

**CITY OF MONROE
PUBLIC ENTERPRISE COMMITTEE
300 W. CROWELL STREET, MONROE, NC 28112
TUESDAY, MARCH 5, 2024 - 4:00 PM
AGENDA
www.monroenc.org**

1. Public Enterprise Committee Meeting Minutes of February 6, 2024
2. Fluoride Presentation for Informational Purposes
3. WWTP Roof Replacement
4. Nelson Heights Tank Replacement Grant Acceptance Resolution and Budget Ordinance
5. Union County Critical Intersection Analysis 2024

Public Enterprise Committee Minutes
February 6, 2024
City Hall Conference Room
4:00 p.m.

Members Present: Council Member James Kerr (Chair), Council Member Julie Thompson, Council Member Franco McGee

Staff: Mark Watson, Terry Sholar, Robert Miller, Scott Clark, Lisa Strickland, Lisa Hollowell, Kyle Ketchum, Rich Riser, Amy Cook, David Rankin, Ronald Weathers, Sarah McAllister, Richard Long, Sandra Slifer

Guest: Clint Lawrence

Council Member James Kerr called the February 6, 2024 Public Enterprise Committee meeting to order at 4:04 p.m.

Item #1: Adoption of Minutes of the December 5, 2023 Meeting

Recommendation:

Council Member James Kerr asked if anyone had any questions or concerns about the minutes, if not, if anyone would like to make a motion that the minutes of the December 5, 2023 Public Enterprise Committee be approved.

Motion: Adopt December 5, 2023 meeting minutes

Motion made by: Council Member Franco McGee

Second: Council Member Julie Thompson

Voting: **In Favor** – Council Member James Kerr, Council Member Franco McGee, Council Member Julie Thompson

Opposed – None

Action: Motion approved

Item #2: Adoption of Minutes of the January 5, 2024 Special Meeting

Recommendation:

Council Member James Kerr asked if anyone had any changes or concerns about those minutes, if not, if anyone would like to make a motion that the minutes of the January 5, 2023 Special Public Enterprise Committee be approved.

Motion: Adopt January 5, 2024 meeting minutes

Motion made by: Council Member Julie Thompson

Second: Council Member Franco McGee
Voting: **In Favor** – Council Member James Kerr, Council Member Franco McGee,
Council Member Julie Thompson
Opposed – None
Action: Motion approved

Item #3: Substitute the Purchase of (1) DM47E-AWD Digger Derrick in the place of (1) DH50 Digger Derrick

Recommendations:

Energy Services staff requests the Public Enterprise Committee approve sending the request to City Council for approval to submitting a change order to Purchase Order #231155 for the substitution of one (1) DM47E-AWD Digger Derrick for one (1) DH50 Digger Derrick truck and to keep the additional funding for future modifications.

Presentation and Discussion:

Director of Energy Services Rob Miller said that on April 11, 2023 City Council approved the purchase of two Digger Derricks for \$340,321. The delivery schedule has been extended due to supply chain challenges. The manufacturer has identified that they have built a truck without a purchase order and it has now become available. The truck will not cost anymore and it would eliminate the supply chain lead times. Mr. Miller asked for approval to push the request on to City Council and to authorize the City Manager to execute any necessary documents.

Council Member Kerr asked if this is the same thing, not an increase in money and delivered early.

Rob Miller explained that the cheaper truck will require some modifications but that it will equal or be less than the original.

Motion: To approve sending request to City Council for approval of a change order to Purchase Order #231155 for the substitution of one (1) DM47E-AWD Digger Derrick for one (1) DH50 Digger Derrick truck and to keep the additional funding for future modifications. Further recommendation to have the item placed on City Council consent agenda to authorize the City Manager to execute the necessary documents.

Motion made by: Council Member Franco McGee

Second: Council Member Julie Thompson

Voting: **In Favor** – Council Member James Kerr, Council Member Franco McGee,
Council Member Julie Thompson

Opposed – None

Action: Motion approved

Item #4: Approval of Contract for Consulting Services for the Cityworks Implementation and Integration.

Recommendations:

Energy Services and Water Resources request the Public Enterprise Committee to consider approving the contract for Black and Veatch to provide consulting services to the Energy Services and Water Resources Cityworks project.

Presentation and Discussion:

Rob Miller said that Energy Services and Water Resources have been working together to implement Cityworks for workforce management. They are asking for approval for a contract with Black and Veatch that will provide for Cityworks implementation and configuration integration with various personnel training systems. The contract for Black and Veatch will be \$719,850, Energy Services currently has sufficient funds, Water Resources plans to do a budget amendment. Mr. Miller is seeking to have Public Enterprise send the contract to City Council for approval and to authorize the City Manager to execute the necessary documents.

Council Member Kerr asked if the levels that Energy Services were going to start analyzing, how much one user has on a monthly basis versus another user. Looking at water rates will the software be able to cover that, it looks like it is for both divisions.

Rob Miller advised this is more about work management. The question is directed for to another project that is being worked on using advanced metering infrastructure. This is more about work orders, Energy Services uses HTE for work orders and Munis for financials. Water Resources uses another system called Lucity for work orders. This new system basically gives the people in the truck a tablet and then all the work orders come in a map base. It's very efficient. Right now we have tons of paper going back and forth through multiple hands creating a huge inefficiency.

Council Member Kerr ask how soon this will be in operation.

Rob Miller said that they started with a pilot program, the goal is to have several things up by the end of the year. The next round is going after the most important things including the bulk of our work orders and the integration with Munis.

<u>Motion:</u>	To approve sending the contract for Black and Veatch to provide consulting services for the Energy Services and Water Resources Cityworks project to City Council for approval. Staff requests that this item be placed on the City Council consent agenda and authorize City Manager to execute the necessary documents.
<u>Motion made by:</u>	Council Member Franco McGee
<u>Second:</u>	Council Member Julie Thompson
<u>Voting:</u>	In Favor – Council Member James Kerr, Council Member Franco McGee, Council Member Julie Thompson
	Opposed – None
<u>Action:</u>	Motion approved

Item #5: Budget Amendment to Cover Cost for Consulting Services for the Cityworks Implementation and Integration Project

Recommendations:

Water Resources is requesting approval of a budget amendment to the Water and Sewer Fund to provide needed funds to cover cost for consulting services for the Cityworks implementation and integration project.

Presentation and Discussion:

Scott Clark is requesting for the Public Enterprise Committee to approve a budget amendment in the amount of \$332,920, Water Resources portion for the Cityworks integration. This is necessary so that we can stay at the same level progressing towards the goal for onboarding and integration in the next year.

