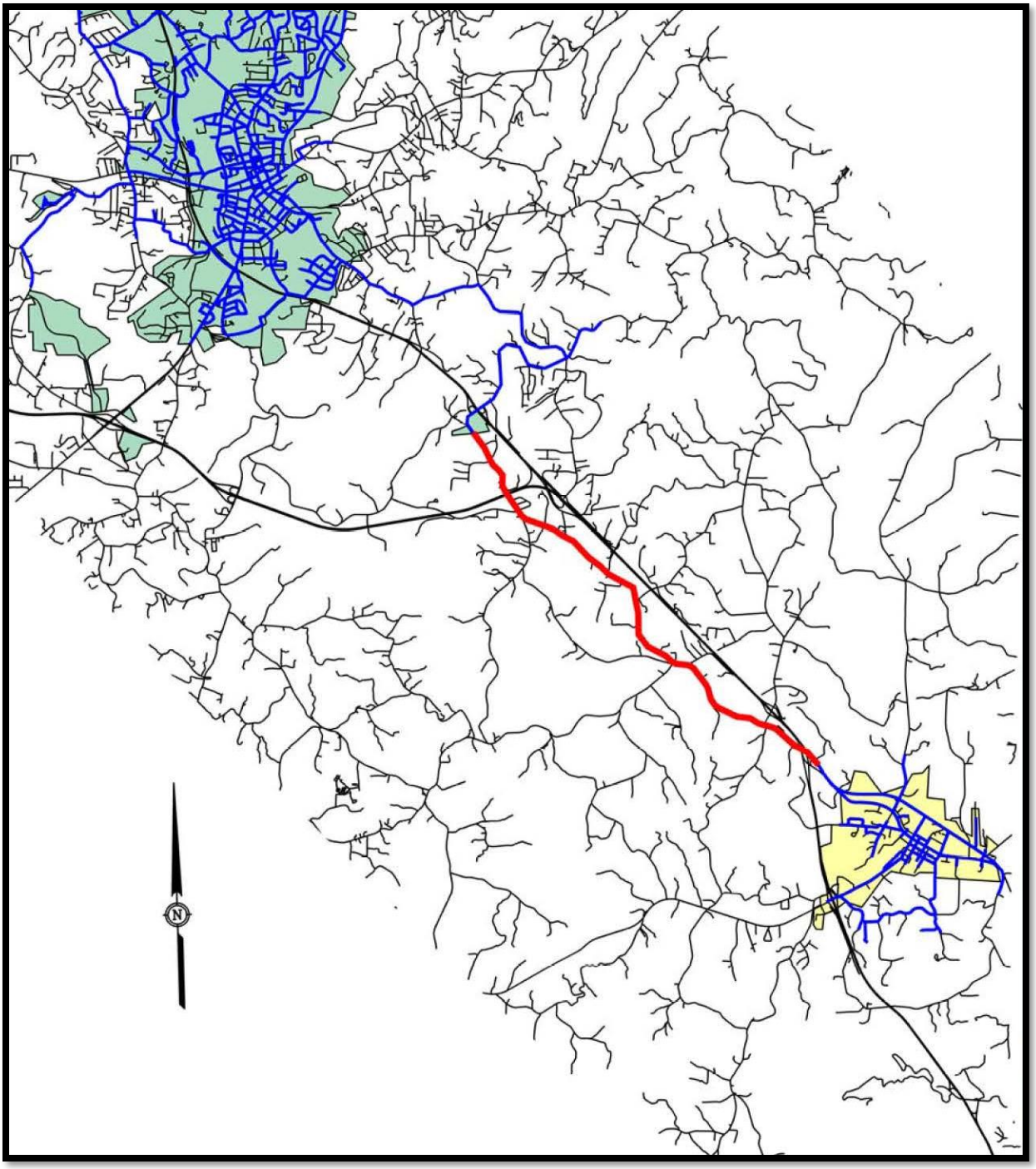
The treatment facility, constructed in 1964, has a design capacity of 2 MGD. While the facility has had a few upgrades over its 55-year history, including filter controls and operational valves, much of the equipment is original to the facilities construction, and therefore passed its expected useful life. To consider the existing treatment plant as a valid source of water for the future, several upgrades are necessary. Should the town choose to continue the operations of its treatment facility, McGill Associates proposes an improvements project. This improvement project includes replacing a number of pumps, valves, chemical feed equipment and the facility's emergency power generator.

3.2 Mount Airy Interconnection

The Mount Airy water treatment facility, which has a design capacity of 12 MGD, currently supplies several neighboring water systems in both North Carolina and Virginia. With current average demands of 2.3 MGD, this plant produces ample available water capacity. The water connection between Pilot Mountain and Mount Airy has been evaluated to the point of preparation of a preliminary design in 2001. Based off this, the most practical route for connecting both systems is primarily along Old Highway 52 to the Pilot Mountain water treatment plant. This proposed project includes construction of approximately 33,000 linear feet of 12" water line and related appurtenances. Given that the hydraulic grade of the Pilot Mountain water system is sufficiently lower than the Mount Airy water distribution system, no pumping is required. Only the installation of appropriate control valves and metering is necessary.

During initial discussions with Mount Airy, their staff indicated that the City could sell water to Pilot Mountain at a bulk rate of $2.78 per 1,000 gallons. This rate would not require any up-front capacity purchase or capital other than construction of the interconnect.

Figure 3.1 – Mount Airy Interconnect Alternative

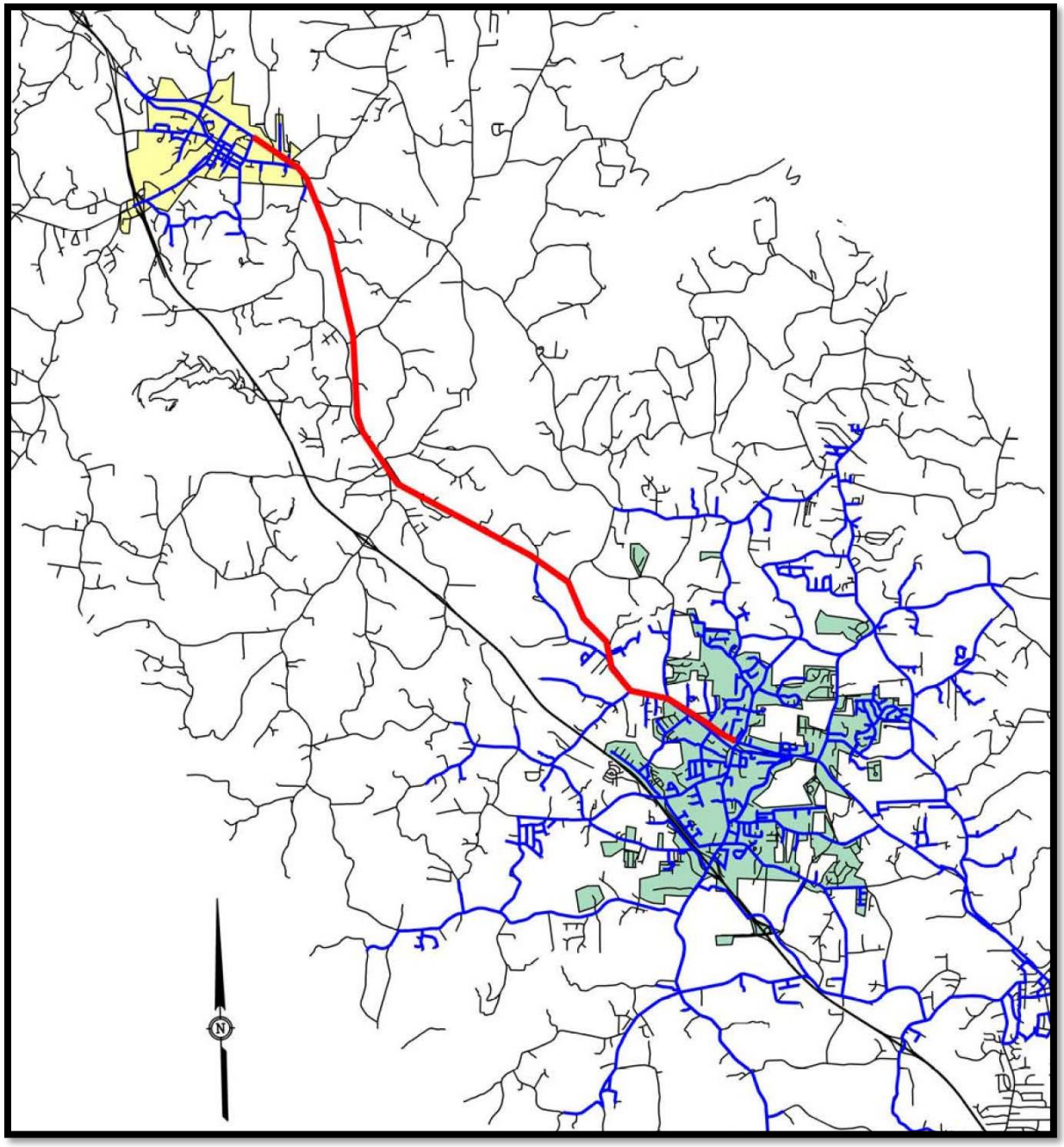


3.3 King Interconnection

The City of King has available water capacity to serve Pilot Mountain's average daily needs. The treatment plant capacity is 4.5 MGD and currently produces an average of 1.5 MGD leaving adequate room to support the town of Pilot Mountain. A potential inter connection between the King and Pilot Mountain waster systems would be primarily along the route of Old US 52. Contrary to the Mount Airy situation, the city of King's hydraulic grade is noticeable lower than that of the Pilot Mountain causing it to require a water booster pump station. This proposed interconnect would include the construction of approximately 55,000 linear feet of 12" water line, a water boosting pumping station, an elevated water tank, and all related appurtenances.

From discussions with King, water purchase rates would likely be in the range of $3.89 per 1,000 gallons and no purchase of capacity is anticipated.

Figure 3.2 – King Interconnect Alternative



4.0 FINANCIAL ANALYSIS

4.1 Goals Statement

This Regionalization Study includes financial analysis and comparison of the potential projects. Given the higher capital costs, operating costs (from pumping), and bulk purchase rates, the King alternative was not considered as a viable financial alternative and therefore not included in this portion of the analysis.

Initial findings of this study were presented to the Town board with a recommendation to seek state revolving grant (SRG) funding for a $3,900,000 water supply project which would apply to either water plant improvements or an interconnect with Mount Airy. Following successful funding for the project with 50% grant, Pilot Mountain, Mount Airy, and Surry County negotiated an interlocal agreement to share the $1,950,000 loan payments three (3) ways. In addition, Mount Airy offered a bulk purchase rate of $2.78 per 1,000 gallons. Consequently, an updated financial analysis was prepared considering Pilot Mountain's enterprise fund which included a reduced debt service on the Mount Airy interconnect and a more modest water plant upgrade project of only $2,730,000. The results of that second analysis are being present in the body of this report while the results of the first analysis are included in Appendix D for reference.

Capital and operating costs for each of the two (2) viable alternatives have been developed and a 10-year financial model presented showing the impact to user rates for each scenario. A Capital Improvements Plan (CIP) has previously been prepared to identify system deficiencies, develop projects to remedy the deficiencies, develop preliminary opinions of probable cost, and prioritize the order and timing of the projects. This previously prepared CIP has been included in Appendix E to display the current financial plan for the Town's Water and Sewer Fund. For this analysis, all capital costs outside of the water supply project are considered constant and extensive capital projects would require further rate increases to sustain the fund.

This Regionalization Study addresses immediate improvements needed to sustain the Town's water supply. Refer to Appendix C for the detailed cost estimates for each of the alternatives. The budgeted cost listed in the CIP for Water Supply Improvements was $3,900,000 as a placeholder; however, this study uses more formalized costs.

4.2 Analysis

Preliminary opinions of probable cost for all water capital projects include construction costs, a 10-percent construction contingency, and "soft costs". Soft costs often vary by project but in this case include preliminary design, surveying, engineering design, environmental design, permitting, construction observation and administration, grant administration and an allowance for legal expenses.

Water purchase costs for the Mount Airy alternative were based on the current average water production of 250,000 gallons per day. Aside from water plant operations (which are removed from the Mount Airy alternative) all other administration, operations, and maintenance costs for the system are held constant for each alternative.

Revenue increases necessary to maintain comparable fund balances for each of the alternatives have been predicted through this analysis. These increases are simply taken as a needed percentage increase over the existing annual revenue. A specific rate study to analyze increases by user category and structure was not performed.

4.2.1 Water Plant Upgrades

To consider the existing treatment plant as a valid source of water for the future, several upgrades are necessary. This improvement project includes replacing a number of pumps, valves, chemical feed equipment and the facility's emergency power generator. The estimated cost of this project (trimmed to address immediate needs only) including construction, planning, design, bidding and funding administrative services is $2,730,000. Refer to Appendix C for the itemized cost estimate for the water plant upgrades. Replacing and improving these plant items are not expected to cause an increase to staffing or operational costs. Below in Table 4.2.1 is a summary of the financial analysis prepared for the water plant upgrade including a $2,730,000 project with 50% grant funding.

Table 4.2.1 Water Plant Upgrade Analysis Summary

UPGRADE WTP $2.73 M PROJECT COSTS (50% GRANT/50% NO INTEREST LOAN)														
REVENUES (WATER ONLY)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		
EXISTING RATE REVENUE	497,340	502,263	507,235	512,255	517,324	522,443	527,611	532,831	538,101	543,423	548,797	554,223		5,806,505
REVENUE FROM INFRASTRUCTURE INVESTMENT FEE	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	0	302,445
REVENUE INCREASE		5%			2%			2%			2%			11%
RATE ADJUSTMENT INCREASE		26,488	26,736	26,987	38,137	38,496	38,857	50,429	50,904	51,383	63,392	63,989		475,799
NEW REVENUES	27,495	53,983	54,231	54,482	65,632	65,991	66,352	77,924	78,399	78,878	90,887	91,484		
TOTAL REVENUES	**524,835**	**556,246**	**561,466**	**566,737**	**582,956**	**588,433**	**593,964**	**610,755**	**616,499**	**622,300**	**639,684**	**645,707**		**6,584,749**
TOTAL OPERATION EXPENSE	**373,155**	**382,142**	**391,367**	**400,838**	**410,561**	**420,544**	**430,793**	**441,317**	**452,123**	**463,218**	**474,612**	**486,312**		**4,753,827**
NEW DEBT SERVICE ($2.73M WTP)		68,250	68,250	68,250	68,250	68,250	68,250	68,250	68,250	68,250	68,250	68,250		750,750
TOTAL EXPENDITURES	**502,907**	**519,370**	**528,245**	**536,318**	**524,224**	**534,207**	**544,456**	**526,367**	**537,173**	**546,168**	**542,862**	**554,562**		**5,893,952**
ANNUAL SURPLUS/ (DEFICIENCY)	**21,928**	**36,877**	**33,221**	**30,419**	**58,732**	**54,226**	**49,507**	**84,388**	**79,327**	**76,132**	**96,822**	**91,145**		**690,796**

4.2.2 Mount Airy Interconnection

This proposed project includes construction of approximately 33,000 linear feet of 12" water line and related appurtenances. The estimated cost of this project, including construction, planning, design, bidding and funding administrative services is $3,900,000. Refer to Appendix C for the itemized cost estimate for the Mount Airy Interconnect. Below in Table 4.2.2 is a summary of the financial analysis prepared for the interconnect project with 50% grant funding. This analysis also assumes that the debt service on the project is divided three (3) ways and only the Pilot Mountain debt service is shown.

Table 4.2.2 Mount Airy Interconnect Analysis Summary

PURCHASE FROM MOUNT AIRY $3.9M PROJECT COSTS (50% GRANT/50% NO INTEREST LOAN) 1/3 PAYMENT - SURRY CO AND 1/3 PAYMENT - MT AIRY														
REVENUES (WATER ONLY)	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**		
EXISTING RATE REVENUE	497,340	502,263	507,235	512,255	517,324	522,443	527,611	532,831	538,101	543,423	548,797	554,223		5,806,505
REVENUE FROM INFRASTRUCTURE INVESTMENT FEE	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495		302,445
REVENUE INCREASE		0.50%			1.00%			1.00%			1.00%			3.50%
RATE ADJUSTMENT INCREASE		2,649	2,674	2,699	8,172	8,249	8,327	14,008	14,140	14,273	20,170	20,360		115,720
NEW REVENUES	27,495	30,144	30,169	30,194	35,667	35,744	35,822	41,503	41,635	41,768	47,665	47,855		
DEBT SERVICE ASSISTANCE		65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000		
TOTAL REVENUES	**524,835**	**597,407**	**602,404**	**607,449**	**617,991**	**623,187**	**628,433**	**639,334**	**644,736**	**650,191**	**661,462**	**667,078**		**6,939,670**
TOTAL OPERATION EXPENSE	**373,155**	**136,989**	**140,223**	**143,543**	**146,950**	**150,448**	**154,039**	**157,726**	**161,511**	**165,397**	**169,387**	**173,484**		**1,699,697**
PURCHASE WATER MT AIRY ($2.78/1000 gal)		253,675	258,749	263,923	269,202	274,586	280,078	285,679	291,393	297,221	303,165	309,228		3,086,899
NEW DEBT SERVICE ($2.73M WTP)		97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500		1,000,000
TOTAL EXPENDITURES	**502,907**	**557,142**	**565,099**	**572,196**	**559,065**	**567,947**	**577,030**	**557,705**	**567,204**	**574,818**	**570,052**	**580,213**		**6,248,471**
ANNUAL SURPLUS/ (DEFICIENCY)	**21,928**	**40,265**	**37,304**	**35,253**	**58,926**	**55,240**	**51,403**	**81,629**	**77,532**	**75,373**	**91,409**	**86,865**		**691,199**

5.0 CONCLUSION AND RECOMMENDATIONS

After analyzing the Town's existing water infrastructure and considering adjacent systems for partnering, it was determined that a system interconnect with the City of Mount Airy is the preferred alternative.

From early discussions, it became apparent that Pilot Mountain did not have a desire or will to lose their autonomy and control by completely merging its water system with Mount Airy. Therefore, a water purchase through an interlocal agreement was the only solutions considered.

Given the condition of the Pilot Mountain water treatment plant, the current water supply source for the Town is not a feasible long-term solution without extensive renovations. Due to the age and condition of the existing components at the water treatment plant, the long-term upkeep of a renovated plant and isolation of supply has made the water plant upgrades a less attractive alternative. When evaluating interconnection alternatives, both availability of water and location were factors in determining which alternative would be best suited for the interconnection. The City of King's water treatment plant has less potential availability than the City of Mount Airy. King's location is also lower in elevation and would require more pipe which causes this interconnect to be more expensive than one with Mount Airy.

Based on the economic benefits of purchasing water and the added benefits to all parties for expanded water service area, construction of an interconnect with Mount Airy is the recommended alternative.

APPENDIX A | Distribution System Map

Pilot Mountain Water Lines

Legend

- Fire Hydrants
- Water Valves
- Water Lines
- Parcels
- Town Boundary

Northwest Piedmont Council of Governments

Sources:

The information contained on this site is furnished by government and private industry sources and is believed to be accurate but accuracy is not guaranteed. Mapping information is a representation of various data sources and is not a substitute for information that would result from an accurate land survey or engineer. The information contained hereon does not replace information that may be obtained by consulting the information's official source. In no event shall Northwest Piedmont Council of Governments be liable for any damages, direct or consequential, from the use of the information contained on this site. Source data is obtained by the counties and municipalities within Region I (Forsyth, Stokes, Surry, Yadkin, and Davie County), United States Census Bureau, United States Geological Survey (USGS), North Carolina Department of Transportation , and Northwest Piedmont Council of Governments .

Cartographic design & digital compilation by
Northwest Piedmont Council of Governments

Using ArcMap in Arc/Info 9.x.
Projection: Stateplane
Units: Feet
Datum: NAD83
Zone: North Carolina (3200)
Date Created: 9/12/2005

F

1 inch equals 517 feet

Feet
0 625 1,250 2,500 3,750 5,000

APPENDIX B | Pilot Mountain Local Water Supply Plan

Pilot Mountain, Town of

2018

The Division of Water Resources (DWR) provides the data contained within this Local Water Supply Plan (LWSP) as a courtesy and service to our customers. DWR staff does not field verify data. Neither DWR, nor any other party involved in the preparation of this LWSP attests that the data is completely free of errors and omissions. Furthermore, data users are cautioned that LWSPs labeled **PROVISIONAL** have yet to be reviewed by DWR staff. Subsequent review may result in significant revision. Questions regarding the accuracy or limitations of usage of this data should be directed to the water system and/or DWR.

