



06/23/2026

Evaluation of the Current State of the Town of Apex Sanitary Sewer Collection System

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Background

North Carolina Department of Environmental Quality, Division of Water Infrastructure (DWI) awards the Town of Apex \$400,000 as part of the American Rescue Plan Act (ARPA)

Project commences

UE presentation and recommendation of Council approval of Final Engineering Report

Sep. 2023

Mar. 2024

Sep. 2024

May 2026

June 2026

Town Council approves a resolution to accept funds and execute all related documents.

Final Engineering Report submitted to Town of Apex

Project Scope

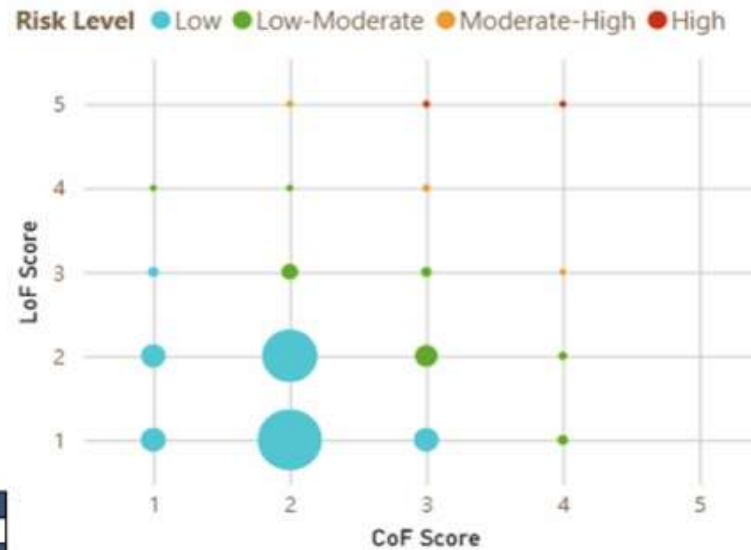
- Consultant Engineering Firm
 - Hazen and Sawyer
- Conduct an Asset Evaluation of the Town's total collection system with an emphasis on Force Main discharge points into Ductile Iron Pipe.
 - 312 miles of gravity main
 - 46 miles of force main
- Deliverables
 - Methodology and Data Summary
 - Sewer Collection System Risk Assessment Framework and Results
 - Asset Rehab and Replacement Cost Projections
 - Capital Improvement Projects and Recommendations

Results

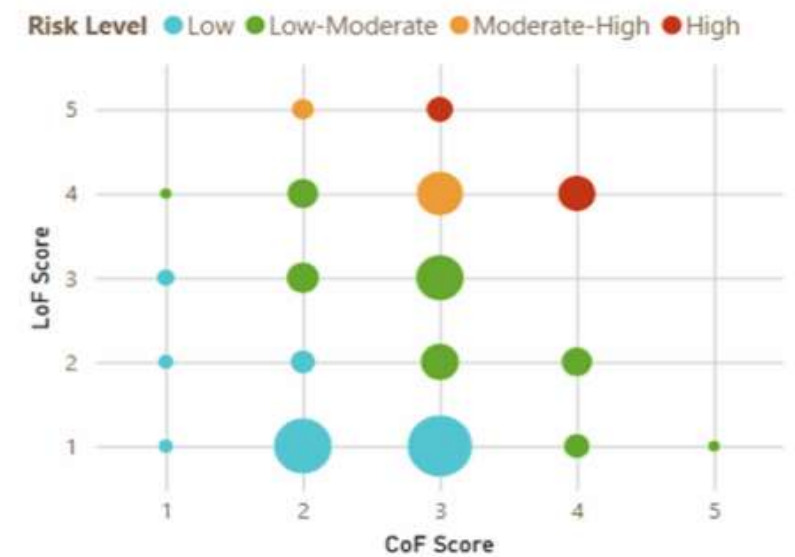
- Low Risk
 - >90% gravity mains
 - >40% force mains
- High Risk
 - <0.1% gravity mains
 - <10% force mains

		Risk Matrix				
		Likelihood of Failure (LoF)				
Risk Score = LoF * CoF		1	2	3	4	5
Consequence of Failure (CoF)	1	Very Good	Good	Fair	Poor	Very Poor
	2	Low Impact				
	3	Moderate Impact				
	4					
	5	High Impact				
Low	Green					
Low-moderate	Light Orange					
Moderate-high	Orange					
High	Dark Orange					

Figure 2-1: Risk Score Matrix



(a) Gravity Mains



(b) Force Mains

Figure 4-2: Asset Risk Distribution by CoF and LoF Scores

Results

- Expected results based on age of current system. Replacement expected to ramp up in 2045 with additional peaks in 2070 and 2090.