Motion: To approve BA-2024-02 and forward to City Council for consideration on the February 13, 2024 consent agenda.

Motion made by: Council Member Julie Thompson

Second: Council Member Franco McGee

Voting: **In Favor** – Council Member James Kerr, Council Member Franco McGee, Council Member Julie Thompson

Opposed – None

Action: Motion approved

Item #6: Lining Rehabilitation of Domestic Water Distribution Main – Vann Street and Jackson Street

Recommendations:

Water Resources staff recommends the award of a contract for the Lining Rehabilitation of Domestic Water Distribution Main project to Mainlining America, LLC in the amount of \$206,650.00. Further request the authorization for the City Manager to execute the necessary agreements and recommends forwarding to City Council for consideration on the February 13, 2024 consent agenda.

Presentation and Discussion:

Scott Clark is requesting the approval of the contract to Mainlining America utilizing a newer technology for pipeline rehab. With this new technology we don't have to excavate an entire roadway and it can minimize the impacts to the community. This can be used in other areas where there is a lot of traffic and where you have a good structural pipe and where you are not having to perform a lot of repairs on the pipe itself. Some of the areas identified are Jackson Street to Main Street, and Jackson Street back off of Craig, approximately 500 feet of pipe at another section of Main Street near Hwy 74 at the Walgreens. That is an old tuberculated 6" inch main, the same as on Jackson Street. The process is to scrape the interior of the pipe. They will lay a temporary bypass water line above ground and tie the services into this temporary pipe while they go in and actually clean the interior of the pipe. Once they strip the pipe they get the surface prepared where it looks like a blue pipe on the interior and then they come in and spray a liner that is similar to an epoxy liner which is structural. What they apply is about a

quarter of an inch thick, you basically have a new pipe inside of an old pipe. You are using the same pipe that is there, instead of going in and pipe bursting or digging up the street we are able to reuse the same infrastructure just with a new interior. It's not a solution in every area, however, these are two areas that we felt were beneficial to maintain the system resiliency and reliability.

Council Member Kerr asked how much it would cost for the City to have this kind of equipment?

Scott Clark said that we have some of the equipment but that he would have to estimate about a million dollars for the equipment and staffing.

Council Member Kerr was thinking about the number of aging lines.

Scott Clark advised that we have pipe bursting abilities internally and we have the resources to do that but it is not a solution for this project as we could not pipe burst under Highway 74 due to the NCDOT requirements. We are one of the few states and utilities that does pipe bursting because of the type of work, the extensive amount of staff, traffic control, and resources it can be cost prohibitive.

Council Member Franco McGee asked how long this project will last.

Scott Clark said that it will be approximately four to five months. Typically, this is done during warmer weather as we are putting water lines above ground. Charlotte has been utilizing this technology for over 20 years now and has been very successful.

Motion: Motion to approve award of a contract for the Lining Rehabilitation of Domestic Water Distribution Main project to Mainlining America, LLC in the amount of \$206,650.00, authorization for the City Manager to execute the necessary agreements and recommends forwarding to City Council for consideration on the February 13, 2024 consent agenda.

Motion made by: Council Member Franco McGee

Second: Council Member Julie Thompson

Voting: **In Favor** – Council Member James Kerr, Council Member Franco McGee, Council Member Julie Thompson

Opposed – None

Action: Motion approved

Item #7: Olive Branch Road and NC 200 Improvements Project

Recommendations:

Public Enterprise Committee is requested to consider adopting a resolution in support of a North Carolina Department of Transportation (NCDOT) project to make intersection improvements to Olive Branch Road and NC 200 (Morgan Mill Road).

Presentation and Discussion:

Sarah McAllister has been working with multiple developers in the area to provide an in depth analysis of identifying improvements at this intersection and overlapping improvements. One identified need for

a signal, what they did not identify was a realignment of the intersection. NCDOT has said they will realign the intersection and take contributions from the developers for their identified improvements associated with their projects and combine it all into one project. The creation of this project with NCDOT will require support from the local municipality, it will not require a funding match.

Council Member McGee asked if this project will move forward?

Sarah McAllister said that they will be able to create a project. They will need to draft up agreements with those developers and that NCDOT cannot except money until they have a project set up so they have asked the City to hold the money.

Council Member McGee asked what is the time frame?

Sarah McAllister said that she does not have a time frame but the project should progressively move forward once it is an NCDOT project.

Motion: Motion to approve Resolution R-2024-09 supporting the NCDOT's project to improve the intersection of Olive Branch Road and NC 200 (Morgan Mill Road). Placement on the February 13th consent agenda for approval.

Motion made by: Council Member Julie Thompson

Second: Council Member Franco McGee

Voting: **In Favor** – Council Member James Kerr, Council Member Franco McGee, Council Member Julie Thompson

Action: **Opposed** – None
Motion approved

Item #8: Request for Sidewalk Variance at JLS Masonry, 1371 N Rocky River Road

Recommendations:

Public Enterprise Committee is requested to consider a request from Clint Lawrence, with Lawrence Associates, to waive the eight-foot wide sidewalk requirement associated with the proposed JLS Masonry site development at 1371 Rocky River Road.

Presentation and Discussion:

Sarah McAllister said this is a request from Clint Lawrence with Lawrence Associates to waive the sidewalk requirements for JLS Masonry. This request cites topography, existing historic trees, jurisdictional stream/buffer, existing utilities and an existing NCDOT 36" culvert as reason why it would be difficult to install sidewalk. This site would require about 300 feet of sidewalk and the intent of the Detail Manual policy is to have developers share in the placement of sidewalks. When the NCDOT STIP projects come through the City's we receive a credit if it is already in place.

Council Member James Kerr requested a full presentation.

Clint Lawrence with Lawrence Associates stated that JLS Masonry called about its site located a little north of the intersection of Goldmine and Rocky River Road. This is a supreme golden site, they will be

upgrading it from Rocky River Road, the topography is two historic trees, there is a 36-inch culvert that crosses under Rocky River Road and there is a jurisdictional stream and technical work in addition there are no sidewalks adjacent to the property on either side at the moment.

Motion: Motion to approve request for a variance from the City's *Standard Specifications and Detail Manual* regarding the sidewalk requirements along the property frontage for the JLS Masonry Project located at 1371 N Rocky River Road

Motion made by: Council Member Franco McGee

Second: Council Member Julie Thompson

Voting: **In Favor** – Council Member James Kerr, Council Member Franco McGee, Council Member Julie Thompson

Opposed – None

Action: Motion approved

Item #9: Change Order #1 – John Glenn WTP Treatment Basin #3 Coatings Project

Recommendations:

Public Enterprise Committee is asked to recommend approval of Change Order #1 for repair of an unforeseen quantity of cracks in the basin wall and repair of the flocculator floor for John Glenn WTP treatment basin #3.

