Water Utilities
Overarching Capital Improvement Plan

January 27, 2026

THE CITY OF WATER UTILITIES BENTONVILLE

FREESE AND NICHOLS

Agenda

- Project Overview
- Primary Project Tasks
  - *Develop the CIP System*
  - *Integrate all Projects into a Unified/Comprehensive CIP*
- Financial & Budgetary Analysis
- Asset Renewal Program
- Next Steps

Project Overview

Primary Goal

Create a Water Utilities Comprehensive Capital Improvement Plan (CIP) to provide a structured approach to support Bentonville's rapid growth.

Additional Goals

Determine a structured framework for prioritizing new projects to address future BWU needs and growth drivers

Develop and recommend annual asset renewal programs to manage and sustain BWUs assets to proactively address aging infrastructure

Project Drivers

- Growth
- Unprecedented CIP
- Aggressive Schedules
- Workforce Constraints
- Funding
- Multiple Studies
- Regulatory Concerns
- Aging Infrastructure
- Leveraging Other City Projects

Water/Wastewater CIP Development

Capacity Driven Additions

- Master Plans
- Regulatory Compliance
- Plan for Development

Asset Renewal Program

- Aging Infrastructure Replacement and Rehabilitation
- Level of Service metrics (SSOs, Unplanned outages, compliance, etc.)
- Asset condition assessment
- Remaining useful life
- Risk based approach – (Likelihood x Impact) of asset failure

Primary Project Tasks

Develop CIP System:

- Project Information Forms
- 1,5,10, & 25 Year CIPs

Integrate All Projects into a Unified/Comprehensive CIP

Capacity Driven Projects – Current Specific List

Annual Programs

Summary of Projects

40

Capacity Driven Projects

- Water Distribution
- Wastewater Mains
- Wastewater Facilities

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Annual Programs

- Asset Renewals
- State Highway Relocations

40 Capacity Driven Projects

Water Distribution

- 8 New Transmission Mains
- 3 New Tanks/Pump Stations
- 1 Upgrade Tank/Pump Station

Wastewater Mains

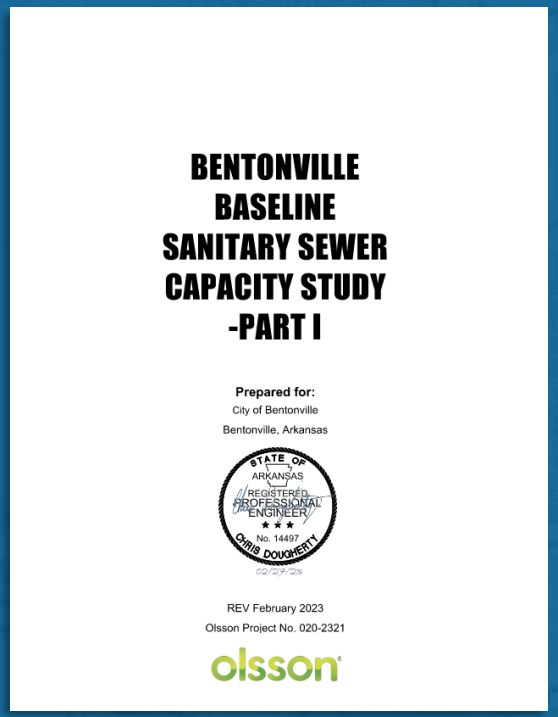
- 5 New Interceptors
- 18 Replacement Interceptors

Wastewater Facilities

- 1 New Lift Station
- 3 Lift Station Upgrades
- 1 Water Resource Recovery Facility Upgrade

