



Approach & Adaptation: Structuring Asset Management for MS4s

July 30, 2026 | 10:30 a.m. – 11:30 a.m. (Eastern)



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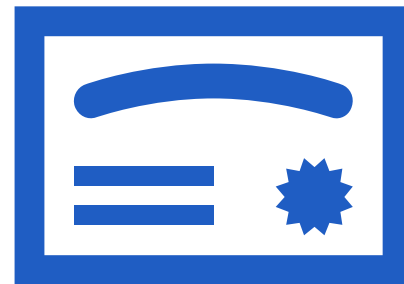
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Sept. 30 – Oct. 2, 2026 | Grand Hotel Resort, Point Clear, AL

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Today's Presenter



Wallace Arnold

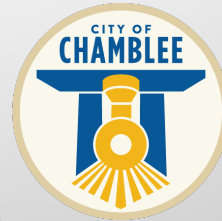
Watershed Protection Specialist

City of Chamblee, GA

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SINKHOLES TO STREAMS: ASSET MANAGEMENT IN STORMWATER



WHAT IS ASSET MANAGEMENT?

“The combination of management, financial, economic, engineering and other practices applied to physical assets with the objective of providing the required level of service in the most cost-effective manner.” – International Infrastructure Management Manual 5.0



WHAT ASSET MANAGEMENT IS NOT

- Asset Management is not
 - Plan that a consultant writes for you.
 - Software package/platform.
 - Condition assessments or checklists
 - One-time event
 - Fast.
 - Solo or siloed undertaking
 - Throwing money at the problem until it goes away



WHY USE THIS METHOD?

- Realities of the 21st century workplace: Everything runs on data
 - Justify budget increases; show where the money goes.
 - Better defense vs. community criticism
- Prices aren't going down on anything – per asset lifecycle cost estimates are good to have.
- Systemic tracking of problem spots, in both cost and frequency, helps focus upgrades/refurbs.
- Systems can be more reliable than people.

WHAT ARE MY ASSETS?

- Built (or grown!) infrastructure that provides a service and will eventually require maintenance and/or replacement.
 - Pipes
 - Catch Basins/other structures
 - Green infrastructure/BMPs/Trees
 - Street Sweepers/CCTV rig/Hydrovac



GETTING STARTED

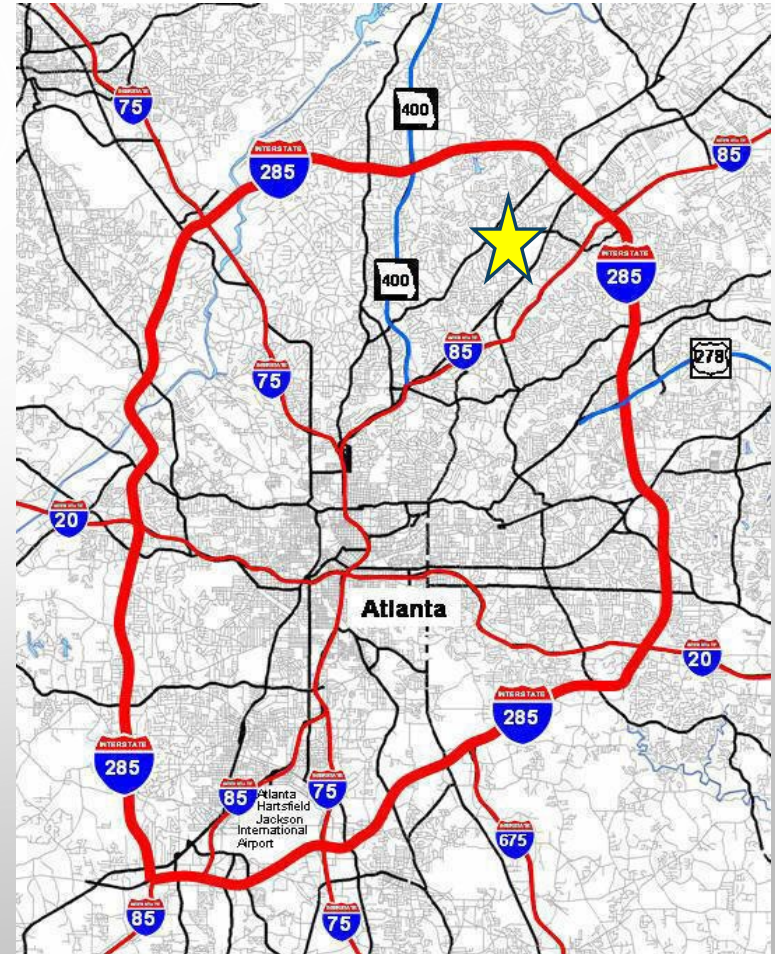
- 1) Clearly establish your workflows for the most common maintenance items.
If you don't have effective processes, no software or gadget will suddenly make you efficient.
- 2) Expectations. The changeover is a long, slow process.
- 3) Figure out what you're tracking & start small
 - Pipes: Work history / material / diameter / install date
 - GI: Minimum annual maint. or insp. / install date / type
- 4) Get buy-in from leadership from day 1 for the changeover.
- 5) Buy or build a platform.
 - Dedicated software or DIY database both work. Either way, IT's input will be needed.