Presentation and Discussion:

Scott Clark said that there is an existing project for recoating the sedimentation basin which is approximately 35 years old. Water Resources has done basin one and basin two over the last two years. The basin 3 contract was awarded to Saffo, when Saffo got started with the surface preparation they identified several large cracks throughout the basin. A structural engineer provided a structural assessment of the concrete sedimentation basin to ensure that any repairs would be sufficient. Saffo had an evaluation completed by Sherwin Williams of a polymer coating base would extend the life of the asset. Request for change order in the amount of \$585,000.00 to fix the cracks and to fix the exterior coating that has delaminated in spots. The coating has been pushing through the cracks and pushing the coating off the exterior. In order for the coating to be efficient the cracks would have to be properly and adequately repaired. Sherwin Williams stated that they would warranty their coating provided that the cracks were adequately repaired. A structural engineer with Black and Veatch also stated that the coating would suffice and adequately protect the coating and the concrete.

Council Member James Kerr stated that basin four is the one that is to be constructed. Right now one and two are all that we are running through. Would that be sufficient in the summertime?

Scott Clark says that in the summertime we are going to have to rely on the county interconnect to help meet the demands. Basin three ensures our additional capacity and for us to meet requirements for circulation and flows throughout the system. The project should be done in approximately June or July.

Motion: Motion to approve to City Council Budget Ordinance BO-2024-03 and Change Order #1 to City Council for consideration on the February 13, 2024 Consent Agenda.

Motion made by: Council Member Julie Thompson
Second: Council Member Franco McGee
Voting: **In Favor** – Council Member James Kerr, Council Member Franco McGee,
Council Member Julie Thompson
Opposed – None
Action: Motion approved

Item #10: Additional Item – Review and Appraisal of Land for Future Growth

Recommendations:

To authorize the City Manager and City Attorney to obtain appraisals for certain property along Walkup Avenue that are identified as critical for future WWTP development.

Presentation and Discussion:

Scott Clark stated that as part of the preliminary engineering report done by Hazen and Sawyer two years ago, they have also been hired to conduct the design for the three-million-gallon expansion of the WWTP, Phase 1. Phase 2 will take us to 6 million gallons, Phase 3 is the ultimate build out of the new WWTP which will take our capacity to 24 million gallons per day. Phase 3 will require additional land. There is acreage near the current Wastewater Treatment Plant that is needed for future expansion. We are nearly complete with building basin 2 with 15-million-gallon capacity. It is essential for us to secure the property now before any developers want to acquire the property. Request today is for the Public Enterprise Committee to authorize the City Manager and the City Attorney's office to get an appraisal done of this area and to obtain approval by Council to approach the property owners to see if they will be interest in the City acquiring their property. This will secure our future expansion of the new wastewater treatment plant; the existing plant will come offline. Once we complete Phase 3 the old WWTP plant will be destroyed. We are constantly doing work to maintain that and extend the life of the assets service life. However, it could be 20 years depending on the growth of the City.

Council Member James Kerr asked if the acreage would be sufficient or if there is anything contiguous that we might need as well.

Scott Clark stated that they looked at this with their consultant, Hazen and Sawyer, they referenced that at a future time some additional areas might be of value for the expansion.

Council Member James Kerr asked about additional acreage displayed on the map.

Mr. Clark advised that would be an additional acreage would be needed.

Council Member James Kerr recommended including the additional acreage.

City Manager Mark Watson asked if Mr. Clark was asking for an appraisal of the land that was initially indicated on the map. He further asked for clarification of the additional land that Council Member James Kerr was referring to.

City Manager Mark Watson asked when this information was identified.

Scott Clark confirmed that this was identified in the preliminary engineering report two years ago.

City Manager Mark Watson asked why no action has been taken to try and secure this property. He went on to clearly identify that the acquisition of the property is critical to the completion and build of the project and further that this project cannot be built out and function as designed without that EQ basin. He further wanted to make sure that everyone is clear the path that this could potentially go down without a willing seller.

Scott Clark asked for the authorization for the City Manager and City Legal to start the process to at least evaluate/appraise what this portion will sell for and in the end to approach the property owner.

City Manager Mark Watson stated that we need to do an appraisal in order to determine the value; and not authorizing the City Attorney to go and negotiate with the landowner at this time. He further clarified that Scott Clark is asking for an appraisal and that Mr. Clark would bring that information back to the Public Enterprise Committee and ask for the next step in the process which would be determining if the seller is willing.

Council Member James Kerr asked if we would consider appraisal and potential approach to the seller all at the same time?

City Attorney Terry Sholar thinks that we are going to want to know what you're dealing with before you authorize any type of negotiations. He further stated that Council is going to have to approve the process of actually acquiring the property.

City Manager Mark Watson asked Mr. Clark if there are any other parcels associated with this expansion project that have not been identified in this presentation or brought before this committee that will be needed in the future in addition to this request?

Kyle Ketchum, WWTP Superintendent advised that there is additional property near the plant entrance to be considered.

Council Member Franco McGee said that the property should be added into the plan as well.

Council Member James Kerr asked if adequate funds were available to cover the cost of the appraisal.

Scott Clark confirmed that there was funding for the appraisal.

James Kerr asked for a motion with two amendments to increase the acreage including all the property along the line and to the creek.

<u>Motion #1:</u>	Motion to approve obtaining appraisal for acreage near the current Wastewater Treatment Plant.
<u>Motion made by:</u>	Council Member Franco McGee
<u>Second:</u>	Council Member Julie Thompson
<u>Voting:</u>	In Favor – Council Member James Kerr, Council Member Franco McGee, Council Member Julie Thompson

Action: **Opposed** – None
Motion approved

Motion #2: Motion to approve obtaining appraisal for second property near the entrance to the Wastewater Treatment Plant.

Motion made by: Council Member Julie Thompson

Second: Council Member Franco McGee

Voting: **In Favor** – Council Member James Kerr, Council Member Franco McGee,
Council Member Julie Thompson

Opposed – None

Action: Motion approved.

Item #11: Fluoride In City Drinking Water Discussion – for discussion only

Presentation and Discussion:

Council Member James Kerr recognized City Manager Mark Watson.