1. System Information

Contact Information

Complete

Water System Name:	Pilot Mountain, Town of	PWSID:	02-86-025
Mailing Address:	124 W. Main Street - Box 1 Pilot Mountian, NC 27041	Ownership:	Municipality
Contact Person:	Ronald L. Holt	Title:	Public Works Director
Phone:	336-368-2247	Cell/Mobile:	--
Secondary Contact:	Michael Bose	Phone:	336-368-4592
Mailing Address:	124 W. Main Street - Box 1 Pilot Mountain, NC 27041	Cell/Mobile:	--

Distribution System

Line Type	Size Range (Inches)	Estimated % of lines
Asbestos Cement	4-12	14.00 %
Cast Iron	6-8	24.00 %
Ductile Iron	4-12	50.00 %
Galvanized Iron	2	2.00 %
Polyvinyl Chloride	2-8	10.00 %

What are the estimated total miles of distribution system lines? 30 Miles
How many feet of distribution lines were replaced during 2018? 0 Feet
How many feet of new water mains were added during 2018? 0 Feet
How many meters were replaced in 2018? 0
How old are the oldest meters in this system? 2 Year(s)
How many meters for outdoor water use, such as irrigation, are not billed for sewer services? 7
What is this system's finished water storage capacity? 0.8000 Million Gallons
Has water pressure been inadequate in any part of the system since last update? *Line breaks that were repaired quickly should not be included.* Yes

Programs

Does this system have a program to work or flush hydrants? Yes, Weekly
Does this system have a valve exercise program? No
Does this system have a cross-connection program? Yes
Does this system have a program to replace meters? Yes
Does this system have a plumbing retrofit program? No
Does this system have an active water conservation public education program? No
Does this system have a leak detection program? No

Water Conservation

What type of rate structure is used? Flat/Fixed, Uniform
How much reclaimed water does this system use? 0.0000 MGD For how many connections? 0
Does this system have an interconnection with another system capable of providing water in an emergency? No

2. Water Use Information

Service Area

Sub-Basin(s)	% of Service Population	County(s)	% of Service Population
Yadkin River (18-1)	100 %	Surry	100 %

What was the year-round population served in 2018? 1,947

Has this system acquired another system since last report? No

Water Use by Type

Type of Use	Metered Connections	Metered Average Use (MGD)	Non-Metered Connections	Non-Metered Estimated Use (MGD)
Residential	853	0.1174	0	0.0000
Commercial	180	0.0889	0	0.0000
Industrial	11	0.0040	0	0.0000
Institutional	10	0.0060	0	0.0000

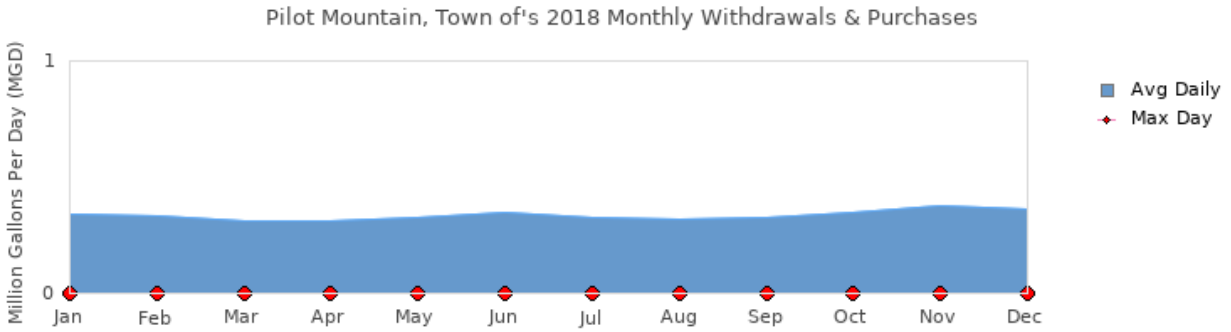
How much water was used for system processes (backwash, line cleaning, flushing, etc.)? 0.0150 MGD

Total number of connections are correct, and industrial and institutional numbers should be correct. Because our billing system does not differentiate residential and commercial connections, these numbers are an estimate.

3. Water Supply Sources

Monthly Withdrawals & Purchases

	Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)
Jan	0.3350		May	0.3260		Sep	0.3230	
Feb	0.3280		Jun	0.3470		Oct	0.3440	
Mar	0.3090		Jul	0.3260		Nov	0.3720	
Apr	0.3090		Aug	0.3150		Dec	0.3620	



Surface Water Sources

Stream	Reservoir	Average Daily Withdrawal		Maximum Day Withdrawal (MGD)	Available Raw Water Supply		Usable On-Stream Raw Water Supply Storage (MG)
		MGD	Days Used		MGD	* Qualifier	
Toms Creek		0.3329	365	0.0000	2.2500	F	0.0000

* Qualifier: C=Contract Amount, SY20=20-year Safe Yield, SY50=50-year Safe Yield, F=20% of 7Q10 or other instream flow requirement, CUA=Capacity Use Area Permit

Surface Water Sources (continued)

Stream	Reservoir	Drainage Area (sq mi)	Metered?	Sub-Basin	County	Year Offline	Use Type
Toms Creek		29	No	Yadkin River (18-1)	Surry		Regular

What is this system's off-stream raw water supply storage capacity? 20 Million gallons

Are surface water sources monitored? Yes, Weekly

Are you required to maintain minimum flows downstream of its intake or dam? No

Does this system anticipate transferring surface water between river basins? No

Water Treatment Plants

Plant Name	Permitted Capacity (MGD)	Is Raw Water Metered?	Is Finished Water Ouput Metered?	Source
Pilot Mountain WTP	1.5000	No	Yes	Toms Creek

Did average daily water production exceed 80% of approved plant capacity for five consecutive days during 2018? No

If yes, was any water conservation implemented? No

Did average daily water production exceed 90% of approved plant capacity for five consecutive days during 2018? No

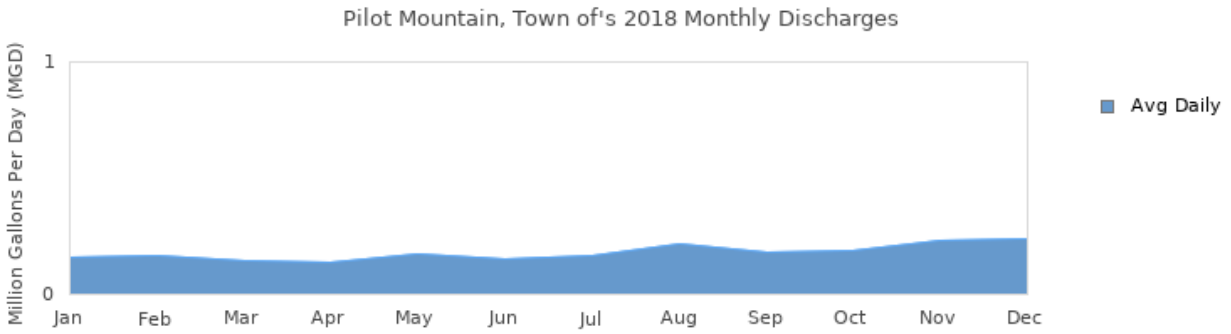
If yes, was any water conservation implemented? No

Are peak day demands expected to exceed the water treatment plant capacity in the next 10 years? No

4. Wastewater Information

Monthly Discharges

	Average Daily Discharge (MGD)		Average Daily Discharge (MGD)		Average Daily Discharge (MGD)
Jan	0.1544	May	0.1721	Sep	0.1800
Feb	0.1605	Jun	0.1484	Oct	0.1884
Mar	0.1445	Jul	0.1617	Nov	0.2289
Apr	0.1328	Aug	0.2118	Dec	0.2328



How many sewer connections does this system have? 794

How many water service connections with septic systems does this system have? 260

Are there plans to build or expand wastewater treatment facilities in the next 10 years? No

Wastewater Permits

Permit Number	Permitted Capacity (MGD)	Design Capacity (MGD)	Average Annual Daily Discharge (MGD)	Maximum Day Discharge (MGD)	Receiving Stream	Receiving Basin
NC0026646	0.5000	1.5000	0.1687		Ararat River	Yadkin River (18-1)
NC0068365	0.2000	0.2000	0.0077		Toms Creek	Yadkin River (18-1)

5. Planning

Projections

	2018	2020	2030	2040	2050	2060
Year-Round Population	1,947	1,956	2,004	2,048	2,092	2,138
Seasonal Population	0	0	0	0	0	0
Residential	0.1174	0.1179	0.1207	0.1233	0.1259	0.1286
Commercial	0.0889	0.0892	0.0914	0.0933	0.0953	0.0973
Industrial	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
Institutional	0.0060	0.0060	0.0061	0.0063	0.0064	0.0065
System Process	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150
Unaccounted-for	0.1016	0.1020	0.1042	0.1063	0.1083	0.1104

Projections based on Surry County growth rate in 2018 of 0.24%

Future Supply Sources

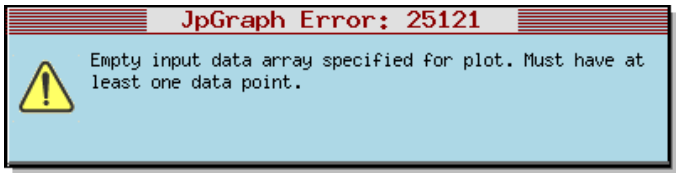
Source Name	PWSID	Source Type	Additional Supply	Year Online	Year Offline	Type

Town of Mount Airy	02-86-010	Purchase	0.5000	2020	Regular

The town plans to interconnect with Mt Airy and decommission the Pilot Mountain WTP

Demand v/s Percent of Supply

	2018	2020	2030	2040	2050	2060
Surface Water Supply	2.2500	2.2500	2.2500	2.2500	2.2500	2.2500
Ground Water Supply	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Purchases	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Future Supplies		0.5000	0.5000	0.5000	0.5000	0.5000
Total Available Supply (MGD)	2.2500	2.7500	2.7500	2.7500	2.7500	2.7500
Service Area Demand	0.3329	0.3341	0.3414	0.3482	0.3549	0.3618
Sales	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Future Sales		0.0000	0.0000	0.0000	0.0000	0.0000
Total Demand (MGD)	0.3329	0.3341	0.3414	0.3482	0.3549	0.3618
Demand as Percent of Supply	15%	12%	12%	13%	13%	13%



The purpose of the above chart is to show a general indication of how the long-term per capita water demand changes over time. The per capita water demand may actually be different than indicated due to seasonal populations and the accuracy of data submitted. Water systems that have calculated long-term per capita water demand based on a methodology that produces different results may submit their information in the notes field.

Your long-term water demand is 60 gallons per capita per day. What demand management practices do you plan to implement to reduce the per capita water demand (i.e. conduct regular water audits, implement a plumbing retrofit program, employ practices such as rainwater harvesting or reclaimed water)? If these practices are covered elsewhere in your plan, indicate where the practices are discussed here.

Are there other demand management practices you will implement to reduce your future supply needs? none

What supplies other than the ones listed in future supplies are being considered to meet your future supply needs? none

How does the water system intend to implement the demand management and supply planning components above? n/a

Additional Information

Has this system participated in regional water supply or water use planning? No

What major water supply reports or studies were used for planning?

Please describe any other needs or issues regarding your water supply sources, any water system deficiencies or needed improvements (storage, treatment, etc.) or your ability to meet present and future water needs. Include both quantity and quality considerations, as well as financial, technical, managerial, permitting, and compliance issues:

The Division of Water Resources (DWR) provides the data contained within this Local Water Supply Plan (LWSP) as a courtesy and service to our customers. DWR staff does not field verify data. Neither DWR, nor any other party involved in the preparation of this LWSP attests that the data is completely free of errors and omissions. Furthermore, data users are cautioned that LWSPs labeled **PROVISIONAL** have yet to be reviewed by DWR staff. Subsequent review may result in significant revision. Questions regarding the accuracy or limitations of usage of this data should be directed to the water system and/or DWR.

APPENDIX C | Detailed Cost Estimate

OPINION OF PROBABLE COST
WATER TREATMENT PLANT IMPROVEMENTS
TOWN OF PILOT MOUNTAIN, NORTH CAROLINA

Item No.	Description	Unit	Estimated Quantity	Unit Price	Total Cost
1	Mobilization	LS	1	$60,000	$60,000
2	Two High Service Pump Replacements	LS	1	$250,000	$250,000
3	One Backwash Pump Replacement	LS	1	$100,000	$100,000
4	Generator	LS	1	$275,000	$275,000
5	Raw Water Intake Pump Replacement	LS	1	$125,000	$125,000
6	Raw Water Intake Piping & Valve Improvements	LS	1	$75,000	$75,000
7	Raw Water Intake Influent Gate & Screening Improvements	LS	1	$225,000	$225,000
8	Filter Improvements	LS	1		$0
9	Reservoir Pump Station - Two Pump Replacements	LS	1	$200,000	$200,000
10	Reservoir Pump Station - Piping & Valve Improvements	LS	1	$50,000	$50,000
11	Reservoir Pump Station - Structure Improvements	LS	1	$300,000	$300,000
12	Chemical Feed System Improvements	LS	1	$425,000	$425,000
Construction Sub-Total					$2,085,000
Contingency (10%)					$208,500
Legal and Administration					$73,500
Design Engineering					$218,000
Construction Administration					$145,000
Total Project Cost					**$2,730,000**

OPINION OF PROBABLE COST
MT. AIRY WATER SYSTEM INTERCONNECTION
TOWN OF PILOT MOUNTAIN, NORTH CAROLINA

Item No.	Description	Unit	Estimated Quantity	Unit Price	Total Cost
1	Mobilization	LS	1	$91,600	$90,000
2	12-Inch Diameter Ductile Iron Pipe	LF	32,150	$50	$1,600,000
3	14-Inch Diameter DR-9 HDPE Pipe	LF	880	$60	$50,000
4	6-Inch Diameter Ductile Iron Pipe	LF	20	$60	$1,200
5	12-Inch Tapping Value & Sleeve	EA	1	$9,000	$9,000
6	12-Inch Gate Valve	EA	35	$2,000	$70,000
7	6-Inch Gate Valve	EA	2	$1,200	$2,400
8	Fire Hydrant Assembly	EA	40	$4,000	$160,000
9	2-Inch Air/Vacuum Release Valve	EA	6	$5,500	$33,000
10	12-Inch Horizontal Directional Drill	LF	880	$500	$440,000
11	20-Inch Diameter Steel Encasement Pipe by Bore & Jack Including Carrier Pipe	LF	830	$400	$330,000
12	Stream Crossing by Bore & Jack	LF	280	$500	$140,000
13	Concrete Anchor Block	EA	30	$1,000	$30,000
14	12-Inch Main Line Master Meter	EA	1	$45,000	$45,000
15	Erosion Control Measures	LF	33,000	$4	$130,000
Construction Sub-Total					$3,130,000
Contingency (10%)					$310,000
Easement Acquisition					$25,000
Legal and Administration					$45,000
Design Engineering (7%)					$200,000
Construction Administration (6%)					$190,000
Total Project Cost					**$3,900,000**

OPINION OF PROBABLE COST
KING WATER SYSTEM INTERCONNECTION
TOWN OF PILOT MOUNTAIN, NORTH CAROLINA

Item No.	Description	Unit	Estimated Quantity	Unit Price	Total Cost
1	Mobilization	LS	1	$159,000	$159,000
2	12-Inch Diameter Ductile Iron Pipe	LF	54,400	$50	$2,720,000
3	Booster Pump Station	EA	1	$700,000	$700,000
3	Elevated Storage Tank	LS	1	$750,000	$750,000
5	12-Inch Tapping Value & Sleeve	EA	2	$9,000	$18,000
6	12-Inch Gate Valve	EA	55	$2,000	$110,000
7	Fire Hydrant Assembly	EA	73	$4,000	$290,000
8	2-Inch Air/Vacuum Release Valve	EA	15	$5,500	$83,000
9	20-Inch Diameter Steel Encasement Pipe by Bore & Jack Including Carrier Pipe	LF	450	$400	$180,000
10	Stream Crossing by Bore & Jack	LF	280	$500	$140,000
11	Concrete Anchor Block	EA	50	$1,000	$50,000
12	12-Inch Main Line Master Meter	EA	1	$45,000	$45,000
13	Erosion Control Measures	LF	55,000	$4	$220,000
	Construction Sub-Total				$5,465,000
	Contingency (10%)				$547,000
	Easement Acquisition				$25,000
	Legal and Administration				$45,000
	Design Engineering (8%)				$435,000
	Construction Administration (7%)				$383,000
	Total Project Cost				**$6,900,000**

APPENDIX D | Preliminary Financial Analysis

SUMMARY

UPGRADE WTP $2.73 M PROJECT COSTS (50% GRANT/50% NO INTEREST LOAN)

REVENUES (WATER ONLY)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
EXISTING RATE REVENUE	497,340	502,263	507,235	512,255	517,324	522,443	527,611	532,831	538,101	543,423	548,797	554,223	5,806,505
REVENUE FROM INFRASTRUCTURE INVESTMENT F	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	0 302,445
REVENUE INCREASE		5%			2%			2%			2%		11%
RATE ADJUSTMENT INCREASE		26,488	26,736	26,987	38,137	38,496	38,857	50,429	50,904	51,383	63,392	63,989	475,799
NEW REVENUES	27,495	53,983	54,231	54,482	65,632	65,991	66,352	77,924	78,399	78,878	90,887	91,484	
TOTAL REVENUES	**524,835**	**556,246**	**561,466**	**566,737**	**582,956**	**588,433**	**593,964**	**610,755**	**616,499**	**622,300**	**639,684**	**645,707**	**6,584,749**
TOTAL OPERATION EXPENSE	**373,155**	**382,142**	**391,367**	**400,838**	**410,561**	**420,544**	**430,793**	**441,317**	**452,123**	**463,218**	**474,612**	**486,312**	**4,753,827**
NEW DEBT SERVICE ($2.73M WTP)		68,250	68,250	68,250	68,250	68,250	68,250	68,250	68,250	68,250	68,250	68,250	750,750
TOTAL EXPENDITURES	**502,907**	**519,370**	**528,245**	**536,318**	**524,224**	**534,207**	**544,456**	**526,367**	**537,173**	**546,168**	**542,862**	**554,562**	**5,893,952**
ANNUAL SURPLUS/ (DEFICIENCY)	**21,928**	**36,877**	**33,221**	**30,419**	**58,732**	**54,226**	**49,507**	**84,388**	**79,327**	**76,132**	**96,822**	**91,145**	**690,796**

PURCHASE FROM MOUNT AIRY $3.9M PROJECT COSTS (50% GRANT/50% NO INTEREST LOAN) 1/3 PAYMENT - SURRY CO AND 1/3 PAYMENT - MT AIRY

REVENUES (WATER ONLY)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
EXISTING RATE REVENUE	497,340	502,263	507,235	512,255	517,324	522,443	527,611	532,831	538,101	543,423	548,797	554,223	5,806,505
REVENUE FROM INFRASTRUCTURE INVESTMENT F	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	302,445
REVENUE INCREASE		0.50%			1.00%			1.00%			1.00%		3.50%
RATE ADJUSTMENT INCREASE		2,649	2,674	2,699	8,172	8,249	8,327	14,008	14,140	14,273	20,170	20,360	115,720
NEW REVENUES	27,495	30,144	30,169	30,194	35,667	35,744	35,822	41,503	41,635	41,768	47,665	47,855	
DEBT SERVICE ASSISTANCE		65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	65,000	
TOTAL REVENUES	**524,835**	**597,407**	**602,404**	**607,449**	**617,991**	**623,187**	**628,433**	**639,334**	**644,736**	**650,191**	**661,462**	**667,078**	**6,939,670**
TOTAL OPERATION EXPENSE	**373,155**	**136,989**	**140,223**	**143,543**	**146,950**	**150,448**	**154,039**	**157,726**	**161,511**	**165,397**	**169,387**	**173,484**	**1,699,697**
PURCHASE WATER MT AIRY ($2.78/1000 gal)		253,675	258,749	263,923	269,202	274,586	280,078	285,679	291,393	297,221	303,165	309,228	3,086,899
NEW DEBT SERVICE		97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	1,000,000
TOTAL EXPENDITURES	**502,907**	**557,142**	**565,099**	**572,196**	**559,065**	**567,947**	**577,030**	**557,705**	**567,204**	**574,818**	**570,052**	**580,213**	**6,248,471**
ANNUAL SURPLUS / (DEFCIENCY)	**21,928**	**40,265**	**37,304**	**35,253**	**58,926**	**55,240**	**51,403**	**81,629**	**77,532**	**75,373**	**91,409**	**86,865**	**691,199**

PURCHASE FROM MOUNT AIRY $3.9M PROJECT COSTS (50% GRANT/50% NO INTEREST LOAN) 1/3 PAYMENT - SURRY CO AND LOWER PURCHASE RATE