Data Sources for Capacity Driven Projects

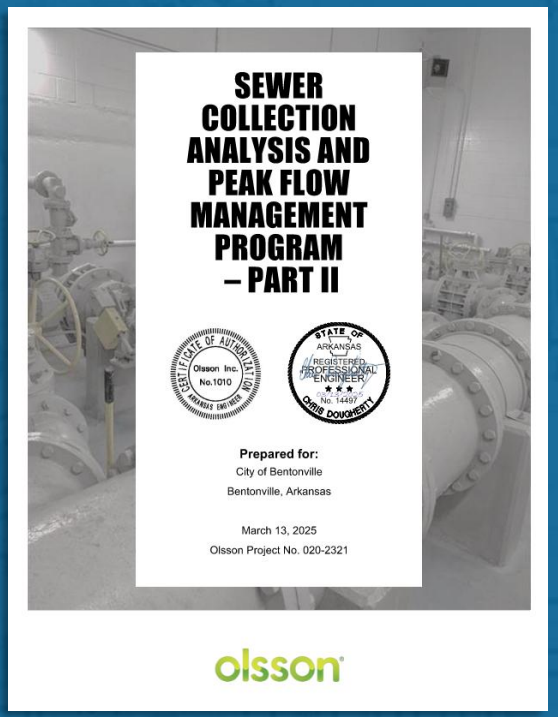
- Recently submitted studies from Garver, Olsson, and TREKK
- Inner department data provided by City


BENTONVILLE BASELINE SANITARY SEWER CAPACITY STUDY -PART I

Prepared for:
City of Bentonville
Bentonville, Arkansas

REV February 2023
Olsson Project No. 020-2321

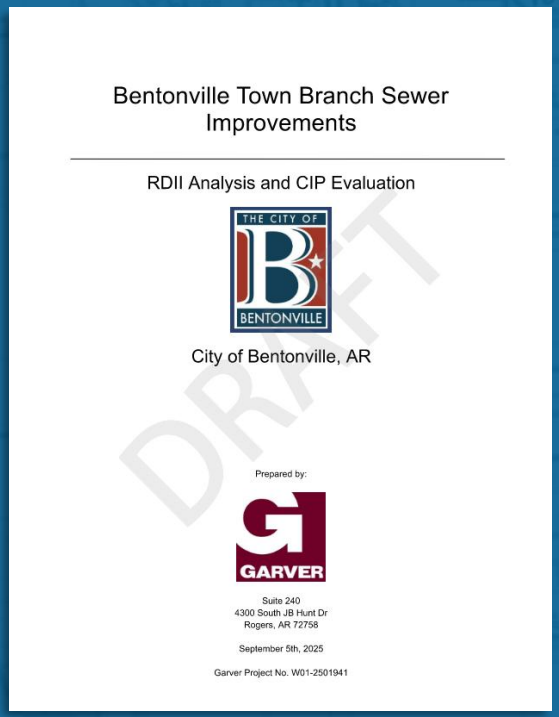
olsson


SEWER COLLECTION ANALYSIS AND PEAK FLOW MANAGEMENT PROGRAM – PART II

Prepared for:
City of Bentonville
Bentonville, Arkansas

March 13, 2025
Olsson Project No. 020-2321

olsson


Bentonville Town Branch Sewer Improvements

RDII Analysis and CIP Evaluation

City of Bentonville, AR

DRAFT

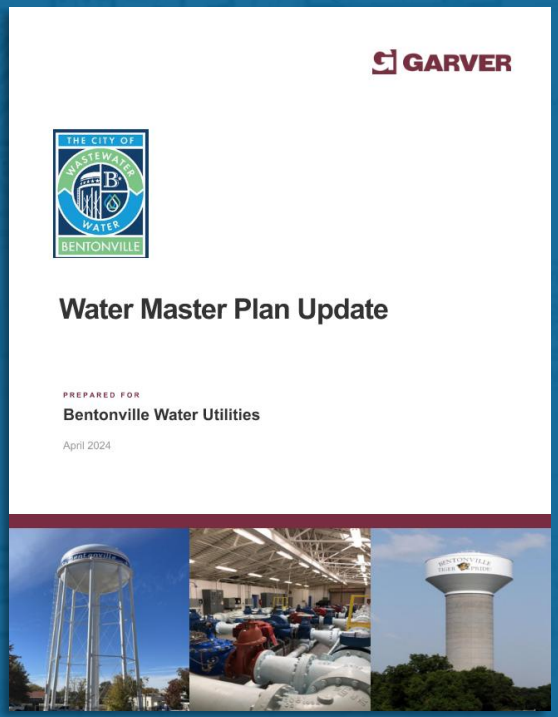
Prepared by:

GARVER

Suite 240
4300 South JB Hunt Dr
Rogers, AR 72758

September 5th, 2025

Garver Project No. W01-2501941


GARVER

Water Master Plan Update

PREPARED FOR
Bentonville Water Utilities

April 2024

Project Review & Compilation

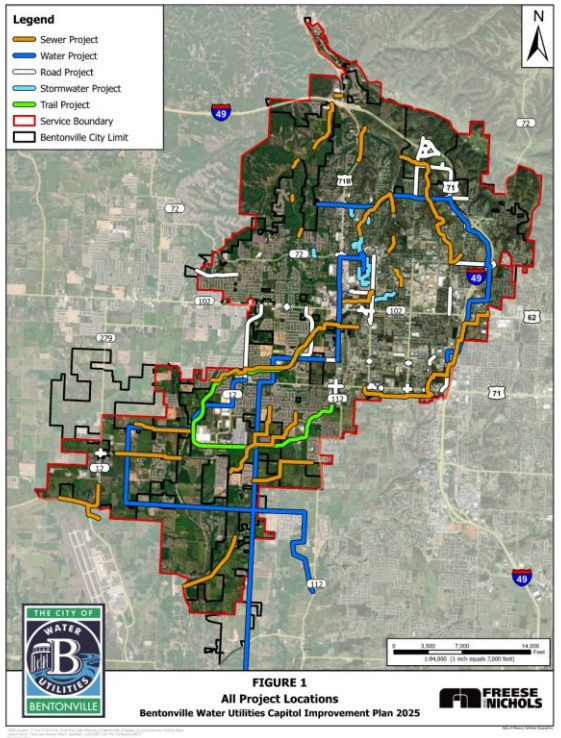
Unification of CIP Projects

- Standardized format prioritizations and drivers
- Reviewed/Adjusted schedules
- Adjusted cost estimates

Project Mapping

- Developed GIS based project mapping
- Identified potential interdepartmental project coordination opportunities

Capacity Driven CIP *



Total: $675M

** From studies*

***2025 Projects approved by City Council*

Annual Programs

6

Asset Renewals:

- Water Distribution Mains
- Water Transmission Mains
- Water Tanks/Pump Stations
- Wastewater Collection Mains
- Wastewater Lift Stations
- Water Resource Recovery Facility

Asset Renewal Programs to be based on Financial & Budgetary Analysis and Risk Based Assessment

3

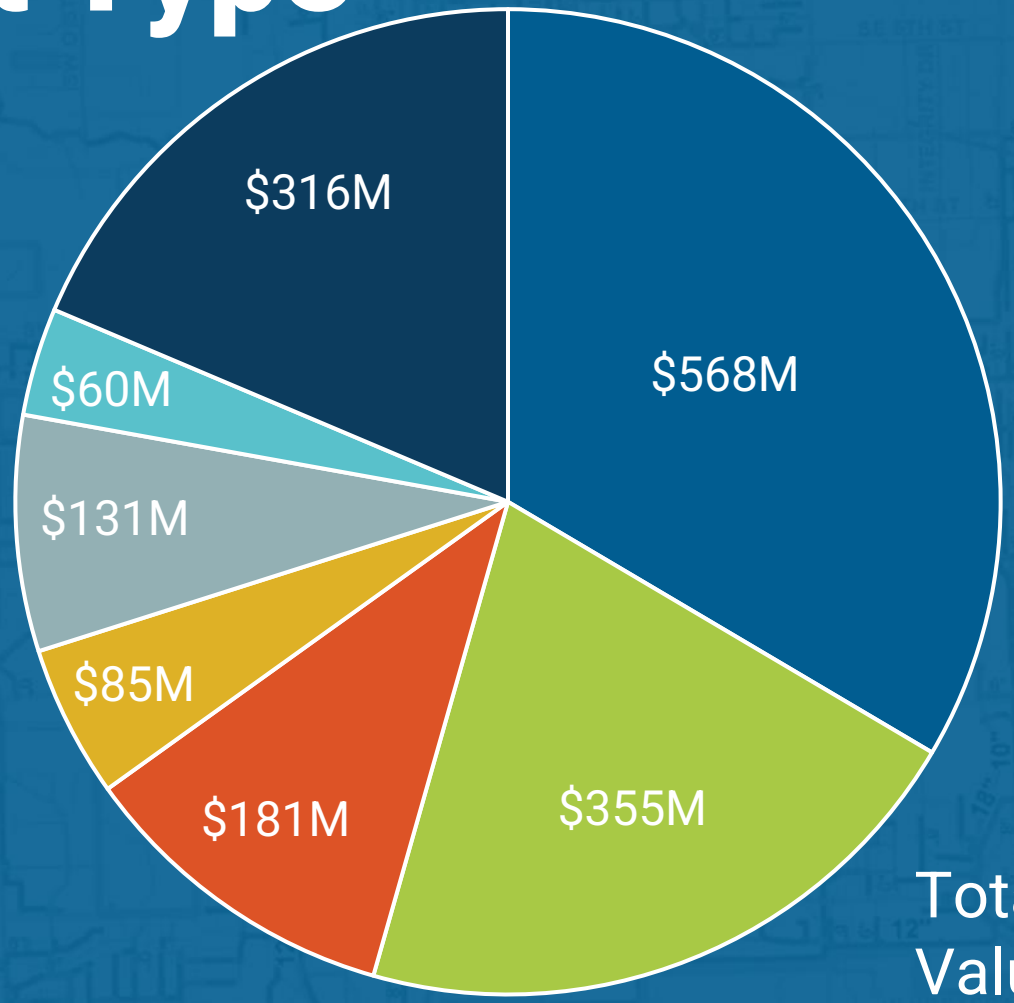
State Highway Relocations:

