



Albemarle City Council Work Session

Monday, July 25, 2022

6:30 PM

City Hall - Council Chambers

Meeting Agenda

Call the Meeting to Order:

- Mayor Michael

Special Presentation:

- Representatives from WK Dickson & Raftelis will present to Council data and recommendations on future Stormwater Management Plan based on Council input.
 - Tom Murray and Keith Reading will present updated version of recommended Storm Water Management Plan.
 - *Reduced Program Levels of Service*
 - *Reduced Staffing and O&M*
 - *Reduced Reserves and Overhead Allocation*
 - *Reduced Contracted Services*
 - *Reduced Capital Improvement*
 - *Reduced ERU Rate*

Discussions/Decisions:

- Q&A on proposed recommended plan with Council, staff and consultants.
- Decisions, if any.

Adjournment:

- Adjourn until Monday, August 1st, 2022 at 6:30 pm for the regularly scheduled Council meeting.



ALBEMARLE
NORTH CAROLINA
Water. Air. Land. Opportunity.

Stormwater Planning Workshop

July 25, 2022

 **WK
DICKSON**
community infrastructure consultants



Why Develop Stormwater Program?

- **Flooding**

- Known flooding problems
- New development impacts
- Increased rainfall intensity

- **Aging infrastructure**

- Lifespan generally 40-80 years
- Run to failure increases overall cost

- **Regulatory requirements**

- Impaired waters
- NPDES MS4 Program



Where are we today?

- February 2021 – Council meeting to initiate study for stormwater program development and funding options
- Summer 2021
 - Begin public outreach on community stormwater needs
 - 1v1 Council meetings
 - City staff meetings
- September 2021 – Council update meeting with preliminary findings or stormwater program study

Where are we today?

- Nov-Dec 2021
 - 1v1 Council meetings
 - Rotary club meeting
 - Meeting with County Manager
- January 2022
 - Council workshop session
 - Move forward with proposed program
 - Begin Melchor Branch infrastructure mapping

Where are we today?

- Spring 2022

- Finalize non-single family residential customer impacts based on ERU
- Public forums
- Public hearing
- Reevaluate proposed utility rates
- Reevaluate proposed utility rates and potential program implementation January 2023

- Summer 2022

- Evaluate opportunities for adjustments to proposed level of service and corresponding reduction in rates
- Discuss timeline for potential implementation

Current Stormwater Services

- Public works provides some right-of-way maintenance as available based on other job responsibilities
 - Predominantly reactive or focused on known issues
 - Focused on clearing blockages and limited replacement or rehabilitation of infrastructure
- Public utilities provides some clearing along existing City easements to remove blockages from culverts particularly in advance of storm events
- Street sweeping
- Partial administration time include public works director, public works assistant director, and planner

Current Stormwater Services

- Predominantly reactive
- Does not address systems that are under capacity or aging and in need or replacement
- Total value of current existing service is approximately \$460,000 per year

Program Recommendations

- Program Management
- Operation and Maintenance
- Reserves and Overhead Allocation
- Contracted Services
- Capital Improvement

Programmatic

- Administration (budget, personnel, billing, audit)
- New development plan review, inspection, enforcement
- Water Quality Compliance (federal and NC rules)
- Floodplain regulation
- Citizen complaint / information request response
- Proactive planning for maintenance and capital needs

Programmatic Revenue Requirements (Original proposal)

- 3.5 New FTE's
 - Stormwater manager
 - Stormwater technician
 - Stormwater administration
 - Utility billing and customer response (shared resource)
- 0.65 Existing FTE's allocated to program
 - Public works director: 25%
 - Assistant public works director: 25%
 - Planner: 15%
- **Estimated annual revenue requirement: \$350,000**

Programmatic Revenue Requirements (Reduced LOS)

- 2.5 New FTE's
 - Stormwater manager
 - ~~— Stormwater technician~~
 - Stormwater administration
 - Utility billing and customer response (shared resource)
- 0 Existing FTE's allocated to program (remains in general fund)
 - ~~— Public works director: 25%~~
 - ~~— Assistant public works director: 25%~~
 - ~~— Planner: 15%~~
- **Estimated annual revenue requirement: \$200,000**

Reductions to LOS for Programmatic

- Longer customer response time
- Longer review time for new development plans
- Limited time for managing capital projects
- NPDES Phase II compliance would be a significant portion of Stormwater Manager's time if required (2023 notification)
- Existing positions (public works director, etc.) remain in general fund

Operation & Maintenance (O&M)

- Open System (streams/ditches) - Remove nuisance vegetation, debris, sediment that can impede flow
- Street or utility ROW access
- Closed System - Clean catch basins & flush pipes
 - 8 miles mapped in Melchor Branch
- Minor repairs/replacement to catch basins and pipes
 - 700 structures mapped in Melchor Branch
- Street sweeping
- Private drainage system assistance (when conveys runoff from public property)

O&M Revenue Requirements (Original Proposal)