City Manager Mark Watson discussed the County Commissioner vote to remove fluoride from the Union County drinking water. The City of Monroe does have several interconnects with Union County and the City of Monroe does treat the water with fluoride. Those water samples are tested regularly and are within compliance of our permit and with the recommended parts per million. Mr. Matthews does not know the impact of mixing a water system that has no fluoride treatment with a water system that has fluoride treatment, if it will dilute the parts per million if the City continues to treat with fluoride. Fluoride treatment first became available and the John Glen Plant was permitted to the state there was a fluoride permit that was part of that. We had to make the state aware that we would be adding fluoride to our water system. In order to discontinue our fluoride treatment a Resolution would have to be passed by City Council, notice has to be given to both the local public health director and the Department of Health and Human Services Oral Health Division. All this has to be done before that treatment can be removed from the system. There were a large number of dentists that did speak before the Commission last night requesting they not stop the addition of fluoride.

Mr. Watson has been approached and asked about fluoride treatment in our water system by other members of City Council. To date, staff has not been requested to provide any lab results or anything related to this topic. This is just for informational purposes only, it may or may not be a topic for the future.

Council Member Franco McGee asked what the pros and cons are of fluoride treatment.

Mr. Clark said that there has been research that says it is beneficial and a lot of data that says fluoride is a contributing factor to pfas.

Council Member James Kerr asked if the committee would like to have more in depth information about fluoride?

Council Member Franco McGee responded that he would like to have more information just because if the County has pursued the effort to remove fluoride he feels that the City is going to get questions on why we have not. He would like more information to support why we will or will not be removing the fluoride.

Council Member Julie Thompson would also like additional information.

Scott Clark advised that he would work with consultants to provide some additional information.

City Manager Mark Watson asked that the fluoride report be on the public Enterprise Committee agenda for the next month.

Item #12: Energy Services Rate Study – informational purposes

Presentation and Discussion:

Rob Miller gave an update for the Energy Services rate study. Energy Services has completed their request for qualifications process. Seven firms have submitted qualification on January 23rd. They have selected Utility Financial Solutions who did the study in 2020. The rate study is going to cost \$59,945 and should have a draft recommendation by April 23rd. Mr. Miller will then plan to have the draft recommendation by April and plan to bring this to the Public Enterprise Committee in May and then proceed to City Council.

Scott Clark responded that Water Resources started approximately two weeks ago with their rate study and hope to have it around the same time frame as Energy Services.

There was no further business. There being none, Council Member James Kerr asked for a motion to adjourn.

<u>Motion:</u>	Adjourn Public Enterprise Committee meeting
<u>Motion made by:</u>	Council Member Franco McGee
<u>Second:</u>	Council Member Julie Thompson
<u>Voting:</u>	In Favor – Council Member James Kerr, Council Member Franco McGee, Council Member Julie Thompson
	Opposed – None
<u>Action:</u>	Motion is approved

There being no further business, the meeting is adjourned at 4:58 p.m.

James Kerr, Chair

Next Meeting – March 5, 2024 at 4:00 p.m.



STAFF REPORT

TO: Public Enterprise Committee

VIA: Mark Watson, City Manager

DATE: March 5, 2024

FROM: Scott Clark, Water Resources Director

PREPARED BY: Scott Clark, Water Resources Director

SUBJECT: Fluoride Presentation for Informational Purposes

SUMMARY STATEMENT

Water Resources staff and Black & Veatch Engineering Consultants will provide a brief presentation on Fluoridated Drinking Water. This presentation is for informational purposes only.

REVIEW

The City of Monroe has provided high quality, Fluoridated drinking water since early 1963. Water Resources provides approximately 7-MGD of water to our customers and community. Black & Veatch Engineering Consultants will provide a brief presentation on Fluoridated water and associated information. The presentation was prepared at the request of the Public Enterprise Committee.

RECOMMENDATION

Staff request that the Public Enterprise Committee takes the following action:

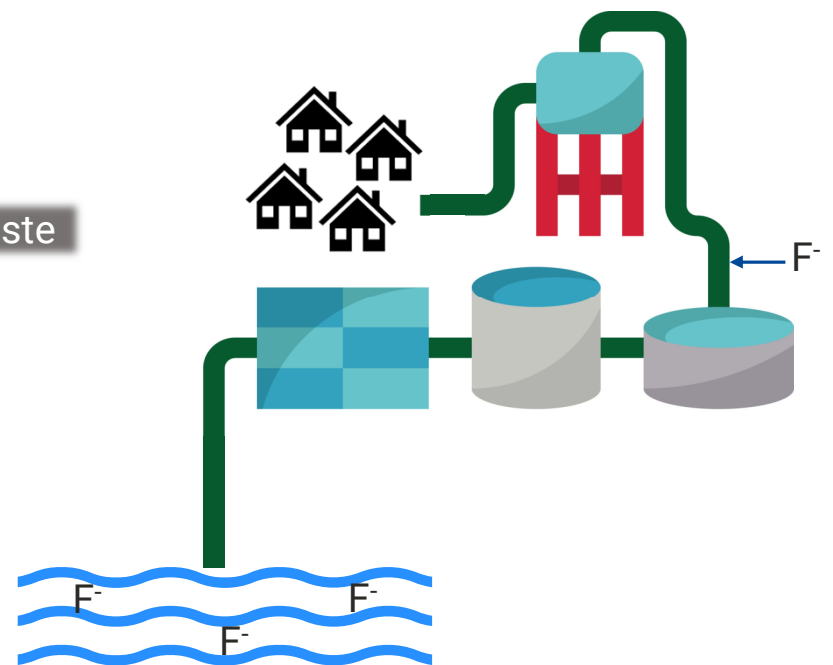
Decide if the presentation should be presented at the March 12th City Council meeting.

Attachment(s): Presentation

Fluoride in Drinking Water

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Fluoride



How Did Water Fluoridation Start?

History

- 1930s – Scientist discovered the lower rate of tooth decay in children drinking water containing higher naturally-occurring fluoride
- 1945 - Grand Rapids Michigan, the first U.S. city to start fluoridating public water supply
- 1950 - Significantly fewer cavities of schoolchildren in Grand Rapids, encouraged other Michigan cities to adapt fluoridation
- Observed benefits encouraged cities and towns across the U.S. to start fluoridation