- Water Distribution Mains
- Water Transmission Mains
- Wastewater Collection Mains

Only if projects are known and required

Financial & Budgetary Analysis for Annual Programs

Current Estimated Replacement Value by Asset Type

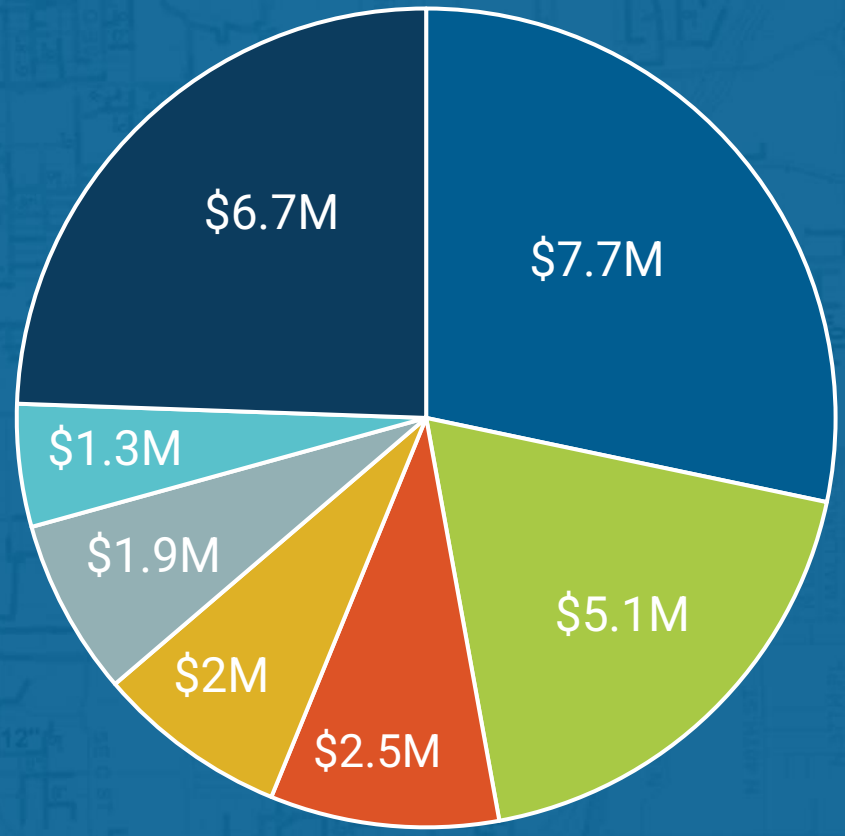


Total Approximate Value: $1.7 Billion

Avg Estimated Annual Investment Level in Replacements Over Asset Lifespans

- Average estimated lifespan based on industry guidelines (years) :
  - Water Mains: 80
  - Wastewater Mains: 75
  - Tanks, Lift Stations, Treatment Plants: 50
  - Pump Stations: 30