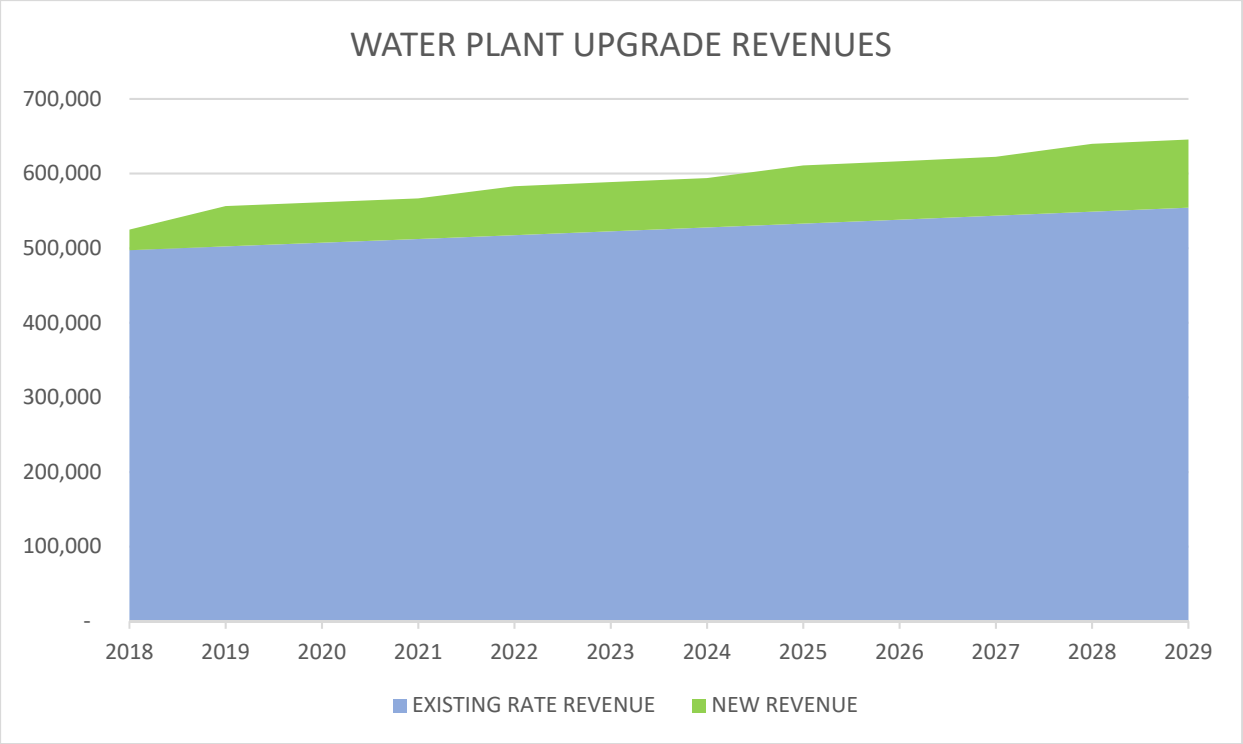
REVENUES (WATER ONLY)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
EXISTING RATE REVENUE	497,340	502,263	507,235	512,255	517,324	522,443	527,611	532,831	538,101	543,423	548,797	554,223	5,806,505
REVENUE FROM INFRASTRUCTURE INVESTMENT F	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	302,445
REVENUE INCREASE		0.50%			1.00%			1.00%			1.00%		3.50%
RATE ADJUSTMENT INCREASE		2,649	2,674	2,699	8,172	8,249	8,327	14,008	14,140	14,273	20,170	20,360	115,720
NEW REVENUES	27,495	30,144	30,169	30,194	35,667	35,744	35,822	41,503	41,635	41,768	47,665	47,855	
DEBT SERVICE ASSISTANCE		32,500	32,500	32,500	32,500	32,500	32,500	32,500	32,500	32,500	32,500	32,500	
TOTAL REVENUES	**524,835**	**564,907**	**569,904**	**574,949**	**585,491**	**590,687**	**595,933**	**606,834**	**612,236**	**617,691**	**628,962**	**634,578**	**6,582,170**
TOTAL OPERATION EXPENSE	**373,155**	**136,989**	**140,223**	**143,543**	**146,950**	**150,448**	**154,039**	**157,726**	**161,511**	**165,397**	**169,387**	**173,484**	**1,699,697**
PURCHASE WATER MT AIRY ($2.46/1000 gal)		224,475	228,965	233,544	238,215	242,979	247,839	252,795	257,851	263,008	268,268	273,634	2,731,572
NEW DEBT SERVICE		97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	1,000,000
TOTAL EXPENDITURES	**502,907**	**527,942**	**535,315**	**541,816**	**528,078**	**536,340**	**544,791**	**524,821**	**533,662**	**540,605**	**535,156**	**544,618**	**5,893,144**
ANNUAL SURPLUS / (DEFCIENCY)	**21,928**	**36,965**	**34,588**	**33,132**	**57,414**	**54,347**	**51,142**	**82,013**	**78,574**	**77,085**	**93,806**	**89,960**	**689,026**

CAPITAL FUNDING NEEDS	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Total Capital Improvemt Plan		3,900,000										
Grant		1,950,000										
Loan NCDEQ SRF 20yr/0% $100,000		1,950,000										
Fund Balance												
Total Funding		3,900,000										

Water Only Fiscal Year Ending 6/30	ESTIMATE 2018	ESTIMATE 2019	ESTIMATE 2020	ESTIMATE 2021	ESTIMATE 2022	ESTIMATE 2023	ESTIMATE 2024	ESTIMATE 2025	ESTIMATE 2026	ESTIMATE 2027	ESTIMATE 2028	ESTIMATE 2029	2019-2029 TOTALS
REVENUES (WATER ONLY)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
WATER TAPS	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	55,000
WATER CHARGES	480,840	485,648	490,505	495,410	500,364	505,368	510,421	515,526	520,681	525,888	531,147	536,458	5,617,415
OTHER OPERATING REVENUE	11,500	11,615	11,730	11,845	11,960	12,075	12,190	12,305	12,420	12,535	12,650	12,765	134,090
EXISTING RATE REVENUE	**497,340**	**502,263**	**507,235**	**512,255**	**517,324**	**522,443**	**527,611**	**532,831**	**538,101**	**543,423**	**548,797**	**554,223**	**5,806,505**
NEW SOURCE OF REVENUE													
REVENUE FROM INFRASTRUCTURE INVESTMENT F	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	**302,445**
REVENUE INCREASE		5%			2%			2%			2%		
RATE ADJUSTMENT INCREASE		26,488	26,736	26,987	38,137	38,496	38,857	50,429	50,904	51,383	63,392	63,989	**475,799**
NEW REVENUES	**27,495**	**53,983**	**54,231**	**54,482**	**65,632**	**65,991**	**66,352**	**77,924**	**78,399**	**78,878**	**90,887**	**91,484**	
TOTAL REVENUES	**524,835**	**556,246**	**561,466**	**566,737**	**582,956**	**588,433**	**593,964**	**610,755**	**616,499**	**622,300**	**639,684**	**645,707**	**6,584,749**
EXPENDITURES (WATER ONLY)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	
SALARIES AND BENEFITS	**211,095**	**217,428**	**223,951**	**230,669**	**237,589**	**244,717**	**252,058**	**259,620**	**267,409**	**275,431**	**283,694**	**292,205**	**2,784,771**
UNIFORMS	1,400	1,418	1,437	1,455	1,474	1,493	1,513	1,532	1,552	1,573	1,593	1,614	**16,655**
PROFESSIONAL SERVICES	16,955	17,175	17,399	17,625	17,854	18,086	18,321	18,559	18,801	19,045	19,293	19,543	**201,702**
UTILITES	42,090	43,184	44,307	45,459	46,641	47,854	49,098	50,374	51,684	53,028	54,407	55,821	**541,858**
MAINTENANCE & REPAIRS	16,130	16,340	16,552	16,767	16,985	17,206	17,430	17,656	17,886	18,118	18,354	18,593	**191,887**
CHEMICALS	17,500	17,728	17,958	18,191	18,428	18,667	18,910	19,156	19,405	19,657	19,913	20,172	**208,185**
SUPPLIES	19,360	19,612	19,867	20,125	20,387	20,652	20,920	21,192	21,467	21,747	22,029	22,316	**230,312**
CONTRACTED SERVICES	27,195	27,549	27,907	28,269	28,637	29,009	29,386	29,768	30,155	30,547	30,945	31,347	**323,520**
INSURANCE AND BONDS	6,855	6,944	7,034	7,126	7,218	7,312	7,407	7,504	7,601	7,700	7,800	7,902	**81,549**
MISCELLANEOUS	14,575	14,764	14,956	15,151	15,348	15,547	15,749	15,954	16,162	16,372	16,585	16,800	**173,388**
TOTAL OPERATION EXPENSE w/o Salaries	**162,060**	**164,714**	**167,417**	**170,169**	**172,972**	**175,827**	**178,735**	**181,697**	**184,714**	**187,787**	**190,918**	**194,107**	**1,969,056**
TOTAL OPERATION EXPENSE	**373,155**	**382,142**	**391,367**	**400,838**	**410,561**	**420,544**	**430,793**	**441,317**	**452,123**	**463,218**	**474,612**	**486,312**	**4,753,827**
CAPITAL EXPENSE													
CAPITAL OUTLAY	58,725												
EXISTING DEBT SERVICE	71,027	68,978	68,628	67,230	45,413	45,413	45,413	16,800	16,800	14,700			389,375
NEW DEBT SERVICE		97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	1,072,500
RATE FUNDED CIP													
TOTAL CAPITAL EXPENDITURES	**129,752**	**166,478**	**166,128**	**164,730**	**142,913**	**142,913**	**142,913**	**114,300**	**114,300**	**112,200**	**97,500**	**97,500**	**1,461,875**
TOTAL EXPENDITURES	**502,907**	**548,620**	**557,495**	**565,568**	**553,474**	**563,457**	**573,706**	**555,617**	**566,423**	**575,418**	**572,112**	**583,812**	**6,215,702**
ANNUAL SURPLUS/ (DEFICIENCY)	**21,928**	**7,627**	**3,971**	**1,169**	**29,482**	**24,976**	**20,257**	**55,138**	**50,077**	**46,882**	**67,572**	**61,895**	**369,046**

PURCHASE WATER FROM MOUNT AIRY		ESTIMATE 2019	ESTIMATE 2020	ESTIMATE 2021	ESTIMATE 2022	ESTIMATE 2023	ESTIMATE 2024	ESTIMATE 2025	ESTIMATE 2026	ESTIMATE 2027	ESTIMATE 2028	ESTIMATE 2029	2019-2029 TOTALS
REVENUES (WATER ONLY)	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	
WATER TAPS	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	55,000
WATER CHARGES	480,840	485,648	490,505	495,410	500,364	505,368	510,421	515,526	520,681	525,888	531,147	536,458	5,617,415
OTHER OPERATING REVENUE	11,500	11,615	11,730	11,845	11,960	12,075	12,190	12,305	12,420	12,535	12,650	12,765	134,090
EXISTING RATE REVENUE	**497,340**	**502,263**	**507,235**	**512,255**	**517,324**	**522,443**	**527,611**	**532,831**	**538,101**	**543,423**	**548,797**	**554,223**	**5,806,505**
NEW SOURCE OF REVENUE													
REVENUE FROM INFRASTRUCTURE INVESTMENT F	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	**302,445**
REVENUE INCREASE		7%			1%			1%			2%		
CUMMULATIVE RATE INCREASE		7%	7%	7%	8%	8%	8%	9%	9%	9%	11%	11%	
RATE ADJUSTMENT INCREASE		37,083	37,431	37,782	43,586	43,995	44,409	50,429	50,904	51,383	63,392	63,989	**524,382**
NEW REVENUES	**27,495**	**64,578**	**64,926**	**65,277**	**71,081**	**71,490**	**71,904**	**77,924**	**78,399**	**78,878**	**90,887**	**91,484**	
TOTAL REVENUES	**524,835**	**566,841**	**572,161**	**577,532**	**588,405**	**593,933**	**599,515**	**610,755**	**616,499**	**622,300**	**639,684**	**645,707**	**6,633,332**
EXPENDITURES (WATER ONLY) W/O PRODUCTION	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	
SALARIES AND BENEFITS	**81,685**	**84,136**	**86,660**	**89,259**	**91,937**	**94,695**	**97,536**	**100,462**	**103,476**	**106,580**	**109,778**	**113,071**	**1,077,591**
UNIFORMS	500	507	513	520	527	533	540	547	554	562	569	576	**5,948**
PROFESSIONAL SERVICES	10,455	10,591	10,729	10,868	11,009	11,152	11,297	11,444	11,593	11,744	11,896	12,051	**124,376**
UTILITES	1,740	1,763	1,808	1,855	1,904	1,953	2,004	2,056	2,110	2,164	2,221	2,278	**22,117**
MAINTENANCE & REPAIRS	6,530	6,615	6,701	6,788	6,876	6,966	7,056	7,148	7,241	7,335	7,430	7,527	**77,683**
CHEMICALS		-	-	-	-	-	-	-	-	-	-	-	**-**
SUPPLIES	7,400	7,496	7,594	7,692	7,792	7,894	7,996	8,100	8,206	8,312	8,420	8,530	**88,033**
CONTRACTED SERVICES	15,425	15,626	15,829	16,034	16,243	16,454	16,668	16,885	17,104	17,326	17,552	17,780	**183,500**
INSURANCE AND BONDS	3,750	3,799	3,848	3,898	3,949	4,000	4,052	4,105	4,158	4,212	4,267	4,323	**44,611**
MISCELLANEOUS	6,375	6,458	6,542	6,627	6,713	6,800	6,889	6,978	7,069	7,161	7,254	7,348	**75,839**
TOTAL OPERATION EXPENSE w/o Salaries	**52,175**	**52,853**	**53,563**	**54,283**	**55,013**	**55,753**	**56,503**	**57,264**	**58,035**	**58,817**	**59,609**	**60,413**	**622,106**
TOTAL OPERATION EXPENSE with Salaries	**373,155**	**136,989**	**140,223**	**143,543**	**146,950**	**150,448**	**154,039**	**157,726**	**161,511**	**165,397**	**169,387**	**173,484**	**1,699,697**
PURCHASE WATER MT AIRY*		**253,675**	**258,749**	**263,923**	**269,202**	**274,586**	**280,078**	**285,679**	**291,393**	**297,221**	**303,165**	**309,228**	**3,086,899**
CAPITAL EXPENSE													
CAPITAL OUTLAY	58,725												
EXISTING DEBT SERVICE	71,027	68,978	68,628	67,230	45,413	45,413	45,413	16,800	16,800	14,700			389,375
NEW DEBT SERVICE		97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	97,500	1,000,000
RATE FUNDED CIP													
TOTAL CAPITAL EXPENDITURES	**129,752**	**166,478**	**166,128**	**164,730**	**142,913**	**142,913**	**142,913**	**114,300**	**114,300**	**112,200**	**97,500**	**97,500**	**1,389,375**
TOTAL EXPENDITURES	**502,907**	**557,142**	**565,099**	**572,196**	**559,065**	**567,947**	**577,030**	**557,705**	**567,204**	**574,818**	**570,052**	**580,213**	**6,248,471**
ANNUAL SURPLUS / (DEFCIENCY)	**21,928**	**9,699**	**7,062**	**5,336**	**29,340**	**25,986**	**22,485**	**53,050**	**49,296**	**47,482**	**69,631**	**65,494**	**384,861**

*	Purchase	2.78
	Water	250,000 gpd
	Annual	
	Cost	253,675


WATER PLANT UPGRADE REVENUES
700,000
600,000
500,000
400,000
300,000
200,000
100,000
-
2018
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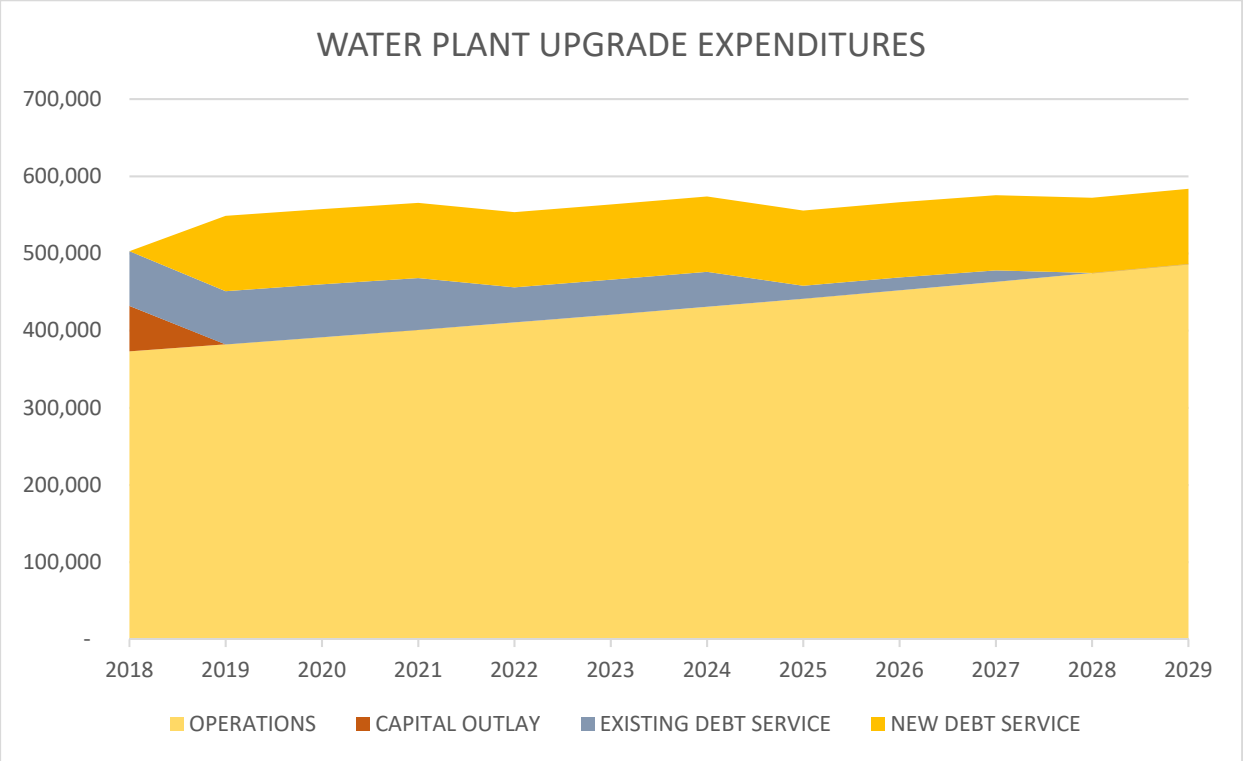
2029
EXISTING RATE REVENUE
NEW REVENUE


WATER PLANT UPGRADE EXPENDITURES
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600,000
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2018
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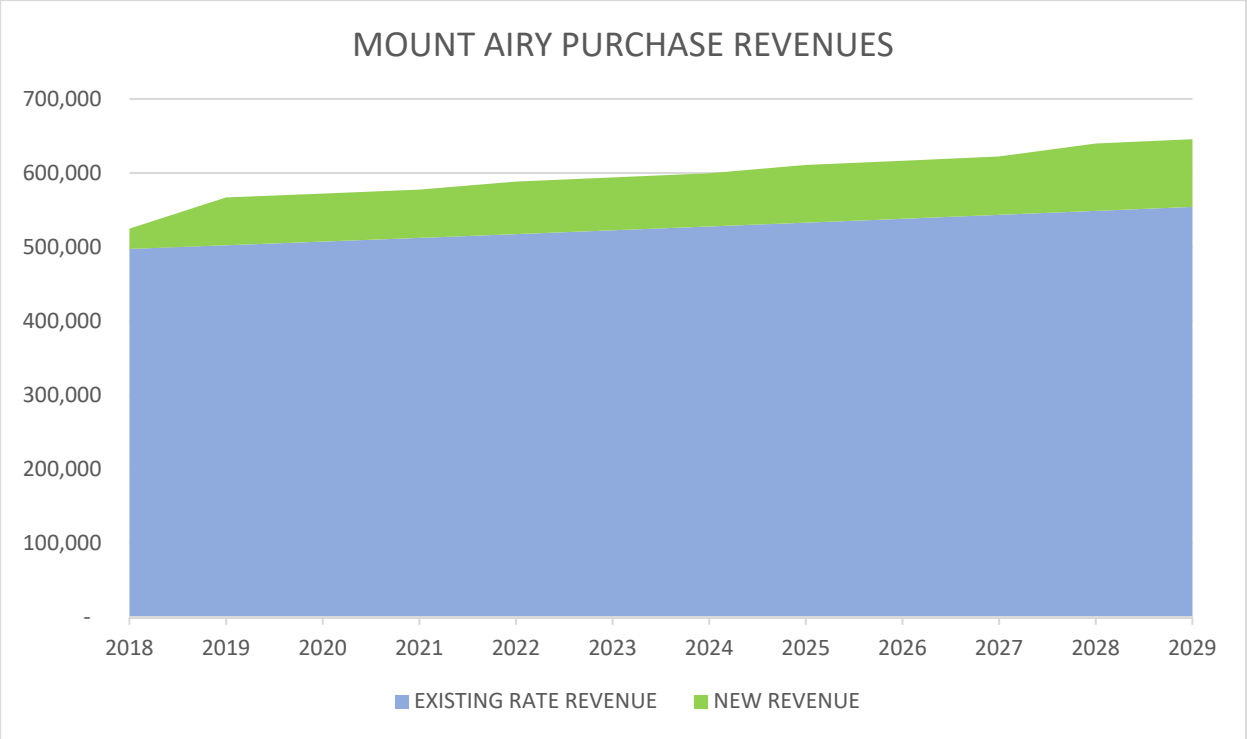
OPERATIONS
CAPITAL OUTLAY
EXISTING DEBT SERVICE
NEW DEBT SERVICE


MOUNT AIRY PURCHASE REVENUES
700,000
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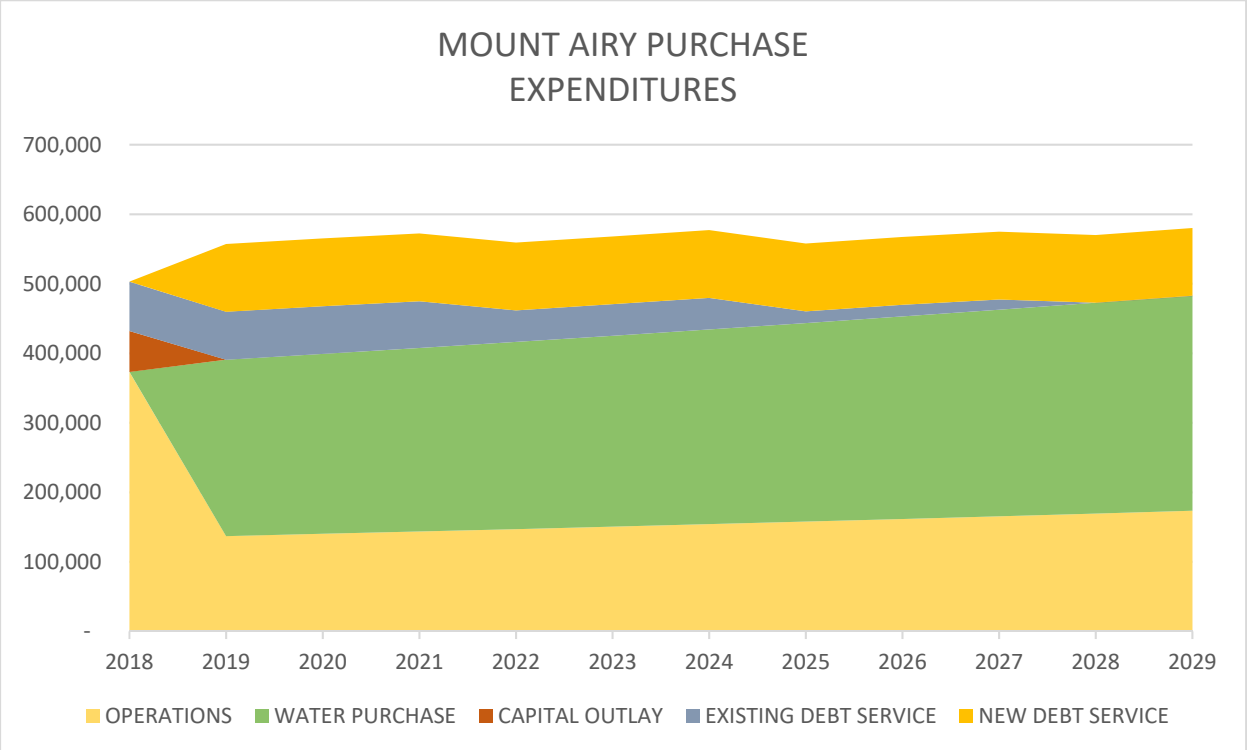
EXISTING RATE REVENUE
NEW REVENUE