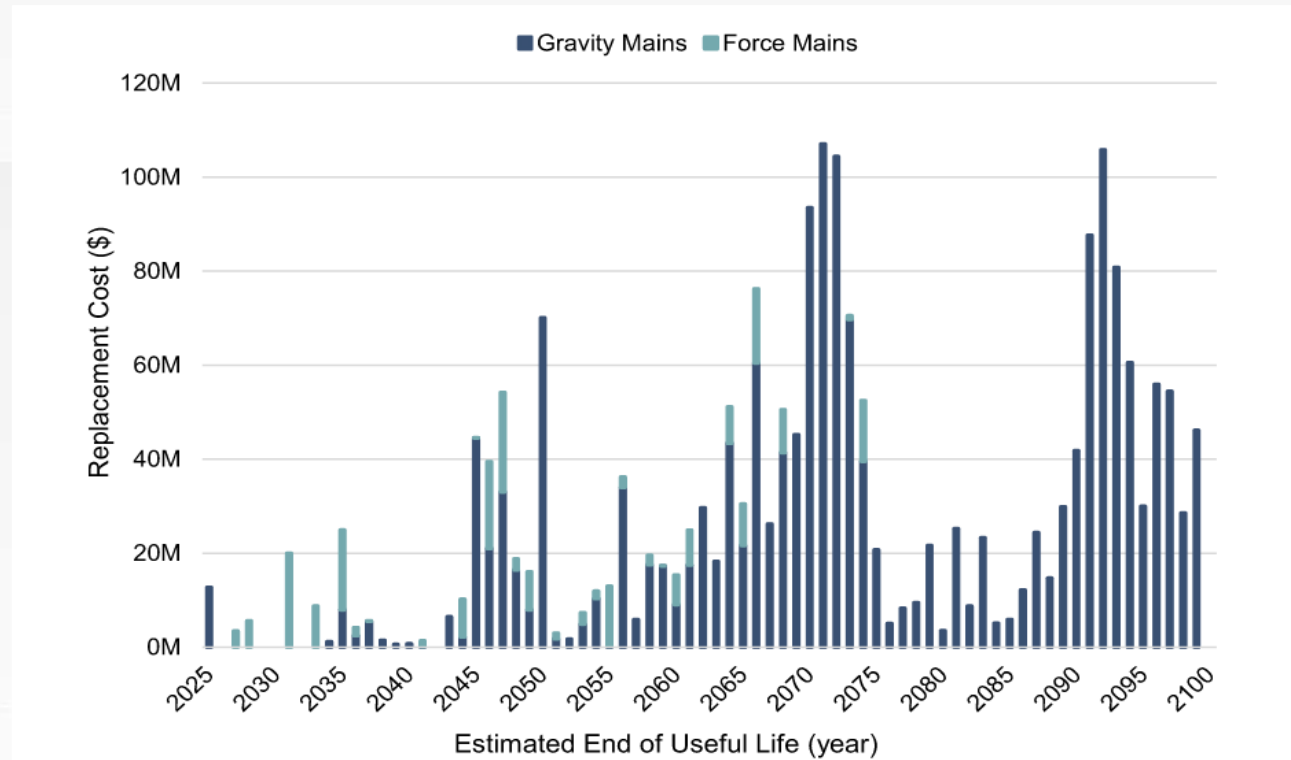


Figure 5-1: Long-term Financial Forecast

Recommendations

- Near-term Projects
 - Apex WRF Trunk Line
 - Beaver Creek Interceptor
- Continued Asset Inspections
- Permanent Flow Metering
- Wastewater Hydraulic Model
- Data Management
- Asset Management Program