- 5 New FTE's
 - Stormwater streets maintenance crew (3 staff)
 - Stormwater ROW maintenance crew (2 staff)
 - Capital equipment to support new crews
- 1 Existing FTE allocated to program
 - Streetsweeper allocated to stormwater program
 - Future capital equipment needs
- Materials for system repairs (catch basins, small diameter pipes, riprap, backfill, etc.)
- Estimated annual revenue requirement: \$710,000

O&M Revenue Requirements (Reduced LOS)

- 3 New FTE's
 - Stormwater streets maintenance crew (3 staff)
 - ~~— Stormwater ROW maintenance crew (2 staff)~~
 - Capital equipment to support new crews
- ~~• 1 Existing FTE allocated to program~~
 - ~~— Streetsweeper allocated to stormwater program~~
 - ~~— Future capital equipment needs~~
- Materials for system repairs (catch basins, small diameter pipes, riprap, backfill, etc.)
- **Estimated annual revenue requirement: \$377,000**

Reductions to LOS for O&M

- Focus in ROW or defined access points
- Longer response time
- Longer ramp up time to proactively repair aging infrastructure
- Streetsweeper remains in general fund

Operation and Maintenance

- System Concerns
 - Pipe under structure on E. Main
 - Upstream capacity greater than downstream capacity
 - Outfall downstream of Badin Road is blocked which can cause issues in street ROW
- Routine maintenance can keep outfall clear maximizing system efficiency and then determine if additional repairs are needed



Reserves and Overhead Allocation

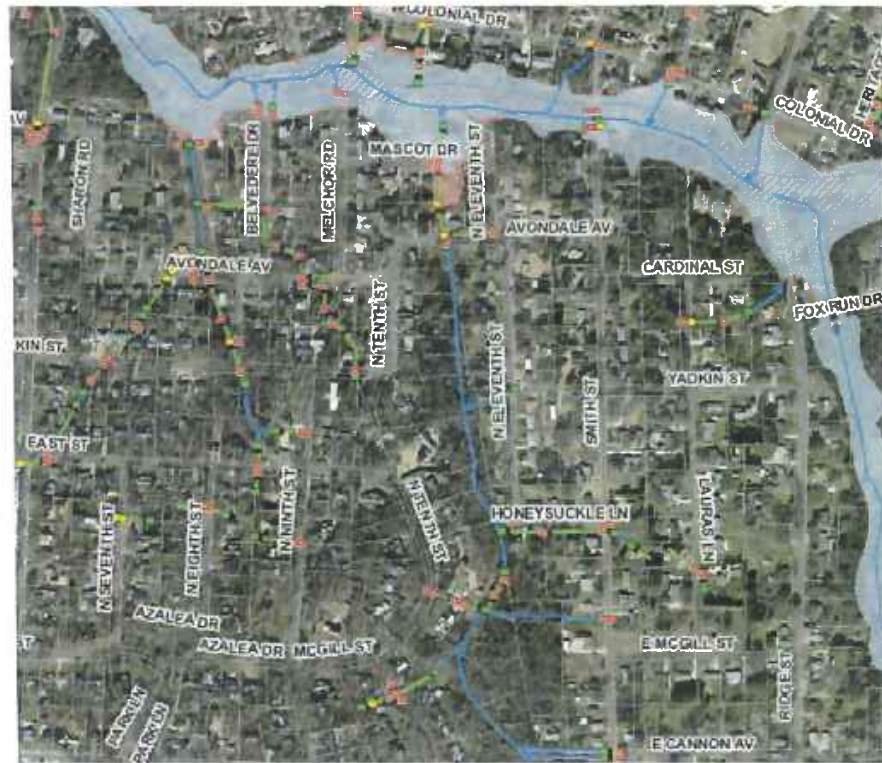
- Typical overhead allocation to support City services required for implementation and operation of an enterprise fund
- Reserves for emergencies typically associated with infrastructure failures

Reserves Revenue Requirements (Original proposal)

- Estimated annual revenue requirement: \$160,000
- **Reduced Level of Service: \$80,000**
- Reduction in reserves will have less revenue available for emergency repairs following storm events. Emergency repairs may increasingly need to utilize capital funds

Contracted Services

- Infrastructure mapping and inventory
- Watershed planning
- Capital planning
- Design
- Permitting
- Funding assistance
- Bidding
- Construction administration support