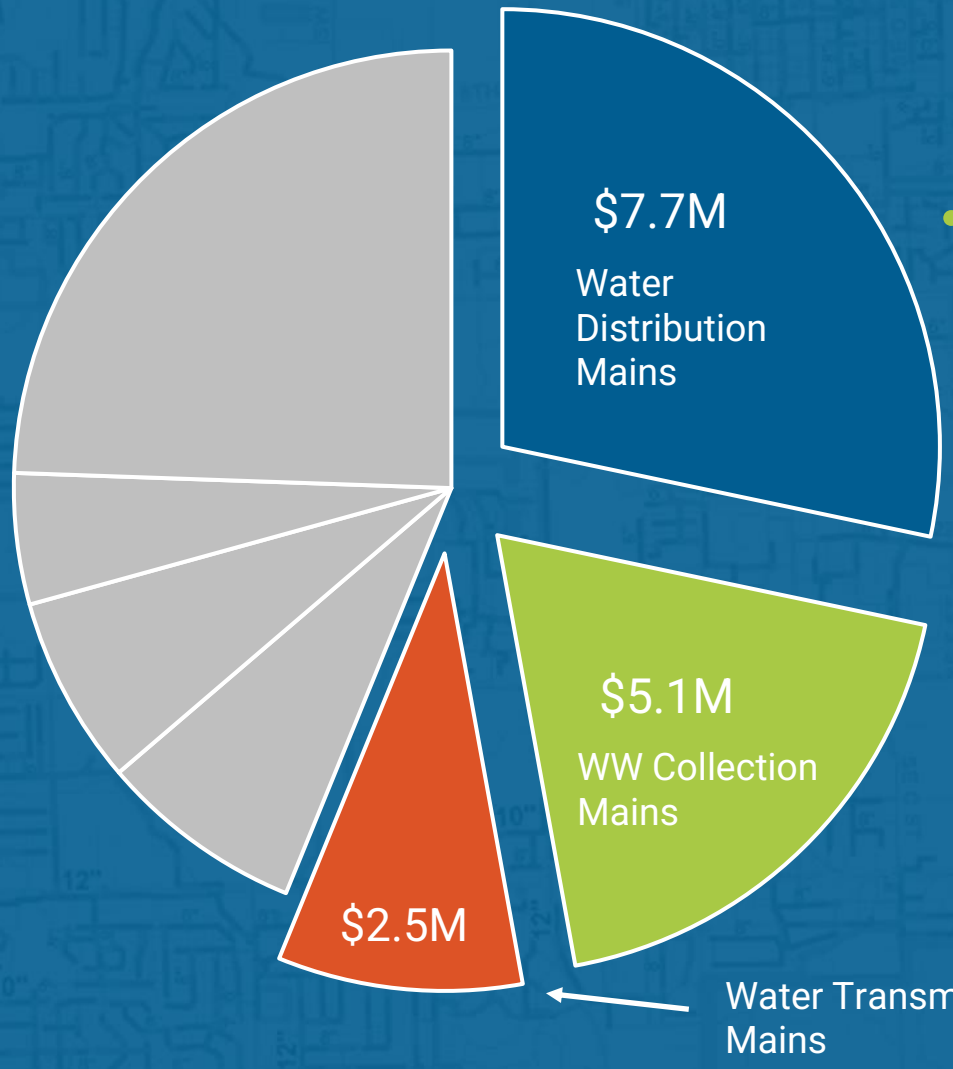
- Approximately $27M/year* + growth & inflation



* *Estimated replacement cost* in 2026

Annual Asset Renewal Budgetary Scenario

- Capacity driven projects address most annual renewals for 10+ yrs for:
  - Wastewater Interceptor Mains
  - Water Tanks & Pump Stations
  - Lift Stations
  - WRRF
- ~$3M/yr to replace components such as large pumps and motors