MOUNT AIRY PURCHASE EXPENDITURES
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2018
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2027
2028
2029
OPERATIONS
WATER PURCHASE
CAPITAL OUTLAY
EXISTING DEBT SERVICE
NEW DEBT SERVICE

WATER PLANT UPGRADE FINANCIAL SUMMARY												
YEAR	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
REVENUE INCREASE	0%	5%	0%	0%	2%	0%	0%	2%	0%	0%	2%	0%
ANNUAL SURPLUS	$ 21,928	$ 7,627	$ 3,971	$ 1,169	$ 29,482	$ 24,976	$ 20,257	$ 55,138	$ 50,077	$ 46,882	$ 67,572	$ 61,895

MOUNT AIRY PURCHASE FINANCIAL SUMMARY												
YEAR	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
REVENUE INCREASE	0%	7%	0%	0%	1%	0%	0%	1%	0%	0%	2%	0%
ANNUAL SURPLUS	$ 21,928	$ 9,699	$ 7,062	$ 5,336	$ 29,340	$ 25,986	$ 22,485	$ 53,050	$ 49,296	$ 47,482	$ 69,631	$ 65,494

APPENDIX E | Capital Improvements Plan and Preliminary Opinion of Probable Cost

TOWN OF PILOT MOUNTAIN
WATER AND SEWER FUND
CAPITAL IMPROVEMENTS PLAN

Updated April 2019

PROJECT NUMBER	PROJECT DESCRIPTION	COST	YEAR 1 2019	YEAR 2 2020	YEAR 3 2021	YEAR 4 2022	YEAR 5 2023	YEAR 6 2024	YEAR 7 2025	YEAR 8 2026	YEAR 9 2027	YEAR 10 2028
	WATER IMPROVEMENTS											
	DISTRIBUTION SYSTEM											
1	Miscellaneous Water Main Replacements	$970,000	$0	$0	$65,000	$150,000	$80,000	$0	$250,000	$300,000	$50,000	$75,000
2	Simmons &Sunset Drive Water Line Replacements	$400,000	$0	$200,000	$200,000							
3	Cook School Road Water Main**	$1,080,000					$1,080,000					
4	Howard and Depot Street Water Replacements	$700,000		$700,000								
	WATER TREATMENT PLANT											
5	Water System Interconnect	$3,900,000	$3,900,000									
	WATER IMPROVEMENTS SUBTOTAL	$7,050,000	$3,900,000	$900,000	$265,000	$150,000	$1,160,000	$0	$250,000	$300,000	$50,000	$75,000
	WASTEWATER IMPROVEMENTS											
	COLLECTION SYSTEM											
6	Sunset PS Replacement	$580,383	$580,383									
7	Sunset Area Sewer Line Replacements	$1,606,484	$1,606,484									
8	Wastewater Collection System SCADA	$277,333	$0		$277,333							
9	Pump Station Repairs	$310,000		$310,000								
10	Heatherly Creek Sewer Outfall & Pump Station**	$2,700,000				$2,700,000						
11	Portable Bypass Pump for Wastewater Lift Stations**	$60,000			$60,000							
12	Nelson Street Pump Station Replacement**	$596,000			$596,000							
13	Infiltration and Inflow Study	$105,000				$105,000						
14	Lola Lane Aerial Sewer Crossing	$119,400		$119,400								
15	Neighbor's Pump Station Improvements	$91,200						$91,200				
16	Upgrade Lola Lane Pump Station**	$1,020,000							$1,020,000			
17	Off Site Pump Station and Force Main Replacement**	$440,000										$440,000
18	Howard and Depot Street Sewer Replacements	$1,300,000		$1,300,000								
	WASTEWATER TREAMENT PLANT											
19	Wastewater Treatment Plant Improvements	$1,690,000		$940,000						$750,000		
		$0										
	WASTEWATER IMPROVEMENTS SUBTOTAL	$10,895,800	$2,186,867	$2,669,400	$933,333	$2,805,000	$0	$91,200	$1,020,000	$750,000	$0	$440,000
	TOTAL	$17,945,800	$6,086,867	$3,569,400	$1,198,333	$2,955,000	$1,160,000	$91,200	$1,270,000	$1,050,000	$50,000	$515,000

WASTEWATER REGIONALIZATION STUDY

AUGUST 2019

TOWN OF PILOT MOUNTAIN

SURRY COUNTY, NORTH CAROLINA

CONSULTING ENGINEERS
HICKORY, NORTH CAROLINA

WASTEWATER REGIONALIZATION STUDY

AUGUST 2019

TOWN OF PILOT MOUNTAIN

SURRY COUNTY, NORTH CAROLINA

DOUGLAS G. CHAPMAN, PE

mcgill Shaping Communities Together

1240 19th Street Lane NW
Hickory, North Carolina 28601
828.328.2024

Firm License No.: C-0459

AUGUST 2019

PROJECT NO. 17.01103

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

1.0 INTRODUCTION

The Town of Pilot Mountain owns and operates its own wastewater utility system. The system serves residents and businesses within the Town of Pilot Mountain as well as a limited number of Surry County customers outside of the town limits.

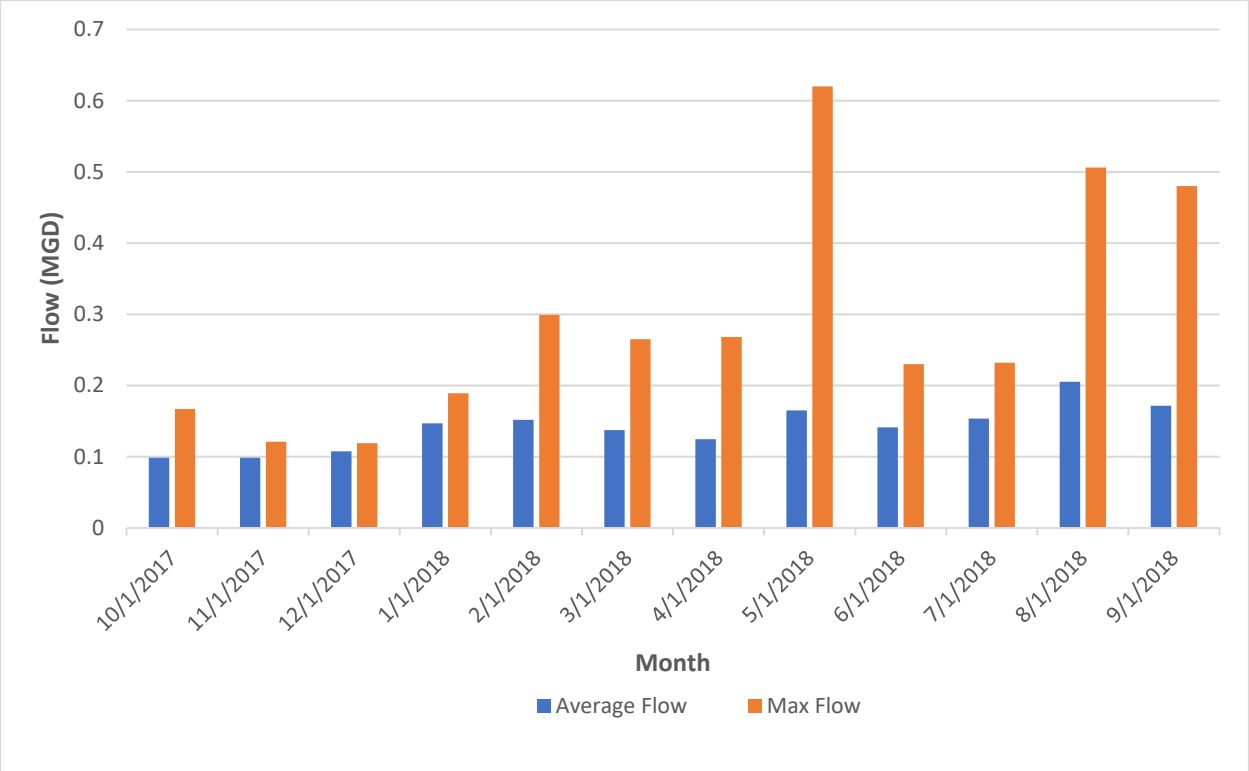
The Town of Pilot Mountain owns and operates the Pilot Mountain Wastewater Treatment Plant (WWTP) under two permits: NC0026646 for discharging into Ararat River and NC0068365 for discharging into Toms Creek. The WWTP has a design capacity of 1.5 MGD with an annual average discharge of 0.146 MGD. The Town of Pilot Mountain's wastewater collection system contains a network of sewer lines that extend outside of town limits on the east and south. Within the collection system are eighteen (18) pump stations consisting of submersible non-clog, suction-lift, and grinder stations.

This Regionalization study seeks to consider some form of partnering with a neighboring utility to meet the Town's need for provision of wastewater treatment and disposal for its customers. As part of this effort, McGill will analyze the Town's existing wastewater infrastructure and consider adjacent systems for partnering. The age and condition of WWTP equipment, sewer lines, and pump stations have previously been assessed in the Asset Management Plan (AMP). Once alternatives are developed, capital and operating costs for each alternative will be developed and a 10-year financial model presented showing the impact to user rates for each scenario. Finally, funding opportunities will be presented to implement portions of the needed capital improvements. A summary of conclusions and recommendations will complete this report.

2.1 Existing Wastewater Treatment Facility

The Town of Pilot Mountain owns and operates a wastewater treatment facility with a design capacity of 1.5 MGD. The facility's National Pollutant Discharge Elimination System (NPDES) Permit No. NC0026646 allows for the discharge of up to 0.50 MGD to the Ararat River. Also, the facility's NPDES Permit No. NC0068365 allows for the discharge of up to 0.20 MGD to Toms Creek. Figure 2.1 shows the average daily flows and peak flows per month from October 2017 to September 2018.

Figure 2.1 - WWTP Average Daily and Peak Flows per Month



The treatment facility includes an influent pump station, manual bar screen, an aeration basin, two clarifiers, aerobic sludge digester, sludge dewatering facility, chlorine disinfection, and an effluent pump station. The WWTP is operated by two part-time operators. Figure 2.2 shows the treatment process flow diagram of the WWTP. Table 2.1.1 shows the equipment at the facility and the current condition of each unit.

Figure 2.2 - WWTP Process Flow Diagram

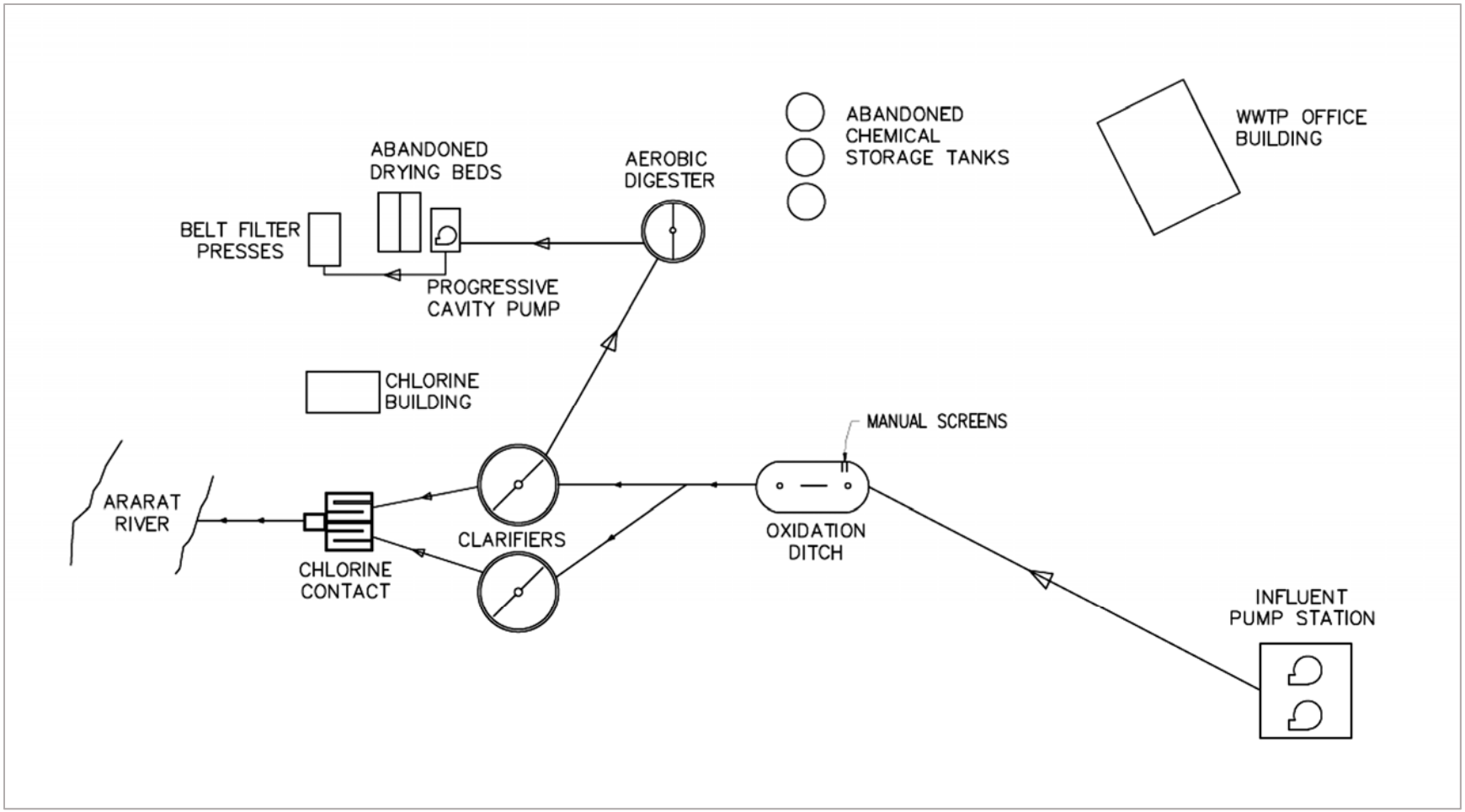


Table 2.1.1 – WWTP Equipment Inventory

Equipment		Age	Condition
Influent Suction Lift Pump Station	25 HP Pump 1	34+ years	Poor
	25 HP Pump 2	34+ years	Poor
Oxidation Ditch	Manual Bar Screen	34+ years	Poor
	(2) Blowers	34+ years	Abandoned
	Outer Concrete Channel	34+ years	Poor
	Middle Concrete Channel	34+ years	Fair
	Center Concrete Channel	34+ years	Fair
	Outer Channel Aerators	34+ years	Fair
	Middle Channel Aerators	34+ years	Fair
	Center Channel Aerators	34+ years	Fair
	Slide Gates	34+ years	Fair
Chemical Tanks, Qty. of 3		34+ years	Abandoned
Aerobic Digester		34+ years	Fair
Sludge PC Pump		27 years	Fair
Drying Beds		34+ years	Abandoned
Belt Filter Press		27 years	Fair
Clarifier 1	Skimmer Arms	34+ years	Poor
	Center Pier	34+ years	Poor
	Drive Mechanism	34+ years	Poor
	Concrete Basin	34+ years	Good
Clarifier 2	Skimmer Arms	34+ years	Fair
	Center Pier	34+ years	Fair
	Drive Mechanism	34+ years	Good
	Concrete Basin	34+ years	Good
Chlorine Feed Building		34+ years	Poor
Chlorine Contact Basin	Slide Gates	34+ years	Good
	Concrete Basin	34+ years	Good
	Weir	34+ years	Good
Effluent Vertical Turbine Pump Station		26 years	Fair

The WWTP's design capacity of 1.5 MGD was based upon sewer flows from large industries that are no longer in operation within the Town's service area. Based on flows from October 2017 to September 2018, the plant currently discharges an average daily flow of 0.146 MGD, about 21% of the plant's 0.70 MGD permitted capacity. Without the demand for wastewater treatment, the WWTP cannot well operate at optimal levels. As a result of these low flows, portions of the wastewater treatment facility have been taken out of operation, in some instances out of necessity, so that the operators can more efficiently treat the lower volume of influent

wastewater flows. Moreover, revenue from sewer usage is much lower which leads to financial issues for maintaining an oversized treatment facility. Currently, the Town employs two (2) part-time operators at the plant who also assist in maintaining the Town's sewer collection system pump stations.

For the Town to continue providing safe and reliable treatment through its WWTP, critical needs within the treatment facility would have to be itemized and addressed in the future. Any improvements made to the treatment plant should focus upon needs associated with the influent pump station generator, manual bar screen, and the oxidation ditch; however, the influent pump station and the clarifiers should be the Town's most immediate concern for the WWTP. Overall, the Town should focus upon maximizing the facility's treatment reliability and operational effectiveness.

The WWTP's influent pump station requires regular maintenance and repairs, while suffering from power outages due to trees coming down on the existing overhead power lines that supply power to the pump station. The pump station has little protection from the weather beyond an aluminum pre-fabricated shed cover. Each of the pumps must be wrapped in insulation during the winter months, creating an ongoing maintenance issue for the Town. At this time there is no mechanism for screening solids from the plant influent before entering the pump station. The manual bar screen is located at the head of the orbal ditch and does not effectively capture small influent solids, thereby causing downstream operational issues.

Currently, there are only two channels of the oxidation ditch in operation. Since it has been out of commission, vegetation has begun to grow in the outer channel. At one time the treatment plant utilized blowers and diffused air, however the two operable channels now utilize horizontal rotary brushes for aeration. Although the blowers remain mounted to the orbal ditch, they are inoperable. Also, the air piping appears to be completely abandoned and disconnected from the ditch. Much of the remaining equipment shows signs of wear and of nearing the end of its useful life. While one clarifier is in operation, the second clarifier is completely out of service without operable skimmer arms and flights. With the current low wastewater flows one (1) clarifier in operation is sufficient; however, this leaves the facility in a vulnerable position due to a lack of redundancy.

The aerobic digester, along with the sludge dewatering facility do not operate on a frequent basis, leaving the equipment in good working condition. The chlorine contact facility is in good working condition with little to no maintenance or repair issues.