Melchor Branch Mapping – System Bottlenecks



Melchor Branch Mapping – System Bottlenecks



30" outfall has failing endwall and debris



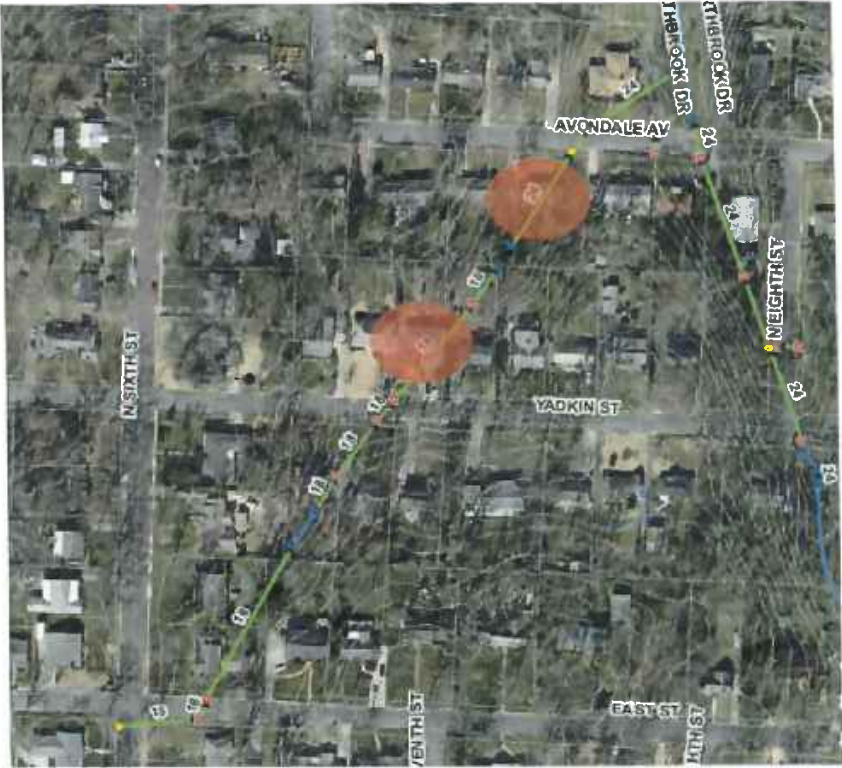
Damaged junction box receives drainage from Larkhaven Lane and Melchor Road 30" and 15" pipes combine with 18" outflow



Melchor Branch Mapping – Pipes under structures



Melchor Branch Mapping – Pipes under structures



Contracted Services Revenue Requirements (Original proposal)

- Melchor Branch pilot watershed study currently on hold
- Complete citywide infrastructure mapping and watershed planning in 4-5 years
- Prioritizes capital investments in City
- Pursue external funding opportunities for early action projects
- Design and permitting for early action projects
- **Estimated annual revenue requirement: \$400,000**

Contracted Services Revenue Requirements (Reduced LOS)

- Melchor Branch pilot watershed study currently on hold
- Complete citywide infrastructure mapping and watershed planning in **7-9** years
- Watershed plans typically required to leverage grants and loans for construction projects
- Design and permitting for early action projects would require external funding or temporary delay in watershed planning
- **Estimated annual revenue requirement: \$250,000**

Capital Expenses

- Culvert/bridge replacement
- Closed system upgrades
- Stream restoration
- Detention
- Floodplain improvements

Capital Revenue Requirements (Original proposal)

- Capital projects identified and prioritized in watershed plans
- Accumulate capital funding to finance larger projects
- Can provide matching funds for grant and loan opportunities
- Require engineering design and permitting
- Public bid process for construction
- **Estimated annual revenue requirement: \$540,000**

Capital Revenue Requirements (Reduced LOS)

- Longer time frame for implementation
- Larger projects will likely require grants and loans
- **Estimated annual revenue requirement: \$250,000**

Cost of Service Summary

Program Component	Original Proposal	Reduced LOS
Programmatic	\$350,000	\$200,000
O&M	\$710,000	\$377,000
Reserves	\$160,000	\$80,000
Contracted Services	\$400,000	\$250,000
Capital	\$540,000	\$250,000
Total Annual Revenue Requirement	\$2,160,000	\$1,157,000

Rate Requirements (Reduced LOS)

	FY 2023	FY 2024	FY 2025
Stormwater Program Rates	\$5.40	\$5.66	\$5.79

- 5-year average rate = \$5.80
- 52% of original proposal
- Rates assume 95% collection rate
- Leaf collection not included in stormwater program

Median Residential Property – Monthly Rate: \$5.80



Example – Government



- 162,018 sq. ft. of impervious surface
- 50 ERUs
- Monthly Rate: \$290.00

Example – Local Business



- 8,737 sq. ft. of impervious surface
- 3 ERUs
- Monthly Rate: \$17.40

Example – Large Retail



- 717,934 sq. ft. of impervious surface
- 220 ERUs
- Monthly Rate: \$1,276.00

Example - Medical



- 611,381 sq. ft. of impervious surface
- 187 ERUs
- Monthly Rate: \$1,084.60

Example – Multi Family




- 95,297 sq. ft. of impervious surface
- 30 ERUs
- Monthly Rate: \$174.00

Summary


- Needs have not changed, but pace of implementation can be adjusted
- Revised program adds 5.5 new FTE's
- Reduced investment for watershed planning and capital projects
- Existing staff remains in general fund
- Existing leaf collection remains in solid waste
- Monthly rates of \$5.80 per ERU



Thank You

 Tom Murray, PE

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