



Asset Management

Public Services Area



Who is the Asset Management Team in A2?

- Craig Hupy – Area Administrator
- Marti Praschan – Chief of Staff
- Brian Steglitz – WTP Manager
- Earl Kenzie – WWTP Manager
- Nick Hutchinson – City Engineer
- Molly Maciejewski – Public Works Manager
- Troy Baughman – Systems Planning Engineer
- Jennifer Lawson – Water Quality Manager
- Deb Gosselin – Systems Planning Engineer
- Chris Elenbaas – Public Works Engineer

Overview

- What is Asset Management?
- 10 Steps of Asset Management
- State of Asset Management in Ann Arbor – Public Services

- Pavement/Roads *
- Bridges *
- Urban Forest
- Sanitary Sewer System *
- Stormwater System
- Drinking Water Distribution System *

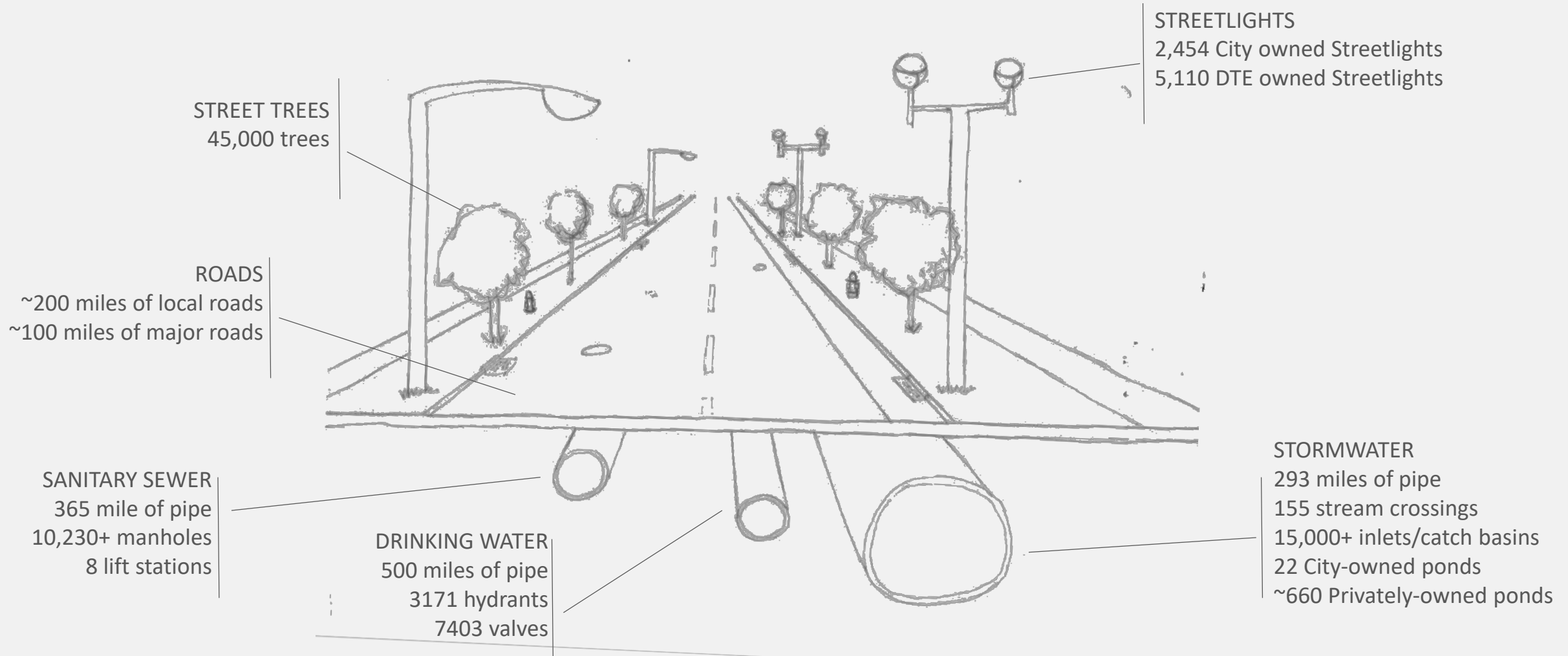
- Drinking Water Treatment Plant *
- Wastewater Treatment Plant *
- Streetlights

* = Regulatory Component

What is Asset Management?

- Systematic process of deploying, operating, maintaining, upgrading, and disposing of assets cost-effectively.