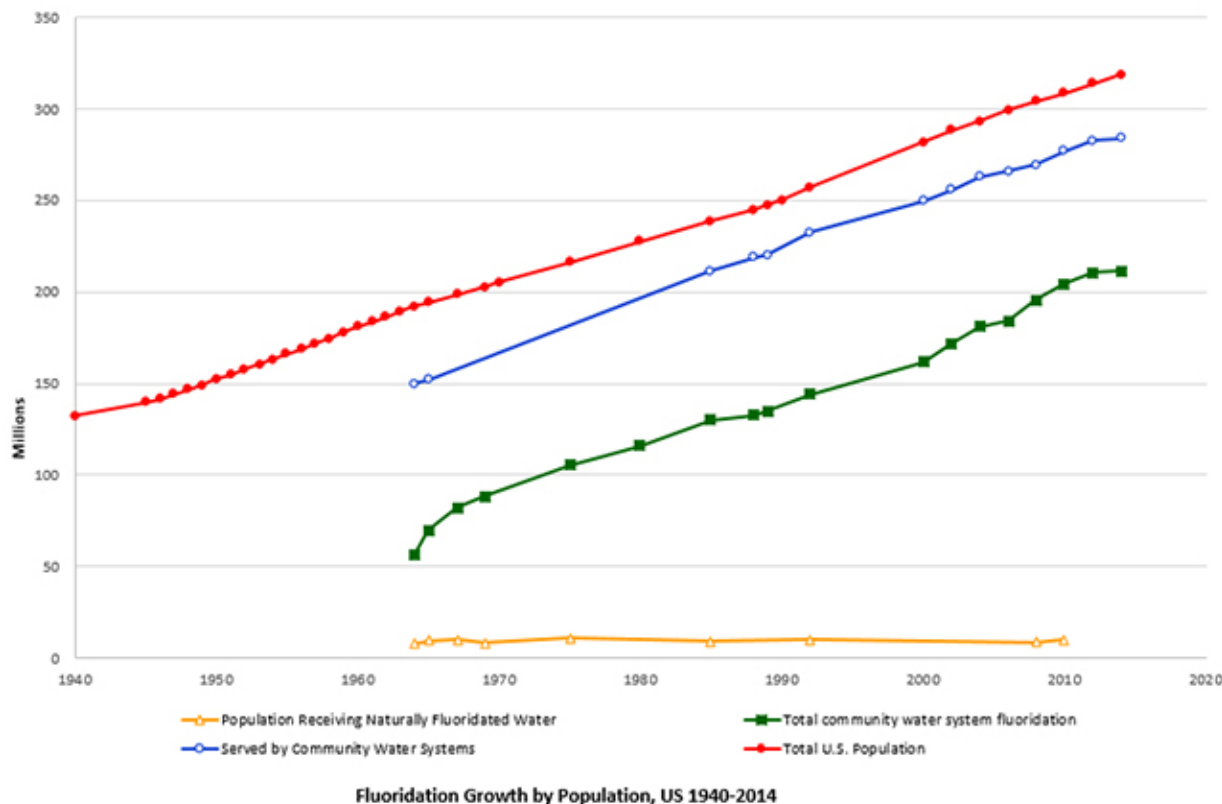
Source: Center for Disease Control & Prevention (CDC), <https://www.cdc.gov/fluoridation/basics/index.htm>

Fluoridation in U.S.

As of 2020

- **62.9%** of U.S. population received fluoridated water
- **72.7%** of U.S. population on community water systems (CWS) received fluoridated water

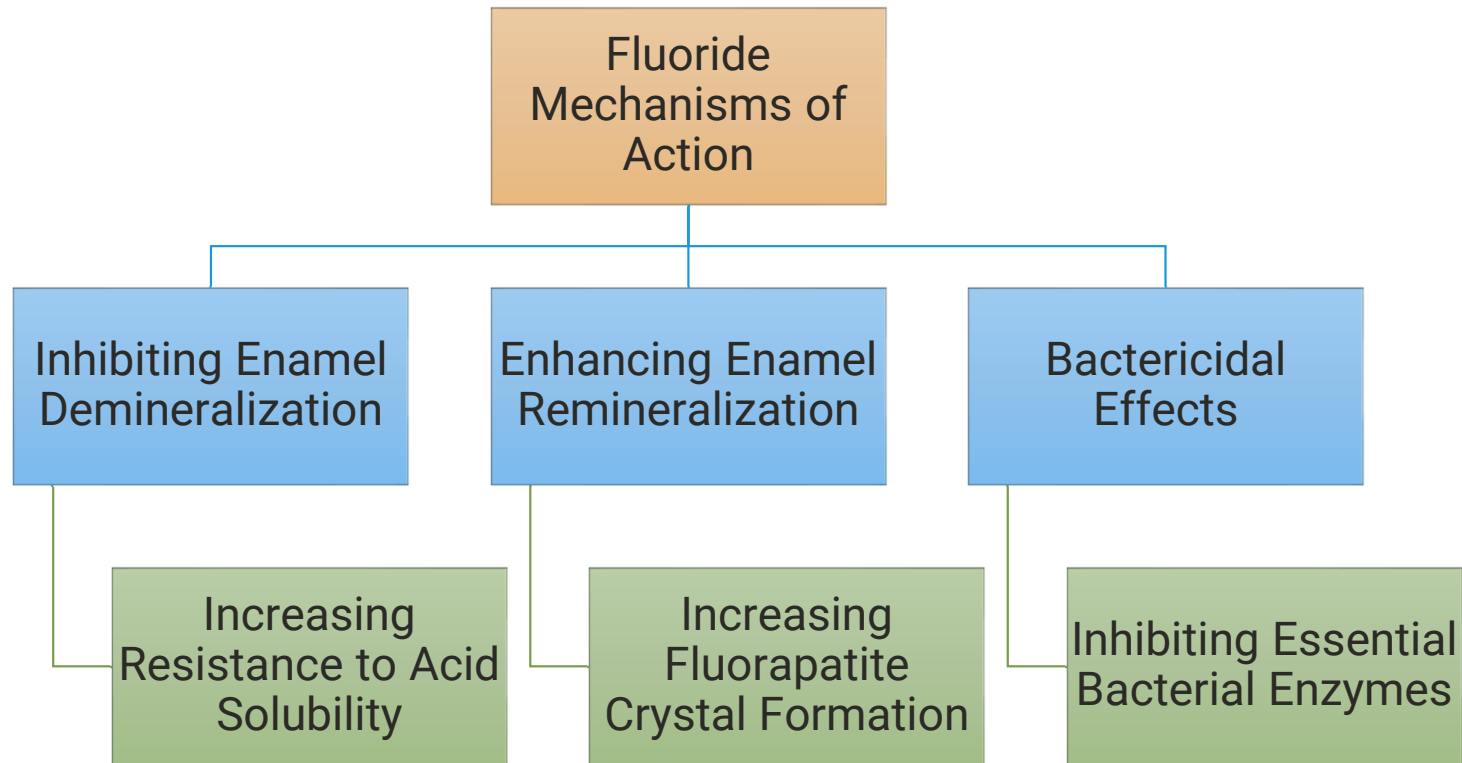
87.9% of NC population on CWS received fluoridated water



Source: Center for Disease Control & Prevention (CDC), <https://www.cdc.gov/fluoridation/basics/index.htm>

Fluoride, Health & Cost

Fluoride Mechanisms of Action



Source: Buzalaf MAR, Pessan JP, Honório HM, Ten Cate JM. Mechanisms of action of fluoride for caries control. *Monogr Oral Sci.* 2011;22:97-114. doi: 10.1159/000325151. Epub 2011 Jun 23. PMID: 21701194.