Figure 2.3 - WWTP Influent Pump Station

Figure 2.4 - Oxidation Ditch Aerators

Figure 2.5 - Oxidation Ditch Piping

Figure 2.6 - Oxidation Ditch Outer and Inner Channels

Figure 2.7 - Oxidation Ditch Outer Channel

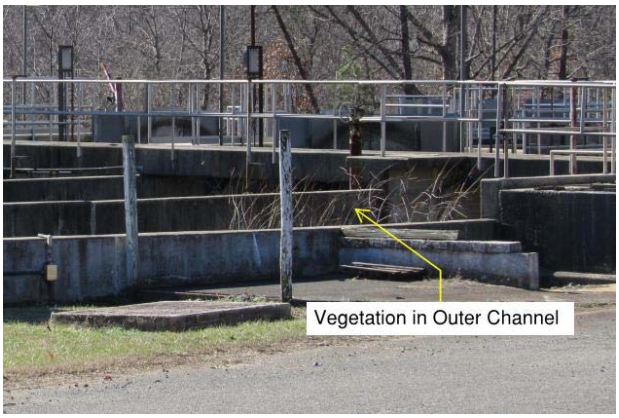


Figure 2.8 - In-service Clarifier

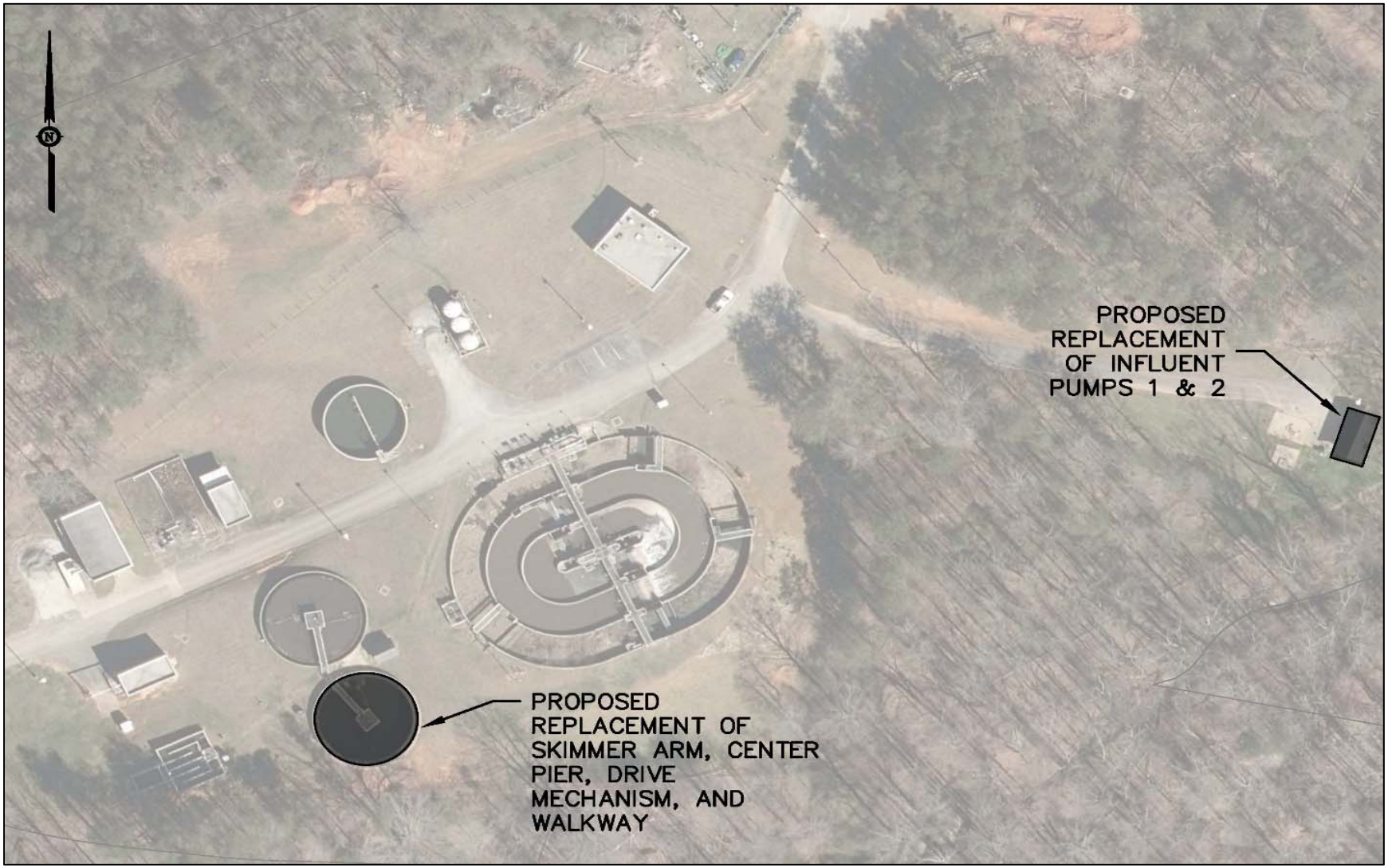
3.0 WASTEWATER DISPOSAL ALTERNATIVES

Alternatives for wastewater treatment and disposal include upgrading Pilot Mountain's existing wastewater treatment plant or constructing an interconnection with one of the adjacent towns. Neighboring systems considered include Mount Airy and the City of King. Mount Airy has ample capacity to provide the projected average daily demand need of 0.24 MGD. The City of King is seeking to construct a new wastewater treatment plant and disposal system but currently transports flows to Winston/Forsyth with little available system capacity to convey wastewater through to Winston/Forsyth. Therefore, the King option is not evaluated further.

3.1 Wastewater Plant Upgrade

The treatment facility, constructed in 1985, has a design capacity of 1.5 MGD. The facility has had a few upgrades over its 34-year history, including the sludge pump, belt filter press, and the effluent pump station. Despite these few improvements, much of the equipment is original to the facilities construction and has passed its expected useful life. To consider the existing treatment plant as a valid treatment solution for the future, several upgrades are necessary. Should the town choose to continue the operations of its treatment facility, McGill Associates proposes an improvements project. This improvement project includes extensive renovations to the influent pump station and the inoperable clarifier.

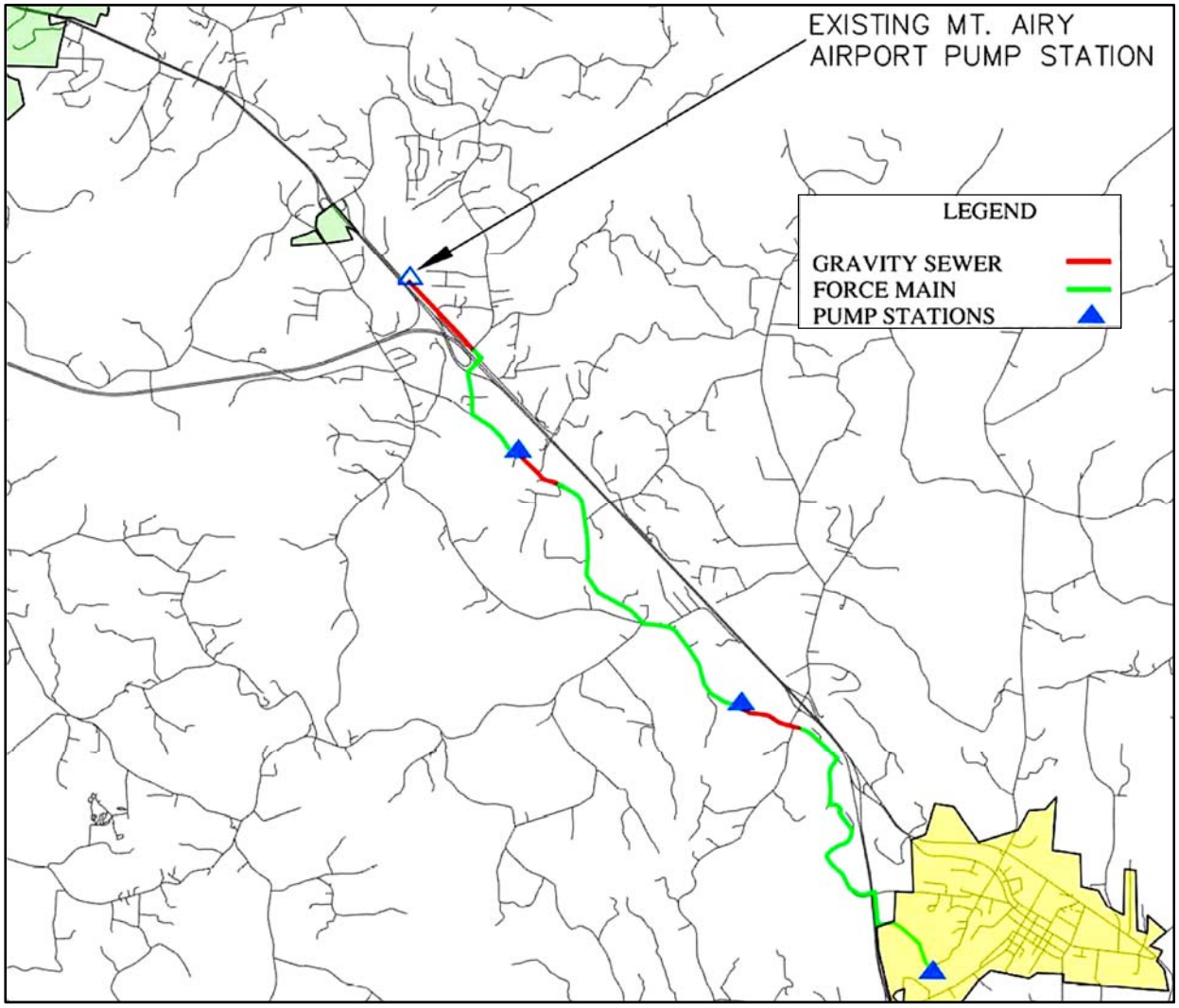
Figure 3.1 – Wastewater Plant Upgrade



3.2 Mount Airy Interconnection

The Mount Airy wastewater treatment facility, which has a design capacity of 21 MGD, currently serves several neighboring water systems in both North Carolina and Virginia. With current average demands of 1.7 MGD, this plant has available treatment capacity for additional flows. The most practical route for connecting both systems is constructing primarily along Old Highway 52 to the existing Mount Airy airport pump station. This proposed project includes construction of approximately 10,000 linear feet of 12" gravity sewer and 30,000 linear feet of 6" force main and related appurtenances. Given the elevation change between Pilot Mountain and Mount Airy, three (3) pump stations would be required to complete this interconnect. Figure 3.2 below shows a schematic layout of the proposed system interconnect.

Figure 3.2 – Pilot Mountain / Mount Airy Sewer Interconnection



4.0 FINANCIAL ANALYSIS

4.1 Goals Statement

This Regionalization Study includes financial analysis and comparison of the potential projects. Alternatives include upgrades to the Town's existing wastewater infrastructure and a potential interconnect project. Capital and operating costs for each alternative have been developed and a 10-year financial model presented showing the impact to user rates for each scenario. A Capital Improvements Plan (CIP) has previously been prepared to identify system deficiencies, develop projects to remedy the deficiencies, develop preliminary opinions of probable cost, and prioritize the order and timing of the projects. This previously prepared CIP has been included in Appendix D to display the current financial plan for the Town's Water and Sewer Fund. For this analysis all capital costs outside of the water supply project are considered constant and extensive capital projects and would require further rate increases to sustain the fund.

This Regionalization Study addresses immediate improvements needed for the Town's wastewater disposal. Refer to Appendix C for the detailed cost estimates for each of the alternatives. The budgeted cost listed in the CIP for Wastewater Disposal Improvements was $4,500,000 as a placeholder, however this study uses more formalized costs.

4.2 Analysis

Preliminary opinions of probable cost for all water capital projects include construction costs, a 10-percent construction contingency, and "soft costs". Soft costs often vary by project but in this case include preliminary design, surveying, engineering design, environmental design, permitting, construction observation and administration, grant administration and an allowance for legal expenses.

Treatment costs for the Mount Airy alternative were based on the current average flow of 146,000 gallons per day. Aside from wastewater plant operations (which are removed from the Mount Airy alternative) all other administration, operations, and maintenance costs for the system are held constant for each alternative.

Revenue increases necessary to maintain comparable fund balances for each of the alternatives have been predicted through this analysis. These increases are simply taken as a needed percentage increase over the existing annual revenue. A specific rate study to analyze increases by user category and structure was not performed.

4.2.1 Wastewater Plant Upgrades

To consider the existing treatment plant as a valid method of treatment for the future, several upgrades are necessary. This improvement project includes extensive renovations to the influent pump station and the inoperable clarifier. The estimated cost of this project, including construction, planning, design, bidding and funding administrative services is $2,295,000, refer to Appendix C for an itemized cost estimate. Funding would be available through NC DWI through a 0% interest loan and a 20-year term.

Table 4.2.1 below includes a summary of the 10-year financial model for this alternative.

Insert table

Table 4.2.1 – Wastewater Plant Upgrade Analysis Summary

UPGRADE WWTP $2.295 M PROJECT COSTS (NO INTEREST LOAN)														
REVENUES (WATER ONLY)	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**		
EXISTING RATE REVENUE	366,500	370,115	373,765	377,450	381,171	384,929	388,722	392,552	396,420	400,325	404,268	408,249		4,644,466
REVENUE FROM INFRASTRUCTURE INVESTMENT FEE	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	0	329,940
REVENUE INCREASE		0%	0%	0%	0%	0%	5%	0%	0%	0%	0%	0%		5%
RATE ADJUSTMENT INCREASE		-	-	-	-	-	20,811	21,002	21,196	21,391	21,588	21,787		127,775
NEW REVENUES	27,495	27,495	27,495	27,495	27,495	27,495	48,306	48,497	48,691	48,886	49,083	49,282		457,715
TOTAL REVENUES	**393,995**	**397,610**	**401,260**	**404,945**	**408,666**	**412,424**	**437,028**	**441,050**	**445,111**	**449,211**	**453,351**	**457,531**		**5,102,181**
TOTAL OPERATION EXPENSE	**289,315**	**234,368**	**238,215**	**242,133**	**246,123**	**250,187**	**254,326**	**258,542**	**262,837**	**267,211**	**271,668**	**276,208**		3,091,131
EXISTING DEBT SERVICE	**62,700**	**61,647**	**62,301**	**61,963**	**42,613**	**45,413**	**45,413**	**16,800**	**16,800**	**14,700**	-	-		430,350
NEW DEBT SERVICE ($2.295 WWTP)		54,000	54,000	54,000	54,000	54,000	115,000	115,000	115,000	115,000	115,000	115,000		960,000
TOTAL EXPENDITURES	**352,015**	**350,015**	**354,516**	**358,096**	**342,736**	**349,600**	**414,739**	**390,342**	**394,637**	**396,911**	**386,668**	**391,208**		**4,481,481**
ANNUAL SURPLUS/ (DEFICIENCY)	**41,980**	**47,595**	**46,744**	**46,850**	**65,931**	**62,824**	**22,289**	**50,708**	**50,474**	**52,300**	**66,683**	**66,323**		**620,701**

4.2.2 Mount Airy Interconnection

This proposed project includes construction of approximately 10,000 linear feet of 12" gravity sewer and 30,000 linear feet of 6" force main and related appurtenances. The estimated cost of this project, including construction, planning, design, bidding and funding administrative services is $6,853,200. An itemized cost estimate for this project is included in Appendix C. Funding would be available through the USDA – Rural Development through a loan with 3.25% interest and a 40-year term.

Table 4.2.2 below includes a summary of the 10-year financial model for this alternative.

Insert table

Table 4.2.2 – Mount Airy Interconnect Analysis Summary

PURCHASE FROM MOUNT AIRY $6.853M PROJECT COSTS (USDA LOW INTEREST LOAN)														
REVENUES (WATER ONLY)	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**		
EXISTING RATE REVENUE	366,500	370,115	373,765	377,450	381,171	384,929	388,722	392,552	396,420	400,325	404,268	408,249		4,644,466
REVENUE FROM INFRASTRUCTURE INVESTMENT FEE	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495	27,495		329,940
REVENUE INCREASE		60%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%		60%
RATE ADJUSTMENT INCREASE		238,566	240,756	242,967	245,200	247,454	249,730	252,028	254,349	256,692	259,058	261,446		2,748,247
NEW REVENUES	27,495	266,061	268,251	270,462	272,695	274,949	277,225	279,523	281,844	284,187	286,553	288,941		**3,078,187**
TOTAL REVENUES	**393,995**	**636,176**	**642,016**	**647,913**	**653,866**	**659,878**	**665,947**	**672,076**	**678,264**	**684,512**	**690,820**	**697,190**		**7,722,653**
TOTAL OPERATION EXPENSE	**289,315**	**64,417**	**65,517**	**66,639**	**67,783**	**68,949**	**70,137**	**71,348**	**72,583**	**73,842**	**75,125**	**76,433**		**1,062,088**
TREATMENT TO MT AIRY ($3.17/1000 gal)	-	168,900	172,278	175,724	179,238	182,823	186,479	190,209	194,013	197,893	201,851	205,888		2,055,296
EXISTING DEBT SERVICE	62,700	61,647	62,301	61,963	42,613	45,413	45,413	16,800	16,800	14,700	-	-		430,350
NEW DEBT SERVICE		333,472	333,472	333,472	333,472	333,472	333,472	333,472	333,472	333,472	333,472	333,472		3,668,192
TOTAL EXPENDITURES	**352,015**	**628,436**	**633,568**	**637,798**	**623,106**	**630,656**	**635,501**	**611,829**	**616,868**	**619,907**	**610,448**	**615,794**		**7,215,926**
ANNUAL SURPLUS / (DEFCIENCY)	**41,980**	**7,740**	**8,448**	**10,115**	**30,760**	**29,221**	**30,446**	**60,247**	**61,396**	**64,605**	**80,372**	**81,397**		**506,727**

5.0 CONCLUSIONS AND RECOMENDATIONS

After analyzing the Town's existing wastewater infrastructure and considering adjacent systems for partnering, it was determined that the wastewater plant upgrades is the preferred alternative.

From early discussions, it became apparent that Pilot Mountain did not have a desire or will to lose their autonomy and control by completely merging its wastewater system with Mount Airy. Therefore, a treatment purchase through an interlocal agreement was the only solution considered.

When evaluating interconnection alternatives, both plant capacity and location were factors in determining which alternative would be best suited for the interconnection. Based on the City of King not being able to support Pilot Mountain's wastewater demands, this interconnection was deemed infeasible. Mount Airy's wastewater plant does have available capacity to handle the demands of the demands of Pilot Mountain. Though this flow would have to be transported by force main and multiple pump stations due to Mount Airy's higher elevation, this interconnect is possible.

The Pilot Mountain wastewater treatment plant requires improvements for it to continue to meet the town's needs. This improvement project includes extensive renovations to the influent pump station and the inoperable clarifier. Given that the scope of the repairs required to make the plant reliable is relatively small, this alternative is also feasible. By comparing the cost of the two feasible options, the wastewater plant upgrade is by far the most affordable option.

Given the financial conditions, improving the Town's wastewater treatment plant is the only viable option at this time. The debt service impact of the entire plant project may be more than the fund can comfortably cover. We recommend making the improvements in phases, possibly optimizing grant opportunities.

APPENDIX A | Collection System Map

Pilot Mountain Sewer Lines

SEWER INFRASTRUCTURE STATISTICS

Sewer Pumps		Manholes		Sewer Lines	
COUNT	18	COUNT	310	COUNT	76
				LENGTH	106,356 FT.

Data provided on this map came from older engineering maps and on site GPSing.

Legend

- Sewer Pumps
- Manholes
- Sewer Lines
- Parcels
- Town Boundary

Northwest Piedmont Council of Governments

Sources:

The information contained on this site is furnished by government and private industry sources and is believed to be accurate but accuracy is not guaranteed. Mapping information is a representation of various data sources and is not a substitute for information that would result from an accurate land survey or engineer. The information contained hereon does not replace information that may be obtained by consulting the information's official source. In no event shall Northwest Piedmont Council of Governments be liable for any damages, direct or consequential, from the use of the information contained on this site. Source data is obtained by the counties and municipalities within Region I (Forsyth, Stokes, Surry, Yadkin, and Davie County), United States Census Bureau, United States Geological Survey (USGS), North Carolina Department of Transportation , and Northwest Piedmont Council of Governments .

Cartographic design & digital compilation by
Northwest Piedmont Council of Governments

Using ArcMap in Arc/Info 9.x.
Projection: Stateplane
Units: Feet
Datum: NAD83
Zone: North Carolina (3200)
Date Created: 9/12/2005

F

1 inch equals 639 feet

Feet
0 800 1,600 3,200 4,800 6,400

APPENDIX B | Pilot Mountain Local Water Supply Plan

Pilot Mountain, Town of

2018

The Division of Water Resources (DWR) provides the data contained within this Local Water Supply Plan (LWSP) as a courtesy and service to our customers. DWR staff does not field verify data. Neither DWR, nor any other party involved in the preparation of this LWSP attests that the data is completely free of errors and omissions. Furthermore, data users are cautioned that LWSPs labeled **PROVISIONAL** have yet to be reviewed by DWR staff. Subsequent review may result in significant revision. Questions regarding the accuracy or limitations of usage of this data should be directed to the water system and/or DWR.

1. System Information

Contact Information

Complete

Water System Name:	Pilot Mountain, Town of	PWSID:	02-86-025
Mailing Address:	124 W. Main Street - Box 1 Pilot Mountian, NC 27041	Ownership:	Municipality
Contact Person:	Ronald L. Holt	Title:	Public Works Director
Phone:	336-368-2247	Cell/Mobile:	--
Secondary Contact:	Michael Bose	Phone:	336-368-4592
Mailing Address:	124 W. Main Street - Box 1 Pilot Mountain, NC 27041	Cell/Mobile:	--

Distribution System

Line Type	Size Range (Inches)	Estimated % of lines
Asbestos Cement	4-12	14.00 %
Cast Iron	6-8	24.00 %
Ductile Iron	4-12	50.00 %
Galvanized Iron	2	2.00 %
Polyvinyl Chloride	2-8	10.00 %

What are the estimated total miles of distribution system lines? 30 Miles
How many feet of distribution lines were replaced during 2018? 0 Feet
How many feet of new water mains were added during 2018? 0 Feet
How many meters were replaced in 2018? 0
How old are the oldest meters in this system? 2 Year(s)
How many meters for outdoor water use, such as irrigation, are not billed for sewer services? 7
What is this system's finished water storage capacity? 0.8000 Million Gallons
Has water pressure been inadequate in any part of the system since last update? *Line breaks that were repaired quickly should not be included.* Yes

Programs

Does this system have a program to work or flush hydrants? Yes, Weekly
Does this system have a valve exercise program? No
Does this system have a cross-connection program? Yes
Does this system have a program to replace meters? Yes
Does this system have a plumbing retrofit program? No
Does this system have an active water conservation public education program? No
Does this system have a leak detection program? No

Water Conservation

What type of rate structure is used? Flat/Fixed, Uniform
How much reclaimed water does this system use? 0.0000 MGD For how many connections? 0
Does this system have an interconnection with another system capable of providing water in an emergency? No

2. Water Use Information

Service Area

Sub-Basin(s)	% of Service Population	County(s)	% of Service Population
Yadkin River (18-1)	100 %	Surry	100 %

What was the year-round population served in 2018? 1,947

Has this system acquired another system since last report? No

Water Use by Type

Type of Use	Metered Connections	Metered Average Use (MGD)	Non-Metered Connections	Non-Metered Estimated Use (MGD)
Residential	853	0.1174	0	0.0000
Commercial	180	0.0889	0	0.0000
Industrial	11	0.0040	0	0.0000
Institutional	10	0.0060	0	0.0000

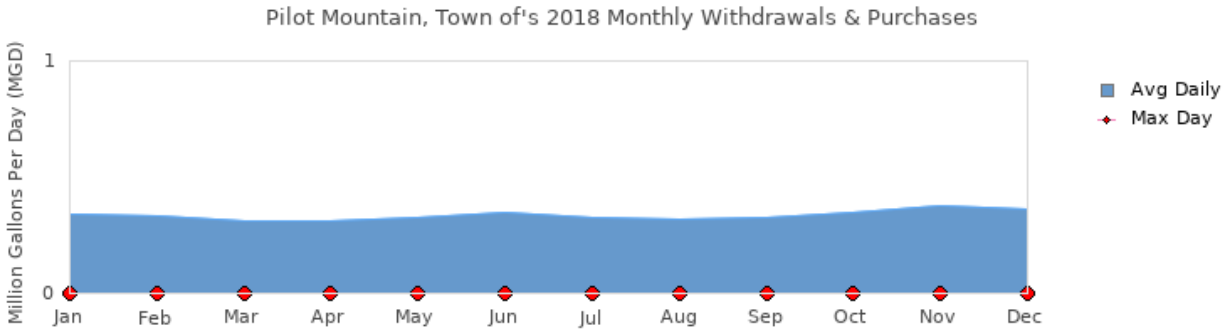
How much water was used for system processes (backwash, line cleaning, flushing, etc.)? 0.0150 MGD

Total number of connections are correct, and industrial and institutional numbers should be correct. Because our billing system does not differentiate residential and commercial connections, these numbers are an estimate.