The City of Ann Arbor's Assets – Public Services



10 Steps of Asset Management



What Assets Are We **ACTIVELY MANAGING** With Plans

- Pavement
- Urban forest
- Drinking water (including WTP)
- Bridges

Pavement/Roads



- **CONSISTS OF:** ~200 miles of Local and 100 miles of Major streets
 - Predominantly asphalt
 - Limited amounts of concrete and brick
- **FUNDING:** Local Street, Bridge, & Sidewalk Millage, Act 51 (Weight and Gas tax), Washtenaw County Road and Non-motorized Path Millage, & federally funded sources (STP-U)
- **BUDGET:** FY2019 Budget \$32 Million
- **STATUS:** Currently implementing with present emphasis on increased use of capital preventative maintenance measures
- **CHALLENGES:**
 - Funding
 - Other infrastructure needs
 - Utility Coordination – internal & external
 - Staff Capacity
 - Contractor Capacity

TOOLS: Cityworks, Roadsoft
Software



Urban Forest

- **CONSISTS OF:** Street trees – approximately 45,200
- **FUNDING:** Stormwater Fund - stormwater rates, dependent upon ratepayers. (Enterprise Fund)
- **BUDGET:** FY2019 Budget \$2.63 Million
- **STATUS:** Current focus to fully implement Recommendation #1 of the UCFMP – to “Implement a proactive tree maintenance program for Ann Arbor’s publicly-managed trees, emphasizing routine pruning, removals and care to improve the health and sustainability of the canopy.”
 - Staff has addressed a backlog in high priority pruning and removals and in 2017 implemented a 10-year routine street tree pruning cycle.
- **CHALLENGES:**
 - Staff Capacity

TOOLS: Cityworks,
Documented Plan



Drinking Water Treatment Plant



- **CONSISTS OF:** over 2200 assets
 - ~250 that are included in Asset Management Plan based on criticality and cost of replacement.
- **FUNDING:** Water Fund – water rates, dependent upon ratepayers. (Enterprise Fund)
- **BUDGET:** FY2019 Budget \$10.5 Million
- **STATUS:** on track to meet the goals identified in the plan which involves completing a condition assessment of all of these assets over a 5 year period, followed by periodic updates based on condition and criticality.
- **CHALLENGES:**
 - Lack of Resources
 - Aging Infrastructure
 - Contaminants
 - Funding Replacing Plant 1



Drinking Water Distribution



- **CONSISTS OF:** over 500 miles of distribution pipes
 - 3171 hydrants
 - 7403 valves
 - Pipes from 1.5" - 42"
- **FUNDING:** Water Fund – water rates, dependent upon ratepayers. (Enterprise Fund)
- **BUDGET:** FY2019 Budget \$4.9 Million
- **STATUS:** Asset Management Plan is complete and is being implemented, and has been submitted to the MDEQ.
- **CHALLENGES:**
 - Lack of Resources
 - Aging Infrastructure
 - Funding to Accelerate Pipe Replacement

METHOD: Cityworks



Bridges



- **CONSISTS OF:** 14 Bridges in the public ROW
- **FUNDING:**
 - Act 51 Major Street Fund (routine maintenance);
 - Street, Bridge, & Sidewalk Millage for actual construction work.
- **BUDGET:** Biannual Bridge Inspection Program receives approximately (\$140K) from the Major Street Fund, \$6K from the Sanitary Fund (bridge to the WWTP) and (\$5K) from outside sources (U of M; DDA, etc.) Funding for bridge capital construction projects varies significantly from year to year based on need and outside fund availability and capital needs. Projects have ranged from \$200,000 to over \$15,000,000.
- **STATUS:** Currently implementing
- **CHALLENGES:**
 - Aging Infrastructure



What assets are **developing** plans

- Streetlights
- Stormwater
- Sanitary sewer
- City facilities (buildings)
- WWTP

Streetlights

- **CONSISTS OF:** 2,454 City owned Streetlights; 5,110 DTE owned Streetlights
- **FUNDING:** General Fund
- **BUDGET:** FY2019 Budget Streetlight annual expenditures over the past 5 years have ranged between \$1.8M and \$2.4M
- **STATUS:** Actively managing streetlights based on the 10-step program. Expansion of the streetlight system is being managed through the Crosswalk Streetlighting Needs Assessment and corridor lighting evaluation.
- **CHALLENGES:**
 - Staffing Limitations
 - Lack of Resources/Funding
 - Aging Infrastructure

TOOLS: City works, Assetic Software



Stormwater System

- **CONSISTS OF:** 293 Miles of conveyance pipes
 - Pipes from 6" - 103"
 - 22 miles of creeks and open channels
 - 155 stream crossings
 - 15,000+ inlets/catch basins
 - 22 City-owned detention ponds
 - Green Infrastructure
- **FUNDING:** Stormwater Fund – stormwater rates, dependent upon ratepayers. (Enterprise Fund)
- **BUDGET:** FY2019 Budget \$3.4 Million
- **STATUS:** Consultant is working on final draft of Asset Management Plan for pipe conveyance. In the interim – recommendations for Preventative Maintenance and Capital Improvements are being implemented.
- **CHALLENGES:**
 - Staffing Levels