Health Benefits¹

Extensive body of research supports the effectiveness of water fluoridation in reducing dental caries

U.S. Public Health Service (PHS)	Comprehensive review of scientific research demonstrating the effectiveness of water fluoridation in caries prevention and control
Community Preventative Services Task Force	Review of scientific research showed overall positive impacts of water fluoridation on dental health
Center For Disease Control and Prevention (CDC)	CDC names community water fluoridation as one of top 10 public health achievements of 20th century
Australian National Health and Medical Research Council	Systematic review of scientific body of research strongly suggests that water fluoridation is beneficial in reducing dental caries

Estimated Cost-Benefits

Research study reviewed research efforts published after 1995

- Holistic cost evaluation of water fluoridation indicates economic benefits of water fluoridation
 - Annual intervention cost of \$0.11- \$4.89 per capita
 - Annual benefits of \$5.45- \$139.78 per capita
- Benefit-cost ratio increases with the community population size



Source: Tao Ran, Sajal K. Chattopadhyay. *Economic Evaluation of Community Water Fluoridation: A Community Guide Systematic Review*. *American Journal of Preventive Medicine*. 2016; 50(6):790-796.

Continued Benefit Uncertainty

- Comprehensive Cochrane Review meta-analysis published in 2015 evaluated the evidence of benefit of water fluoridation on modern lifestyle
 - Most observational studies at high risk of bias
 - 70% of the high-quality studies were conducted before 1975 and prevalence of fluoride toothpaste
 - In modern lifestyle, the impact of water fluoridation is mixed with the impact of other fluoridated products
 - The role of dental care products containing fluoride is unknown
- Affirms potential positive impacts of water fluoridation, but acknowledges lack of evidence on the extent of its impact in the context of modern lifestyle

Source: Iheozor-Ejiofor Z, Worthington HV, Walsh T, O'Malley L, Clarkson JE, Macey R, Alam R, Tugwell P, Welch V, Glenny AM. Water fluoridation for the prevention of dental caries. *Cochrane Database Syst Rev.* 2015 Jun 18;2015(6):CD010856. doi: 10.1002/14651858.CD010856.pub2. PMID: 26092033; PMCID: PMC6953324.

Health Concerns

Dental Fluorosis

- *Concern:* Mild forms of dental fluorosis in the U.S. have increased
- *Findings:* Mild dental fluorosis creates aesthetic issues (mottled teeth) does not impact tooth functionality

Skeletal Fluorosis

- *Concern:* Potential health risk at higher levels, particularly endemic water and air exposure
- *Findings:* Primary limit of 4 mg/L in (2 mg/L secondary) with health effects language
"Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones."

Carcinogenicity

- *Concern:* correlation between osteosarcoma and water fluoride levels in males based on residence history
- *Findings:* No correlation between osteosarcoma and fluoride levels in cancerous and benign bone tumors; more accurate procedure for determining fluoride exposure than residence history.

Source: State of the Science: Community Water Fluoridation. Water Research Foundation. 2015. Report #4641

Health Concerns

Neurological Effects*

- Disputed studies show links between water fluoride levels and reduced IQ
- Findings are inconsistent – Lowering of IQ due to fluoride exposure has not been demonstrated in areas that practice CWF

Endocrine Disruption*

- Evidence of endocrine disruption is inconsistent where some studies show correlation, and some do not
- The mixed results has impeded a decisive conclusion and research on the topic is ongoing

NTP added fluoride hazard classification, 2016**



NASEM rejected the conclusion made by NTP due to inadequate support for the conclusion



NTP removed fluoride hazard classification



Further research and investigation is ongoing

* State of the Science: Community Water Fluoridation. Water Research Foundation. 2015. Report #4641

** NTP website: [Fluoride: Assessment for Developmental Neurotoxicity \(nih.gov\)](https://www.niehs.nih.gov/fluoride) . Accessed on 02/21/2024.

Water Fluoridation: Operational Considerations

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Operational Challenges & Benefits

Health and Safety Impact

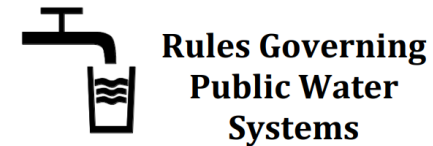
- Extra caution required in smaller facilities where dry salt additive is used
 - Handling the salt additive requires personal protection equipment

Operational Benefit

- + Fluoride is used as a tracer for leak detection
 - No significant impact on water quality parameters such as pH or corrosivity



Start & Stop Fluoridation in NC



- Fluoridation- SECTION .1400
- Application that includes a resolution by the local government or governing body operating CWS, which shall include local board of health approval of the proposed fluoridation procedure
- Discontinuation of Fluoridation -15A NCAC 18C .1406 (h)
- Prior to the discontinuation, a supplier of water shall provide to the Department and the Department of Health and Human Services, Oral Health Section, copies of documentation by the local government or the governing body operating CWS that:
 - the resolution provided in the formal application to add fluoride has been rescinded or replaced; and
 - the local board of health has been notified.

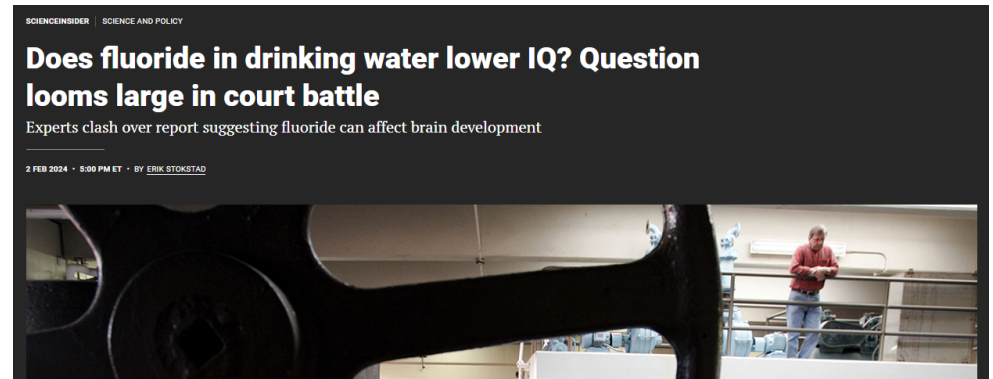
Current Legal Challenges

City of Buffalo, NY*

- Stopped fluoridation in 2015
- Two lawsuits (including one class action) were filed against city for lack of fluoride in drinking water
- City to restore fluoridation in summer 2024

San Francisco, CA**

- Lawsuit filed against EPA and to prohibit fluoride addition to drinking water
- The lawsuit is based on claims of neurotoxicity associated with water fluoridation



* [Second suit filed against Buffalo over lack of fluoride \(buffalonews.com\)](https://buffalonews.com). Accessed on 02/21/2024.