3. Water Supply Sources

Monthly Withdrawals & Purchases

	Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)		Average Daily Use (MGD)	Max Day Use (MGD)
Jan	0.3350		May	0.3260		Sep	0.3230	
Feb	0.3280		Jun	0.3470		Oct	0.3440	
Mar	0.3090		Jul	0.3260		Nov	0.3720	
Apr	0.3090		Aug	0.3150		Dec	0.3620	



Surface Water Sources

Stream	Reservoir	Average Daily Withdrawal		Maximum Day Withdrawal (MGD)	Available Raw Water Supply		Usable On-Stream Raw Water Supply Storage (MG)
		MGD	Days Used		MGD	* Qualifier	
Toms Creek		0.3329	365	0.0000	2.2500	F	0.0000

* Qualifier: C=Contract Amount, SY20=20-year Safe Yield, SY50=50-year Safe Yield, F=20% of 7Q10 or other instream flow requirement, CUA=Capacity Use Area Permit

Surface Water Sources (continued)

Stream	Reservoir	Drainage Area (sq mi)	Metered?	Sub-Basin	County	Year Offline	Use Type
Toms Creek		29	No	Yadkin River (18-1)	Surry		Regular

What is this system's off-stream raw water supply storage capacity? 20 Million gallons

Are surface water sources monitored? Yes, Weekly

Are you required to maintain minimum flows downstream of its intake or dam? No

Does this system anticipate transferring surface water between river basins? No

Water Treatment Plants

Plant Name	Permitted Capacity (MGD)	Is Raw Water Metered?	Is Finished Water Ouput Metered?	Source
Pilot Mountain WTP	1.5000	No	Yes	Toms Creek

Did average daily water production exceed 80% of approved plant capacity for five consecutive days during 2018? No

If yes, was any water conservation implemented? No

Did average daily water production exceed 90% of approved plant capacity for five consecutive days during 2018? No

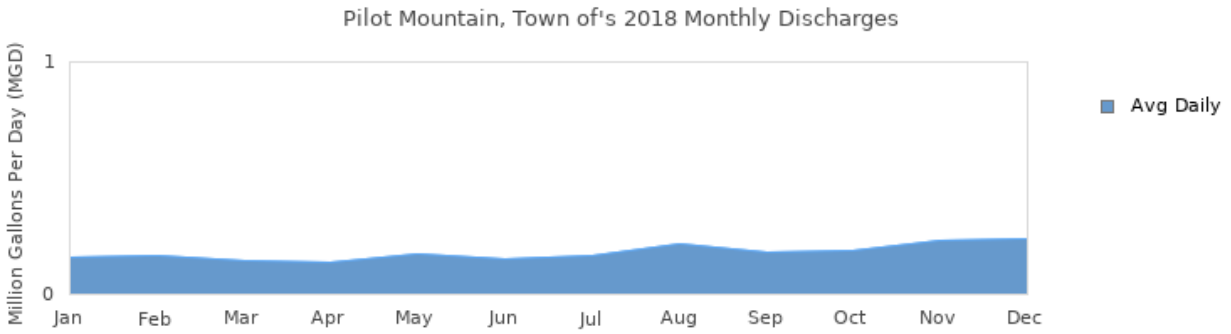
If yes, was any water conservation implemented? No

Are peak day demands expected to exceed the water treatment plant capacity in the next 10 years? No

4. Wastewater Information

Monthly Discharges

	Average Daily Discharge (MGD)		Average Daily Discharge (MGD)		Average Daily Discharge (MGD)
Jan	0.1544	May	0.1721	Sep	0.1800
Feb	0.1605	Jun	0.1484	Oct	0.1884
Mar	0.1445	Jul	0.1617	Nov	0.2289
Apr	0.1328	Aug	0.2118	Dec	0.2328



How many sewer connections does this system have? 794

How many water service connections with septic systems does this system have? 260

Are there plans to build or expand wastewater treatment facilities in the next 10 years? No

Wastewater Permits

Permit Number	Permitted Capacity (MGD)	Design Capacity (MGD)	Average Annual Daily Discharge (MGD)	Maximum Day Discharge (MGD)	Receiving Stream	Receiving Basin
NC0026646	0.5000	1.5000	0.1687		Ararat River	Yadkin River (18-1)
NC0068365	0.2000	0.2000	0.0077		Toms Creek	Yadkin River (18-1)

5. Planning

Projections

	2018	2020	2030	2040	2050	2060
Year-Round Population	1,947	1,956	2,004	2,048	2,092	2,138
Seasonal Population	0	0	0	0	0	0
Residential	0.1174	0.1179	0.1207	0.1233	0.1259	0.1286
Commercial	0.0889	0.0892	0.0914	0.0933	0.0953	0.0973
Industrial	0.0040	0.0040	0.0040	0.0040	0.0040	0.0040
Institutional	0.0060	0.0060	0.0061	0.0063	0.0064	0.0065
System Process	0.0150	0.0150	0.0150	0.0150	0.0150	0.0150
Unaccounted-for	0.1016	0.1020	0.1042	0.1063	0.1083	0.1104

Projections based on Surry County growth rate in 2018 of 0.24%

Future Supply Sources

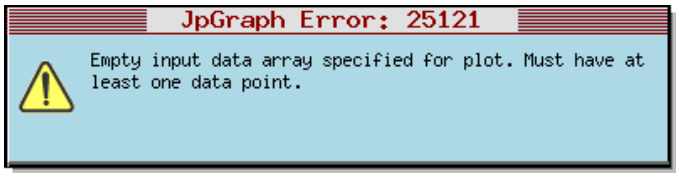
Source Name	PWSID	Source Type	Additional Supply	Year Online	Year Offline	Type

Town of Mount Airy	02-86-010	Purchase	0.5000	2020	Regular

The town plans to interconnect with Mt Airy and decommission the Pilot Mountain WTP

Demand v/s Percent of Supply

	2018	2020	2030	2040	2050	2060
Surface Water Supply	2.2500	2.2500	2.2500	2.2500	2.2500	2.2500
Ground Water Supply	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Purchases	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Future Supplies		0.5000	0.5000	0.5000	0.5000	0.5000
Total Available Supply (MGD)	2.2500	2.7500	2.7500	2.7500	2.7500	2.7500
Service Area Demand	0.3329	0.3341	0.3414	0.3482	0.3549	0.3618
Sales	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Future Sales		0.0000	0.0000	0.0000	0.0000	0.0000
Total Demand (MGD)	0.3329	0.3341	0.3414	0.3482	0.3549	0.3618
Demand as Percent of Supply	15%	12%	12%	13%	13%	13%



The purpose of the above chart is to show a general indication of how the long-term per capita water demand changes over time. The per capita water demand may actually be different than indicated due to seasonal populations and the accuracy of data submitted. Water systems that have calculated long-term per capita water demand based on a methodology that produces different results may submit their information in the notes field.

Your long-term water demand is 60 gallons per capita per day. What demand management practices do you plan to implement to reduce the per capita water demand (i.e. conduct regular water audits, implement a plumbing retrofit program, employ practices such as rainwater harvesting or reclaimed water)? If these practices are covered elsewhere in your plan, indicate where the practices are discussed here.

Are there other demand management practices you will implement to reduce your future supply needs? none

What supplies other than the ones listed in future supplies are being considered to meet your future supply needs? none

How does the water system intend to implement the demand management and supply planning components above? n/a

Additional Information

Has this system participated in regional water supply or water use planning? No

What major water supply reports or studies were used for planning?

Please describe any other needs or issues regarding your water supply sources, any water system deficiencies or needed improvements (storage, treatment, etc.) or your ability to meet present and future water needs. Include both quantity and quality considerations, as well as financial, technical, managerial, permitting, and compliance issues:

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APPENDIX C | Detailed Cost Estimate

OPINION OF PROBABLE COST
MT. AIRY SEWER SYSTEM INTERCONNECTION
TOWN OF PILOT MOUNTAIN, NORTH CAROLINA

Item No.	Description	Unit	Estimated Quantity	Unit Price	Total Cost
1	Mobilization	LS	1	$154,110	$154,100
2	8-Inch Diameter PVC Force Main	LF	30,000	$60	$1,800,000
3	12-Inch Diameter DIP Gravity Sewer	LF	10,000	$100	$1,000,000
4	0.5 -MGD Regional Pump Station Construction	LS	1	$750,000	$750,000
5	Convert Digester into Flow Equalization Tank	LS	1	$150,000	$150,000
6	Site Piping	LS	1	$30,000	$30,000
7	Intermediate 0.5 MGD Pump Station Construction	LS	2	$600,000	$1,200,000
8	Air Release Stations	EA	6	$9,500	$57,000
9	Airport Pump Station Backup Generator	LS	1	$150,000	$150,000
Construction Sub-Total					$5,291,100
Contingency (10%)					$529,100
Easement Acquisition					$100,000
Legal and Administration					$60,000
Design Engineering (9%)					$476,200
Construction Administration (7.5%)					$396,800
Total Project Cost					**$6,853,200**

OPINION OF PROBABLE COST
WASTEWATER TREATMENT PLANT IMPROVEMENTS
TOWN OF PILOT MOUNTAIN, NORTH CAROLINA

Item No.	Description	Unit	Estimated Quantity	Unit Price	Total Cost
1	Mobilization	LS	1	$50,000	$50,000
2	Influent Mechanical Screening	LS	1	$500,000	$500,000
3	Influent Pump Station Upgrades	LS	1	$150,000	$150,000
3	Influent Pump Station Generator	LS	1	$150,000	$150,000
5	Oxidation Ditch - Mechanical Surface Aeration Upgrades	LS	1	$200,000	$200,000
6	Oxidation Ditch - Cleaning and Concrete Repairs	LS	1	$100,000	$100,000
7	Clarifier Improvements	LS	1	$400,000	$400,000
8	Chemical Feed Improvements	LS	1	$50,000	$50,000
9	Effluent Pump Station Improvements	LS	1	$150,000	$150,000
Construction Sub-Total					$1,750,000
Contingency (10%)					$175,000
Legal and Administration					$60,000
Design Engineering					$194,000
Construction Administration					$116,000
Total Project Cost					**$2,295,000**

APPENDIX D | Capital Improvements Plan

TOWN OF PILOT MOUNTAIN
WATER AND SEWER FUND
CAPITAL IMPROVEMENTS PLAN

Updated April 2019

PROJECT NUMBER	PROJECT DESCRIPTION	COST	YEAR 1 2019	YEAR 2 2020	YEAR 3 2021	YEAR 4 2022	YEAR 5 2023	YEAR 6 2024	YEAR 7 2025	YEAR 8 2026	YEAR 9 2027	YEAR 10 2028
	WATER IMPROVEMENTS											
	DISTRIBUTION SYSTEM											
1	Miscellaneous Water Main Replacements	$970,000	$0	$0	$65,000	$150,000	$80,000	$0	$250,000	$300,000	$50,000	$75,000
2	Simmons &Sunset Drive Water Line Replacements	$400,000	$0	$200,000	$200,000							
3	Cook School Road Water Main**	$1,080,000					$1,080,000					
4	Howard and Depot Street Water Replacements	$700,000		$700,000								
	WATER TREATMENT PLANT											
5	Water System Interconnect	$3,900,000	$3,900,000									
	WATER IMPROVEMENTS SUBTOTAL	$7,050,000	$3,900,000	$900,000	$265,000	$150,000	$1,160,000	$0	$250,000	$300,000	$50,000	$75,000
	WASTEWATER IMPROVEMENTS											
	COLLECTION SYSTEM											
6	Sunset PS Replacement	$580,383	$580,383									
7	Sunset Area Sewer Line Replacements	$1,606,484	$1,606,484									
8	Wastewater Collection System SCADA	$277,333	$0		$277,333							
9	Pump Station Repairs	$310,000		$310,000								
10	Heatherly Creek Sewer Outfall & Pump Station**	$2,700,000				$2,700,000						
11	Portable Bypass Pump for Wastewater Lift Stations**	$60,000			$60,000							
12	Nelson Street Pump Station Replacement**	$596,000			$596,000							
13	Infiltration and Inflow Study	$105,000				$105,000						
14	Lola Lane Aerial Sewer Crossing	$119,400		$119,400								
15	Neighbor's Pump Station Improvements	$91,200						$91,200				
16	Upgrade Lola Lane Pump Station**	$1,020,000							$1,020,000			
17	Off Site Pump Station and Force Main Replacement**	$440,000										$440,000
18	Howard and Depot Street Sewer Replacements	$1,300,000		$1,300,000								
	WASTEWATER TREAMENT PLANT											
19	Wastewater Treatment Plant Improvements	$1,690,000		$940,000						$750,000		
		$0										
	WASTEWATER IMPROVEMENTS SUBTOTAL	$10,895,800	$2,186,867	$2,669,400	$933,333	$2,805,000	$0	$91,200	$1,020,000	$750,000	$0	$440,000
	TOTAL	$17,945,800	$6,086,867	$3,569,400	$1,198,333	$2,955,000	$1,160,000	$91,200	$1,270,000	$1,050,000	$50,000	$515,000

Mt. Airy Interconnect Funds Acceptance
Background Information:
The Town's application to the Local Government Commission for approval of the loan for the construction of the interconnect with Mt. Airy was approved. In order to complete the loan process, the Board will need to approve the attached resolution which will accept the grant and loan from the State, direct staff to comply with all conditions of the funding, and to allow staff to sign all appropriate paperwork concerning the grant and loan.
Staff Recommendation: Staff recommends that the Board approve Resolution 2019-20 02
Possible Board of Commissioner Actions
• Approve Resolution 2019-20 02 • Deny approval of Resolution 2019-20 02 • Table to a later meeting • Take no action
Attachments
• Resolution 2019-20 02

STATE OF NORTH CAROLINA **TOWN OF PILOT MOUNTAIN**

COUNTY OF SURRY **RESOLUTION NO. 2019/20-02**

RESOLUTION AUTHORIZING TOWN ACCEPTANCE OF WATER GRANT AND LOAN FUNDS

WHEREAS, the Safe Drinking Water Act Amendments of 1996 and the North Carolina Water Infrastructure Fund have authorized the making of loans and/or grants, applicable, to aid eligible, drinking-water system owners in financing the cost of construction for eligible, drinking-water infrastructure, and;

WHEREAS, the North Carolina Department of Environmental Quality has offered a Drinking Water State Revolving Fund Loan in the amount of $3,900,000 for the construction of an interconnection with the City of Mt Airy Water System, and;

WHEREAS, the Town of Pilot Mountain intends to construct said project in accordance with engineering plans and specifications that have been or will have been approved by the North Carolina Public Water Supply Section.

NOW, THEREFORE, BE IT RESOLOVED by the Board of Commissioners that:

1. That the Town of Pilot Mountain does hereby accept the Drinking Water State Revolving Fund Loan in the amount of $3,900,000.

2. That the Town of Pilot Mountain does hereby give assurance to the North Carolina Department of Environmental Quality that they will adhere to all applicable items specified in the standard "Conditions" and "Assurances" of the Department's funding offer, awarded in the form of a $1,950,000 grant and a $1,950,000 0% interest loan.

3. That, James Michael Boaz, Town Manager/Finance Officer and successors so titled, is hereby authorized and directed to furnish such information as the appropriate State agency may request in connection with such application or the project; to make assurances as contained above; and to execute such other documents as may be required by the Division of Water Infrastructure.

4. That the Town of Pilot Mountain has complied substantially or will comply substantially with all Federal, State, and local laws, rules, regulations, and ordinances applicable to the Project and to Federal and State grants and loans pertaining thereto.

ADOPTED by the Board of Commissioners of the Town of Pilot Mountain this the 9th day of September 2019.

Attest:

_____ _____

Evan Cockerham, Mayor *Holly Utt, Town Clerk*

Towing and Storage Ordinance

Background Information:

After a recent traffic stop by Sgt. Chrisman, Officer Blizzard, and K-9 officer Jeffery, the Police Department seized a vehicle. This vehicle was seized under state statutes that authorize the Town to seize vehicles that the officers believe are being used to sell narcotics. There are specific standards that have to be met in order for this seizure to be allowed and the action will eventually be reviewed by a judge. After this judicial review, it is possible that the Town will be awarded the vehicle; it is also possible however that the vehicle will be ordered returned to the registered owner.

This process could take quite some time to fully resolve itself and during this time the Town is required to store the vehicle in a secure location. After discussing this issue with Chief Bottoms and Captain Jackson, I reviewed our ordinances and found that we had not adopted a policy that governs the towing of vehicles and the storage of those vehicles. This ordinance amendment would adopt those standards.

First, the ordinance sets standards for wrecker rotations. We have, for a number of years, maintained a list of wrecker services that would like to be called when we have a vehicle to tow, either because of an accident or because the vehicle is being seized. Surry County Communications maintains this rotation and will call the next wrecker service in line. This ordinance would formalize that long standing policy.

Second, and more importantly, this ordinance would establish a policy and a fee structure for the long term storage of vehicles. This would allow the Town to recover some money for storing these vehicles for long periods of time. This vehicles are stored in the gated PW storage area at the WWTP. Town staff is forced to mow around and adjust our storage procedures to accommodate these vehicles. In addition, there is an additional cost on our insurance to cover this "impound" lot.

Staff has reviewed the ordinances of other Towns in NC and Surry County and found these fees and this policy to be in line with what our neighbors are charging for storage of impounded vehicles.

Staff Recommendation:	Staff recommends that the Board adopt the Towing and Storage Ordinance

Possible Board of Commissioner Actions

- Adopt the Towing and Storage Ordinance
- Reject the Towing and Storage Ordinance
- Direct staff to make changes to the ordinance and resubmit
- Table to a later meeting
- Take no action

Attachments

- Towing and Storage Ordinance

STATE OF NORTH CAROLINA **TOWN OF PILOT MOUNTAIN**
COUNTY OF SURRY **BOARD OF COMMISSIONERS**

ORDINANCE NO: 2018-03

ORDINANCE TO AMEND CHAPTER 42 OF THE TOWN OF PILOT MOUNTAIN CODE OF ORDINANCES: TRAFFIC AND VEHICLES

WHEREAS, the Town is empowered to tow and impound motor vehicles under certain provisions; and

WHEREAS, the Town of Pilot Board of Commissioners wish to enact policy to govern the towing, impoundment, and storage of motor vehicles; and

WHEREAS, the Board of Commissioners believes it in the best interests of the citizens of Pilot Mountain to adopt these regulations to clarify the procedure governing the towing, impoundment, and storage of motor vehicles.

NOW, THEREFORE, be it ordained by the Board of Commissioners of Town of Pilot Mountain, that the Code of Ordinances be amended as follows:

Section 1. That a new Article IX be added to Chapter 42 of the Town of Pilot Mountain Code of Ordinances:

Article IX: Vehicle Towing and Impoundment Policy

Section 42-400: General Procedures

(a) The owner operator of the vehicle to be towed will be given the opportunity to request the wrecker service of his choice when feasible.
(b) In the event the owner or operator is unable or refuses to make an "owners request" the officer will notify Surry Communications to contact the next wrecker on rotation.

Section 42-401: Rotation List

(a) A maximum of five wreckers will be maintained on the rotation list. Wrecker companies inside the Town limits will be given priority for placement on the rotation list.
(b) The Chief of Police will assign an officer to maintain the rotation list for the Town.
(c) The Chief of Police will approve any requests to be added to the rotation list.
(d) The officer in charge of the rotation list will keep a record of any poor performance by a wrecker company and will make a report to the Chief of Police as required.
(e) The Chief of Police will take appropriate action up to and including removal from the list for poor performance by a wrecker company.

Section 42-402: Long and short term impoundment

(a) On occasion it will be necessary to impound a vehicle on a long or short term basis.
(b) A vehicle that is impounded by the Town will be towed to the secured impound lot.
(c) When it becomes necessary to impound a vehicle, the impound officer will:
    a. Make a complete inventory of the vehicle.
    b. Describe any damage to the vehicle on the inventory sheet.
    c. Fill out a notice of towing form.
    d. Indicate general requirements for the release of the vehicle.

e. If the vehicle is being towed pursuant to NCGS, the officer will follow all requirements of those statutes in addition to these standards.

(d) All towing, storing, violation and other charges incurred by the Town or imposed on the owner or operator in connection with the impounded vehicle shall constitute a lien upon such vehicle, and no such impounded vehicle shall be release until such charges have been paid and proper evidence of ownership exhibited.