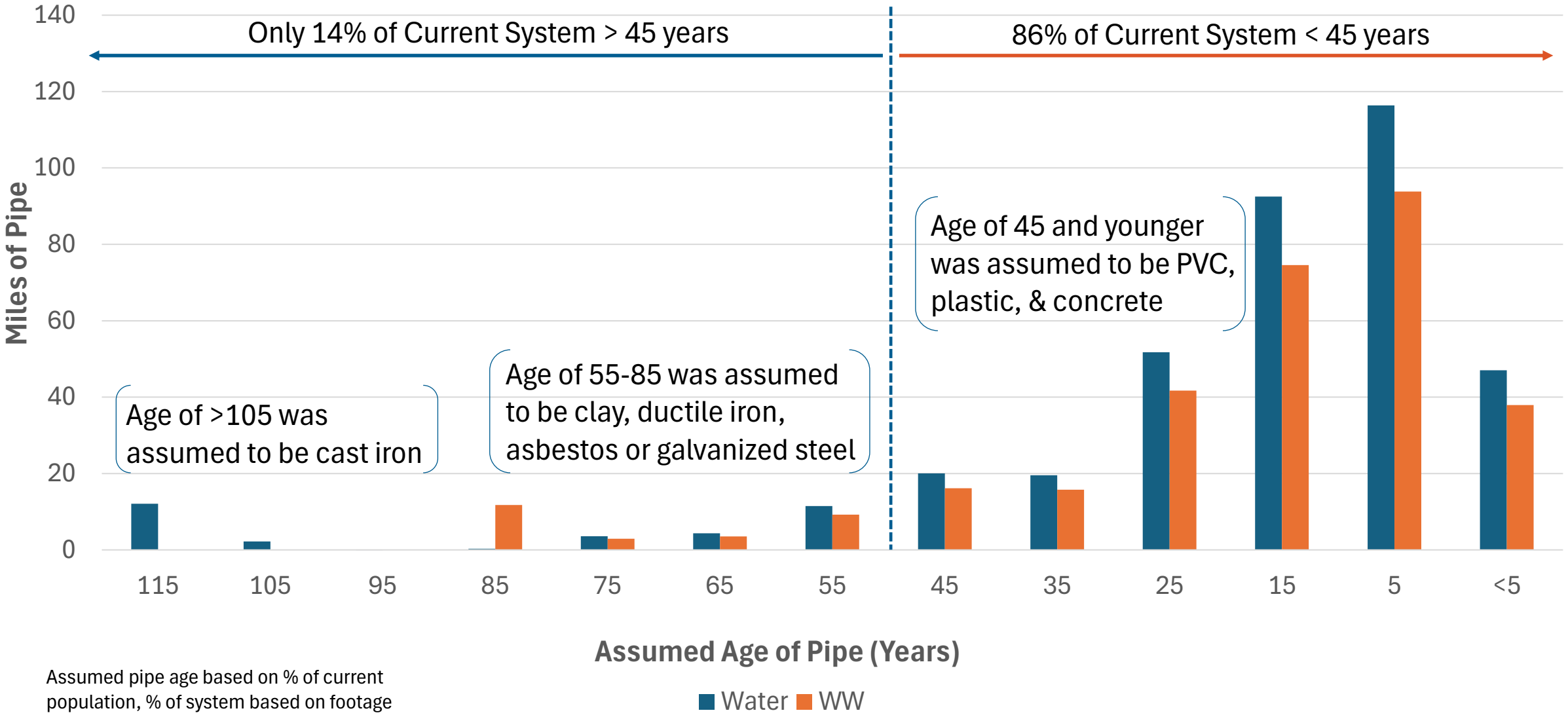
- ***On average, over time,*** complete approximately **$15.3M/year** (+ growth & inflation) for asset renewal based on risk-based selection criteria

Asset Renewal Program

Example of Initial High Level Desktop Analysis

Actual Program to be Developed with BWU’s Asset Management Program

Miles of Pipe in System by Assumed Age



Assumed pipe age based on % of current population, % of system based on footage

Example of Risk Based Assessment

Determining ***Criticality*** and ***Condition*** for asset risk

Risk = (Criticality Score x Condition Score)

CRITICALITY
Consequence of Asset Failure?
Loss of Service Number and Type of Customers
Damage to Property
Public Image
Environmentally Sensitive Areas
Regulatory Impact

CONDITION	
Likelihood of Asset Failure?	
Asset Age	GIS
Asset Material	GIS
Performance of Asset	CMMS/ CCTV/MSI
Available Capacity	Hydraulic Model

Next Steps

- Implement the Comprehensive CIP:
  - Update as projects are designed and bid
  - Add new projects based on BWU priorities
  - Upload this Comprehensive CIP into BWU's Enterprise CIP system that is underway to manage projects through construction and commissioning
- Consider the impacts of BWU's annual CIPs in Bentonville annual budgets
- Annual Asset Renewal Program:
  - Dependent upon funding
  - Projects to be selected based on asset management system underway by BWU staff and risk-based selection criteria

Thank you

FREESE AND NICHOLS