** [Fluoride Science on Trial in Case With Broader Chemical Impacts \(bloomberglaw.com\)](https://bloomberglaw.com). Accessed on 02/21/2024

Summary

- The extensive body of scientific research suggests the effectiveness of water fluoridation in reducing dental caries
- To date, the only widely acknowledged adverse health impacts of correctly executed water fluoridation is dental fluorosis
- Cost-benefit analysis conducted by government agencies and independent researchers favors water fluoridation
- Debate on adverse health impacts (neurotoxicity and endocrine impacts) has led a minority of systems to discontinue drinking water fluoridation

Discussion

References

- Community Preventive Services Task Force. Guide to Community Preventive Services: Community Water Fluoridation website: <http://www.thecommunityguide.org/oral/fluoridation.html>
- Koulourides T. Summary of session II: Fluoride and the caries process. *J Dent Res.* 1990;69(Spec Iss):558.
- Featherstone JD. Prevention and reversal of dental caries: Role of low level fluoride. *Community Dent Oral Epidemiol.* 1999;27:30–40.
- Truman BI, Gooch BF, Sulemana I, et al. Reviews of evidence on interventions to prevent dental caries, oral and pharyngeal cancers, and sports-related craniofacial injuries. *Am J Prev Med.* 2002(1S):21–54.
- Griffin SO, Regnier E, Griffin PM, Huntley V. Effectiveness of fluoride in preventing caries in adults. *J Dent Res.* 2007;86:410–415.
- CDC Community water Fluoridation Fact sheet: [Community Water Fluoridation Fact Sheet \(cdc.gov\)](#). Accessed on 02/21/2024.
- Water Fluoridation and Human Health in Australia. Australian National Health and Medical Research Council: [2017 Public Statement – Water fluoridation and human health | NHMRC](#). Accessed on 02/21/2024.



STAFF REPORT

TO: Public Enterprise Committee

VIA: Mark Watson, City Manager

DATE: March 5, 2024

FROM: Scott Clark, Water Resources Director

PREPARED BY: Scott Clark, Water Resources Director

SUBJECT: Budget Amendment (BA-2024-06) to Cover Cost for Roof Replacement

SUMMARY STATEMENT

The Public Enterprise Committee (PEC) is requested to approve a budget amendment to the Water and Sewer Fund to provide needed funds to cover costs for installation of a new roof on the Wastewater Treatment Plant Administration Building.

REVIEW

The City of Monroe Wastewater Treatment Plant Administration Building roof is in need of replacement due to multiple leaks and other impacts caused by hazardous weather events.

Water Resources will need a Budget Amendment in the amount of *\$125,000.00* from the Water and Sewer Fund Balance to cover the estimated project costs of approximately *\$110,000*.

RECOMMENDATION

It is the recommendation of Staff that the Public Enterprise Committee takes the following action:

Approve the Budget Amendment and forward to City Council for consideration on the March 12, 2024 consent agenda.

Attachment(s):
Budget Amendment 2024-06

**CITY OF MONROE
BUDGET AMENDMENT
BA-2024-06**

Amendment necessary to appropriate an additional \$125,000 to cover cost for WWTP Administration Building Roof Replacement.

Water & Sewer Fund:

Revenues:

Appropriation of Fund Balance

\$ 125,000

Expenditures:

WWTP Administration Building Roof Replacement

\$ 125,000

Adopted this 12th day of March, 2024.

Robert Burns, Mayor

Attest:

Bridgette H. Robinson, City Clerk



STAFF REPORT

TO: Public Enterprise Committee
VIA: Mark Watson, City Manager
DATE: March 5, 2024
FROM: Scott Clark, Water Resources Director
PREPARED BY: Scott Clark, Water Resources Director
SUBJECT: Nelson Heights Tank Replacement Grant Acceptance Resolution and Budget Ordinance

SUMMARY STATEMENT

The Public Enterprise Committee is requested to consider a Resolution and Budget Ordinance that is required as part of an American Rescue Plan Act grant acceptance requirement for the Nelson Heights Tank Replacement Project funded from the State Fiscal Recovery Fund.

REVIEW

The North Carolina Department of Environmental Quality has awarded the City of Monroe, a Pre-Construction Planning (ARPA) grant, for funding in the amount of **\$400,000**, to assist with the Nelson Heights Tank Replacement project. The adoption of the Resolution is required by the North Carolina Department of Environmental Quality as part of the administrative documentation process.

RECOMMENDATION

It is the recommendation of Staff that the Public Enterprise Committee take the following action: Motion to approve Resolution 2024-14 and Budget Ordinance BO-2024-04 to be placed on Consent Agenda at the March 12, 2024 City Council meeting and authorize the City Manager to execute all required documents.

Attachment: R-2024-14
BO-2024-04

**RESOLUTION TO ACCEPT ARPA GRANT
CITY OF MONROE, NORTH CAROLINA
R-2024-14**

WHEREAS, the American Rescue Plan Act (ARPA), funded from the State Fiscal Recovery Fund, was established in Session Law (S.L.) 2021-180 to assist eligible units of local government with meeting their drinking water and/or wastewater needs, and

WHEREAS, the North Carolina Department of Environmental Quality has offered Pre-construction Planning Grant ARPA funding in the amount of **\$400,000** to perform the work detailed in the submitted application, and

WHEREAS, the **City of Monroe** intends to perform said project in accordance with the agreed scope of work,

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF MONROE

That the **City of Monroe** does hereby accept the ARPA grant offer of **\$400,000**; and

That the **City of Monroe** does hereby give assurance to the North Carolina Department of Environmental Quality that any *Conditions* or *Assurances* contained in the *Funding Offer and Acceptance* (award offer) will be adhered to; has substantially complied, or will substantially comply, with all federal, State of North Carolina (State), and local laws, rules, regulations, and ordinances applicable to the project; and to federal and State grants and loans pertaining thereto; and

That **Mr. Mark Watson, City Manager**, and successors so titled, is hereby authorized and directed to furnish such information as the appropriate State agency may request in connection with this project; to make the assurances as contained above; and to execute such other documents as may be required by the North Carolina Department of Environmental Quality, Division of Water Infrastructure.