(e) All vehicles, including motorcycles, towed pursuant to this section, shall be stored on Town-owned property or Town-operated property unless other arrangements are needed due to the size of the vehicle, lack of space or other similar circumstances.

Section 42-403: Storage and towing charge

(a) Charges for impounded vehicles shall be as follows:
   a. After 7 days a storage fee of $20 per day.
   b. Towing service fees billed to the Town.
   c. An administrative fee of $50 per impounded vehicle, regardless of how long the vehicle is impounded.

(b) All charges must be paid before the vehicle will be released to the owner. The owner may sign the vehicle over to the Town in lieu of any fees.

Section 42-404: Nonliability of Town for damage to impounded vehicle or loss of or damage to contents.

The Town and any member of the Town staff that is engaged in the enforcement of the provisions of this section chapter shall not be responsible or liable for the loss or theft of the contents of any impounded vehicle nor for any damage thereto arising from the removal of any vehicle.

Section 42-405 Seizure of Vehicle for DWI

(a) When a vehicle is impounded for seizure to benefit the schools, the officer shall utilize the wrecker service assigned by the State.

(b) In the event where a DWI operator's vehicle is impounded and later discovered that it should be transferred to the school system, the officer will notify the original wrecker service of same and they will notify the state-designated wrecker service.

Section 2. All laws and clauses of laws in conflict herewith are repealed to the extent of any such conflict.

Section 3. This ordinance is effective upon adoption.

Adopted this the 9th day of September, 2019.

_____ _____

Evan J. Cockerham, Mayor Holly Utt, Town Clerk

Title: Paint-A-Hydrant (Downtown Public Art) Program

Background Information:

The Main Street Coordinating Committee seeks to launch a Paint-A-Hydrant program. The last time the 23 hydrants on Main Street were painted was in 2009. They currently display faded images outlined in rust. Adding new whimsical designs to these hydrants will not only enhance the physical appearance of Main Street but will also help promote a sense of cultural identity for the community. This program seeks partner with multiple community organizations and businesses to achieve its goal.

In 2009 there were concerns about the hydrants, once painted, no longer indicating the correct pressure for the fire hoses. Although much of the information is now available electronically on the special GPS software our fire department has (which also denotes where in the street a hydrant should be located), stipulations and rules of the program will help avoid this issue. Designs will be approved/selected by the design subcommittee in coordination with the Pilot Knob Volunteer Fire Department. Marketing materials will be created to help promote the hydrants as point of interest for tourists.

Who will oversee the project? The Design Subcommittee and the Pilot Knob Volunteer Fire Department will help to oversee the execution of the project.

Maintenance: Hydrant sponsors will select an artist. Hydrants will remain designed for 2 years. The design is approved for a 2-year period. During that time, artist is available for upkeep of design. If the hydrant is vandalized, artist has 30 days to fix and maintain the original, approved design. If hydrant is vandalized with offensive, derogatory or obscene graphics, the Town of Pilot Mountain reserves the right to paint over/remove the obscenity until the artist renews the approved design. If a hydrant becomes non-functional because of damage, the Town of Pilot Mountain reserves the right to replace it with a new hydrant and the artist may elect to repaint it with the approved design during the 2-year period.

Potential Cost: Potential cost will depend on the amount of supplies needed. Staff estimates that the sponsorship fee for the 23 hydrants should cover the costs of supplies - Paint, Primer, Wire Brushes, Paint Brushes, Drop Clothes – If there is any surplus from the adoption fees it is proposed that they be used to go towards general revitalization efforts.

Community Partners: Pilot Knob Volunteer Fire Department
Surry County Schools – East Surry
Pilot Mountain Police Department – aid with safety during the painting
Local businesses, civic organizations, and religious organizations

Staff hopes to make painting the hydrants a community event

Staff Recommendation:	Allow the Main Street Coordinating Committee to pursue the program. Allow the Design subcommittee to administer the program – effectively allowing this group to authorize the painting of whimsical designs on the 23 hydrants on Main Street.

Possible Board of Commissioner Actions

- Approve hydrant adoption program
- Deny approval of hydrant adoption program
- Return proposal to staff for more information
- Table Request
- Take no action

Attachments

- Hydrant Adoption Program Application
- Hydrant Location Map
- Surry County Schools Adoption Form

PAINT-A-HYDRANT
DOWNTOWN PUBLIC ART

The Town of Pilot Mountain's Main Street Coordinating Committee is pleased to announce the Paint-A-Hydrant Program, where the community will be permitted to "adopt" a fire hydrant on Main Street. Your adoption will give you the opportunity to help turn our fire hydrants into works of art. As a sponsor, you will have the option to A) Submit your own design B) Find an artist to submit a design on your behalf or C) Choose from one of our 30 potential designs for the hydrants submitted from children at local schools. There will be no specific theme for the fire hydrants, but artists are encouraged to incorporate different elements of the community into their art. There is a $100 adoption fee that lasts for 2 years. The program open to everyone.

How the PAINT-A-HYDRANT program, works

Step 1: Download an application and design proposal from (WEBSITE)
Step 2: Fill out your application and design proposal then submit it to JKindy@PilotMountainNC.Org
Step 3: The Design Subcommittee of the Main Street Coordinating Committee will review and notify applicants that their application & proposed design was approved or denied.
Step 4: If approved, you will be able to paint your designated hydrant (Between? DATES)
Step 5: Email photos of your art and/or photos of you painting your hydrant JKindy@PilotMountainNC.Org
Step 6: Get Social -> Share your ART #DowntownPilotMtn & #VisitPilotMtn
Step 7: Check in on your art throughout the year, if it needs a touch up, please inform the Town you will be maintaining your hydrant and do so.

PAINT-A-HYDRANT
DOWNTOWN PUBLIC ART

Rules and Regulations:

1. Applicants must be 18 or older, or have parent or legal guardian to apply and supervise painting.
2. Hydrant surface will be prepped by the Town of Pilot Mountain. Hydrant artists will provide their own paint and brushes. Drop cloths and painter's tape will be provided.
3. The property around the hydrant should be kept clean and neat when working on the hydrant. A provided drop cloth must be taped around the bottom of the hydrant covering the sidewalk, ground or any area adjoining the hydrant.
4. Paint cannot prevent the functional use of the hydrant. The three openings and the top turning knob must all function. Hydrant threads may not be painted. Paint cannot seep into it to prevent operation. **DO NOT PAINT THE TOP KNOB OR SIDE KNOBS (**painting the front knob is fine)
5. Painting may not reduce the hydrant's visibility.
    * Paint may not be all black, all white, dark camouflage green, or use patterns and/or designs that reduce the hydrant's visibility.
    * Paint colors may not be the same color as the vegetation or items surrounding the hydrant
    * Black paint may not cover more than 20% of the overall hydrant
    * Red paint may not cover more than 50% of the overall hydrant.
6. Must use an oil-based primer before painting followed by a high quality oil-based enamel paint specifically for metal. Bright and vibrant colors are encouraged.
7. No logos, copyrighted or trademarked graphics
8. No inappropriate words or images, advertisements, political messages, etc.
9. No objects can be attached or glued to fire hydrants.
10. Design must be appropriate for public places
    * Paintings/art cannot endorse an individual or business.
    * No offensive, derogatory or obscene graphics.
    * No gang tags
11. Hydrants that are found to be painted without approval, are not properly maintained, or do not meet the rules and regulations of the program, will be returned to the standard red color by the Town.

Hydrants will be painted on (DATE & TIME)

Rain Date: (DATE)

For questions about the PAINT-A-HYDRANT program, contact the Main Street Coordinator, Jenny Kindy at 336-312-3024 or email: JKindy@PilotMountainNC.Org

PAINT-A-HYDRANT
DOWNTOWN PUBLIC ART

AGREEMENT

By signing below and participating in the Paint-A-Hydrant Program, you agree that you have the permission and authority to act as agent for the Artist. Additionally, you acknowledge that the Town of Pilot Mountain and Pilot Knob Volunteer Fire Department and their affiliates are not responsible in any way for any injury or property damage directly or indirectly associated with this program and/or event.

The design is approved for a 2-year period. During that time, artist is available for upkeep of design. If the hydrant is vandalized, artist has 30 days to fix and maintain the original, approved design. If hydrant is vandalized with offensive, derogatory or obscene graphics, the Town of Pilot Mountain reserves the right to paint over/remove the obscenity until the artist renews the approved design. If a hydrant becomes non-functional because of damage, the Town of Pilot Mountain reserves the right to replace it with a new hydrant and the artist may elect to repaint it with the approved design during the 2-year period.

By signing this waiver, the hydrant artist is agreeing to all rules, guidelines and criteria associated with Paint-A-Hydrant and is responsible for communicating this information to those executing the design, and supervising the work on, your adopted hydrant.

Paint-A-Hydrant SPONSOR/ARTIST/AGENT:

Print Name _____Representing: _____
Signature _____ Date: _____

PAINT-A-HYDRANT
DOWNTOWN PUBLIC ART

Application/Adoption Form

Artist Name_____
Phone: _____ **Email** _____
Address_____
_____
A little about the artist:

Brief Description of Proposed Design:

_____
_____
_____
_____
_____

DO NOT PAINT THE TOP KNOB OR SIDE KNOBS (painting the front knob is fine)

Hydrant Name/ Title:_____

Return to:

Jenny Kindy
Main Street Coordinator
124 W Main Street
Pilot Mountain NC 27041
Phone 336-312-3024
Email: jkindy@PilotMountainNC.Org
Fax: 336-368-9532

((Office Use Only))

Hydrant Number:_____

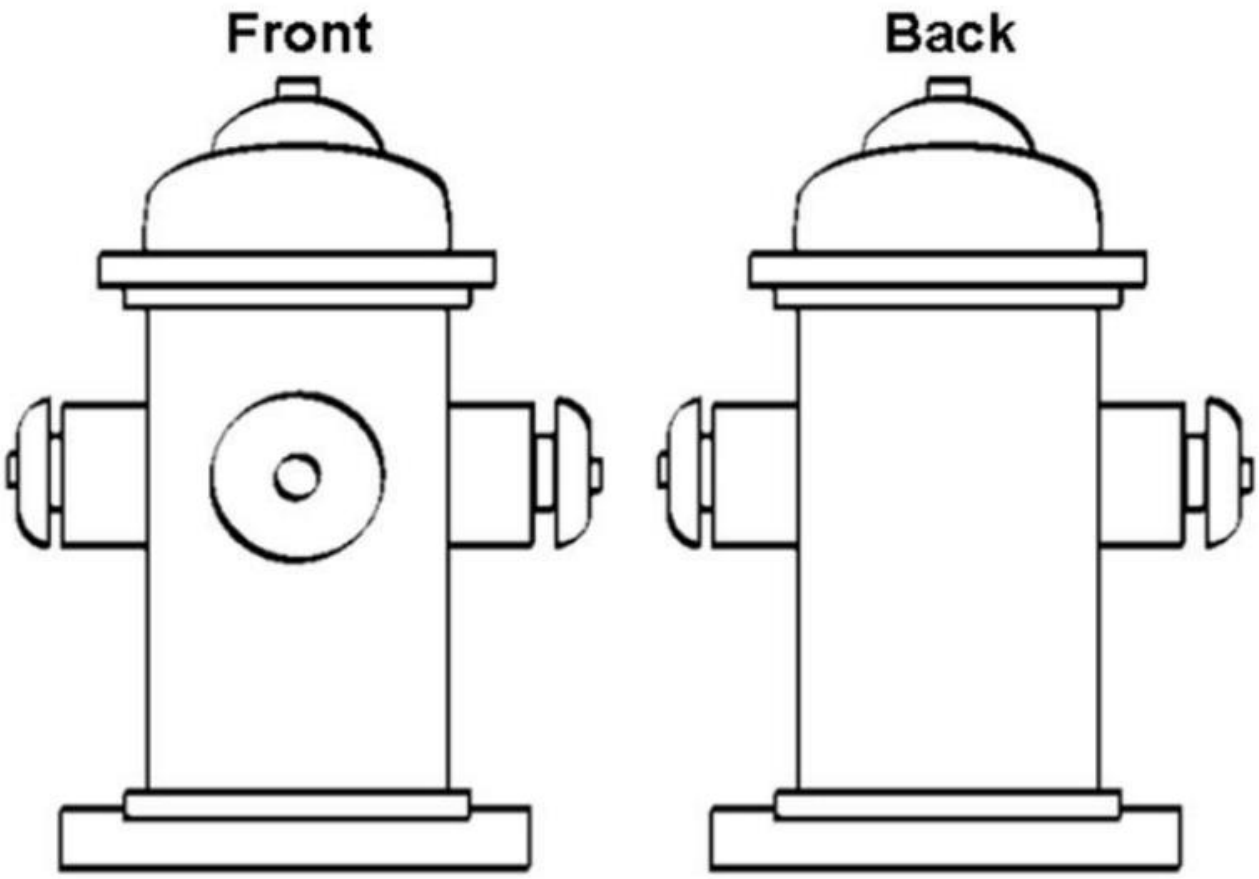
Approved By:_____

Date Awarded:_____

PAINT-A-HYDRANT
DOWNTOWN PUBLIC ART

DESIGN SKETCH

DO NOT PAINT THE TOP KNOB OR SIDE KNOBS **(painting the front knob is fine)**



Please submit by (DATE)

1. Signed rules & regulations agreement/ Hold-Harmless Waiver
2. Completed Adoption Form
3. Design Sketch
4. $100 Adoption Fee

Jenny Kindy
Main Street Coordinator, Town of Pilot Mountain
124 W Main Street, Box 1,
Pilot Mountain NC 27041
JKindy@PilotMountainNC.Org

PAINT-A-HYDRANT
DOWNTOWN PUBLIC ART

School Name_____

Student Name_____

Brief Description of Proposed Design:

_____

_____

_____

Hydrant Name/ Title:_____

1. No logos, copyrighted or trademarked graphics
2. No inappropriate words or images, advertisements, political messages, etc.
3. No objects can be attached or glued to fire hydrants.
4. Designs should not include the top or side knobs as shown in the "Minion" design ->
5. Design must be appropriate for public places
    * Paintings/art cannot endorse an individual or business.
    * No offensive, derogatory or obscene graphics.
    * No gang tags

((Office Use Only))

Hydrant Number:_____

Approved By:_____

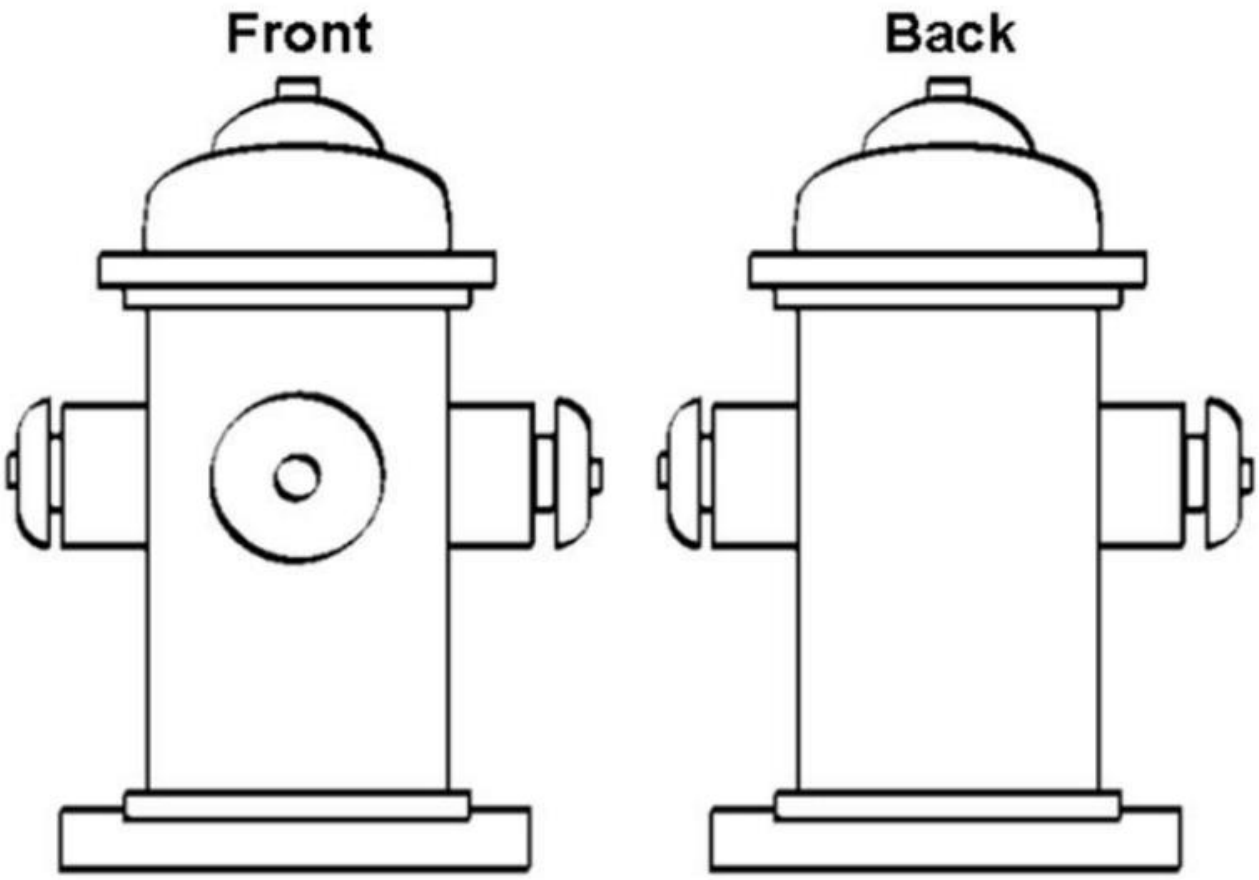
Date Awarded:_____

Return to:
Jenny Kindy
124 W Main Street, Box 1,
Pilot Mountain NC 27041
JKindy@PilotMountainNC.Org

PAINT-A-HYDRANT
DOWNTOWN PUBLIC ART

DESIGN SKETCH

DO NOT PAINT THE TOP KNOB OR SIDE KNOBS **(painting the front knob is fine)**



1. No logos, copyrighted or trademarked graphics
2. No inappropriate words or images, advertisements, political messages, etc.
3. No objects can be attached or glued to fire hydrants.
4. Designs should not include the top or side knobs – leave those blank
5. Design must be appropriate for public places
    * Paintings/art cannot endorse an individual or business.
    * No offensive, derogatory or obscene graphics.
    * No gang tags

Return to:
Jenny Kindy
124 W Main Street, Box 1,
Pilot Mountain NC 27041
JKindy@PilotMountainNC.Org

Pilot Mountain Town Hall
124 West Main St.
Pilot Mountain, NC 27041

(Phone) – 336.368.2247
(Fax) – 336.368.9532
www.pilotmountainnc.org

MEMORANDUM

TO:	**Mayor and Board of Commissioners**
FROM:	**Michael Boaz, Town Manager/Finance Officer**
DATE:	**September 3, 2019**
RE:	**September 2019 Manager's Report**

- The next meeting for the State Park Greenway will be on October 2. After the steering committee meets and reviews the results of the survey and proposed routes, we will be able to schedule a time with the Commissioners to review these results.
- This month we have Ghostbusters as the Movie on Main. This movie will be on September 21 starting at dark.
- We will also have our second "Summer" Concert on Friday September 27 on Depot Street. We will have the Coconut Groove Band performing. Those interested in buying tickets can go to Eventbrite to get those tickets.
- The Monsters on Main Parade will return to downtown Pilot Mountain on Saturday October 19. The parade will be followed by our Movie on Main, "Witches". The movie will be held at Art of Massage and Hilda's Place.
- The Glow Party will once again be held in Pilot Mountain on Saturday October 26.
- The RaceCar Night will return on Friday October 4 and the final car show of the season will be on Saturday October 5.
- We have received a number of calls from residents in the Lynchburg, Old Barn Circle, and Saddle drive area of Town concerning the turkey vultures that are nesting in the area. These birds are causing damage to vehicles and homes in the area. We also have the problem with the birds at the WWTP. We have talked with USDA officials about these birds. There are only two real solutions that a homeowner can take. The first is to pay the USDA a fee to acquire a vulture carcass and hang that carcass on their property. I have been told that these cost approximately $250. The second option is to go through a paperwork process and get permission to shoot the birds. These are federally protected birds and so to shoot them without a special permit is a federal crime.
- There is no finance report in this month's packet. As a general rule I don't prepare those until I have fully closed out the previous month. There has been a delay in closing out August. It is possible that I will get the closeout done after the packet is produced and if so I will distribute the report at the meeting. If that doesn't happen, I will distributed the report as soon as possible. There is a software issue that the engineers are working through.

PROJECT UPDATES

1. Depot Street Stream Restoration Project: We have been awarded three grants, totaling $1,100,000 for this project. This is enough money to do most of the stream restoration work on project. We have signed easements from 20 of 40 property owners. We are still working with property owners to get signed easements.
2. Water/Sewer Regionalization/Interconnection Study: Final reports are in this month's agenda packet. Staff will be closing out this project over the next week or two.
3. Landfill Rehabilitation Project: The engineers are continuing to work on a remediation plan for this old landfill project. This project is being completed funded by the State of NC.
4. Main Street National Register District: The survey work has been completed and submitted to the NC Historic Preservation Office. We have gotten some feedback from SHPO staff and have had an onsite meeting with the staff. We are continuing to work with our consultant on the formal application based on the comments from SHPO staff.
5. Street Paving Project: We are waiting on some updated numbers from the NC DOT before we can complete the application process.
6. Sunset Sewer Sub-Basin Project: Plans have been submitted to DEQ for review.
7. Water Treatment Upgrade: Plans have been approved by DEQ. We are working to secure the necessary easements.
8. Streetscape Project: Staff has reviewed a second set of draft plans and started looking at ideas for site furnishings (light poles, tree grates, etc.) We have also looked a preliminary planting list. Final draft plans should be ready in September.
9. WWTP & Pump Station Project: McGill is nearly finished with the Preliminary Engineering Report for this project. It will be submitted to the State by the end of the month.