Welcome To Chamblee



BACKGROUND INFO

- Incorporated in 1907
- 7.8 sq mi (minus an airport)
- Population of ~34,000
 - About half our residents speak a language besides English at home.
- Major annexations in 2011 & 2014



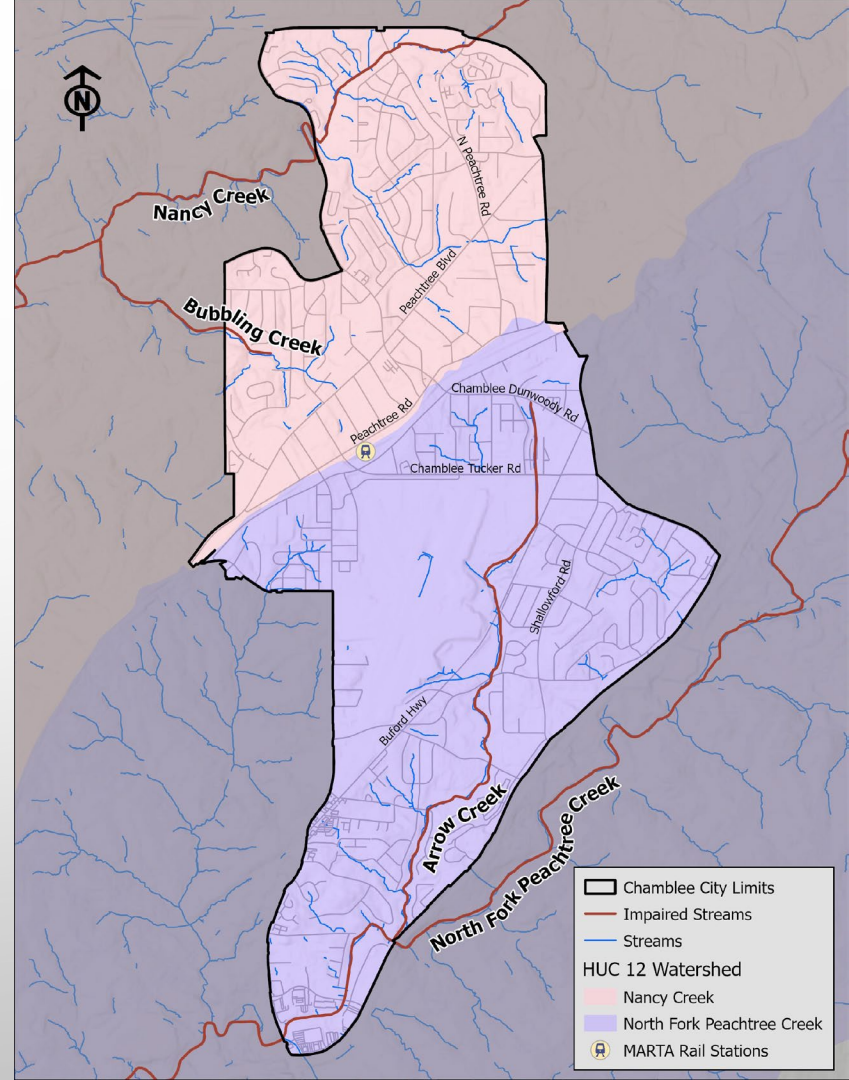
MS4 Overview

City is responsible for:

- 26.1 mi of city-maintained pipe
(28% of 91.5 mi total)
- 1,734 city-maintained structures
(grates, outfalls, etc.)
- 12.4 mi of streams & creeks

Program History:

- First stormwater ordinance in 1996
- Annexations in 2011 & 2014 expanded maintenance needs
- County responsible for maintenance prior to 2017.
- Incomplete system survey in 2020.
- No dedicated stormwater staff until 2023.
- State requires a 5-year inspection program.



MS4 Challenges

- Reactive, emergency maintenance as problems are called in.
- Lots of corrugated metal pipe (CMP) reaching the end of its service life and causing sinkholes.
- Contracted engineering firm made mistakes with the mapping project. Final product was incomplete.
 - No elevations
 - Poor data QC
- Very little institutional knowledge.
- Poor data management over the years.
 - 3 competing data sets starting out.



05-14-20





MS4 Goals

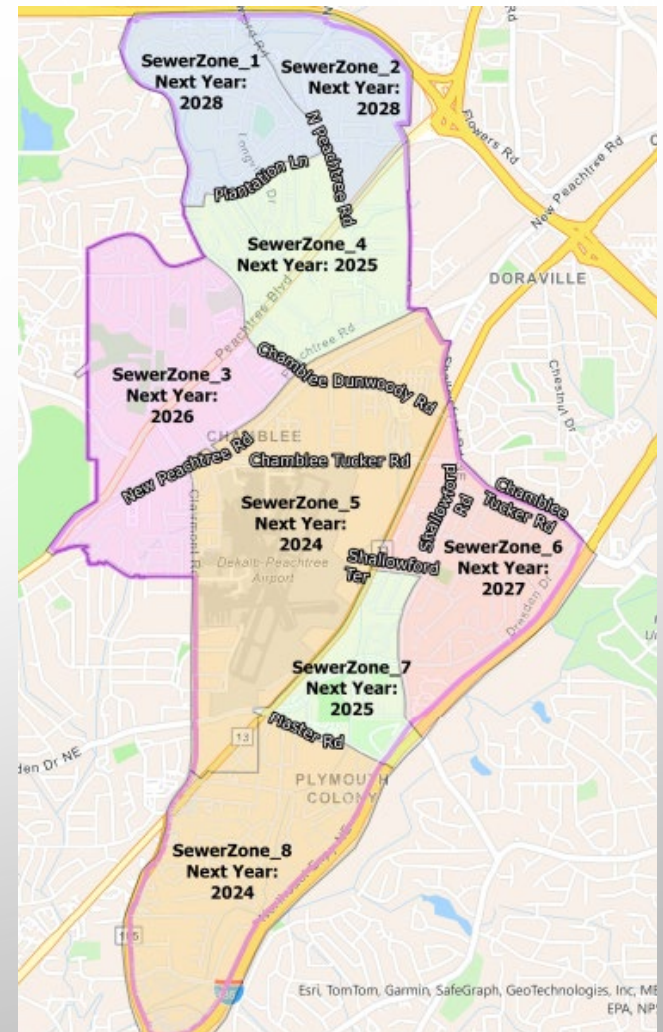
- 1) Meet the inspection requirements in the state permit for a 5-yr plan.
- 2) Clean up the existing data.
- 3) Improve connectivity of system map.
- 4) Develop a tracking system for work tickets.
- 5) Standardize inspection forms.
- 6) Locate additional data sources.
- 7) Automate where possible.