Adopted this the 12th day of March, 2024.

Attest:

Robert Burns, Mayor

Bridgette H. Robinson, City Clerk

CAPITAL PROJECT BUDGET ORDINANCE
Nelson Heights Tank Replacement Project
BO-2024-04

WHEREAS, the City is currently replacing the Nelson Heights Water Tank; and

WHEREAS, funding is available from the American Rescue Plan Act from the State Fiscal Recovery Fund; and

WHEREAS, the North Carolina Department of Environmental Quality has awarded the City of Monroe \$400,000 toward this project; and

NOW, THEREFORE, BE IT ORDAINED that the City Council hereby provides grant funding for the Nelson Heights Tank Replacement Project WR2302 funding as follows:

Water & Sewer Capital Project Fund:

Revenues:

Restricted

\$ 400,000

Expenditures

Project Expenses

\$ 400,000

Adopted this 12th day of March, 2024.

Attest:

Robert A. Burns, Mayor

Bridgette H. Robinson, City Clerk



STAFF REPORT

TO: Public Enterprise Committee

VIA: Mark Watson, City Manager

DATE: March 5, 2024

FROM: Sarah McAllister, P.E., Engineering Director

PREPARED BY: Sarah McAllister, P.E. – Engineering Director

SUBJECT: Critical Intersection Analysis 2024

SUMMARY STATEMENT

The Public Enterprise Committee is requested to consider recommending City Council enter into an Interlocal Agreement with Union County for another critical intersection analysis study.

REVIEW

Engineering Staff has been working with Bjorn Hansen, Transportation Planner with Union County, along with representatives from the North Carolina Department of Transportation (NCDOT) and staff from other municipalities within Union County on another Union County Critical Intersection Analysis. The intent is to identify locations throughout the county that have experienced congestion and safety issues, provide a further evaluation based on existing data, and narrow the list to those that would be most competitive for funding through the NCDOT and/or the Charlotte Regional Transportation Planning Organization (CRTPO). Union County has been awarded a grant in the amount of \$192,000 with a required local government match of \$48,000. The City's portion of the local match would be \$4,000 with the County contributing \$20,000 and the rest being provided from other municipalities.

Similar processes took place in 2016, 2019, and 2023 in which several intersections within Monroe were identified. The Williams Road intersection with Old Charlotte Highway was identified in the 2016 list and later qualified for spot safety funds through NCDOT. Construction of a traffic signal with turn lanes should take place within the next year. The Poplin Road and Unionville-Indian Trail Road intersection was identified in the 2019 list, later received funding and a four-

way stop was installed. The Sutherland Avenue and Walkup Avenue intersection was identified in the 2023 list and was submitted as a project to CRTPO in the fall of 2023.

Union County has provided an Interlocal Agreement for this project which includes the City's \$4,000 participation toward the required match for the grant. A copy of the Interlocal Agreement is provided. Sufficient funds are available in the Engineering Department's operating accounts to cover the \$4,000 required match.

RECOMMENDATION

Staff recommends approval of the Interlocal Agreement with Union County and authorization of the City Manager to execute the agreement. If the Public Enterprise is in agreement, the Interlocal Agreement and authorization of the City Manager will be placed on the March 12th consent agenda for approval.

Attachment:
Interlocal Agreement with Union County

STATE OF NORTH CAROLINA

INTERLOCAL AGREEMENT

COUNTY OF UNION

THIS AGREEMENT, is made and entered into this _____, by and between Union County (the “County”) and the City of Monroe (the “Municipality”) (hereinafter collectively referred to as the “Parties”).

W I T N E S S E T H:

WHEREAS, the County was awarded a grant from the Charlotte Regional Transportation Planning Organization (“CRTPO”) for a critical intersection analysis study that will study certain traffic intersections in Union County, including certain intersection(s) in the Municipality, in order to consider implementing future intersection improvements (the “Grant”); and

WHEREAS, the Grant will allow for County to select and engage a consultant (the “Consultant”) to perform the critical intersection analysis study and produce a subsequent report (the “Study”); and

WHEREAS, under the Grant CRTPO will reimburse the County for its costs for the Study in the amount of One Hundred Ninety Two Thousand Dollars (\$192,000), with an additional Forty Eight Thousand Dollars (\$48,000) required under the Grant as a local government match (the “Match”); and

WHEREAS, the County will contribute at least Twenty Thousand Dollars (\$20,000) toward the Match; and

WHEREAS, the Municipality has agreed to contribute Four Thousand Dollars (\$4,000) toward the Match due to the Study including intersection(s) within the Municipality’s limits (the “Municipality Contribution”); and

WHEREAS, this Agreement is made under the authority of N.C. Gen. Stat. § 160A-460 et seq and all other applicable law.

NOW, THEREFORE, for and in consideration of the mutual covenants and agreements hereinafter set forth, the parties hereto do each contract and agree with the other as follows:

1. The term of this Agreement shall begin on mutual execution and shall continue until December 31, 2025. This Agreement may only be terminated upon expiration of the aforementioned term without an amendment extending the term executed by both parties to this Agreement. Notwithstanding the foregoing, the Parties may, by mutual written consent, terminate this Agreement at any time and for any reason.

2. After 50% of the work for the Study is complete, as reasonably determined by the County, the County will invoice the Municipality for the Municipality Contribution. Within thirty (30) days of receipt of such invoice, the Municipality shall pay the Municipality Contribution.

3. The County shall directly select and engage the Consultant to perform the Study. The Parties agree to work collaboratively with the Consultant to provide any reasonably requested information and assistance needed for the Study. Upon completion, and County's receipt, of the Study, the County will ensure that the Municipality receives a copy of the Study.

4. This Agreement may be amended at any time by mutual, written consent of the parties.

5. This Agreement may be signed in counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. The Parties hereto confirm that any facsimile copy or photocopy of another party's executed counterpart of this Agreement (or its signature page thereof) will be deemed to be an executed original thereof.

IN WITNESS WHEREOF, the Parties hereto have caused this instrument to be executed the day and year above written.

UNION COUNTY:

Attest: _____
Lynn West, Clerk to the Board

By: _____
Brian W. Matthews, County Manager

Approved as to Legal Form: BTI

CITY OF MONROE:

Attest: _____
Bridgette Robinson, Clerk

By: _____
William Mark Watson, Manager

This instrument has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

Lisa Strickland, Finance Officer