MONTHLY STATUS REPORT OF
OPERATION FOR THE PILOT MOUNTAIN
WASTEWATER TREATMENT PLANT

MONTH: July **YEAR: 2019**

OPERATIONS:

MILLION GALLONS OF WATER TREATED	**5.921**	**PERMIT LIMIT MGD**	**.500**
AVERAGE DAILY VOLUME TREATED	**.191**		
TOTAL RAINFALL INCHES	**5.05**		

CHEMICALS USED:

CHLORINE/BLEACH	**80 Gallons**
POLYMER	**0 Gallons**

CHEMICAL ANALYSIS:

Parameter	Permit Limits	Monthly Results
BOD	**30 max. avg. monthly**	**2.45**
TSS	**30 max. avg. monthly**	**4.25**
D.O.	**5 minimum avg. daily eff.**	**7.80**
Fecal Coliform	**200 max. avg. monthly**	**2.79**
Ammonia-Nitrogen	**28.6 max. avg. monthly**	**1.57**

We are in compliance with all permit requirements, including passing our quarterly Bioassay.

Id	Status	Address	Street Name
10705996	Complete	444	Old Westfield Rd
10699715	Complete	174	NC 268 E
10699532	New Request	111	S Boyles St
10697586	New Request	200	Dodson St
10689653	New Request	138	Buckingham Rd
10687686	Complete		Cemetery Section F
10687006	Complete	204	Lola Ln STATE CREDIT UNION
10686938	Complete	537	Butler St
10678040	Complete	101	Shoals Rd
10677204	Complete	522	W Main St
10666149	New Request	114	W Main Street
10654472	Complete	709	E Main St
10650018	Complete	720	E 52 Byp
10641040	Complete	604	W Main St
10639364	Complete	540	Butler St
10625019	Complete	409	S Stephens St
10624235	Complete	523	S Stephens St old ELASTRIX
10624009	Complete	339	N Depot St WAS CALLER
10609263	Complete	400	W Main St
10597661	Complete	621	E Main St
10597432	Complete	128	Northview Dr
10597408	Complete	124	W Main St
10597407	Complete	124	W Main Street
10597335	Complete	512	W Main St
10593716	New Request	319	W Main St
10590103	Complete	151	Buckingham Rd
10577911	Complete	807	Sunset Dr
10577824	Complete	213	W Marion St
10577793	Complete	320	N Key St
10577775	Complete	514	E Main St
10577723	Complete	509	W Main St
10574205	Complete	301	W Main St
10566675	Complete	409	S Stephens St, UNIT 4
10557633	Complete	300	E Main St Unit C
10527173	New Request		Corner of Marion & Boyles near fire hydrant
10525392	Complete		D260
10519985	Complete	224	S Boyles St
10517889	Complete	224	S Boyles St
10505755	Complete		Simmons St AND W MAIN
10505144	Complete	105	C W Main St

Work Type	Time Open
Cut On	0 days 2 hrs 36 mins
Hydrant Flushing	0 days 7 hrs 39 mins
Brush	5 days 0 hrs 22 mins
Pavement Repair	5 days 2 hrs 42 mins
AMI Coms Check	5 days 22 hrs 5 mins
Grave Marking	0 days 2 hrs 23 mins
AMI Coms Check	0 days 0 hrs 44 mins
Meter Check	0 days 1 hrs 4 mins
Hydrant Flushing	2 days 10 hrs 48 mins
Cut Off	0 days 0 hrs 56 mins
Grounds Maintenance	8 days 3 hrs 57 mins
AMI Coms Check	0 days 22 hrs 14 mins
Meter Check	1 days 4 hrs 3 mins
Water Leak	0 days 22 hrs 56 mins
Bulky Item	1 days 0 hrs 38 mins
Cut On	2 days 3 hrs 9 mins
Water Leak	1 days 4 hrs 15 mins
Dead Animal	2 days 22 hrs 19 mins
AMI Coms Check	0 days 23 hrs 37 mins
Water Leak	2 days 0 hrs 32 mins
Hydrant Flushing	0 days 0 hrs 17 mins
Misc. Repair	9 days 0 hrs 52 mins
Grounds Maintenance	2 days 1 hrs 38 mins
Hydrant Flushing	0 days 0 hrs 0 mins
Nusiance Abatement	20 days 4 hrs 4 mins
Water Tap	0 days 1 hrs 31 mins
Sign Reinstall/Replacement	4 days 4 hrs 19 mins
Sign Down/Damaged	4 days 4 hrs 24 mins
Sign Reinstall/Replacement	4 days 4 hrs 27 mins
Sign Reinstall/Replacement	8 days 23 hrs 37 mins
Hydrant Flushing	0 days 0 hrs 53 mins
Meter Check	0 days 3 hrs 18 mins
Cut Off	0 days 7 hrs 2 mins
Cut On	0 days 6 hrs 55 mins
Brush	29 days 2 hrs 10 mins
Grave Marking	0 days 9 hrs 50 mins
Grounds Maintenance	0 days 3 hrs 7 mins
Hydrant Flushing	10 days 0 hrs 1 mins
Clear Street of Obstruction/Debris	0 days 2 hrs 4 mins
Brush	1 days 7 hrs 17 mins

Description

CUT ON FOR INSPECTION.....
WATER HAS BECOME DARK AGAIN SINCE NO ONE HAS FLUSHED HYDRANT IN A LONG TIME. SHE WANTS TO BE PUT ON A SCHEDUL
SHE SAID YARD WASTE HAS BEEN THERE 3 TO 4 WEEKS. PICK UP ASAP
JEFF MEDLEY WILL BE THERE ALL DAY. HE CAN SHOW YOU WHERE THE REPAIRS ARE NEEDED. SEE IF TODAY IF POSSIBLE. HE HAS A
PUT A YELLOW TAG ON DOOR IF NO ONE IS HOME FOR THEM TO CALL THE OFFICE. THANKS
Mark plot F501, Ralph Duggins, for burial on 8/31/19. No headstone up
THEY HAVE A TOP BROKEN ON THE IRRIGATION. CHECK IT OUT I'M SURE IT'S ONE MIKE PUT IN. STEP IN SIDE AND SEE STEPHEN HI
DONE A ON DEMAND NO READING SINCE JUNE..CHECK AND GET ME A READING FOR BILLING LAST READ 51469 6/18/19
SAID THEY HAVE BROWN, MURKY WATER
WATER SHOULD BE CUT OFF....BUT NEEDS TO BE LOCKED
Pressure Wash the Mural Wall to help prepare the area to be repainted. Muralist will come Wed. to Paint

LOW WATER PRESSURE REPORTED
NEED READING FOR SOUTHERN SUPPLY

POSSIBLE LEAK....CHECK MINET OVER 2000 GALLONS YESTERDAY
BULK ITEM PICK UP READY ON BUTLER
FOR CLEANING
CHECK MINET SEVERAL DAYS OF LARGE USAGE
ANIMAL ON BOTH SIDES OF THE ROAD NEAR TREES ON ONE SIDE. THE CARCASS HAS BEEN EATEN BY VAULTERS
LADY SAID THE MANHOLE COVER WAS BUSTED IN THE AREA. HAS A CONE NEAR IT.
Water Leak is at Fulks Exxon
Reported Dirty Water
Please replace the missing ceiling tile in the Board meeting room.
Please check all of the parking stops in the parking lot. I have a report of rebar sticking out of at least one of them.
Reported Dirty Water

Good morning
Could you please have someone check School Street and Swanson Streets for me? I had a school bus driver write in a complaint this morning that trees were hitting the side of their bus on both of these streets. Stan Newman

THEY ARE THINKING OF HOOKING UP TO WATER. CHECK SEE IF THEY HAVE A HOOK UP FROM YEARS BACK CALL HER 336-710-2413
Please Move the No Parking sign away from the driveway for 715 Sunset Drive closer to the intersection of Simmons and Sunset.

Also remove the no parking sign from the yard at 715 Sunset.
Please repair or replace the stop sign and post at the corner of W Marion and Key Street.
Please move the stop sign on N Key Street closer to the intersection with US 52 Bypass.
Please place a Children at Play sign on either side of this address.

Dirty Water
Meter box lid needs replacing. Picture attached
THIS WATER HAS BEEN CUT OFF AND RESIDENT HAS BEEN FINALED OUT BUT THERE IS USAGE LAST FEW DAYS.

LOCK

Turn water back on. Meter # 1700027442

Mark plot D260 William Hassell Hunter Jr.

WILL YOU PLEASE CHECK D260 TO MAKE SURE IT IS SUITABLE FOR SOMEONE. DARIAN CHECKED SAID IT IS OK BUT WHATS YOU TO

said that minerals were coming up when he flushed toilet
A SIGN HAS BEEN KNOCKED DOWN AROUND SIMMONS ST DUE TO MOVING THE HOUSE YESTERDAY AND RESIDENTS WANT IT PUT
NEED TRASH CART TO THIS APT. CAN YOU PUT A 105 C ON IT .....SO SHE WILL KNOW IT'S HER'S PUT BEHIND TITILED LADDER

Comments

Reading 19992
Turned On
Flushed Hydrant

Marked Plot # F-501
box belongs to customer
updated in minet
Flushed Hydrant
water is cut off. no usage in the past 15 days

kitchen faucet.
Owner cleaned it out and they have full Pressure.
Reading 13153100
LOOK AT METER WHEN TO DOOR NO ONE ANSWERED.
OFFICE CALLED TALKED TO MS. LIN HOME OWNER
ITEMS PICKED UP TAKEN TO LANDFILL PAPER WORK IN THE OFFICE
status on
outside faucet left on
DOT REMOVED
replaced meter lid
repaired
Flushed Hydrant
replaced
repaired
Flushed Hydrants

EVERYTHING IS READY FOR A METER. JUST WAITING ON THE CUSTOMER

moved
repaired. dot probably took care of it
within dot guide lines
installed see pictures
Flushed Hydrant
Approximately 24,000 Gallons of Water
repaired

complete
Reading 35447
Already On

Marked Plot # D-260
Wrong address.
Plot # D-260 is available
Flushed Hydrant
Approximately 16,000 Gallons of Water
could not find a sign to repair. all that where pulled up got put back
Delivered Garbage Cart

TOWN OF PILOT MOUNTAIN WASTEWATER TREATMENT PLANT
ANNUAL PERFORMANCE REVIEW

I. General Information

Facility/System Name: Pilot Mountain WWTP

Responsible Entity: Town of Pilot Mountain

Person in Charge/Contact: Kent Scott, ORC/ (336)368-4041

Applicable Permit(s): NPDES No. NC0026646

Description of Treatment Process:
The Town of Pilot Mountain Wastewater Plant has a permitted flow of .5 million gallons per day the facility consists of, extended aeration ditch two clarifiers and chlorine contact chambers. The plant is located on Lynchburg Road here in Pilot Mountain.

II. Performance

Summary of Plant Performance for Fiscal Year July 1, 2018 – June 30, 2019.

The Pilot Mountain WWTP treated a total of 72.61 million gallons during this fiscal year, an average of .199 million gallons per day.

Listed below are any monthly violations of permit conditions or other environmental regulations, the environmental impact of those violations and corrective measures taken to address the violations.

MONTH	VIOLATION	ENVIRONMENT IMPACT	CORRECTIVE MEASURES TAKEN
August	**Fecal**	**None**	**Repaired chlorination equipment.**

III. Notification

Copies of this report are available at the Pilot Mountain Town Hall located 124 West Main Street, Box 1 Pilot Mountain, N.C. 27041

IV. Certification

I certify under penalty of law that this report is complete and accurate to the best of my knowledge. I further certify that this report has been made available to the users or customers of the named system and that those users have been notified of its availability.

Responsible Person: Kent Scott
Title: ORC
Entity: Town of Pilot Mountain

Date

Pilot Mountain Police Department
Monthly Report for August 2019

Accidents

8/1/2019 805 S Key St (H&R)
8/2/2019 Marion St @ S Key St
8/8/2019 200 E Main St (H&R)
8/10/2019 647 S Key St PVA (H&R)
8/15/2019 N Depot St @ E 52 Byp
8/16/2019 873 W 52 Byp
8/20/2019 801 W Main St
8/26/2019 W Pine St @ Key St
8/31/2019 647 S Key St

	TOTAL	AMOUNT	RECOVERED
Police Service	224		
Wrecks Investigated	10	$ 23,400.00	
Assaults	0		
Larcenies	6	$ 4,548.58	
Disturbances/Domestic	15		
Burglar Alarms	18		
Breaking & Entering	2	$ 7,500.00	
MIP & Property Damage	0		
Traffic Citations	19		
Intoxicated Drivers	0		
Intoxicated Pedestrians	1		
Forgery	1	$ 724.51	
Armed Robbery	0		
Drug Charges	4		
Other Crimes	6		
Total Arrests	3		
Totals:	**309**	**$ 36,173.09**	**$ -**

Other

8/1/2019 Served WFA for Indecent Liberties with a child
Served WFA for Accessory after the fact
8/5/2019 Served OFA X 2
8/24/2019 Possession of Marijuana
DWLR
8/27/2019 PWIMSD Schedule II
Maintain Drug Dwelling
Poss of Drug Paraphernalia
Resist public officer

Notes:

Pilot Mountain Town Hall
124 West Main St.
Pilot Mountain, NC 27041

(Phone) – 336.368.2247
(Fax) – 336.368.9532
www.pilotmountainnc.org

FALL CLEANUP OCTOBER 14-18, 2019

White goods only. No hazardous materials will be picked up. Due to environmental regulations, the Town cannot collect paint, pesticides, herbicides, solvents or chemicals. Surry County holds an annual event at Veterans Park (in the fall) when they will take these items.

There are no return trips for items. The route schedule for the FALL bulk item clean-up will be strictly adhered to. If you are unable to get your rubbish to the curb in time, you are welcome to drop off your items at the bins yourself. Bins are located at the end of Lynchburg Road through October 18th.

Items should be placed at the curb no later than 7am on the scheduled day of pick up.

ROUTE SCHEDULE FOR FALL BULK ITEM CLEAN UP

Monday October 14th	N. Stephens St., Second St., N. Depot St., Howard St., N. Academy St., Joyce Dr., East HWY 52 ByPass, Thompson Dr. Carson Rd., Carson St., Crestwood Dr., Bullington Ln., Hamlin Dr., East Main St., Nelson St. & Needham St..
Tuesday October 15th	S. Academy St., Marion St., Davis St., Pine St., South Stephens St., Dodson St., Denny St., South Key St., Golf Course Rd., Foothill Dr., Lola Lane, Butler St., South Boyles & South Depot St.
Wednesday October 16th	North Key St., Thompson Dr., West HWY 52 ByPass, Westfield Rd., School St., Spring St., Friends St., Swanson St., West Main St., Simmons St. & Sunset Dr.
Thursday October 17th	Dodson Mill Rd., Neva St., North View Dr., Mountain View Dr., West Ridge Dr., Gordon Ct., Blaylock Ct. & Saddle Dr.
Friday October 18th	Lynchburg Rd. & Old Barn Circle

TOWN OF PILOT MOUNTAIN

Monthly Financial Dashboard

FISCAL YEAR ENDING June 30, 2020

Reporting Period: August 1-August 31 2019

OUR CASH AND INVESTMENTS

Balances on July 31, 2019, in whole dollars

CASH & INVESTMENTS BY FUND

GENERAL FUND

	August 2018	August 2019
Central Depository	$ 242,221	$ 399,658
NCCMT	2,077	2,285
NCCMT-Powell Bill	139,461	704
NCCMT-Term Account	255,276	35,210
Police Drug Forfeiture	1,398	2,195
Centura Bank CD	25,031	25,031
Fiduciary Funds	57,767	59,134
TOTAL GENERAL FUND	**$ 723,230**	**$ 524,217**

OTHER FUNDS

	August 2018	August 2019
Water & Sewer Fund	$ (577)	$ (18,618)
NCCMT-Water/Sewer	$ 2,105	$ 3,633
Water Meter CP	$ 3,180	$ 9,059
Interconnection CP	$ (44,600)	$ (6,000)
Landfill Project CIP	$ 1,134	$ (2,965)
Lola Lane CP	$ 4,064	$3,286
Water Treatment Upgrade	N/A	($208,025)
Streetscape Project	N/A	$15,573
Sunset Sewer Project	N/A	($220,680)
Street Resurfacing	N/A	$17,504
WWTP & Pump Stations	N/A	$9,720
AIA Project	N/A	($4,500)
Capital Reserve	$ 74,000	$ 18,174
TOTAL OTHER FUNDS	**$ 39,307**	**$ (383,839)**

TOTAL CASH & INVESTMENTS TOWN-WIDE

	August 2018	August 2019
ALL FUNDS	**$ 762,537**	**$ 140,378**

OUR CASH FLOWS...

			Comparison of FYTD %	
GENERAL FUND REVENUES & EXPENDITURES			**Prior FYTD %**	**Current FYTD %**
	Fiscal Year Budget		**$ 1,814,960**	**$ 1,892,090**
	Revenues Fiscal Year to Date		14.00%	13.00%
	Expenses Fiscal Year to Date		17.43%	19.43%
WATER & SEWER ENTERPRISE FUND				
	Fiscal Year Budget		**$ 945,800**	**$ 906,480**
	Revenues Fiscal Year to Date	$ 149,546	15.01%	16.50%
	Expenses Fiscal Year to Date	$ 169,138	15.82%	18.66%
LANDFILL REHAB PROJECT				
	Project Budget		**$ 15,803**	**$ 93,554**
	Revenues Project to Date	$ 77,657	95.88%	83.01%
	Expenses Project to Date	$ 89,817	89.94%	96.01%
Water Treatment Upgrade Project				
	Project Budget		**N/A**	**$ 3,978,000**
	Revenues Project to Date		N/A	0.00%
	Expenses Project to Date	$ 197,450	N/A	4.96%
Sunset Sewer Rehabilitation Project				
	Project Budget		N/A	**$ 2,573,038**
	Revenues Project to Date	$ 44,254	N/A	1.72%
	Expenses Project to Date	$ 264,130	N/A	10.27%
WATER & SEWER INTERECONNECTION STUDY PROJECT			**$ 100,000**	**$ 100,000**
	Project Budget			
	Revenues Project to Date	$ 93,000	54%	93%
	Expenses Project to Date	$ 93,000	68%	93%

SPECIFIC REVENUE COLLECTIONS AT A GLANCE...

		Comparison of FY %	
		Prior FY %	**Current FY %**
AD VALOREM PROPERTY TAX			
Fiscal Year Budget		**$ 834,280**	**$ 847,090**
Revenues this Month	$ 92,529	17.71%	10.92%
Revenues FYTD	$ 103,942	17.71%	12.27%
SALES & USE TAX			
Fiscal Year Budget		**$ 446,310**	**$ 469,790**
Revenues this Month	$ 42,749	8.80%	9.10%
Revenues FYTD	$ 82,116	17.15%	17.48%
UTILITY FRANCHISE TAX			
Fiscal Year Budget		**$ 107,000**	**$ 106,020**
Revenues this Month	$ -	0.00%	0.00%
Revenues FYTD	$ -	0.00%	0.00%
REFUSE COLLECTION FEES			
Fiscal Year Budget		**$ 68,000**	**$ 69,840**
Revenues this Month	$ 6,551	8.77%	9.38%
Revenues FYTD	$ 12,262	16.19%	17.56%
SALES & SERVICES			
Fiscal Year Budget		**$ 41,500**	**$ 23,500**
Revenues this Month	$ 13,340	8.77%	56.77%
Revenues FYTD	$ 19,775	22.07%	84.15%
WATER & SEWER ENTERPRISE FUND REVENUES			
Fiscal Year Budget		**$ 945,800**	**$ 906,480**
Revenues this Month	$ 75,379	8.52%	8.32%
Revenues FYTD	$ 149,546	15.01%	16.50%

EXPENDITURES AT A GLANCE...

		Comparison of Monthly Expenses	
GENERAL FUND	**Fiscal Year**	**YTD Expenses**	
DEPARTMENTS	**2020 Budget**	**Prior FY**	**Current FY**
Governing Body	$ 63,280	$ 18,775	$ 12,467
Administration	273,760	54,672	54,402
Community & Economic D	47,500	1,752	8,350
Downtown Revitilization	125,810	16,071	24,863
Police Dept	721,630	138,897	144,223
Street Dept	104,410	29,906	29,538
Powell Bill	43,420	1,724	3,919
Sanitation	215,490	36,677	46,266
Pilot Center	19,060	10,678	4,480
Library	39,060	2,055	2,055
Debt Service	49,620	-	-
Non Departmental	-	5,182	334
	$ 1,703,040	$ 316,388	$ 330,896
Fiscal Year Budget		**$ 1,814,960**	**$ 1,892,090**
YTD % of Annual Budget Expended		17.43%	19.43%
WATER & SEWER ENTERPRISE FUND			
General	$ 137,720	$ -	$ -
Water/Sewer Administration	136,560	$ 17,510	23,926
Production	218,510	$ 37,629	35,204
WWTP	206,800	$ 32,161	43,329
Line Maintenance	206,890	$ 62,289	66,679
	$ 906,480	$ 149,589	$ 169,138
Fiscal Year Budget		**$ 945,800**	**$ 906,480**
YTD% of Annual Budget Expended		15.82%	18.66%