TOOLS: Cityworks, IT Pipes, Assetic Software



Sanitary Sewer System



- **CONSISTS OF:** 365 miles of collection pipes
 - 10,230+ manholes
 - Pipes from 8" – 72"
- **FUNDING:** Sanitary Fund – sewer rates, dependent upon ratepayers. (Enterprise Fund)
- **BUDGET:** FY2019 Budget \$2.7 Million
- **STATUS:** Consultant is working on final draft of Asset Management Plan. In the interim – recommendations for Preventative Maintenance and Capital Improvements are being implemented.
- **CHALLENGES:**
 - Staffing Levels and Resources

TOOLS: Cityworks, ITPipes,
Assetic Software





Wastewater Treatment Plant



- **CONSISTS OF:** The Wastewater Treatment Plant (WWTP) and eight sewage lift stations.
 - Buildings, pumps, piping, tanks and equipment.
- **FUNDING:** Sanitary fund.
- **BUDGET:** FY2019 Budget \$15.3 Million
- **STATUS:** Current activities include development of the asset inventory, populating City works (computerized maintenance management system) with equipment and required preventive maintenance activities and schedules, and development of the RFP for consultant services. Continue to repair/replace based on Master Plans.
- **CHALLENGES:**
 - Staffing Limitations
 - Regulatory Changes
 - Aging Infrastructure

TOOLS: Cityworks



Project Name: AAWWTP Renovations
Photo Taken: 11/17/17
Job-Image #: 48871-31
Location: Ann Arbor WWTP
Description: West Plant



Project Name: AAWWTP Renovations
Photo Taken: 11/21/17 - 1:55 PM
Job-Image #: 48871-064
Location: East Aeration Tank
Description: AT-E3/E4



Project Name: AAWWTP Renovations
Photo Taken: 11/21/17 - 2:09 PM
Job-Image #: 48871-078
Location: East Blower Building
Description: WAS pumps



Project Name: AAWWTP Renovations
Photo Taken: 11/21/17 - 2:04 PM
Job-Image #: 48871-073
Location: East Blower Building
Description: Sampler Room



Project Name: AAWWTP Renovations
Photo Taken: 11/17/17
Job-Image #: 48871-01
Location: Ann Arbor WWTP
Description: Substantial Completion

Airport – Pavement

- **CONSISTS OF:** Airfield pavement including runways, taxiways, hangar areas and aprons. 1,288,013 sf of paved surface.
- **FUNDING:** Preventative maintenance and spot repairs are locally funded from the Airport operating budget. Larger projects are eligible for Airport Capital Improvement Program funding which is a combination of local, state and federal funding.
- **BUDGET:** PM and spot repairs vary from year to year. Approximately \$20,000 - \$25,000 annually. The cost of larger projects would be project specific.
- **STATUS:** The plan is fully implemented and all work is on schedule. Pavement assessments are completed by a third party consultant every three years. Preventative maintenance and spot repairs are done annually over a three year cycle to address all paved surfaces within the three year assessment period. Larger projects are included in the airport's multi-year capital improvement plan submitted to the State annually.

City Owned Facilities

- Finance based plan which tracks major building components and their condition in City owned facilities to provide replacement funding as these components reach the end of their useful life.
- **CONSISTS OF:** City Hall, Justice Center, Fire Stations, Wheeler Service Center
- **FUNDING:** Source of funding will vary based on the revenue stream that supports the facility.
- **BUDGET:** Funding needs vary. Finance has established a policy to determine annual replacement funding needed to cover these components. Actual funding is determined through the budget process.
- **STATUS:** IT has developed a tracking database for these buildings and their components. The majority of facilities and their components have been entered into the system.

How do the AM plans inform decisions?

- Optimize Operations and Maintenance Efforts
- Strategically Prioritize Capital Investments
- Determine Necessary Staffing Levels and Resource Needs
- Formalize Levels of Service (& Performance Metrics)

Performance Metrics

Asset Plans have, or will, establish Performance Metrics that will be reported on a regular basis.

Public Services Asset Groups **lacking** plans/focused efforts

- Signs
- Signals
- Dams
 - We have an inspection cycle
- Sidewalks/ Active Transportation
 - Annual investment
 - 5 year inspection cycle

Next Steps:

- Upcoming Big Endeavors
 - WWTP Asset Management Plan
 - Completion of Sanitary Collection and Stormwater AM Plans.
 - Implementing the Optimized Operations and Maintenance
- Implementation of Recommendations
 - Rate structuring
 - Capital Investments
 - Appropriate Preventative Maintenance Programming

Discussion