HOW LONG CAN YOU WORK ON MAKING A ROUTINE TASK MORE EFFICIENT BEFORE YOU'RE SPENDING MORE TIME THAN YOU SAVE?
(ACROSS FIVE YEARS)

		HOW OFTEN YOU DO THE TASK					
		50/DAY	5/DAY	DAILY	WEEKLY	MONTHLY	YEARLY
HOW MUCH TIME YOU SHAVE OFF	1 SECOND	1 DAY	2 HOURS	30 MINUTES	4 MINUTES	1 MINUTE	5 SECONDS
	5 SECONDS	5 DAYS	12 HOURS	2 HOURS	21 MINUTES	5 MINUTES	25 SECONDS
	30 SECONDS	4 WEEKS	3 DAYS	12 HOURS	2 HOURS	30 MINUTES	2 MINUTES
	1 MINUTE	8 WEEKS	6 DAYS	1 DAY	4 HOURS	1 HOUR	5 MINUTES
	5 MINUTES	9 MONTHS	4 WEEKS	6 DAYS	21 HOURS	5 HOURS	25 MINUTES
	30 MINUTES		6 MONTHS	5 WEEKS	5 DAYS	1 DAY	2 HOURS
	1 HOUR		10 MONTHS	2 MONTHS	10 DAYS	2 DAYS	5 HOURS
	6 HOURS				2 MONTHS	2 WEEKS	1 DAY
	1 DAY					8 WEEKS	5 DAYS

Dipping our Toes In: Chamblee's First Steps

- Data cleanup
 - Consistent asset names. STST-A08-215
 - Merge & sync all prior GIS datasets.
- Pictures of everything.
 - Get a camera app with GPS & timestamps!
- Developed a standard inspection rubric for in-house work.
- Replacing ~130 blind catch basin lids.
- Created work zones for each reporting year.



What We Use: Cartegraph / OpenGov EAM

- The Good:
 - Phone app is solid.
 - Can be set up to track almost anything (costs, conditions)
 - Options for automatic work ticket creation, follow-ups, etc.
- The Bad: Very steep learning curve during initial setup



STST-D07-231

Storm Inlet

[Details](#) [Attachments 1](#) [Upstream Pipes 0](#) [Inspections 1](#) [Tasks 2](#)

Inlet Information

ID *required

STST-D07-231

Type

Catch Basin

Shape

Grate Inlet

Material

Brick

Ownership

Chamblee

Notes

Structure ID includes the grates in front of the basins.

Inspections Workflow

- 1) Worklist for MS4 inspections in a year is created May 1st.
 - Filtered by asset ownership & sewer zone
- 2) Field staff inspect assets as able, using the standard form & grading rubric.
- 3) If flagged for follow-up (repair, replacement, etc.), a new work task within Cartegraph is automatically created and inspection notes are copied over to new ticket.
- 4) Follow-up task is sent to management or crew for review/completion.

Apr 24, 2025 at 9:52:25 AM
2597 New Haven Dr NE
Chamblee GA 30345
United States







05-22-2025



Jan 6, 2026 at 1:34:55 PM
5480 Peachtree Rd
Chamblee GA 30341
United States

CHAMBLEE STORMWATER TODAY

- Survey & Assessment of entire system in progress.
- Numbers as of May 1:
 - 57% of City-maintained structures inspected in last 2 years.
 - 62% of RY 2025's pipes inspected.
 - 26% of private detention ponds provided maintenance info for RY2025 (first year of enforcement)
 - \$1,295,217 spent on maintenance, incl. staff time, May 2025 – March 2026.
- Able to locate 90% of assets now.
- Photo collection reduces driving time.
- Better public engagement & reporting.
- Almost entirely digital workflow.

NEXT STEPS

- Detention basin inspection notices via automated email instead of paper.
- Develop better criteria for prioritizing repairs.
 - Develop standards for Likelihood of Failure/Consequence of Failure
- Finish the updated system assessment.
- Develop data schema, workflows, for tracking green infrastructure.
- Find additional contractors (Referrals gladly accepted!)

Questions?

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Watershed Protection Specialist
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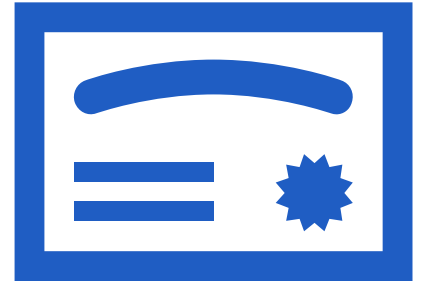
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